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# TOWARDS THE DECARBONIZATION OF THE EU BUILDING STOCK: AN INTEGRATED BUILDING STOCK RENOVATION MODELING APPROACH

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CICLO XXXII
ANNO 2020

*Alla mia famiglia sempre presente,*
*Ai miei colleghi diventati amici,*
*Ai vecchi amici sempre con me,*
*Ai professori e ricercatori che mi hanno*
*guidato nell’arduo percorso della ricerca.*

# ABSTRACT

In Europe, the residential building stock is responsible for about the 40% of the energy demand and for about the 36% of the CO2 emission at global level. Considering that almost 70% of the existing building stock will still be used in 2050, a long-term vision is needed to align with future challenges to avoid having significant increases in carbon emissions. The European policymakers have a long recognized the potential energy saving associated to the renovation of the existing building stocks, as demonstrated by the directives on the Energy performance of buildings (EPBD), introducing also the needs to developed an integrated buildings design approach with environmental analysis. The purpose of this thesis is to provide a comprehensive assessment of the existing building stock that could be renovated. The basis of a good renovation strategy is establishing an accurate understanding of the building stock, including age, building typology, heating source etc. A detailed bottom-up breakdown by building type, age, energy carrier, climatic zone, energy performance, occupancy and ownership are developed to underpin subsequent steps in the European decarbonization strategies in residential sector.

In this thesis, the energy and environmental effects of four possible renovation scenarios are studied using the dynamic energy simulation and the Life Cycle Assessment. Also, in order to account the possible use of bio-based materials, a sensitive analysis is performed on the improvement of the building’s envelope for four types of materials (as stone wool, wood wool cement board, cellulose fiber and cork slab). Another two scenarios are

relative the installation renewable energy systems (RES) as solar thermal collector and photovoltaic systems. In particular, in some countries, the results show how the use of insulation materials could require less time for repaying the environmental impacts generated during their whole life cycle that the RES, comparing the environmental impacts generated during their production with the potential energy saving during their use. The models developed allow to evaluated energy and environmental effects of a greater number of renovation strategies, highlighting the needs of integrated approach for helping the policymakers, the designer and the engineering into the definition of the most sustainable solutions for EU-28.

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# SUMMARY

In Europe, the residential building stock is responsible for about the 40% of the energy demand and for about the 36% of the $CO_2$ emission at global level. Considering that almost 70% of the existing building stock will still be used in 2050 and that an increase of around 25% is expected at the building stock level, a long-term vision is needed to align with future challenges to avoid significant increases in carbon emissions. The European policymakers have a long recognized the potential energy saving associated to the renovation of the existing building stocks, as demonstrated by the directives on the Energy performance of buildings (EPBD) in 2002 and its updates in 2010 and 2018. Although, the first editions of the directives focused on improving the thermal energy performance of the buildings stocks, in order to help the diffusion of nearly zero energy buildings (nZEB); the last update of the EPBD in 2018 includes measures that will accelerate the rate of building renovation towards more energy efficient systems and strengthen the energy performance of new buildings, making them smarter. Moreover, it introduced the need of integrate the building design with the environmental impacts' analysis of the improvements of the new and existing building stock.

Energy policies at the regional level may result in long lasting effects and can successfully influence the energy performance of an urban or national system if the whole built environment is taken into account and focused on the energy renovation process in existing buildings. Planning and monitoring of the impacts of a variety of policies and measures in the building sector has become a complex task, in particular due to the fragmentation of the

building stock (in terms of shape, age, renovation status, ownership, and intended use) and several data gaps.

In order to study and to propose sustainable energy retrofit scenario and observing the effects at European level, greater number of information on existing European building stocks is required. However, the available information on building stocks in Europe is very limited and uncertainties.

Several studies have been carried out for implementing predicting energy models that represent the national building stock. However, due to the data lack and the different methodologies used for calculating the residential energy demand, it is not possible compare data results and, in many cases, the models are not validated with the real energy consumption at the reference year and in other cases, the environmental effects of the changed proposed are not taken into account. In this context, this thesis aims to address an urgent need to describe the existing residential European building stock, so as to allow future assessments of the effects of different energy-saving measures of refurbishments.

This work contributes to the collection of data on the existing European building stock, applying a bottom-up energy model that could be used for studying the energy and environmental effects of European regulations at global level and district level. The goals of this thesis, for helping the policymaker and designer into the definition of directives that could really reduce not only the energy demand but also the environmental impacts, are:

1 to map all the energy contributes connect to existing residential European building stocks using the open sources European datahubs and software;
2 to evaluate the potential energy and environmental effects connect to some retrofit scenarios through the application of an integrated approach at micro and macro level: dynamic energy simulation and LCA.

The European building stock is described in this thesis by means of archetype buildings, following a methodology that has been developed for combining statistical and technical data. The buildings modelling process is based on the assumptions made by Joint Research Center for creating 24 archetypes with a top down approach, identifying: three climatic zone (warm, moderate and cold), two types of buildings (single family house (SFH) and multi-family house (MFH)) and four period of constructions. The top-down approach was applied for evaluating the environmental benchmark of the existing European building stock at 2010. However, from an energy point of view, the tow-down approach limits the capabilities of the models to study the interaction between the building system and the environment. While, in order to apply the bottom up approach, several details are required for modelling the European building stock in comparison with a top down model. At the end, the 24 original archetypes have been transformed into 672 thermo-physical objects, in order to account the climatic condition of the EU-28 countries and the spatial distribution of the buildings at national level (as city, country or rural geographic locations). In fact, all of these parameters could have greater effects on the heating and cooling demand estimate by the predictive energy models.

In particular, the main steps applied in this thesis for the construction of the thermo-physical archetype buildings are:

(1) quantification, where the building stock was assembled and clustered into separate categories by considering age, area, building typology and climatic area, throughout the EU;

(2) segmentation step, in which the clustering and definition of archetype buildings required to represent the entire stock is decided according to 3 macro categories: building type, construction year, and climate zone;

(3) characterization, whereby each archetype is described in terms of its geometrical, thermo-physical and technical characteristics (as envelope, shape, efficiency, infiltration and ventilation, inhabitant's behavior);

Then, all of the data collected are used as inputs for running dynamic energy simulations. The models developed to allow us to calculate the energy demand (for heating and cooling, hot water, and electricity for equipment, appliances, and lighting) at the micro-level. In order to account the average national climatic conditions in all EU-28, a location representative of each nation is chosen based on a comparison between the heating and cooling degree day (HDD and CDD) calculated from Eurostat and the analysis carried out on the available weather data chosen for every EU state.

The energy models have been developed and validated comparing the results of the models with the energy demand for space heating and cooling, associated with the European residential sector in 2010 from the JRC-IDEES database, which collected data on the energy consumption of the residential sector from 2000 to 2015.

The assessment of thermal behavior of the building stock models are performed according to five metrics, including the normalized mean bias error (NMBE) and the coefficient of variation of the root mean square error, CV(RMSE). These results are summarized at European level showing that all the NMBE are less than 10% for cooling demand (8.20%), heating (-6.06%) and -5.81% for both the thermal service of all countries.

The results fit with the statistical data for 99% as demonstrated by the calculation of adj $R^2$. The summary of the validated results indicates the heating ideal load is about 1,773.41 TWh, while the cooling is 28.08 TWh. These heating and cooling results differ of 111.33 and -2.43 TWh in comparison with the statistical data. Therefore, the building stock model can be said to be valid for the purposes of the research conducted and will therefore be used to analyze the energy performance of each archetype generating a NMBE error of less than 10% in comparison with the statistical value.

In addition, the model is performed for providing results at disaggregated level showing that the standard deviation results could differ for more than 50% from the average value calculated on the heating and cooling ideal load of the 672 archetypes. This effect is connect to the geographic location that affects the results in a range of 2%- 60% for heating and 1%-33% for cooling into the warm climatic zone; while greater variation could be generated into the moderate climatic zone, where the heating load varies from 1% to 58% and the cooling from 0% to 85% respect to the average value. Moreover, the archetypes of the cold climatic zone change at least of about 8% for heating and cooling demand due to ventilation and temperature set point set during the calibration process.

The next step of the study is the definition of retrofit scenarios towards the decarbonization of the European building stocks, reducing the energy required during their operation use and evaluating the potential environmental impacts/benefits that could be generated at European level, country level and for archetypes.

In order to test the potential energy saving with the application of retrofit actions on the whole building stock, four retrofit scenarios have been proposed: i) application of four insulation materials on walls, ii) installation of renewable systems for the production of domestic hot water (DHW) and electricity for equipment, iii) application of occupants behavior improvement strategies and iv) application of four insulation materials on all the opaque surfaces and installation of more thermal efficient windows.

In detail, the retrofit actions have been selected trying to reduce the use stage energy consumptions applying some of retrofit solutions proposed into the European directives. In order to optimize the thermophysical characteristics of the envelope and to increase the self-consumption of electricity generated and reduce the heat and cooling demand by the most nonefficient building stocks.

The modeling of these scenarios will be used to calculate energy use for heating, cooling, DHW ideal loads and electricity demand that could be avoided after the realization of renovation strategies.

For all these scenarios, the Life Cycle Assessment has been applied for calculating the environmental impacts connect to the new materials and technologies with particular attention to the bio-based materials and the renewable energy systems (RES). All life cycle stages are included in the study: materials and component production, installation and end-of-life. The LCA methodology, based on the standards of the ISO 14040 [1] and ISO 14044 [2] are used to quantify the environmental impacts associated to the refurbishment of the 672 archetypes. The LCA methods used is ILCD v.1.08 with Ecoinvent 3.4 database included in Simapro software.

In addition, to account that each country and buildings use different fuels for the production of thermal energy and all the countries are characterized by different electricity mix, the avoided impacts have been calculated accounting the national electricity, heating, cooling and DHW used into the residential sector for each country. Another important assumption for calculating the heating, cooling and electricity impacts for every country is due to the average efficiency of the technologies used for space heating, space cooling and DHW from the residential sector at 2010.

This allows to observe the effects that could be generated by the same quantity of insulation materials in different countries, or by the use of the renewable energy systems. For each of the environmental category evaluated, the payback time have been calculated for analyzing if each technologies or materials can repay the environmental impacts produced before their useful life.

The analysis of the results is divided in two macro categories: the energy analysis and the environmental assessment. All scenarios can reduce the thermal energy required for heating, increasing in some case the cooling demand. In particular, the energy results show that:

- the application of insulation on the walls could reduce the heating demand of each archetypes of about 17-36% in comparison with the baseline scenario. Cold climatic zone is characterized by greater heat demand reductions in comparison to the other climatic zone, although the energy required for cooling could be 38% more than the baseline. The results highlight that the older households are characterized by greater potential energy saving;
- the installation of solar thermal collectors and photovoltaic systems could reduce the thermal energy for DHW of about 179.64 TWh and the electricity required from the grid of 620TWh. Also, the potential surplus of electricity generated by the PV is 228.65TWh calculated in order to account only the auto consume of the building stock;
- finally, turn-off heating and cooling systems during the night could reduce the thermal energy demand of about 4% and 1% at European level.

Although it has been noticed that all the scenarios proposed could generate energy benefits, different issues could be generated introducing the LCA. For example, in term of life cycle, the production, transport, installation and End-of-life of the solar collectors and PV systems at EU level generate about 159 Mtons of CO2 and 1245 Mtons, that correspond an impacts superior of 2 and 14 times that generated by a traditional insulation material of the walls as the stone wool. Instead, the analysis of four insulation materials' impacts allows us to identify that the use of cellulose fiber could reduce CO2 emissions of about 33% in comparison with stone wool. While the use of wood wool cement board, due to worse thermal properties and higher density, could produce about 7 times more CO2 than that produced by the stone wool. The results provide insight information on the environmental impacts of the transport, identifying that the transport could be responsible for about 26%-53% of the whole life cycle impacts of the retrofit solutions.

In addition, the environmental PBTs indicate that the retrofit solutions are able to repay the impacts generated before their substitution, except for two impact categories of the solar collector and the PV systems (Mineral depletion and ecotoxicity). This aspect should be more controlled when renovation strategies are implemented at the EU level because could generate great critical raw material and ecotoxicity issues.

Moreover, the PBT of climate change shows that cellulose fiber as insulation represents the solution that could repay the CO2 emitted during its production in less time (about 0.52 years) than the others actions (e.g. PV in 2.53 years).

The combination of thermo-physical simulations with Life cycle assessment in a bottom up model allows to better understand the effects at macro level applying a long vision strategy. In fact, the results shows that in a year, the EU could reduce the CO2 emission of heat and cool production for the existing residential building stock of about 21% to 75% into the best case.

In conclusion, although the outcomes of the study are based on the specific conditions of the existing residential building sector at 2010, the design of any type of building, even SFH or MFH, requires an integrated and multidisciplinary design approach, covering a number of key aspects such as energy saving, life cycle environmental impacts and many others, to create the conditions for a significant decarbonisation of the residential sector.

A successful renovation design of the European building stock could be performed including not only energy efficient measures, but also an environmental assessment of each materials and technologies involved. Life-cycle oriented approach is particularly useful to assess the environmental impacts of all the whole buildings, but also of the only contributes connect to potential benefits/impacts of the retrofit solutions proposed.

In this context, the research proposes an integrated methodological framework which allows to combining the dynamic energy simulation of building stock and LCA, investigating at the same time energy and environmental effects of some European renovation strategies. It can be used to explore and improve the low sustainability performing areas over the life cycle of all existing residential European building stocks. Moreover, the methodological approach can also be adopted for sustainability assessment of other reference years, changing the weather condition or the total number of buildings and their geographic locations.

In this context, this research contributes to the current body of knowledge by providing a deeper insight into the environmental performance of the refurbishment strategies applied on all the EU-28 countries, investigating the importance of a sustainable redesign of the existing building stocks. The outcomes of this study may help construction practitioners, such as decision makers, policymakers, clients, developers, engineers, contractors to have a better understanding of the potential energy and environmental saving that could be generate by the application of a deep refurbishment of the all existing residential European building stock for period of construction or geographic location or type of building.

One of the main features of the bottom up approach is to identify more energy and environmental hot spots that obtained by the use of a top-down approach, highlighting the real energy and environmental interactions between the house systems and the outdoor conditions and inhabitant’s life style.

# SOMMARIO

In Europa, il settore residenziale è resposabile di circa il 40% dell’energia consumata edel 36% della $CO_2$ emessa a livello globale.

Considerando che quasi il 70% del patrimonio edilizio esistente sarà ancora utilizzato nel 2050 e che è previsto un aumento di circa il 25% della superficie costruita, è necessaria una visione a lungo termine per allinearsi alle sfide future per evitare significativi aumenti di gas climalteranti. I politici europei hanno da tempo riconosciuto il potenziale risparmio energetico che potrebbe essere ricavato dal rinnovamento degli edifici esistenti, come dimostrato dalla direttiva sulla prestazione energetica degli edifici (EPBD) nel 2002 e dai suoi aggiornamenti nel 2010 e 2018. Sebbene le prime edizioni della direttiva fossero incentrate sul miglioramento delle prestazioni energetiche degli edifici nuovi, al fine di favorire la diffusione di edifici a energia quasi zero (nZEB); l'ultimo aggiornamento dell'EPBD nel 2018 include misure che accelereranno il tasso di rinnovamento degli edifici verso sistemi più efficienti dal punto di vista energetico e rafforzeranno le prestazioni energetiche dei nuovi edifici, rendendoli più intelligenti. Inoltre, ha introdotto la necessità di integrare la progettazione dell'edificio con analisi dell'impatto ambientale.

Le politiche energetiche a livello regionale possono avere effetti a lungo termine e possono influenzare con successo le prestazioni energetiche di un sistema urbano o nazionale se l'intero ambiente costruito fosse preso in considerazione, focalizzando l’attenzione soprattuto sul processo di rinnovamento energetico degli edifici

esistenti. Purtroppo, pianificare e monitorare gli impatti di una varietà di politiche e misure energetiche applicate al settore residenziale è un compito complesso, in particolare a causa della frammentazione del patrimonio edilizio (in termini di forma, età, stato di rinnovo, proprietà e destinazione d'uso) e diverse lacune nei dati disponiponibili. Per studiare e proporre uno scenario di retrofit sostenibile e osservare gli effetti a livello europeo, è necessario un maggior numero di informazioni sugli edifici europei esistenti. Tuttavia, le informazioni disponibili sugli edifici in Europa sono molto limitate e incerte.

Sono stati condotti numerosi studi per l'implementazione di modelli energetici previsionali che cercano di rappresentare il patrimonio edilizio nazionale. Tuttavia, a causa della presentazione dei dati e delle diverse metodologie utilizzate per il calcolo della domanda di energia residenziale, non è possibile confrontare i risultati dei dati e, in molti casi, i modelli non sono convalidati con il consumo reale di energia per l’anno di riferimento. In altri casi, gli effetti ambientali associati al rinnovamento dell’edificio fanno riferimento alla sola $CO_2$ potenzialmente risparmaiata o non sono presi totalmente in considerazione.

In questo contesto, questa tesi mira a rispondere a una necessità urgente di descrivere il patrimonio edilizio residenziale europeo esistente, in modo da consentire future valutazioni ambientali ed energetiche delle diverse misure di rinnovamento per incentivare il risparmio energetico e la decarbonizzazione.

Questo lavoro contribuisce alla raccolta di dati sul patrimonio edilizio europeo esistente, applicando un modello energetico bottom-up che potrebbe essere utilizzato per studiare gli effetti energetici e ambientali delle normative europee a livello globale e distrettuale, includendo osservaioni su edfiici distlocati in zone rurali o urbani. Gli obiettivi di questa tesi, per aiutare il decisore politico e il progettista nella definizione di direttive che potrebbero davvero ridurre non solo la domanda di energia ma anche gli impatti ambientali, sono:

- mappare tutti i contributi energetici collegati agli stock di edifici residenziali europei esistenti utilizzando i datahubs e il software europei open source;
- per valutare i potenziali effetti energetici e ambientali connessi ad alcuni scenari di retrofit attraverso l'applicazione di un approccio integrato a livello micro e macro: simulazione dinamica dell'energia e LCA.

Il patrimonio edilizio europeo è descritto in questa tesi per mezzo di archetipi, seguendo una metodologia che è stata sviluppata per combinare dati statistici e tecnici. Il processo di modellazione degli edifici si basa sulle ipotesi formulate dal JRC per la creazione di 24 archetipi con un approccio top-down, identificando: tre zone climatiche (calda, moderata e fredda), due tipi di edifici (casa unifamiliare (SFH) e multi familiare (MFH)) e quattro periodi di costruzione. L'approccio top-down è stato applicato per valutare il benchmark ambientale del patrimonio edilizio europeo esistente al 2010. Tuttavia, dal punto di vista energetico, l'approccio limita le capacità dei modelli energetici di studiare l'interazione tra il sistema edilizio e l'ambiente. Mentre, per applicare l'approccio bottom-up, sono necessari diversi informazioni aggiuntive per modellare il patrimonio edilizio europeo. Alla fine, i 24 archetipi originali sono stati trasformati in 672 oggetti, al fine di tenere conto delle condizioni climatiche dei paesi dell'UE-28 e della distribuzione spaziale degli edifici a livello nazionale (come località geografiche: città, paese o rurali). In effetti, tutti questi parametri hanno effetti sulla stima della domanda di riscaldamento e raffreddamento dai modelli energetici predittivi. In particolare, le fasi principali applicate in questa tesi per la costruzione degli archetipi sono:

- quantificazione, in cui il patrimonio edilizio è stato assemblato e raggruppato in categorie separate considerando l'età, l'area, la tipologia dell'edificio e l'area climatica, in tutta l'UE;
- fase di segmentazione, in cui il raggruppamento e la definizione di edifici ad archetipo richiesti per rappresentare l'intero stock vengono decisi in base a 3 macro categorie: tipo di edificio, anno di costruzione e zona climatica;
- caratterizzazione, per cui ogni archetipo è descritto in termini di caratteristiche geometriche, termo-fisiche e tecniche (come forma, efficienza, infiltrazione e ventilazione, comportamento dell'abitante).

In seguito, tutti i dati raccolti sono utilizzati come input per l'esecuzione di simulazioni energetiche dinamiche. I modelli sviluppati per consentirci di calcolare il fabbisogno energetico (per riscaldamento e raffreddamento, acqua calda ed elettricità per apparecchiature, elettrodomestici e illuminazione) a livello micro. Al fine di tenere conto delle condizioni climatiche nazionali medie in tutta l'UE-28, viene scelta una località rappresentativa di ciascuna nazione sulla base di un confronto tra i grado giorni di riscaldamento e raffreddamento (HDD e CDD) calcolato da Eurostat e l'analisi effettuata sui dati meteorologici disponibili per ogni stato dell'UE.

I modelli energetici sono stati calibrati e validati confrontando i risultati dei modelli con la domanda di energia per il riscaldamento e il raffreddamento per il settore residenziale europeo nel 2010. I dati statistici sono stati ricavati dal database IDEES del JRC, che ha collezionato dati sul consumo energetico del settore residenziale dal 2000 al 2015.

La valutazione del comportamento termico dei modelli di edifici è eseguita in base a cinque metriche per la valutazion dell’errore, tra cui l'errore di polarizzazione media normalizzato (NMBE) e il coefficiente di variazione dell'errore quadratico medio, CV (RMSE). Questi risultati sono sommati a livello europeo, dimostrando che tutti gli NMBE sono inferiori al 10% per la domanda di raffreddamento (8,20%), riscaldamento (-6,06%) e -5,81% per entrambi i servizi termici di tutti i paesi.

I risultati corrispondono ai dati statistici per il 99%, come dimostrato dal calcolo del R quadrato. Il riepilogo dei risultati convalidati indica che il carico ideale di riscaldamento è di 1.773,41 TWh, mentre il raffreddamento è di 28,08 TWh. Questi risultati di riscaldamento e raffreddamento differiscono di 111,33 e -2,43 TWh rispetto ai dati statistici. Pertanto, si può affermare che il modello è valido per rispondere ai limiti imposti per i fini della ricerca condotta e sarà quindi utilizzato per analizzare le prestazioni energetiche di ciascun archetipo. Inoltre, il modello è simulato per fornire risultati a livello disaggregato, mostrando che i risultati dei vari archetipi generano una deviazione standard che, in alcuni casi, differisce di oltre il 50% dal valore medio calcolato per i 672 archetipi. Questo effetto è collegato alla posizione geografica che influenza i risultati in un intervallo compreso tra 2% - 60% per il riscaldamento e 1% -33% per il raffreddamento nella zona climatica calda; mentre una maggiore variazione potrebbe essere generata nella zona climatica moderata, dove il carico di riscaldamento varia dall'1% al 58% e il raffreddamento dallo 0% all'85% rispetto al valore medio calcolato per il meesimo archetipo. Inoltre, gli archetipi della zona climatica fredda generano al massimo una variazione dell'8% circa per la richiesta di riscaldamento e raffreddamento a causa delle temperature esterne più rigide.

Il prossimo passo dello studio è stata la definizione di scenari di retrofit verso la decarbonizzazione degli edifici europei, riducendo l'energia necessaria durante il loro funzionamento e valutando i potenziali impatti / benefici ambientali che potrebbero essere generati a livello europeo, a livello nazionale e per archetipi .

Al fine di testare il potenziale risparmio energetico con l'applicazione di azioni di retrofit sull'intero patrimonio edilizio, sono stati proposti quattro scenari di retrofit: i) applicazione di quattro materiali isolanti sulle pareti, ii) installazione di sistemi rinnovabili per la produzione di acqua calda sanitaria (ACS) ed elettricità per attrezzature, iii) applicazione di strategie di miglioramento del comportamento degli occupanti e iv) applicazione di quattro materiali isolanti su tutte le superfici opache e installazione di finestre più efficienti dal punto di vista termico.

Nel dettaglio, le azioni di retrofit sono state selezionate cercando di ridurre i consumi energetici della fase d'uso applicando alcune delle soluzioni di retrofit proposte nelle direttive europee. Al fine di ottimizzare le caratteristiche termofisiche dell'involucro e aumentare l'autoconsumo di elettricità generata e ridurre la domanda di calore e raffreddamento da parte degli edifici più inefficienti energeticamente.

La modellizzazione di questi scenari è utilizzata per calcolare il consumo di energia per riscaldamento, raffreddamento, di acqua calda sanitaria e fabbisogno di elettricità che potrebbero essere risparmiati dopo la realizzazione di strategie di ristrutturazione. Per tutti questi scenari, la valutazione del ciclo di vita è stata applicata per il calcolo degli impatti ambientali connessi ai nuovi materiali e tecnologie, con particolare attenzione ai materiali a base biologica e ai sistemi di energia rinnovabile (RES). Tutte le fasi del ciclo di vita sono incluse nello studio: produzione di materiali e componenti, installazione e fine vita. La metodologia LCA, basata sugli standard ISO 14040 e ISO 14044 viene utilizzata per quantificare gli impatti ambientali associati alla ristrutturazione dei 672 archetipi. I metodi LCA utilizzati sono ILCD v.1.08 con il database Ecoinvent 3.4 incluso nel software Simapro.

Inoltre, per tenere conto del fatto che ciascun paese usa combustibili diversi per la produzione di energia termica e che sono caratterizzati da un diverso mix di elettricità, gli impatti evitati sono stati calcolati tenendo conto dell'elettricità nazionale, del riscaldamento, del raffreddamento e dell'acqua calda sanitaria utilizzati settore residenziale per ogni paese. Un'altra ipotesi importante per il calcolo degli impatti di riscaldamento, raffreddamento ed elettricità per ogni paese è dovuta all'efficienza media delle tecnologie utilizzate per il riscaldamento degli ambienti, il raffreddamento degli ambienti e l'acqua calda sanitaria dal settore residenziale nel 2010.

Ciò consente di osservare gli effetti che potrebbero essere generati dalla stessa quantità di materiali isolanti in diversi paesi o dall'uso di sistemi di energia rinnovabile. Per ciascuna delle categorie ambientali valutate, il tempo di ammortamento è stato calcolato per analizzare se ciascuna tecnologia o materiale può ripagare gli impatti ambientali prodotti prima della fine loro vita utile. L'analisi dei risultati è divisa in due macrocategorie: l'analisi energetica e la valutazione ambientale. Tutti gli scenari possono ridurre l'energia termica richiesta per il riscaldamento, aumentando in alcuni casi la domanda di raffreddamento. In particolare, i risultati energetici mostrano che:

- l'applicazione dell'isolamento sulle pareti potrebbe ridurre la richiesta di riscaldamento di ciascun archetipo di circa il 17-36% rispetto allo scenario di base. La zona climatica fredda è caratterizzata da maggiori riduzioni della domanda di calore rispetto alle altre zone climatiche, sebbene l'energia necessaria per il raffreddamento potrebbe incrementarsi del 38% in più rispetto al caso base del 2010. I risultati evidenziano che le case più vecchie sono caratterizzate da un maggiore potenziale di risparmio energetico;

- l'installazione di collettori solari termici e sistemi fotovoltaici potrebbe ridurre l'energia termica per l'acqua calda sanitaria di circa 179,64 TWh e l'elettricità richiesta dalla rete di 620TWh. Inoltre, il potenziale surplus di elettricità generata dal fotovoltaico è di 228,65 TWh calcolato per tenere conto solo del auto consumo da parte del patrimonio edilizio;
- infine, la disattivazione dei sistemi di riscaldamento e raffreddamento durante la notte potrebbe ridurre il fabbisogno di energia termica di circa il 4% e l'1% a livello europeo.

Sebbene sia stato notato che tutti gli scenari proposti potrebbero generare benefici energetici, potrebbero essere generati diversi problemi con l'introduzione dell'LCA. Ad esempio, in termini di ciclo di vita, la produzione, il trasporto, l'installazione e il fine vita dei collettori solari e dei sistemi fotovoltaici a livello dell'UE generano circa 159 Mt di CO2 e 1245 Mt, che corrispondono a impatti superiori a 2 e 14 volte quelli generati da un materiale isolante per le pareti (come la lana di roccia). Invece, l'analisi dell'impatto di quattro materiali isolanti ci consente di identificare che l'uso della fibra di cellulosa potrebbe ridurre le emissioni di CO2 di circa il 33% rispetto alla lana di roccia. Mentre l'uso del pannello di cemento in lana di legno, a causa delle peggiori proprietà termiche e della maggiore densità, potrebbe produrre circa 7 volte più CO2 di quella prodotta dalla lana di roccia durante il suo ciclo di vita. I risultati forniscono informazioni approfondite sugli impatti ambientali del trasporto, identificando che il trasporto potrebbe essere responsabile di circa il 26% -53% degli impatti dell'intero ciclo di vita delle soluzioni di retrofit.

Inoltre, i PBT ambientali indicano che le soluzioni di retrofit sono in grado di ripagare gli impatti generati prima della loro sostituzione con i potenziali benefici prodotti, ad eccezione di due categorie di impatto del collettore solare e dei sistemi fotovoltaici (deplezione minerale ed ecotossicità). Questo aspetto dovrebbe essere maggiormente attenzionato quando le strategie di rinnovamento sono attuate a livello UE perché potrebbero generare importanti problemi di criticità della materia prima ed ecotossicità.

Inoltre, il PBT dei cambiamenti climatici mostra che la fibra di cellulosa come isolante rappresenta la soluzione che potrebbe risarcire la CO2 emessa durante la sua produzione in meno tempo (circa 0,52 anni) rispetto alle altre soluzioni (ad esempio PV in 2,53 anni).

La combinazione di simulazioni dinamiche con la valutazione del ciclo di vita in un modello ibrido bottom-up consente di comprendere meglio gli effetti a livello macro applicando una strategia di visione a lungo termine. In effetti, i risultati mostrano che in un anno l'UE potrebbe ridurre nel migliore dei casi l'emissione di CO2 associato alla produzione di energia per ricaldamento e raffrescamento  dal 21% al 75% circa.

In conclusione, sebbene i risultati dello studio siano basati sulle condizioni specifiche del settore dell'edilizia residenziale esistente al 2010, la progettazione di qualsiasi tipo di edificio, anche SFH o MFH, richiede un approccio progettuale integrato e multidisciplinare, che copre una serie di aspetti chiave, quali il risparmio energetico, gli impatti ambientali del ciclo di vita e molti altri, per creare le condizioni per una significativa decarbonizzazione del settore residenziale.

È stato possibile eseguire con successo un progetto di ristrutturazione del patrimonio edilizio europeo includendo non solo misure di efficienza energetica, ma anche una valutazione ambientale di ciascun materiale e tecnologia coinvolti. L'approccio orientato al ciclo di vita è particolarmente utile per valutare gli impatti ambientali di tutti gli edifici, ma anche degli contributi connessi ai potenziali benefici / impatti delle soluzioni di retrofit proposte sul singolo.

In questo contesto, la ricerca propone un quadro metodologico integrato che consente di combinare la simulazione energetica dinamica del patrimonio edilizio e LCA, indagando allo stesso tempo gli effetti energetici e ambientali di alcune strategie di ristrutturazione europee. Può essere utilizzato per esplorare e migliorare le aree a bassa sostenibilità nel corso del ciclo di vita di tutti gli stock di edifici residenziali europei esistenti. Inoltre, l'approccio metodologico può anche essere adottato per la valutazione della sostenibilità di altri anni di riferimento, modificando le condizioni meteorologiche o il numero totale di edifici e le loro posizioni geografiche.

In questo contesto, questa ricerca contribuisce all'attuale conoscenze fornendo una visione più approfondita delle prestazioni ambientali delle strategie di ristrutturazione applicate a tutti i paesi dell'UE-28, indagando sull'importanza di una riprogettazione sostenibile delgi edifici esistenti. I risultati di questo studio possono aiutare i professionisti dell'edilizia, quali responsabili delle decisioni, responsabili delle politiche, clienti, sviluppatori, ingegneri, appaltatori a comprendere meglio il potenziale risparmio energetico e ambientale che potrebbe essere generato dall'applicazione di una profonda ristrutturazione del tutto il patrimonio edilizio residenziale europeo esistente per periodo di costruzione o posizione geografica o tipo di edificio.

# NOMENCLATURE

| Symbol | Definition | Unit |
|---|---|---|
| **AC** | Air Conditioner | |
| **Ac** | Acidification | molc H+ eq |
| **ADP** | Abiotic resource Depletion Potential | [-] |
| **AP** | Acidification Potential | [-] |
| **AT** | Austria (19) | [-] |
| **BE** | Belgium (14) | [-] |
| **BG** | Bulgaria (11) | [-] |
| **C** | Cold climatic zone | |
| **CC** | Climate change | kg CO2 eq |
| **CDD** | Cooling Degree Day | [-] |
| **CV(RMSE)** | coefficient of variation of the root mean square error | [-] |
| **CY** | Cyprus (2) | [-] |
| **CZ** | Czech Republic (20) | [-] |
| **DE** | Germany (18) | [-] |
| **DHW** | Domestic Hot water | [-] |
| **DK** | Denmark (22) | [-] |
| **EE** | Estonia (25) | [-] |
| **EED** | Energy Efficiency Directive | [-] |
| **EP** | Eutrophication Potential | [-] |
| **EPBD** | Energy Performance of Buildings Directive | [-] |
| **EPC** | Energy Performance Certificate | [-] |
| **ES** | Spain (5) | [-] |

| | | |
|---|---|---|
| **ET** | Terrestrial eutrophication | molc N eq |
| **EU28** | European Union 28 | [-] |
| **Fc_FW** | Freshwater ecotoxicity | CTUe |
| **FI** | Finland (27) | [-] |
| **FR** | France (7) | [-] |
| **FU** | functional unit | [-] |
| **GB** | United Kingdom (16) | [-] |
| **GDO** | Gas/Diesel oil incl. biofuels | [-] |
| **GR** | Greece (4) | [-] |
| **HDD** | **Heating Degree Day** | **[-]** |
| **HETUS** | Harmonized European Time Use Survey | [-] |
| **HR** | Croatia (28) | [-] |
| **HT_c** | Human toxicity, cancer effects | CTUh |
| **HT_nc** | Human toxicity, non-cancer effects | CTUh |
| **HU** | Hungary (9) | [-] |
| **HVAC** | Heating, Ventilation and Air Conditioning | [-] |
| **IE** | Ireland (12) | [-] |
| **IR-E** | Ionizing radiation E (interim) | CTUe |
| **IR-hh** | Ionizing radiation HH | kBq U235 eq |
| **IT** | Italy (6) | [-] |
| **l** | Conductivity | [W/(m K)] |
| **LCA** | Life Cycle assessment | [-] |
| **LCI** | Life Cycle Inventory | [-] |
| **LCIA** | Life cycle impact assessment | [-] |
| **LPG** | Liquified petroleum gas | [-] |
| **LT** | Lithuania (23) | [-] |
| **LU** | Land use | kg C deficit |
| **LU** | Luxembourg (15) | [-] |
| **LV** | Latvia (24) | [-] |
| **M** | Moderate climatic zone | |
| **MBE** | mean bias error | [-] |
| **ME** | Marine eutrophication | kg N eq |
| **MFH** | Multi-family House | [-] |
| **MFH_C_<1945** | Multi-Family House built before <1945 in Cold (C) climatic zone (21) | [-] |
| **MFH_C_1945-1969** | Multi-Family House built between 1945-1969 in Cold (C) climatic zone (22) | [-] |
| **MFH_C_1970-1989** | Multi-Family House built between 1970-1989 in Cold (C) climatic zone (23) | [-] |
| **MFH_C_1990-2010** | Multi-Family House built between 1990-2010 in Cold (C) climatic zone (24) | [-] |

| | | |
|---|---|---|
| **MFH_M_<1945** | Multi-Family House buit before <1945 in Moderate (M) climatic zone (17) | [-] |
| **MFH_M_1945-1969** | Multi-Family House buit between 1945-1969 in Moderate (M) climatic zone (18) | [-] |
| **MFH_M_1970-1989** | Multi-Family House buit between 1970-1989 in Moderate (M) climatic zone (19) | [-] |
| **MFH_M_1990-2010** | Multi-Family House buit between 1990-2010 in Moderate (M) climatic zone (20) | [-] |
| **MFH_W_<1945** | Multi-Family House buit before <1945 in Warm (W) climatic zone (13) | [-] |
| **MFH_W_1945-1969** | Multi-Family House buit between 1945-1969 in Warm (W) climatic zone (14) | [-] |
| **MFH_W_1970-1989** | Multi-Family House buit between 1970-1989 in Warm (W) climatic zone (15) | [-] |
| **MFH_W_1990-2010** | Multi-Family House buit between 1990-2010 in Warm (W) climatic zone (16) | [-] |
| **MT** | Malta (1) | [-] |
| **NL** | Netherlands (13) | [-] |
| **nZEB** | nearly Zero Energy Building | [-] |
| **NZEB** | Net Zero Energy Building | [-] |
| **OD** | Ozone depletion | kg CFC-11 eq |
| **PBT** | payback time | [-] |
| **PL** | Poland (21) | [-] |
| **PM** | Particulate matter | kg $PM^2.5$ eq |
| **POF** | Photochemical ozone formation | kg NMVOC eq |
| **PT** | Portugal (3) | [-] |
| **PV** | photovoltaic system | [-] |
| **R2** | coefficient of determination | [-] |
| **RD_MFR** | Mineral, fossil & ren resource depletion | kg Sb eq |
| **RES** | renewable energy sources | [-] |
| **RMSE** | root mean square error | [-] |
| **RO** | Romania (10) | [-] |
| **RSP** | reference study period | [-] |
| **RT** | Thermal Resistance | [($m^2$ K)/W] |
| **s** | thickness | [m] |
| **SE** | Sweden (26) | [-] |
| **SFH** | Single-Family House | [-] |
| **SFH_C_<1945** | Single -Family House built before <1945 in Cold (C) climatic zone (9) | [-] |

| | | |
|---|---|---|
| **SFH_C_1945-1969** | Single -Family House built between 1945-1969 in Cold (C) climatic zone (10) | [-] |
| **SFH_C_1970-1989** | Single -Family House built between 1970-1989 in Cold (C) climatic zone (11) | [-] |
| **SFH_C_1990-2010** | Single -Family House built between 1990-2010 in Cold (C) climatic zone (12) | [-] |
| **SFH_M_<1945** | Single -Family House built before <1945 in Moderate (M) climatic zone (5) | [-] |
| **SFH_M_1945-1969** | Single -Family House built between 1945-1969 in Moderate (M) climatic zone (6) | [-] |
| **SFH_M_1970-1989** | Single -Family House built between 1970-1989 in Moderate (M) climatic zone (7) | [-] |
| **SFH_M_1990-2010** | Single -Family House built between 1990-2010 in Moderate (M) climatic zone (8) | [-] |
| **SFH_W_<1945** | Single -Family House built before <1945 in Warm (W) climatic zone (1) | [-] |
| **SFH_W_1945-1969** | Single -Family House built between 1945-1969 in Warm (W) climatic zone (2) | [-] |
| **SFH_W_1970-1989** | Single -Family House built between 1970-1989 in Warm (W) climatic zone (3) | [-] |
| **SFH_W_1990-2010** | Single -Family House built between 1990-2010 in Warm (W) climatic zone (4) | [-] |
| **SI** | Slovenia (8) | [-] |
| **SK** | Slovakia (17) | [-] |
| **Tm** | Mean Air Temperature | [°C] |
| **$U_{value}$** | Transmittance | [W/(m$^2$ K)] |
| **W** | Warm climatic zone | |
| **WRD** | Water resource depletion | m$^3$ water eq |
| **WWR** | window-to-wall area ratio | [-] |

# CHAPTER 1. INTRODUCTION AND STATE OF THE ART

## 1.1 BACKGROUND

With rapid urbanization and economic development, the world has been experiencing an unprecedented increase in energy consumption and greenhouse gas (GHG) emissions. Promoting sustainable energy system technologies, CO2 reduction strategies and fighting climate change have become integral aspect of the energy planning, energy supply and policymaking at world level.

During the Paris Agreement (COP21) in December 2015, 195 countries were involved for setting out a national and global plan for reducing global greenhouse gas (GHG) emissions. The government agreed on a long-term goal for limiting the world global warming to well below 2 degrees Celsius and on the need to apply energy and decarbonization strategies as soon as possible [3]. The agreement recognizes the role of each part in addressing the climate change; inviting each country and sector, private and public, to support action for reducing emissions, to improve resilience and scale up promotion and incentives for reduce the negative effects of climate change, and to promote regional and international cooperation.

In this context, the European Union (EU) established at national level to reduce greenhouse gas emissions by at least 40% by 2030 compared to 1990, under its wider 2030 climate and energy frameworks. All key legislation for implementing this target has been adopted by the end of 2018 [2]. One of point analyzed into the climate and energy frameworks regards the energy and environmental impacts of residential European building stock, that accounts for about 40% of energy consumption and 36% of CO2 emissions [4].

In addition, The European Commission (EC) released the first legislative instrument aimed to improve the energy performance of buildings: the "Energy Performance of Building Directive (EPBD) in the 2002 and updated in the 2010 and 2018[4–6]. The last version sets that all new and existing buildings should be "nearly-zero" energy (nZEB), that should be designed with multidisciplinary approach.

EU policymakers have long recognized the importance of energy-efficient buildings in mitigating climate change, considering that almost 70% of the European existing building stocks will still be used in 2050 and that it is expected a 25% increase of the energy required by building stock. The EPBD recast establish that long-term vision is needed to align with future challenges because without any reduction regulation, $CO_2$ emissions could be double or triple by 2050 [3]. While the efficiency of new buildings has improved over time with the first energy directives, most of Europe's existing building stock has yet to be affected by inefficient energy performance of the envelope and of the HVAC systems.

It is evident that the largest energy-saving potential lies on the older existing buildings, which trough major renovation or a simpler retrofitting could largely reduce their energy demands as far as it is technically and economically feasible. The renovation of the existing building stock and the improvement of the energy performances are expected to have a key role in the reduction of the residential energy demand.

The term "renovation" has been used to describe a wide variety of improvements to an existing building or group of buildings. Different levels of renovation can be distinguished depending on the type of intervention and savings obtained. Renovation can involve the installation of renewable energy sources (RES) as well as the replacement or upgrade of all building elements to reduce energy consumption towards zero levels. The refurbishment of a building façade (i.e. walls and windows) provides a different energy saving level compared to the retrofit of the overall building envelope and systems (heating, ventilation and air conditioning - HVAC, lighting, etc.).

In order to implement effective policies for the transition to nZEB (for all buildings) or to adopt the best retrofit solutions at global level, there is a crucial need to have reliable and comprehensive information and data on the composition of the existing building stocks, verifying that regulations and programs have the intended effects.

Governments, building owners and other stakeholders have an interest in knowing the impact of efficiency measures on the building stock, on the one hand for reasons of financial planning, but on the other hand also in order to control their performance in terms of climate change visions and environmental impacts.

For studying the energy demand of the existing building stock and the potential energy and environmental effects connect to some retrofit actions, several reviews identified two main approaches for creating a predicted energy model: top-down and bottom-up. The first start with the use of historical data broke into segments, while the second approach is based on the development of a complex system that could be representative of the building stocks, where the individual base elements of the system are first specified in great detail. Both policy developers and building scientists would benefit from a better understanding of the appropriate application and limitations of these models. Policymakers would gain by establishing which building parameters are key for national carbon reduction strategies for dwellings and highlighting policy challenges for climate and building stock [7–9].

However, the use of a bottom up approach is accounted as the most appropriate model for studying the potential energy saving connect to some retrofit actions because the results are not based on the historical trend of energy saving but on the “real” interaction between environment and building systems.

When a bottom up approach is used for studying the effects of retrofit actions, it is important analysis the potential effects connect to the materials or technologies used during that step. In fact, as established into the Article 2.a of the EPBD recast 2018, the renovation design of building stocks should be realized introducing the environmental analysis for evaluating their effects during the whole lifetime of the energy efficiency measure [4].

Several environmental studies on the realization of refurbishment of the buildings in nZEB had shown that the energy and environmental impacts that before are greater connect to the operation use of the buildings, then are shifted versus the materials production, their transport to site, construction processes and waste construction [10–13], highlighting the need of a defined multidisciplinary approach.

This chapter provides an overview on the research context, focusing on the European building sector trends, the EU frameworks on the energy performance of building stocks and the Energy and LCA modeling approach elaborated into the last decades. At the end of this chapter, the objective and structure of the thesis are summarized.

## 1.2 EUROPEAN BUILDING STOCK STATUS AND TRENDS

Effective policies and incentive systems to reduce the carbon footprint on the climate change of buildings require, as already underlined, a solid understanding of the current buildings state.

This section provides an overview on the historical trend of the construction sector with a focus on the residential building stocks.

### 1.2.1 Building sector in EU-28

Buildings plays a relevant role in the society and people life. The energy performance of the European buildings is generally inefficient, affecting the energy consumed in buildings and significant amount of Greenhouse Gas (GHGs) emitted. While new buildings can be constructed with high performance levels, it is the older buildings, that represent the vast majority of the building stock, which are characterized by low energy performance. With their potential to deliver high energy and CO2 savings as well as many societal benefits, energy efficient buildings can have a relevant role in a sustainable future. However, achieving the energy savings in buildings is a complex process and requires a long vision strategy. Policymaker in this field requires a meaningful understanding of several characteristics of the building stock. Reducing the energy demand requires the deployment of effective policies which in turn makes it necessary to understand what affects people's decision-making processes, the key characteristics of the building stock, the impact of current policies etc.

It is estimated that there are about 20 billion $m^2$ of useful residential floor space in the EU28 at 2015, that will increase into the next years. Almost 67% of the total estimated floor space is located in Spain, Italy, France, United Kingdom and Germany (range between 9 to 19%), followed by Netherland and Poland with the 4-5% of the total European heated floor area. While, the other countries account for less than the 2%.

Annual growth rates in the residential sector are around 1% (Figure 1.1) while most countries encountered a decrease in the rate of new buildings in the recent years, reflecting the impact of the current financial crisis on the construction sector. A substantial share of the stock in Europe is older than 50 years with many buildings in use today that are hundreds of years old.

More than 45% of European residential buildings were constructed before the 1970s when energy building regulations were very limited. Countries with the largest number of older buildings are Italy, UK, Denmark, Sweden, France and Slovenia. There wasn't data on Austria into BPIE datahubs. However, ENTRANZE calculated that about 56% of the households were built before the 1970 at 2008. A large boom in construction was recorded for all European countries, with a few exceptions, in 1971-1990.

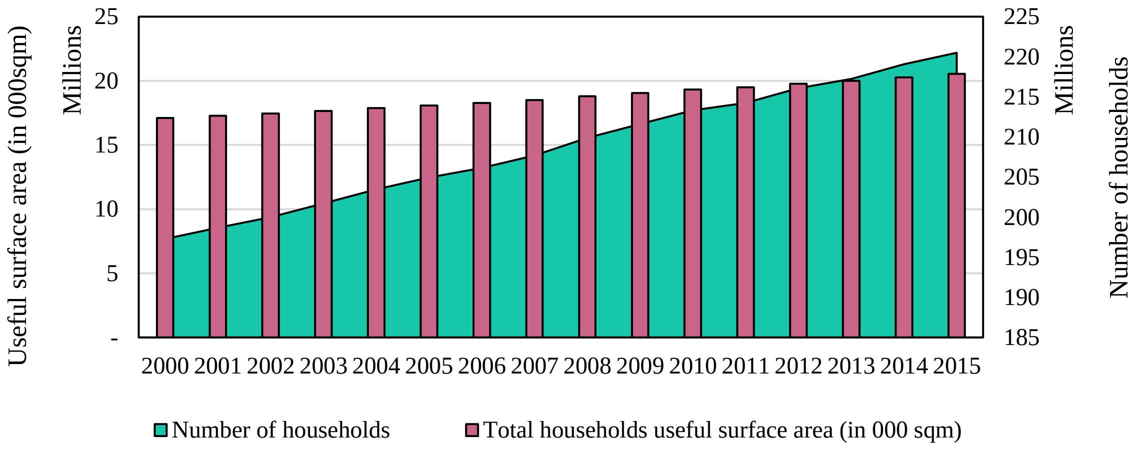

**Figure 1.1 Number of building stock and useful floor area EU-28** [14]

Instead, the performance of buildings depends on a number of factors such as the efficiency of the installed heating and cooling system and building envelope, climatic conditions, occupancy' behavior characteristics (e.g. typical indoor temperatures) and social conditions (e.g. fuel poverty). Data on typical heating consumption levels of the existing stock by age shows that the largest energy saving potential is associated with the older building stock where in some cases buildings from the 1960s are worse than buildings from earlier decades.

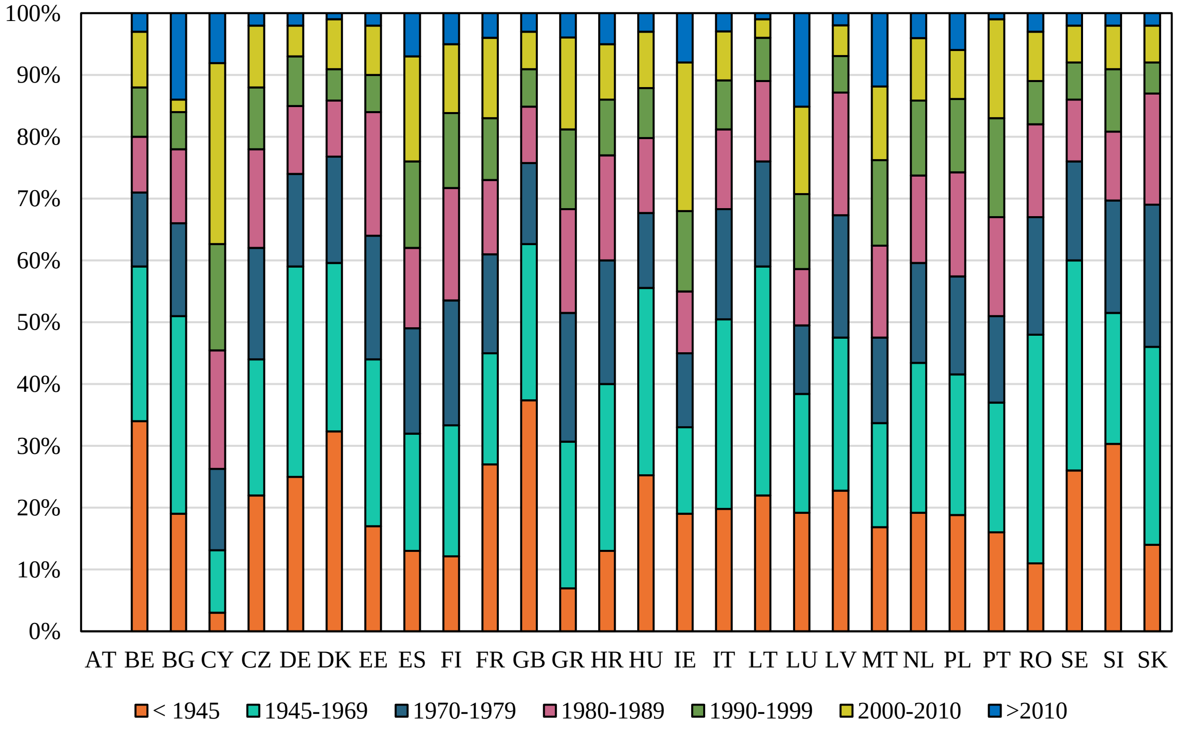

**Figure 1.2 European buildings overlook at 2014**[15]

The lack of sufficient insulation of the building envelope in older buildings was also reflected through the historic U-value data which comes with no surprise as insulation standards in those construction years were limited [15]. In the last decades, at European level, the percentage of the renovated building has been increased compared to the number of new buildings. In fact, after the 2009 the number of new houses decreased of about 35% in comparison with 2007. At 2015, the number of new households represents only the 23 % of the new and renovated buildings in EU-28.

The number of renovated houses had increased of about 7% in 2010 respect to 2009.

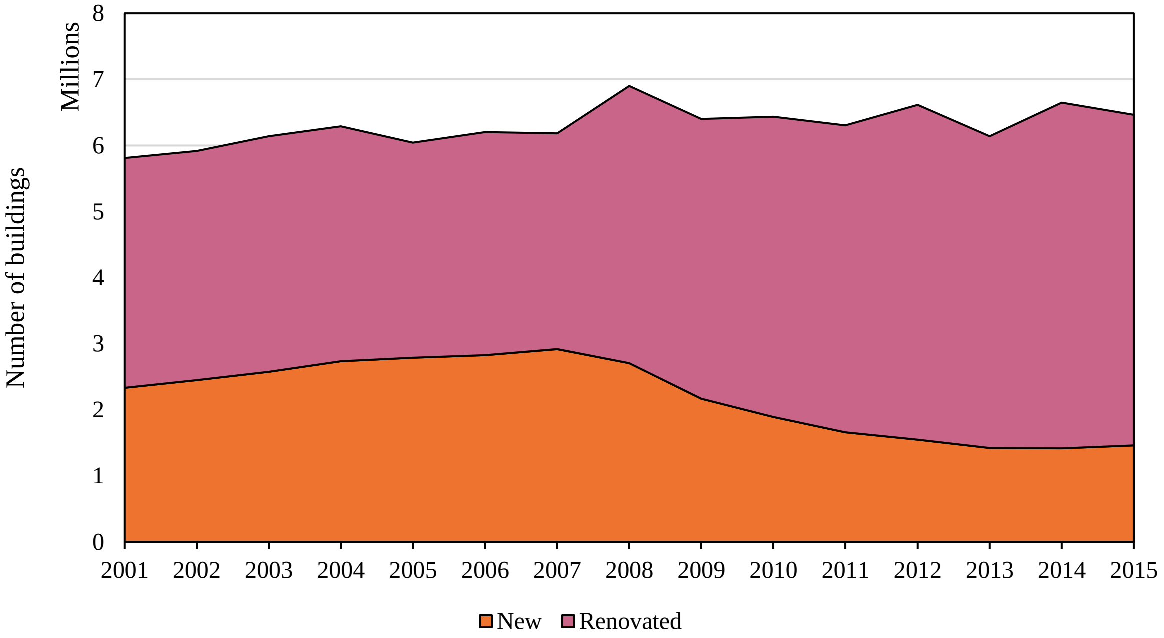

**Figure 1.3 Breakdown of estimated new and renovated buildings from 2001 to 2015(reworked of** [14, 16]**)**

Each country, according to its culture and its economic perspective, has different trends in living, whether it refers to the average number of people for family and to the tendency to have spaces more or less extensive per person or technologies used.

In the last decades, the European population grows up of less than 0.6% each year. The trend is similar in each member state of the EU-28. While the family composition in the last 20 years changed the way to live the house and the number of inhabitants' composition. Traditionally, the family has been defined as a group of people who are linked through blood or marriage, typically center on a married couple and their dependents. However, within the population and housing census a broader definition is applied.

A family ‘nucleus’ is constituted when two persons (of either sex) choose to live together as a married couple, in a registered partnership, or in a consensual union, whether or not they have children; single parents with children also constitute a family unit, while people living alone do not, nor do groups of unrelated people who choose to share a house together (for example, students) [17].

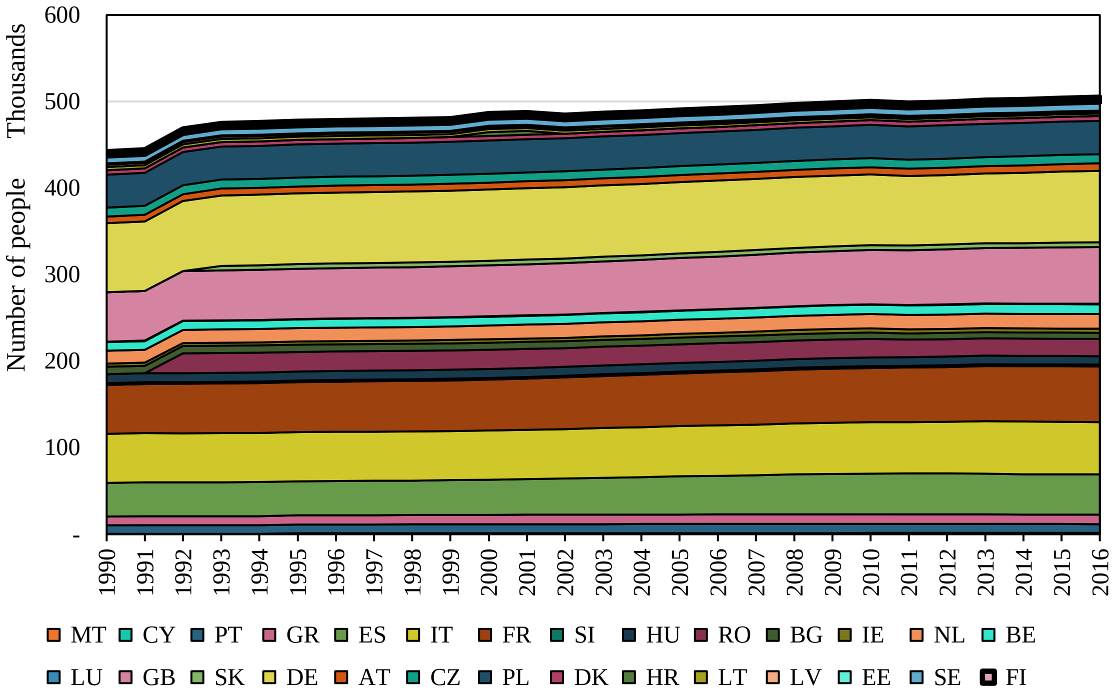

**Figure 1.4 Population trend 1990-2016** [17]

Families have been considerable changes in the household composition and living arrangements of Europeans: this is particularly true in relation to patterns of family formation, with traditional boundaries becoming increasingly blurred and different types of family nuclei becoming more common.

The percentage of average inhabitants for dwelling is around 2.3 person for dwelling in Europe at 2018, decreased of the 4% in comparison with EU-28 at 2010, where the number of inhabitants was around 2.4 (Figure 1.5). Similar trend has been verified in most of the countries of EU-28. The proportion of households made up of people living alone in the Europe is split geographically insofar as more people in the cold climatic zone (northern and western EU Member States) tend to live alone, while lower shares of single-person households are recorded in most of the warm climatic zone (southern and eastern).

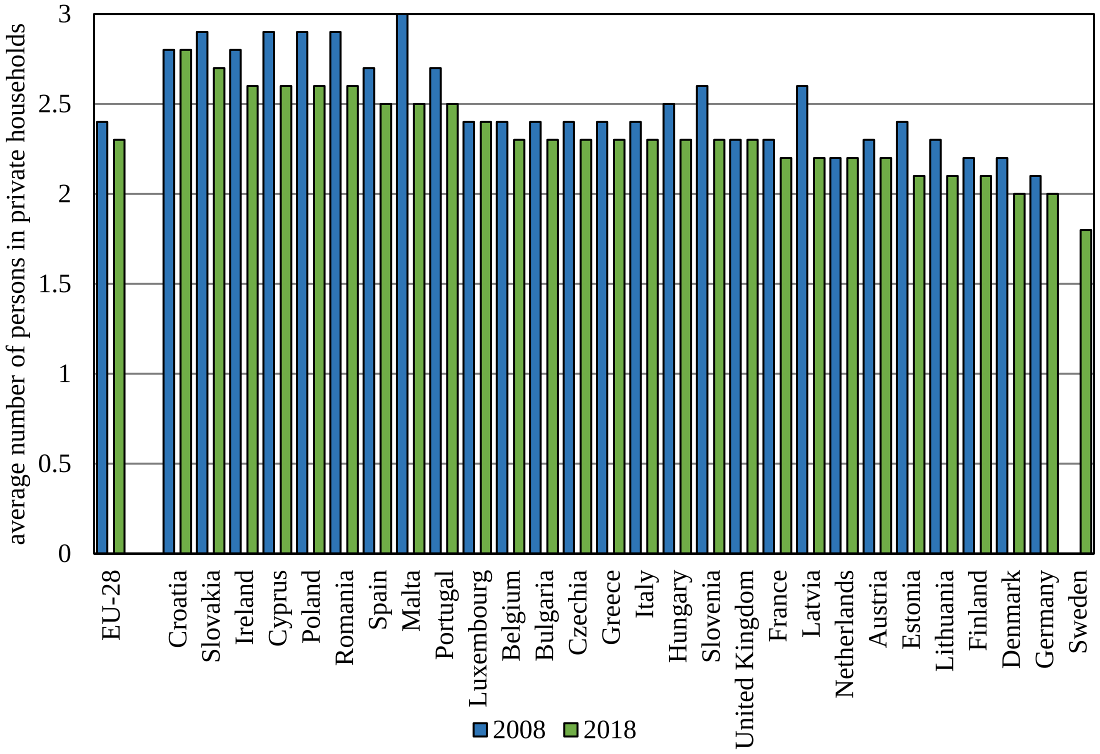

**Figure 1.5 Average household size, 2008 and 2018 (average number of persons in private households) comparing the data from 2008 to 2018 Eurostat (online data code: lfst_hhantych)**[17]

The different attitude of the people for climatic zone had been notice analyzing the Harmonized European Survey Time Use 2010 (HETUS). The data collected from HETUS are reworked for underlining an average behavior for country, showing some of the possible actions that, generally, people make at home. However, the analysis of the surveys does not give useful information on how many time people spent in household or where they are for that specific action, but allows to understand that it is not possible creating a unique households profile of energy consumption for all the EU buildings stocks if not with statistical and accuracy data.

Analyzing the data for generic climatic conditions, it was possible underline some little different between the country as show in Figure 1.7, where warm climatic zone include countries with an average HDD that it is less than 2300, instead cold includes the countries with an HDD superior to 4000 and moderate countries are characterized by an HDD in a range between 2300 and 4000 [13].

In addition, the Figure 1.7 shows the use of electric equipment or actions grouped for climatic condition: e.g. a great percentage of people eat round at 12:00 a.m. and 7:30, while in warm climate zone, the people eat around the 14:00 and 21:00. It is also possible observe that the category Personal care, that accounts the time spent for sleeping, is similar in all the country, expect for warm countries where some people sleep also around the 15:00 to 17:00. All of these observations could affect the energy consumed in each home. Several studies have been performed for defining a stochastic profile of the inhabitant's behavior. However, using standard profile could simplified the behavior assumptions into an energy model at European level.

### 1.2.2 Energy consumption in residential EU building stocks

The building sector is one of the key consumers of energy in Europe where energy use in buildings has seen overall a rising trend over the past 20 years. Today, European residential households are responsible for about 40% of the total final energy use.

Figure 1.8 shows the final residential energy consumption trend at European level. It can be observed that, after a peak in 2010 (320.0 Mtoe), the thermal energy consumption has reached its minimum in 2014 (265.1 Mtoe). These two values represent the maximum and minimum respectively for the 27-year period from 1990 to 2016. During the period 2000-2015, the final residential energy consumption in the EU-28 has dropped by 2.1%, from 290.9 Mtoe to 284.8 Mtoe [18].

In 2015, the total energy consumed by residential building stock in the EU-28 countries was 275 Mtoe. It corresponds to a decrease of 6% in comparison to the year 2000 and of 14% in comparison to the year 2010, when the primary energy consumption was 321Mtoe. The energy consumption and CO2 emissions in Europe are following similar trends.

Most of the energy used in buildings is consumed by equipment that transforms fuel or electricity into end uses such as heat or cool, lights, hot water, refrigeration, laundry cleaning, information management, and entertainment.

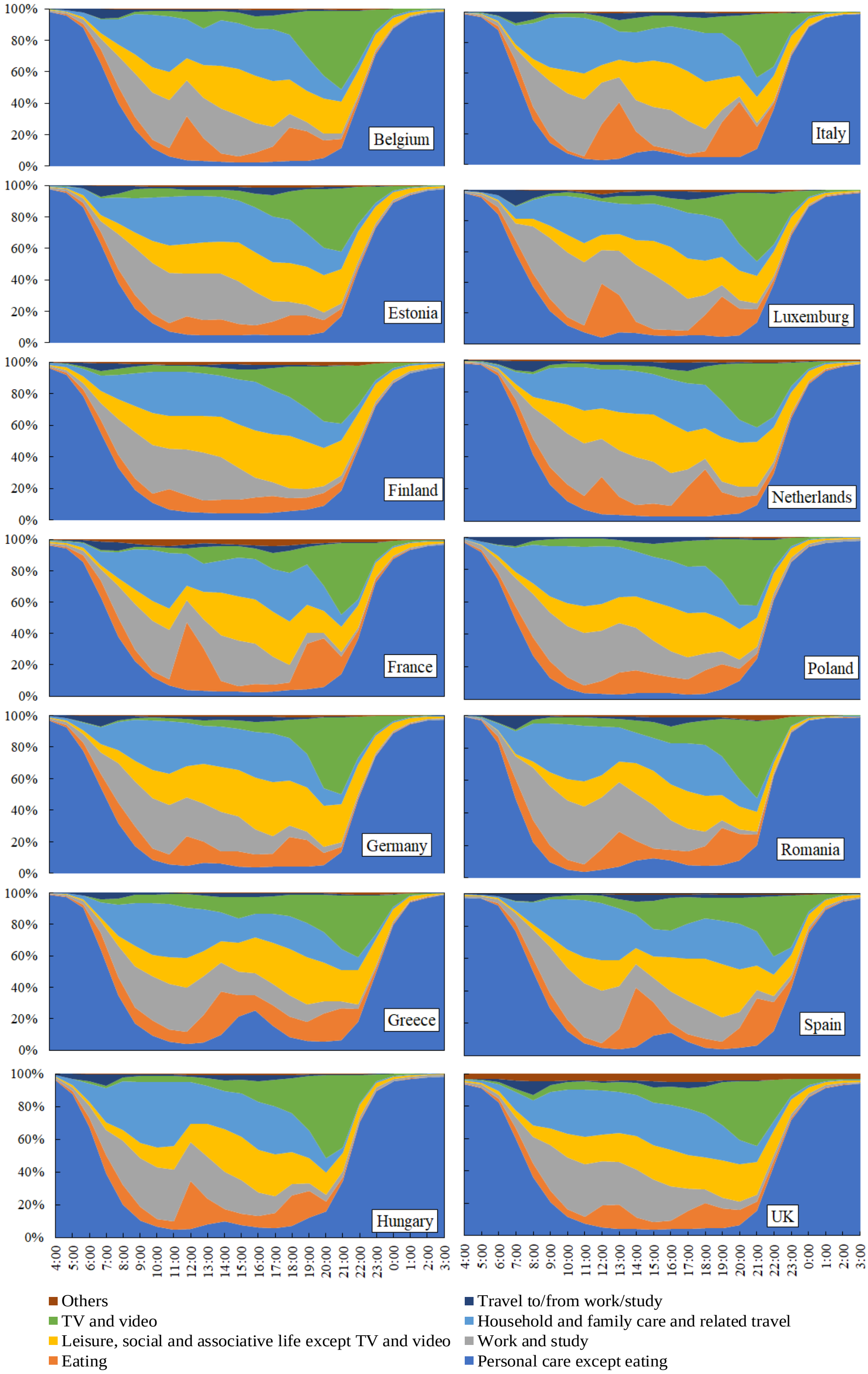

**Figure 1.6 Example of the percentage of people for country that do that action in a specific hour of the day (reworked from HETUS)**

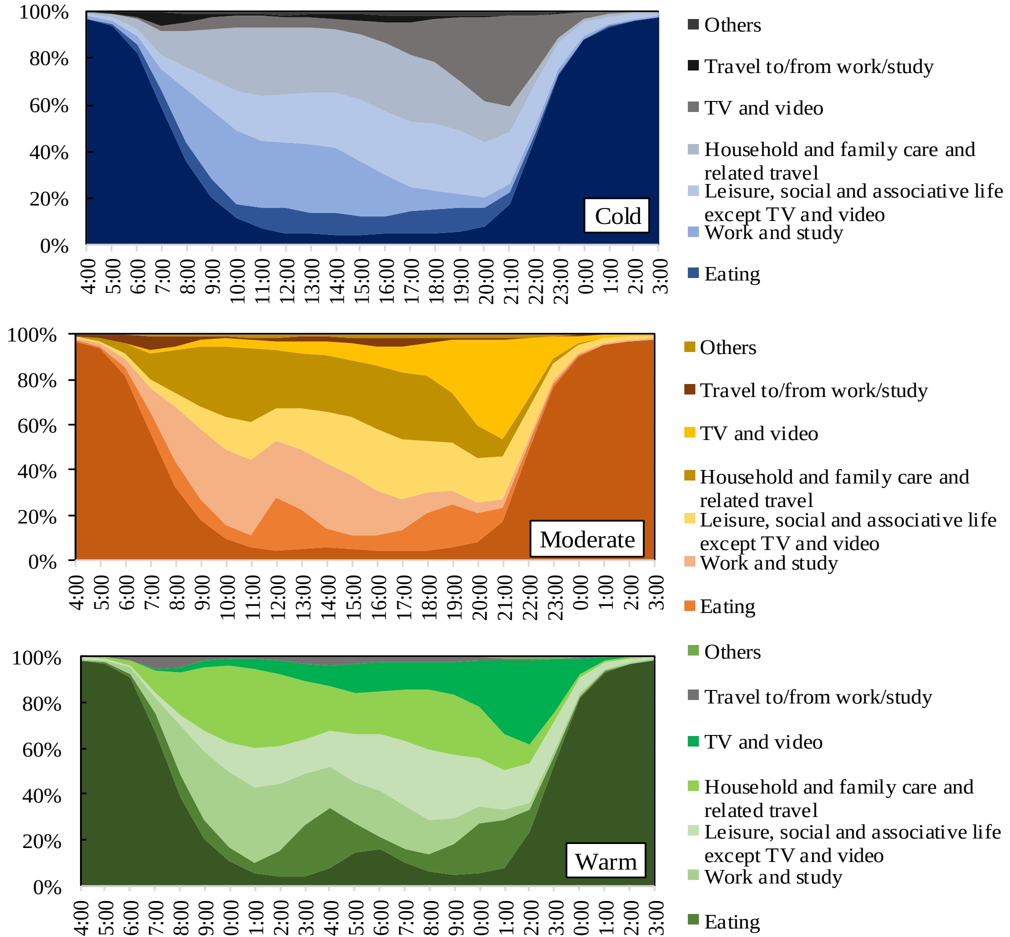

**Figure 1.7 Example of the percentage of people for climatic zone**

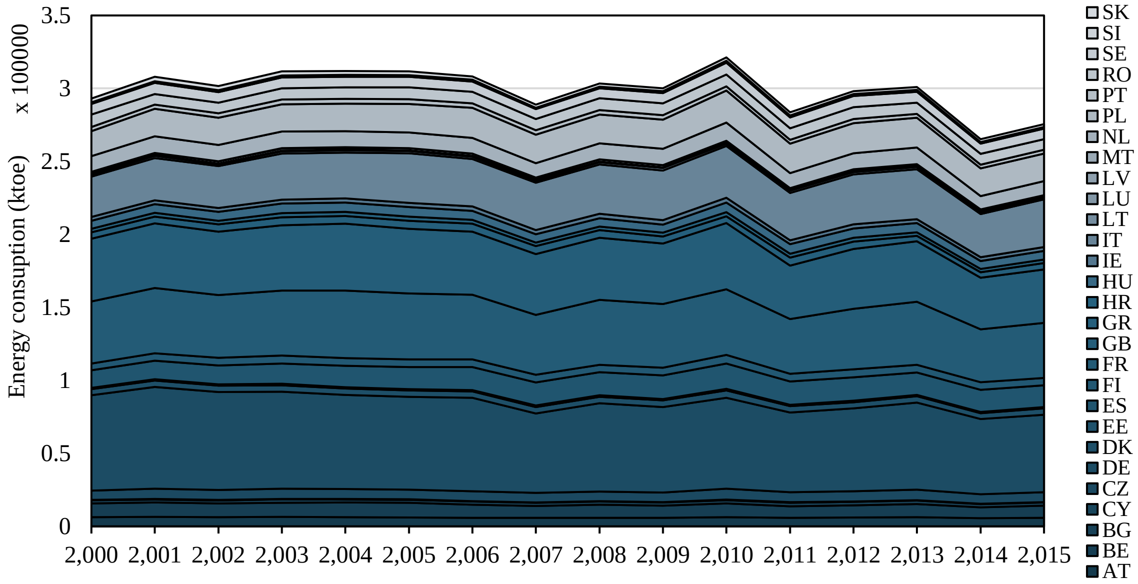

**Figure 1.8 Energy consumed by European residential buildings stocks – Eurostat structure** [14]

The most energy used in the residential sector is for heating space, followed by the DHW. In the last 10 years, the rate of energy required for appliance and lighting had been increase respect to the heating demand (Figure 1.10).

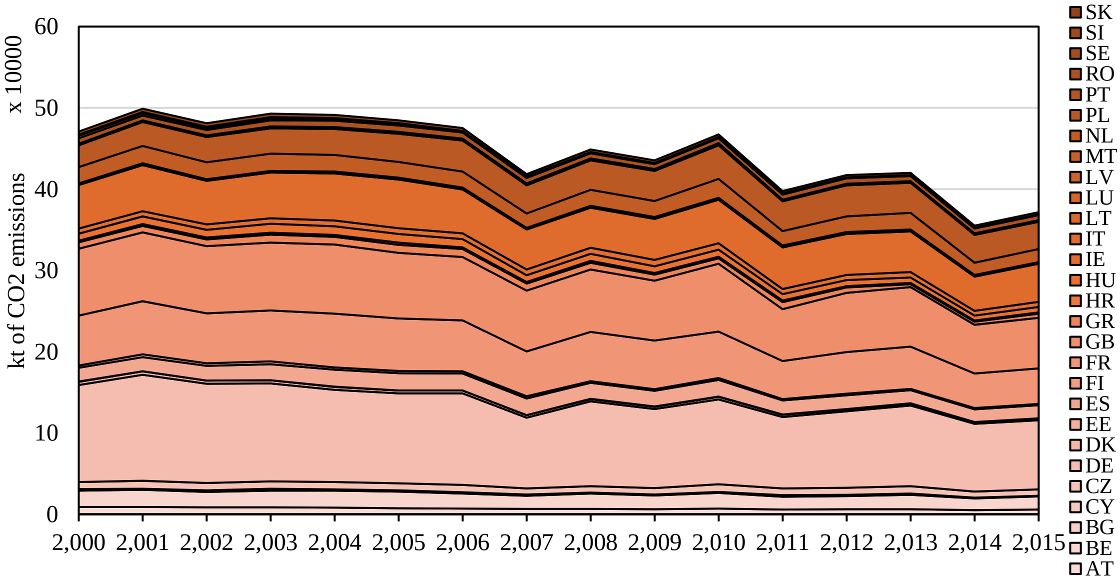

**Figure 1.9 CO2 emissions by European residential buildings stocks – Eurostat structure** [14]

It is possible split the energy demand in thermal energy and electricity for appliance and lighting. In addition, a breakdown of the thermal energy end use for building shows that at 2010, the 76% of the thermal energy end use was consumed for heating (about 213 Mtoe), followed by the Hot Domestic Water (DHW) with 16.12% (Figure 1.11). At 2015, instead, a reduction of the energy demand for thermal use shows an increasing of the energy demand for water heating, affecting the final energy consume for about 19%.

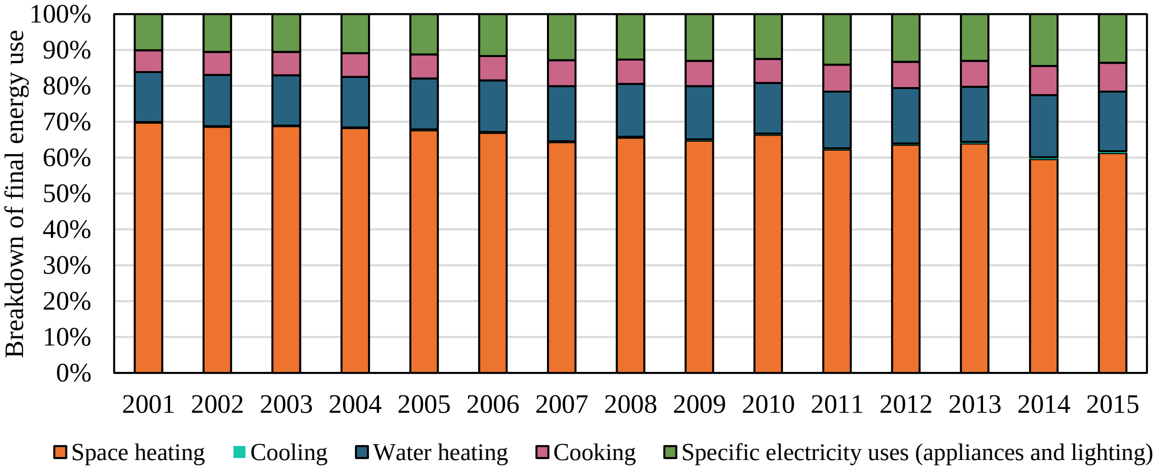

**Figure 1.10 Breakdown of the final energy use for heating, cooling, DHW, appliances and cooking**

However, it is important notice that there is a correlation between weather conditions and final thermal energy consumption in residential sector for heating and cooling demand (Figure 1.12 and Figure 1.13). Weather and climate are environmental conditions that affect energy consumption for space heating and cooling space: for instance, severity of winter or hot summer seasons can lead to occasional consumption peaks.

The parameters, which are related to the heating and cooling needs, are the so-called heating degree day (HDD) and Cooling degree day (CDD). This indicates that there is a strong correlation between the two indicators.

The differences in trends in 2009 and 2013 might be explained by the influence of other factors, notably in relation to income levels, building design, energy systems and behavioral aspects. In fact, the energy efficiency directives on the installation of more efficient HVAC systems or new construction of buildings retrofitted had been elaborated after 2010.

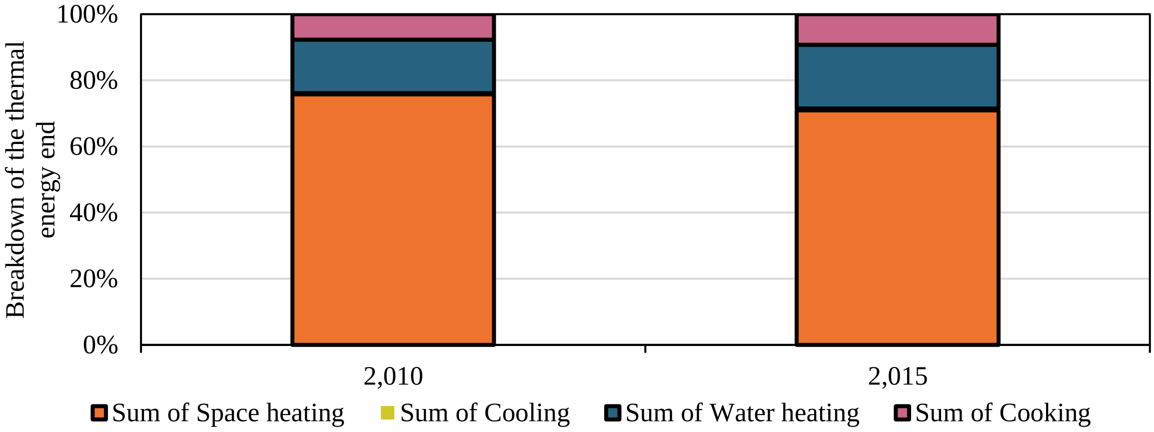

**Figure 1.11 Breakdown of the thermal energy end use at European level 2010 and 2015** [14]

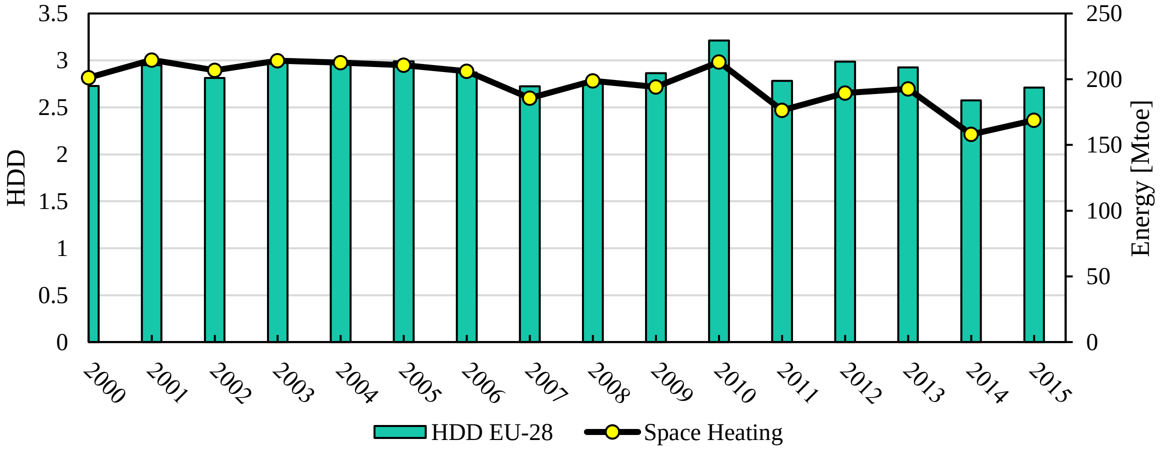

**Figure 1.12 Final residential energy consumption (detailed) and Heating Degree Days in the EU-28, 2000-2015** [14, 19]

Instead, Figure 1.13 shows that, in 2015, the energy required for cooling space grow up of about 2.5 times the energy consumed at 2000. EUROSTAT estimated that the production of derived heat from solid fossil fuels continued its long-term decreasing trend. In particular, it decreased by 27.3 % since 2000 and reached a record low of 155.6 TWh in 2017. Oil and petroleum products have a similar trend for heat production (whit a decrease of 60.5 % with a record low of 27.2 TWh in 2017).

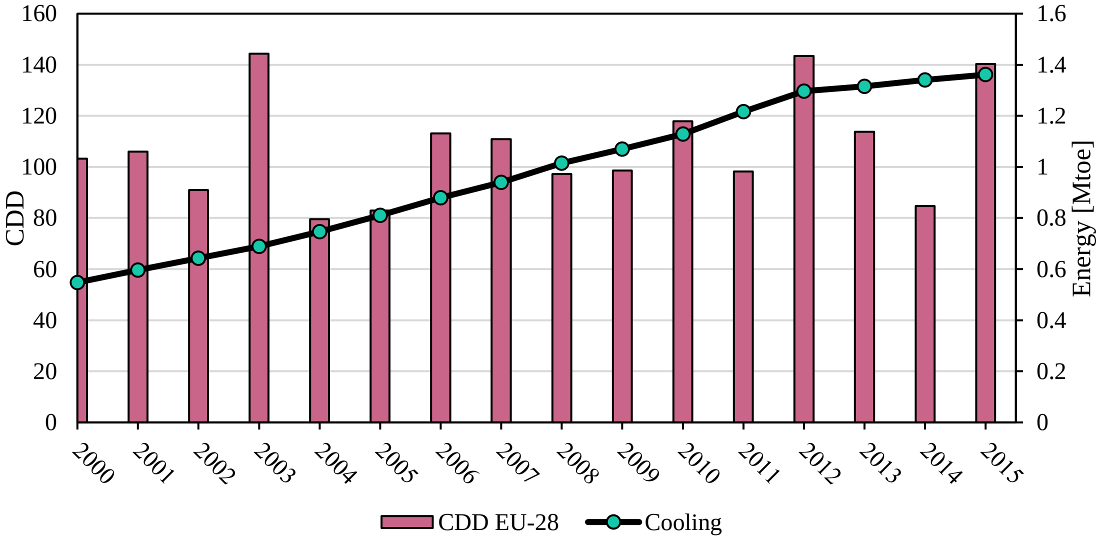

**Figure 1.13 Final residential energy consumption for cooling and Cooling Degree Days in the EU-28, 2000-2015** [14, 19]

Instead, natural gas and renewable energy increased by 12.8 % and 240.3 % in 2017 for the production of heating. However, in total, renewable energy sources contribute only by 26.5 % to the total derived heat generation. Derived heat from nuclear power plants play a marginal role into the sources involved into the heat production [20].

For the cooling space, today, it is not possible yet correlate the real energy consumed for cooling with the CDD, because not all the household have an air conditioner or forced ventilation systems.

The performance of households depends on a number of factors such as the performance of the installed heating system and building envelope, climatic conditions, behavioral characteristics (e.g. typical indoor temperatures) and social conditions (e.g. fuel poverty meaning that not all buildings are used at maximum capacity). Despite different improvements in, for instance, heating systems, there is still a large saving potential associated with residential buildings that has not been exploited. These technologies are easily implemented in new buildings, but the challenge is mostly linked to existing stock which forms the vast majority of our buildings.

Sufficient thermal insulation of the building envelope is in fact essential for shielding the interior of the building from the exterior environment and minimizing thermal transfer (heat losses or gains) through the envelope during the winter and summer periods. The lack of proper insulation in older buildings is clear in all countries due to the lack of insulation standards in those construction years.

The effect of the EPBD implementation can also be demonstrated especially in countries with no previous prescriptive-based requirements for new buildings Member States have different prescriptive, element-based requirements associated with building energy codes such as maximum U values, minimum/maximum indoor temperatures, requirements for minimum ventilation rates and boiler and/or air conditioning plant efficiency. In addition to the lack of sufficient thermal insulation, gaps at connection points between different elements of a building envelope (e.g. window frame and surrounding wall) can lead to considerable energy wastage. This highlights the importance of appropriate air tightness levels in a building. A building with high air tightness levels (that is, high air leakage levels and high n50 values) typically suffers from high energy consumption levels while a building with very high air tightness levels can cause unhealthy conditions for its occupants, especially if there is inadequate ventilation. The latter is typically linked to poor indoor air quality and the so-called sick building syndrome. Establishing the appropriate level of air tightness in buildings is, therefore, a key aspect from the viewpoints of energy usage and comfortable occupant conditions. Poor detailing in past construction techniques means that older buildings encounter high leakage levels.

Although, the thermal energy demand at European level has been reduced thank to the EPBD recast the electricity demand for equipment have been grow up in order to account that the comfort and style of life people is better than 1990.

The number of equipment at 2015 have been increased of about 56% in comparison with the 2000, where the total number of equipment was about 6.7 bln. Electricity consumption per capita in the buildings sector in the EU-28 in 2017 was about 1.6 MWh per capita. The range of electricity consumption per capita in the residential sector in the EU Member States in 2017 varied widely, from consumption below 1 MWh per capita in Romania, Poland, Latvia and Slovakia, to consumption of over 4 MWh per capita in Sweden and Finland (EUROSTAT, table “Supply, transformation and consumption of electricity [nrg_cb_e]”[17]).

Looking on electricity consumption per capita in the residential sector in non-EU countries, an even wider range is observed: from 0.7 MWh in Turkey and Georgia to 7.5 MWh in Norway. The range is affected by the choice of energy used for space heating, the climate conditions as well as the level of economic development of each country.

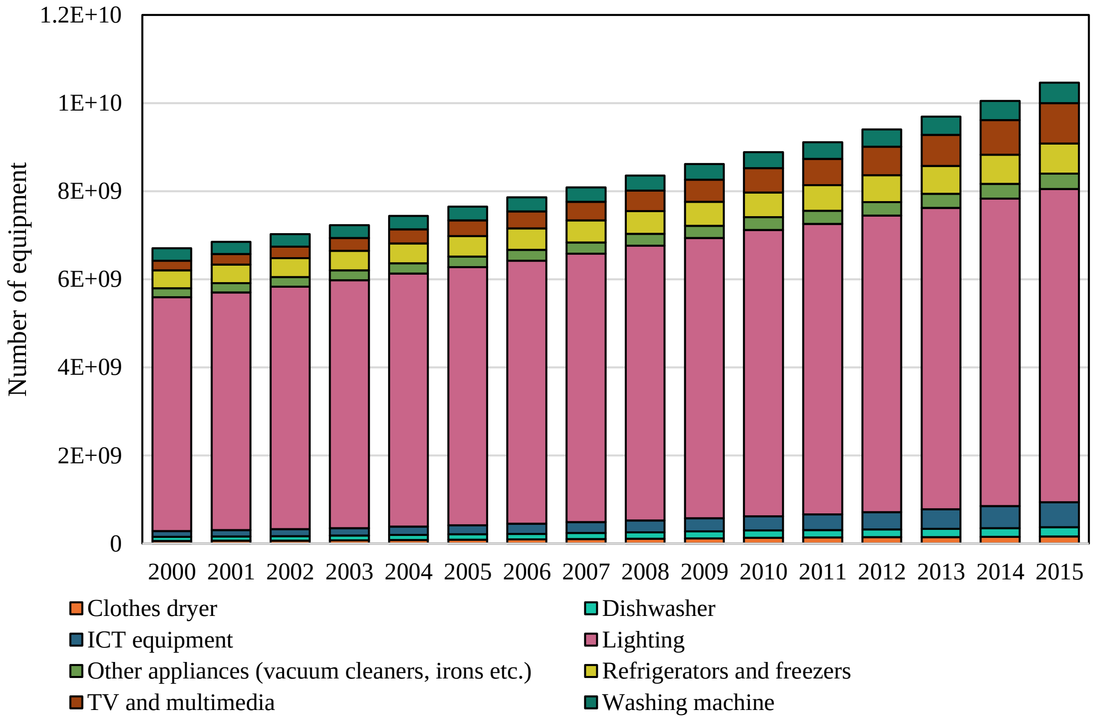

**Figure 1.14 Electric Equipment trend in residential stock in EU-28 from 2000 to 2015** [14]

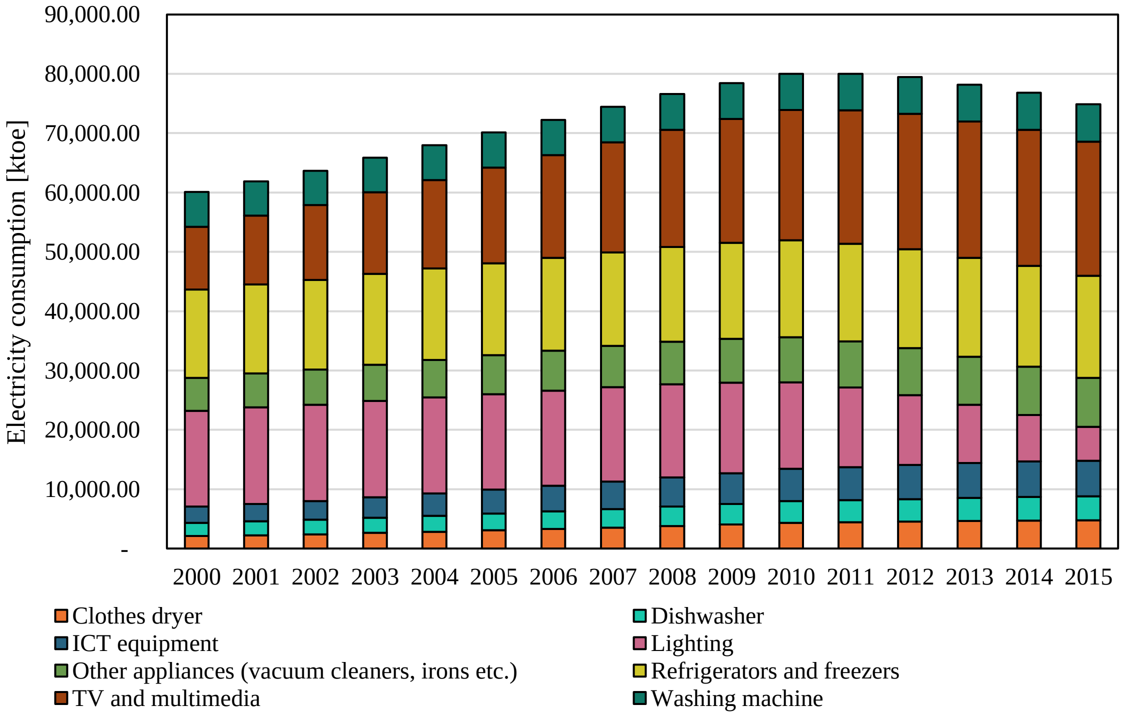

**Figure 1.15 Electricity consumption trend in residential stock in EU-28 from 2000 to 2015**

Although, the efficiency of new equipment has been improved, the number of the electric appliances have affected the electricity required at European level, increased of about 24% at 2015 respect the 2000. However, it is possible observe that the trend of the energy consumption increases of about 2% each year until 2010 and then, it decreases until 2015. Most of these benefits could be associated to the new lighting technologies (LED) that consume about half of the power for squared meter of the older ones or to the most efficient technologies, takin into account the European directives on the efficiency of the technologies.

In addition, as mentioned above, it is important understand that the energy demand trend change from country to country and depends also from inhabitants' attitudes (e.g. number of dwellers for house, type of family, when they eat or listen music, etc..).

## 1.3 POLICY AND STRATEGIES IN THE EUROPEAN BUILDING SECTOR

In the last decades, the EU has imposed regulations on reducing energy consumption strategies for buildings, using directives which set minimum requirements, obligations and measures for all Member States. Fistful, these directives included specific energy efficiency standards for new building stock. In a second moment, the directives had been upgraded for including the existing building stocks, that could account for 70% in 2050. Each EU directive has to be converted in Law by each Member States' legal systems (with equal or more stringent requirements) in order to reduce the energy consumption of this private and residential sector.

Drastic programs and actions are required at global and local level in order to control climate change and relative effects, increase of urban population, migration, increase of global energy demand and non-renewable energy resources depletion, global economic and financial crisis. Some European State Member already have implemented strategies, policies and national plan to renovated the existing building. This sections gives an overview of the main European strategies and regulation regarding the energy performance of the building stocks with a focus on the renovation strategies into the current local policies and regulation [6, 21].

### 1.3.1 European strategies

In the last decades, the EU's growing portfolio of legislation that addresses and promotes the reduction of the energy consumption of the residential building stocks, affecting the behavior of the end-users and the operations step of energy providers.

In the last directives and regulation, Europe proposed to include the energy and environmental impact into the building sector assessment, defining target and goals for each European member.

These goals have been included into two main standards: the Energy Performance of Buildings Directive (EPBD - Directive 2010/31/EU) and the Energy Efficiency Directive (EED - Directive 2012/27/EU) [6, 21].

This section provides a general overview on the EPBD and EED directives at European level. Bearing in mind that these regulatory instruments cannot be assessed in isolation, the third section further examined the supporting directives namely the RED and the Eco-Design Directive.

The European framework on building stocks includes different policy strategies as:

- Building codes for new buildings;
- Building codes for building renovation;
- Financial and fiscal support policies/programs;
- Obligation to install renewable heating systems in case of new buildings and renovation or replacement of the existing heating system.

Incorporating energy-related requirements during the design or retrofit phase of a building is a key driver for implementing energy efficiency measures which in turn highlights the role of building energy codes in reducing CO2 emissions and reaching the energy saving potential of buildings. Several Member States introduced building code requirements (prescriptive criteria) associated with the thermal performance of buildings.

In particular, there are a wide range of voluntary and regulatory initiatives or schemes that are designed to stimulate the energy efficient renovation of existing buildings in the EU.

Table 1.1 reports voluntary and regulatory initiatives or schemes for incentives energy renovation of the existing European building stocks.

The building codes for building renovation had been defined for two type of scenarios: current and ambitious. The first defined three types of renovation categories: major renovation which refers to the building codes; minor renovation meaning that in reality not all buildings fulfil the criteria set in the building legislation and deep renovation reflecting the nZEB definition.

While, in the ambitious scenario it is established that, from 2021 to 2050, all buildings fulfil at least the building standards and include another additional renovation level “deep plus” which means higher energy performance achievements compared to the deep renovation.

**Table 1.1 Overview voluntary and regulatory initiatives or schemes for incentives energy renovation in Europe** [22]

| **Type** | **Examples of policy option** |
|---|---|
| **Regulatory** | • Mandatory building codes<br>• Minimum Energy Performance Standards (MEPS)<br>• Refurbishment obligations<br>• Energy Efficiency Obligation Schemes (EEOS) |
| **Financial and fiscal** | • Subsidies and financial instruments<br>• Grants for research, innovation and demonstration programs (e.g. for nZEBs & smart meter roll-out)<br>• Tax incentives<br>• Energy Service Companies (ESCOs) |
| **Environmental benefits** | • Energy savings & GHG emissions reduction<br>• Reduced usage of materials |
| **Economic benefits** | • Employment<br>• GDP and public budgets<br>• Innovation<br>• Sectoral modernization<br>• Energy Security<br>• Productivity benefits Social benefits<br>• Health benefits<br>• Reduction energy poverty<br>• Wellbeing / Comfort benefits<br>• Energy bill savings<br>• Increase in property value & tenant satisfaction |
| **Financial barriers** | • Renovation costs<br>• Access to finance<br>• Low energy prices |
| **Technical barriers** | • Lack of technical solutions<br>• Cost of technical solutions<br>• Lack of knowledge of construction professionals Process barriers<br>• Fragmentation of the supply chain<br>• Burdening of home owners Regulatory barriers<br>• Varying ambition of performance requirements<br>• Multiple definitions for renovation Awareness barriers<br>• Lack of awareness |
| **Information campaigns & Labelling** | • Awareness raising and information campaigns<br>• EU Energy Performance Certificates (EPCs)<br>• (Voluntary) energy labelling schemes<br>• EU eco-design and energy labelling Others<br>• Voluntary and negotiated agreements<br>• Energy audits<br>• Skills development and capacity building programs |

The Energy performance of buildings directive (EPBD) is, together with the Energy efficiency directive, the main legislative instruments to promote the energy performance of buildings and to boost renovation within the EU [23].

### 1.3.2 Energy Performance of Buildings Directive (EPBD)

The first EU Directive on the Energy Performance of Buildings (EPBD) was proposed in December 16th, 2002 and became core reference for future studies on energy performance of buildings. In the last decades, the EPBD has been upgraded for taking into account new technologies and new materials with better energy performances. Also, the last update includes important directives on the refurbishment of the existing building stocks.

Objective of EPBD is to promote the improvement of the energy performance taking into account outdoor climatic and local conditions, as well as indoor conditions. It demonstrates the EU's ambitious efforts to address the interrelated and connected challenges of climate change and energy emanating from the EU's building stocks by making new and existing buildings more efficient.

It focuses on four main aspects:

1. Establishment of a calculation methodology: Member States were to implement a methodology for the calculation of the energy performance of buildings, taking account of all factors that influence energy use [6].
2. Minimum energy performance requirements: regulations would need to set minimum energy performance requirements for new buildings and for large (>1000m²) existing buildings when they were refurbished.
3. Energy performance certificates: an energy performance certificate would need to be made available whenever buildings were constructed, sold or rented out.
4. Inspections of boilers and air-conditioning: regulations would be needed, requiring inspections of boilers and heating systems (with the possibility of alternative approaches such as providing advice), as well as inspection of air conditioning systems.

Important outcome of EPBD is the necessity of a national energy performance calculation method for buildings covering both new and existing buildings. Performance evaluation is followed by renovation if necessary, certification, and inspection of HVAC equipment.

Over subsequent years, the continuously evolving regulatory framework has mobilized significant resources that led to the recasting of the European directive on the energy performance of buildings (EPBD) in 2010. The 2010 recast is considered the EU's main legislation covering the reduction of energy consumption. The directive promotes the reduction of energy requirements through the development of new building designs that reduces energy consumption and ultimately reduce $CO_2$ emissions and afterwards, promote energy production from renewable resources [24]. The primary focus of the EPBD is therefore to reduce energy usage demand and $CO_2$ emissions from the building stocks, promoting "cost-effective improvement of the overall energy performance of buildings, while taking into account climatic and local conditions as well as indoor climate environment" (EPBD Recital 8) [25].

The recast EPBD therefore focuses on enhanced quality assurance improvements to ensure the reliability and robustness of energy efficiency that lacked in the 2002 EPBD [26].

The recast EPBD introduced the concept of nearly Zero Energy Buildings (nZEB) and a target of 2018/2020 for their introduction. The EPBD do not settle minimum performance requirements that buildings must comply to be considered as nZEBs. In addition to this, the different European countries must implement their own national plans for increasing the number of nZEBs. In order that by the 31st of December 2020 all new buildings must be nearly zero-energy buildings.

On the 30 November 2016 the Commission proposed an update to the Energy Performance of Buildings Directive, approved on May 14, 2018 and published the Official Journal of the EU on June 19, 2018), to help promote the use of smart technology in buildings and to streamline the existing rules.

The revised EPBD (2018/844/EU), which amends parts of the 2010 EPBD and introduces new elements, is an important part of the implementation of "a resilient Energy Union and a forward-looking climate change policy" [4]. It was adopted on 9 July 2018 and constituted an important and concrete first delivery of the '*Clean energy for all Europeans' package and sent a strong political signal on the EU's commitment to the clean energy transition, as the building sector has a vast potential to contribute to a carbon-neutral and competitive economy".*

The EPBD 2018, in its Article 2a, sets out a framework for long-term renovation strategies to support the renovation of national building stocks into highly energy-efficient and decarbonized buildings by 2050, facilitating the cost-effective transformation of existing buildings into nearly zero-energy buildings ('NZEBs').

In accordance with Article 10 of the EPBD, policies and measures are required to:

a) link financial measures for energy efficiency improvements in the renovation of buildings to the targeted or achieved energy savings;
b) allow data to be gathered on the measured or calculated energy consumption of certain buildings; and
c) make available aggregated anonymized data.

Pursuant to Article 20 of the EPBD, information must be provided to owners or tenants of buildings or building units through accessible and transparent advisory tools.

The EPBD sets out a common general framework for determining buildings' energy performance, including the indicators and calculations to be used. These guidelines support correct implementation in national and regional regulatory frameworks. They reflect the views of the Commission. They do not alter the legal effects of the EPBD and are without prejudice to the binding interpretation of its Articles 2a, 10 and 20 and its Annex I, as provided by the Court of Justice of the European Union.

#### 1.3.2.1 EPBD implementation status in Europe

This section provides an overview on the implementation status EPBD directives in law from the different EU Member State, as elaborated in [27].

The EU Member States that have submitted the consolidated information on the basis of non-binding template are: Austria (AT), Belgium (BE) (Brussels Capital region, Flemish region, Walloon region), Bulgaria (BG), Croatia (HR), Cyprus (CY), Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Poland (PL), Portugal (PT), Slovakia (SK), Sweden (SE), and the United Kingdom (UK). Slovenia (SI) submitted the Action Plan for Nearly Zero Energy Buildings Up to 2020 in April 2015. Greece (EL), Romania (RO), and Spain (ES) have not yet finalized their templates, but ES and RO have established nZEBs national plan. However, the ENER templates allow to structure and make the information assessable. Many national plans have missing or vague information, which prevents a consistent and detailed evaluation and comparison across EU Member States [28]

General information provided by EU Member States on Regulations, Directives, or Certification schemes are summarized in Table 1.2 [28].

## Table 1.2 Regulation and directives recipe for nation

| Country | Regulation/ Directive/Certification scheme | Editor | Year |
|---|---|---|---|
| **AT** | OIB-Dokument zur Definition des Niedrigstenergiegebäudes und, on the definition of nearly zero-energy building and setting of intermediate objectives (National Plan, the basic document for OIB Guideline 6, Energy economy and heat retention). | OIB/Länder | 2012 |
| **BE** | Brussels Capital: The Brussels Air, Climate and Energy Code (COBRACE), Flemish region: Flemish Action Plan nZEB – Energy Decree, Energy Law, Walloon region: Co-ZEB study – Regional Policy Statement, execution order adopted on 28th of January 2016 settings nZEB definition. | Flemish Energy Agency in Flemish region | 2013 |
| **BG** | National Plan for Nearly zero-energy buildings | Ministry of Investment | 2014 |
| **CY** | Nearly Zero-Energy Buildings Action Plan - Decree 366 | Ministry of Energy, Commerce, Industry and Tourism | 2012-2014 |
| **CZ** | The Energy Management Act n. 406/2000 Coll. | Ministry of Industry and Trade | 2012 |
| **DE** | EnEG, EnEV, EEWärmeG | Government | EnEG 2013,<br>EEWärmeG 2011 |
| **DK** | Building Regulation (BR10) | Ministry of Economic and Business | 2010 |
| **EE** | Minimum requirements for energy performance- VV n. 68: 2012 | Ministry of Economic Affairs and Communications | 2012 |
| **FI** | National Building Code of Finland | Ministry of the Environment | 2012 |
| **FR** | Réglementation Thermique 2012 (RT 2012) | Government | 2013 |
| **HU** | 7/2006 (V. 24.) TNM degree | Ministry of Interior | 2012 |
| **HR** | Technical regulation for building structures | Government | 2017 |
| **IE** | Building regulation Part L amendement-Buildings other than Dwellings SI | DECLG | 2008 |
| **IT** | Decree of June 26th, 2015 concerning new minimum requirements and methodology for calculating energy performance of buildings | Ministry of Economic Development | 2015 |
| **LT** | Building technical regulation STR 2.01.09:2012. Law on Renewable Energy, on Construction, Construction Technical Regulation STR 2.01.09:2012 "Energy Performance of Buildings. Certification of Energy Performance", STR 2.05.01:2003 "Design of Energy Performance of Buildings" | Government | 2012 |
| **LU** | 1) RGD 2007: Règlement grand-ducal modifié du 30 novembre 2007 concernant la performance énergétique des bâtiments d'habitation2) RGD 2010: Règlement grand-ducal modifié du 31 août 2010 concernant la performance énergétique des bâtiments fonctionnels 3) Nationaler Plan Luxemburgs zur Erhöhung der Zahl der Niedrigstenergiegebäude | Ministry of Economy | 2007-2010-2013 |
| **LV** | Cabinet Regulation n.383 from 09.07.2013 "Regulations regarding Energy certifications of Buildings" and amendments adopted on November 10th 2015, entered into force on November 21st, 2015. | Government | 2013 |
| **MT** | LN 376/2012, transposing Directive 2010/31 | Ministry for Transport and Infrastructure | 2012 |
| **NL** | EPG 2012 - National Plan to promote nearly zero-energy buildings Bouwbesluit | Government | 2011 |
| **PL** | Resolution No. 91/2015 of the Council of Ministers of 22 June 2015 On the adoption of the National Plan aimed at | Government | 2015 |

| Country | Regulation/ Directive/Certification scheme | Editor | Year |
|---|---|---|---|
|  | increasing the number of buildings with low energy consumption (MP pos. 614) |  |  |
| **PT** | Decreee-Law 118/2013, August 20th | Government | 2013 |
| **RO** | National Plan for Nearly zero-energy buildings – included in the 3rd NEEAP, approved by Governmental Decision no.122/2015 | Ministry of Regional Development and Public Administration | 2014 |
| **SI** | Action Plan for Nearly Zero-Energy Buildings Up to 2020 (AN sNES) | Government | 2015 |
| **SE** | Building regulations BBR 2012 | The Swedish Board of Housing, Building and Planning | 2013 |
| **SK** | Act No. 555/2005 Coll. as amended by the act No. 300/2012 Coll. | Ministry of Transport, Construction and Regional Development | 2013 |
| **GB** | Building Regulations Energy Efficiency Requirements: England (Part L); Wales (Part L); Scotland (Section 6); Northern Ireland (Technical Booklet F) | HM Government;<br>Welsh Government;<br>Scottish Government;<br>Northern Ireland Assembly | 2013 |

#### 1.3.2.2 EPBD challenges and opportunities

An overview of the main barriers and challenges in relation to nZEBs appear common among the countries [29]. They are primarily political, but also technical, financial, and related to a lack of information and awareness of key actors and stakeholders. Energy efficiency policies can generate other barriers such as some invisible extra costs such as maintenance and transport.

The EPBD does not take into account energy inefficiency or any verification about the environmental impacts generated by building construction, maintenance and disposal [24]. This has resulted in considerable energy efficiency during the buildings' operational phase while undermining the environmental impacts and energy inefficiencies of buildings that result from the buildings construction, maintenance and disposal.

A disconnection can be identified between developing innovative technologies from the building industry and the lack of uptake due to budget constraints. Awareness of how users consume energy in residential buildings should be increased. Furthermore, it is widely recognized that energy targets are challenging for cultural and historic buildings. In relation to nZEBs renovation, existing building structures set limits to what extent the existing technical solutions can be implemented. This limitation is more relevant where the architectural value of the building needs to be conserved, making the retrofit processes more challenging. Furthermore, existing technical solutions are perceived as expensive adding to the main financial challenge of having high investment in renovation projects. A return of the investment appears often as difficult apart from considering savings through the life cycle of the building; in this case the initial investment costs are lower than those of the overall operational costs. The payback period for renovation may take between 15 and 30 years, and often residents do not benefit from this period. Moreover, a landlord cannot, or does not want to raise rents and becoming uncompetitive in the market as the difference between non-efficient and efficient buildings is not considered by the tenants.

It is also common that a lack of knowledge regarding efficiency is spread among professionals and residents. Communication of best practices is important to increase knowledge among professionals and general public on energy-efficient renovation and technical solutions. A follow-up is important to ensure that residents use buildings properly.

Communicating with end users has been identified as necessary. End user behavior after a completed renovation is also a challenge in the retrofit process. In relation to financial barriers, public authorities have a leading role in setting up financing schemes for national or local contexts. The level of ambition of financial programs rises in order to have greater impact and unlock further private investment for energy efficiency. Legislation and financial incentives also have a strong influence in developing nZEBs projects.

The cooperation between institutions and individuals is essential for the implementation of energy efficiency policies. Communication and information between involved actors and organizations of the renovation project, as well as with the residents, are among the factors that can provide a successful efficiency renovation. Involving the media in energy and environmental issues can raise customers' awareness.

To overcome financial barriers, market-based regulatory instruments like Energy Performance Contracting (EPC) can reduce transaction costs as well as researching financial support establishing partnerships with international bodies and institutions.

Spreading local energy audit programs in public buildings can also help remove barriers as well as a global diffusion of new technologies using renewable resources. This is also important to fill the technological gap and ensure the effectiveness of energy efficiency measures.

### 1.3.3 Energy Performance Certificates

Energy Performance Certificates (EPCs) are regarded as the cornerstone of the effort to reach the EU's emissions reduction target of the building sector [30]. EPCs provide useful information to the public which is essential in promoting energy efficiency They provide enhanced information to a broader network of building owners and occupiers about how to reduce emissions through energy efficiency. Evidence from the UK [26] indicates that the results of actual energy performance have been significantly higher than the standardized and theoretical performance determined under Article 3 since actual operating conditions often differ from standardized conditions [26]. There is always an energy efficiency or performance gap due to the discrepancy of the actual energy performance of a building with its theoretical performance [26]. In some Member States the discrepancy derived from using the EPBD compliant software is up to 30%.

#### 1.3.3.1 Energy Efficiency Directive (EED)

The EED recast (2012) was developed with the primary objective "to establish a common framework of measures for the promotion of energy efficiency" replying and merging two directives on energy efficiency to ensure that opportunities for improvements are addressed.

The EED was intended to help achieve the target of 20% primary energy savings in 2020, offer a direct response to increased dependence on energy imports, climate change mitigation initiatives, and ensuring energy security within the EU Member States [26]. It is well understood as a key policy instrument to decrease energy consumption of EU buildings [31].

The directive mandates Member States to use energy more efficiently at all stages of the energy chain, from production to final consumption in various sectors of the economy to promote smart use of energy [32]. The EED promotes the reduction of energy demand compared to the business-as-usual pathway where energy demand is rising rapidly within the EU and globally as a result of rapid industrialization and urbanization in particular. The EED has key Articles and measures on energy efficiency promotion which are directly linked to buildings. Some Articles have cross-sectoral level coverage with great relevance to energy efficiency of buildings. Although the EED is a cross sectoral instrument, this section will address the main components of the directive which is applicable to energy efficiency of buildings. The focus will be on renovations and energy usage by public buildings, energy efficiency supply obligations, efficiency in energy use and horizontal provisions which are geared to drive GHG emissions.

The EED introduces measures to be undertaken by Member States and utility companies for improving energy efficiency and reducing dependency on oil and gas imports by creating an energy efficiency obligation requirement in Article 7. The ways in which these measures are implemented are left to the discretion of the Member States.

With the energy savings or reduction obligation to 1.5% per year, the Article lays great responsibility for utility companies (energy distributors or retail energy sales) to be major players in reducing the customers' energy use of buildings and other sectors of the economy. They have control of the infrastructure and customer base which is important to GHG emissions. In this context, the utility companies are turned into service companies rather than simply sellers of energy thus introducing legal obligations that make utility companies key players in the energy efficiency game.

Article 8 outlines the obligations to implement energy audits and energy management systems to be carried after every 3 years. Energy audits and management system tools provides additional measures for reducing end-user energy by providing consumers with the necessary information and tools to make more energy efficient decisions. Energy audits are "used to identify, quantify and report existing energy consumption profiles and energy savings opportunities in buildings, industrial or commercial operations or installations, and in private or public services" [21].

### 1.3.4 Legislative context for sustainable building renovation

Across Europe and other developed regions, buildings represent the largest potential for cost-effective carbon emission reduction and with it, improvement in energy security, as well as a myriad of other benefits. Historical, the renovation of buildings has not been a priority, either for policy-makers or building owners and investors. Today, it becomes one of the main solutions for reducing the energy demand of the residential and non-residential buildings.

The Energy Performance of Buildings Directive (EPBD, 2002) required EU Member States to implement a number of measures, including the introduction of Energy Performance Certificates and inspection of heating, ventilation and air conditioning (HVAC) systems. Another fundamental aspect of the EPBD was the need for Member States to set energy performance requirements for new as well as existing buildings, and for these to be revised on a regular basis. Many of these requirements were strengthened in the 2010 recast of the Directive (EPBD 2010), which most notably introduced the requirement for all new construction to be nearly zero-energy buildings from 2021 (2019 for buildings owned and occupied by public authorities). In the 2010 recast it is furthermore highlighted that, when setting minimum energy performance requirements, the general indoor climate conditions shall be taken into account in order to "avoid possible negative effects" (EPBD, Article 4).

The purpose of this section is to provide a comprehensive assessment of the existing building stock. The basis of a good renovation strategy is establishing an accurate understanding of the building stock, including age, building typology, heating source etc. A detailed, bottom-up breakdown by building type, age, energy carrier, climatic zone, energy performance, occupancy and ownership are a fundamental knowledge requirement to underpin subsequent steps in the strategy.

Article 4(a) of the EED already provided the starting point for LTRS by requiring an overview of the national building stock.

Article 2a(1)(a) of the revised EPBD adds to this by requiring Member States to include the “expected share of renovated buildings in 2020" in their LTRS.

The expected share of renovated buildings may be expressed in different ways such as:

- percentage (%)
- absolute number
- $m^2$ of renovated space per type of building.

Renovation depth could also be used to better describe the nature of renovated buildings, such as "light," "medium" and "deep". Transformation into nZEBs could be another indicator.[1]

"Expected share" is not intended as a binding target but rather that realistically represents the likely rate of completed building renovation in 2020. Member States can also mention the expected share of completed renovation for 2030, 2040 and 2050, in line with the requirement to provide indicative milestones for these years.

Buildings should be categorized according to year of construction; possible past renovation attempts; general uses; associated energy consumers; calculated, measured or estimated energy consumption; and heating system types. As a minimum, for public buildings the floor area (expressed in square meters) and data on the energy performance

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[1] The following renovation depths have been developed in the context of the EU Building Stock Observatory, based on primary energy savings: light renovations (less than 30%); medium renovations (between 30% and 60%); deep renovations (beyond 60%). nZEB renovations are not defined in terms of a specific primary energy saving threshold, but according to official national nZEB renovation definitions.

should be collected in the overview. Data on energy performance means data on energy consumption or total energy use, or data from EPCs. The EPCs required for buildings (over 250 m²) occupied by public authorities and frequently visited by the public could provide a useful source of data and information on public buildings. These may have already been compiled, to some extent, at a national level, where inventories of buildings owned and occupied by central government should be developed.

### 1.3.5 Technical building systems and renovations

Among major requirements of the directive, the Member States are obliged to promote the implementation of intelligent energy consumption metering systems in new buildings or existing renovated building stocks (Article 8.2). The directive ensures that the energy performance of new or existing buildings is calculated.

The EPBD shows the EU’s increased attention on buildings renovation quality, rate and efficiency. Member States are encouraged to adopt actions and measures to harness energy savings opportunities in the building sector through deep and major renovations [31]. The Union has demonstrated high ambition to tackling the high energy consumption of these old existing buildings as outlined in Article 5 and 7. The rate of renovations has been low ranging from 0.5% to 2.5 % per year across Member States. The Fraunhofer Institute research conducted on behalf of the European Commission indicated variations across EU regions, with rates of 1.2%, 0.9% and 0.5% per year were found for North-Western Europe, Southern Europe and new Member States respectively [33].

### 1.3.6 Other Directives

The EU has other regulatory instruments to decrease energy consumption, promote energy efficiency, reduce GHGs emissions and mitigate climate change from buildings. The Union also relies on the Renewable Energy Directive (RED) and the Eco-Design Directive to achieve an EU-wide goal of improving energy efficiency by 27% by 2030 among other instruments. The EU deploys a mix of legal instruments to target different parts of the problem of escalating energy demand to ensure that the Climate change and energy package broad objectives and goals are achieved.

#### 1.3.6.1 Renewable Energy Directive (RED)

The EU's climate and energy policy goals are both served by the expansion of the renewable energy sector as incorporated into the RED [34]. The new RED amended and repeals Directives 2001/77/EC and 2003/30/EC) and aims to promote the use of energy from renewable sources by establishing a common framework for the use of energy from renewable sources in order to limit GHG emissions.

The Directive specifies national renewable energy targets for each country, taking into account their overall potential for renewable production. This aspect is crucial in nZEBs as these buildings must combine high efficiency technologies with renewable production.

The co-existence of the RED framework measures and the energy efficiency may lead to overlaps, synergies and conflicts between them [35]. RED enables the full potential to reach energy efficiency in buildings to be realized through potentially increasing building renovation. Renewable energy and energy efficiency are the twin pillars that must be developed aggressively together to reduce emissions in buildings [36]. Slowing the demand of energy usage should be met by the increased adoption of clean energy to effectively reduce emissions from buildings.

RED promotes green buildings and energy efficiency of buildings by ensuring that the Member States adopt policies and targets that enhance the uptake of renewable energy sources particularly in heating and cooling of existing and new buildings. RED obliges Member States to adopt a requirement for a minimum level of energy from renewable sources in new and renovated buildings into their building codes [37]. It also defines technology-specific restrictions of heat pumps and bioliquids in new and existing buildings that are subject to major renovations thereby promoting buildings energy efficiency [38]. The EU has advocated for public buildings to be exemplary and in this regard, the directive provides a supportive legal framework that obliges Member States to enhance the deployment and use of RES in new public buildings and those that are subject to major renovation [38]. The directive aims to provide the strongest basis for consistent growth of renewable energy production towards significant GHG emission reductions, energy supply diversification and technological innovation [34].

#### 1.3.6.2 Eco-Design Directive

The Eco-Design directive was initially introduced in 2005 and updated in 2009 introducing measures for Member States to become more efficient in energy consumption by addressing issues pertaining to energy using products and energy related products in buildings. It is a fundamental directive that has a wider mandate in addressing the environmental performance of products during the product life cycle. The directive has a large potential towards EU objectives on energy efficiency and GHGs emissions reduction [39].

It establishes “a framework for the setting of eco-design requirements for energy-related products” in buildings focusing on energy and environmental performance standards [38]. In its entirety it stipulates minimum efficiency standards for technologies used in the building sector such as boilers, hot water generators, pumps, ventilation, fridges, lamps, windows, insulation materials, etc. [15] that meets the qualification criteria in Art 15 (2). The directive applies to products that have more than 200,000 sales units per year in the EU, significant environmental impact and there should be a great potential of environmental improvement [39].

The Eco-Design directive recognizes that energy savings can be achieved through improved design of products that use, generate, transfer, or measure energy usage. In Finland alone it has resulted in energy savings of 1,278 GWh/a in 2016 and a projected 4,259 GWh/a by 2020 while the EU has a yearly projected savings of 39 TWh on domestic lighting, 135 TWh on electric motors (boilers and pumps and circulators), 8 TWh on domestic refrigeration and 34 TWh on fans yearly by 2020 [39]. The directive ensures the achievement of energy efficiency in buildings by ensuring that the most inefficient and poorest performing products are eliminated from the market, thus not finding their way in buildings. It is important to market transformation and behavioral changes in the equipment selection and operation of new and existing building stocks [40].

## 1.4 ENERGY AND ENVIRONMENTAL MODELING ON EUROPEAN BUILDINGS STOCKS

This Section provides an overview on the types of modeling approach that have been developed for creating building energy predicting models in literature with their strengths and limitations, and includes a description of how the chosen modelling approach fits the aims of this thesis.

After a generic overview on the types of approach defined in literature, this section is restricted to modeling that has the specific purpose of studying the renovation of the building stock’s energy performance and associated environmental impacts on the national or European level.

Although, the studies on energy building stock models and their implementation at various temporal and spatial levels have been carry out for several years. Different models were developed for a multitude of applications and scopes: e.g. to study a single house or a city or country, to evaluate the low carbon and energy strategies or to estimate climate change effects on building sector.

This section briefly presents existing approaches to model the energy demand and energy consumption of buildings with a focus on the sustainable assessment. Such overviews and comparisons have already been given extensively by other researchers, either on a detailed model-by-model-based analysis or already on a meta level [9, 41, 42]. Instead, each approach requires different level of detail of the available input data and they can vary dramatically: from the use of different modeling techniques to the advantage of the available information.

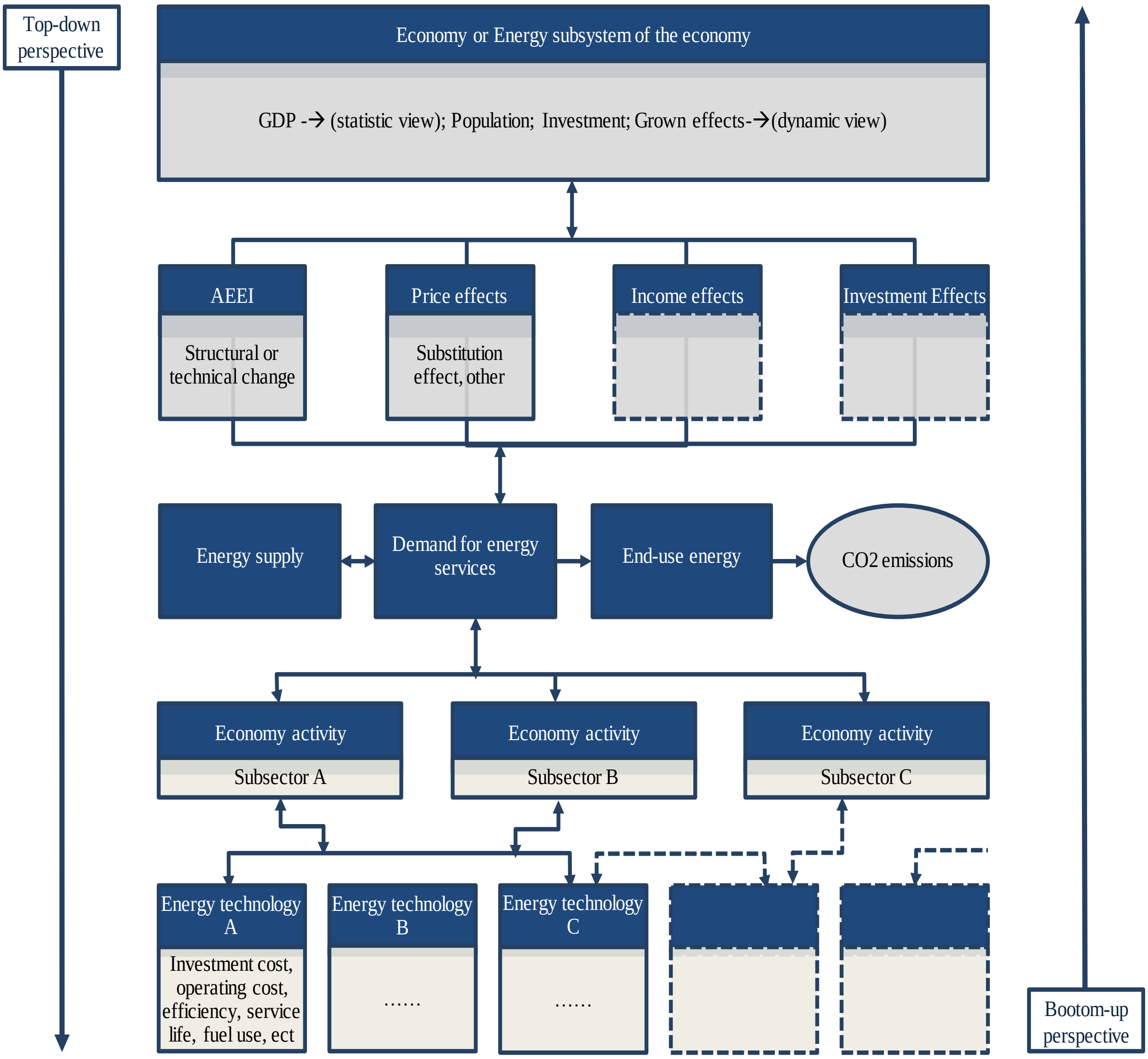


**Figure 1.16 Energy modelling approach schemes elaborated by IEA for underline the main different between tow-down and bottom-up (reworked [37])**

Broadly, it is possible identify two fundamental group of modelling methods used to predict and analyze various aspects of the overall building stock energy use performance and associated environmental impacts: the top-down and bottom-up approaches. Each model technique is characterized by different strengths, weaknesses, capability, and applicability. Swan and Ugursal [42], and Kavgic et al. [9] provide valuable reviews of current residential building stock models. Both differentiate the models in top-down and bottom-up and provide a shortcoming discussion of each approach. Top-down models are an interesting option to describe building stocks, especially when data availability is limited. However, these models are practically unable to investigate the impact of specific measures or technologies since they do not explicitly consider the inter-connection between systems [43]. Instead, the bottom-up approach can evaluate the impact of energy conservation measures on the stock as a whole, but it needs extensive databases containing detailed building characteristics or energy consumption [44].

The main different between a top-down and bottom up approach methodology was elaborated from IEA and reworked by [37] (Figure 1.16).

More advanced models are often implemented as hybrid models [9], yet still have set the main focus on one of the two approaches. Bottom-up and top-down models consider the inertia behavior of the analyzed systems differently and thus respond differently to changing input factors. The relationships of aggregated variables used in top-down models are usually more stable than those of disaggregated entities. Thus, by introducing some top-down constrains to bottom-up models, their results become less unrealistic and unstable to short-term effects.

A brief description of the two models are reports into the following sections only for providing an overview on the main different.

### 1.4.1 Top-down approach

The top-down modelling approach works at an aggregated level as shown in Figure 1.16, typically aimed at fitting an historical time series of national energy consumption or CO2 emissions data.

Many countries have developed top-down modeling approaches to identify the energy consumption of their building stock and potential changes of its consumption in the future [45]. Such models tend to be used to investigate the inter-relationships between the energy sector and the economy at large scale, and could be broadly categorized as econometric and technological top-down models.

Kavgik et al. [9] identified that the econometric top-down models are primarily based on energy use in relationship to variables such as income, fuel prices, and gross domestic product (GDP) to express the connection between the energy sector and economic output; including in some cases general information on climatic conditions, such as temperature set point or HDD and CDD.

However, the reliance on past energy–economy interactions might also not be appropriate when dealing with climate change issues where environmental, social, and economic conditions might be entirely different to those previously experienced.

Top-down models have no inherent capability to model discontinuous changes in technology. The technological top-down models include a range of other factors that influence energy use (i.e. saturation effects, technological progress, and structural change), however they are not described explicitly within the models [46]https://www.sciencedirect.com/science/article/pii/S0360132310000338 - bib17. Furthermore, the lack of detail regarding the energy consumption of individual end-uses eliminates the capability of identifying key areas for improvements for the reduction of energy consumption [42].

A top-down model for the European building stocks and their energy demand with focus on definition of environmental benchmark impacts is presented in [13]. They develop a top-down model, which incorporates three main components: (1) archetypes definition for climatic zone, types and period of construction, (2) energy service and sources used at 2010 from European heritage, and (3) LCA. Contrary to the classical approach where only the CO2 is evaluated, the environmental impacts are developed with the methods ILCD. They also implement 24 household types, distinguished by their “consumption sustainability” patterns, derived at European level and for capita or for archetypes.

### 1.4.2 **Bottom-up approach**

Bottom-up methods are built up from data on a hierarchy of disaggregated components, that are then combined according to some estimate for their individual impact on energy usage. With regard to the Bottom-up approach, the method used for calculating the energy consumption require knowledge on the individual end-uses, individual buildings, or groups of buildings, and then use these representative models are used to predict the regional or national energy consumption by different weighting approaches[42]. Often these models are seen as a way to identify the most cost-effective options to achieve given carbon reduction targets based on the best available technologies and processes [9, 47].

The bottom-up models work at a disaggregated level, and thus need extensive databases of empirical data to support the description of each component [42], that can be divided into three sub-categories based on its modeling mechanisms: statistical and engineering- based (physical) methods and their combination[41]. Also, in literature it was notice that these models are building up on already well-established methods in the building energy simulation domain. The available modelling techniques and resolution can differ substantially, from the use of steady-state approach to dynamic heat-balance simulation and within a single building to whole neighborhoods or cities or state. [45].

#### 1.4.2.1 Approach based on building physics

A considerable list of studies, literature and models exists with respect to the description of the building's energy demand using engineering-based bottom-up models. Swan and Ugursal [42] identify three different categories: population distributed, archetype and sample-based approaches. Another dimension is whether the scope is set on a predefined static building (stock), possibly considering dynamic environmental conditions (static model), or whether the focus of the model and the objective of the analysis is set on a changing building environmental constant or dynamic environmental conditions (dynamic model). Building physics models generally introduce the consideration of an archetype representative of the national housing stock and utilization of a building energy calculation method to estimate the delivered energy consumption [9]. Therefore, this type of model required great detailed data input on physically measurable variables such as the efficiency of space heating systems and their characteristics, information on the areas of the different dwelling elements (walls, roof, floor, windows, doors) along with their thermal characteristics (*U*-values), internal temperatures and heating patterns, ventilation rates, energy consumption of appliances, number of inhabitants, outdoor climatic condition, etc. [9].

Severe shortcoming of pure non-statistical engineering-based bottom-up models (building physics bottom-up model) is that the occupant's behavior is not taken into account appropriately. Numerous studies have shown that the occupants have a significant influence on the building related energy consumption [48–50]. Therefore, adding statistical bottom-up elements to the basic technical bottom-up model significantly improves the forecast results.

Sample based models are applied to integrate the energetic behavior (e.g. energy need, energy use, delivered energy) and eventually environmental impacts (e.g. primary energy consumption or CO2 emissions) for analyzing in detail individual buildings.

The combination of building physics and empirical data from housing surveys and other database, as well as assumptions about buildings operation, give modelers the means to estimate energy consumption in dwellings for the past, present, and future. By developing different scenarios, the bottom-up models appear to have the potential to be used to assess the impact of specific carbon reduction measures on the overall energy demand [9, 42]. This model can be used as part of a based approach for evaluating long-term energy supply strategy.

In Europe, bottom-up building physics stock models are seen as useful tools to provide for policymakers a help for estimating the effectiveness of policies and to identify technological measures.

One of the main weaknesses of building physics models, lies in the many assumptions made regarding the role of behavioral factors on energy consumption, for instance in estimating the impact of changing demographic factors related to an aging population and hours of occupancy and heating system use.

For this reason, recently, the bottom-up engineering building stock models have been integrated with GIS platform for acquisition and expression of data thanks to the advances in the mapping technologies. Most of these models were built for the commercial sector, because the residential sector doesn’t follow linear or standard behavior. In many studies, behavior of the dwellings was built using technical standard profile from ASHRAE, DOE or from UNI 17772 [51–53]. In other case, stochastic use factors are used for underlining the unpredictable end-use into the different houses, without energy measures and survey on the time use and electrical use out or inside the buildings.

All of these assumptions are strictly connected to the goal and scope of the study [48, 50]. However, these models required a great number of information on the effective composition of the family, the type of equipment, work time information and hourly activities of the inhabitants, that in many cases are only reworked with statistical mathematical models or stochastic approach, in order to underline an average schedule profile.

#### 1.4.2.2 Statistical models

A detailed review of the statistical techniques used for modelling energy consumption of the residential sector can be found elsewhere. Even though, there is a wide array of statistical modelling techniques available, most of the bottom-up statistical models are based on regression techniques [42].

These methods rely on energy utility billing data (e.g., electricity, gas) from energy providers and survey data that includes human behaviors and building characteristics. Researchers have studied diverse approaches for analyzing the building stock energy consumption utilizing this information. Recent bottom-up statistical models have used geographic information system (GIS) for data acquisition to build a model and visualize results.

In [39], the statistical models are taken into account as relatively easy to build once it has enough information to attribute building energy consumption to relevant building characteristic and data. Another benefit is that the statistical models are capable of considering demographics and occupant behaviors that have a significant influence on the energy consumption. On the other hand, the statistical methods have similar limitations to the top-down approach when exploring new technologies. In many cases, it has restricted capacity to evaluate the impact of a wide range of energy conservation scenarios.

#### 1.4.2.3 Hybrid models

While it is the case that building physics-based models also rely on statistics for much of their empirical data, for instance average hot water demand per person. Some of the more sophisticated models combine, in a more fundamental way, components where both building physics and statistical approaches have been applied. For example, the authors of [9] identified a typical example of a hybrid model is represented by the Canadian Hybrid Residential End-use Energy and Emission Model (CHREM), which relies on the 17,000 detailed house records, implements the neural networks techniques. This model consists of two energy modelling components, statistical and physics-based component that are used to estimate the energy consumption of the major end-use groups. Estimation of space heating and cooling loads is accomplished using the high-resolution building performance simulation package ESP-r as there is no relevant historic data for statistical analysis of new technologies. In [54], the authors defined an hybrid model for account the deficient data (e.g. data related to the use of the building) on the building stock with the use of normative assumptions, thereby compromising the accuracy of building-physics based models. The hybrid bottom-up building stock energy model was developed in order to overcome the drawbacks of traditional building-physics (engineering) based modelling methods. In particular, the hybrid bottom-up approach is characterized by the advantage of the physics and statistical modeling techniques.

A hybrid model for the European building stocks focus on potential environmental saving is presented in [13, 55]. They develop a bottom-up model only for simulate the potential environmental saving of some eco innovation scenarios respect the baseline 24 archetypes built with a top-down approach. However, the limits associated to this approach is correlated to the impossibility of disaggregated the results for countries.

### 1.4.3 Comparison

As mentioned above, several study on the building stocks models were performed. It is clear that there is a wide range of possibilities to develop this type of studies, from the point of view of the criteria and parameters and, from the point of view of the tools. Each approach is characterized by pros and cons. The review study [41] summarized Pros and cons of building stock energy modeling methods developed in literature (Table 1.3).

**Table 1.3 Pros and cons of building stock energy modeling methods** [41]

| | **Top-down** | **Bottom-up statistical** | **Bottom-up engineering** |
|---|---|---|---|
| **Pros.** | • Capable of modeling the relationships between economic variables and energy use<br>• Inclusion of macroeconomic and socioeconomic effect<br>• Use aggregated data<br>• Avoid detailed technology descriptions | • Enable to determine a typical end-use energy consumption<br>• Encompass occupant behaviors<br>• Include macroeconomic and socioeconomic effects<br>• Not require detailed data (only billing data and simple survey information)<br>• Easy to develop and use | • Enable to model current and prospective technologies in detail<br>• Assess and quantify the impacts of different combinations of technologies<br>• Enable to determine each end-use energy consumption<br>• Use physically measurable data |
| **Cons.** | • Depend on past energy economy interactions to project future trends<br>• Lack the level of technological details<br>• Coarse results<br>• No explicit representation of end-uses<br>• Lack of disaggregation into individual levels | • Rely on historical consumption data<br>• Limited capacity to assess the impact of retrofit or new technologies<br>• Provide fewer data and flexibility<br>• Require large survey sample<br>• Multicollinearity | • Require detailed input information<br>• Computationally intensive<br>• No economic factor<br>• Require a significant amount of technical data<br>• Behavioral assumptions for occupants<br>• Unable to consider uncertainties |

When a prevision energy models could be carried out for studying the effects of retrofit actions, the use of hybrid bottom-up approach provides useful information on the really interaction between the building system an environment and represent a good compromise between pros and cons of statistical and engineering approach. It allows to substitute the data lacks with statistical assumption and maintaining the benefits of the physical engineering models.

### 1.4.4 Life Cycle Assessment of building stocks

As mentioned above, consideration of the entire lifetime of an energy efficiency measure in buildings is necessary to evaluate its factual effectiveness and payback. The reduction in energy demand for building operation represents only part of the environmental and economic impact. Transport, fabrication, fitting, usage and disposal of building components or systems may involve substantial impacts directly or within their upstream or downstream processes [43].

In [43], the authors introduced the need to accomplish the LCA  to the energy bottom-up approach for evaluating the energy efficiency measure applied to the building stock. However, the methodological approach proposed is limited to the city of Zurich in Switzerland. Although, this method was developed for the evaluation of the effectiveness of measures and their dynamics on the building stock, no assumption was performed on the shape or weather conditions. An evaluation of the model at macro level could be performed for evaluating the greater detail that could be involved into this type of study.

However, the limited number of archetypes doesn’t allow to obtained general information at national level due to the data aggregated. Also, use an approach simplified datasets for simulating the environmental impacts connect to the electricity mix and to the heating and cooling impacts.

Several studies have been found in literature for observing the environmental impacts of the building stock, however many of them are only concentrate on the reduction of CO2 emissions, without taken into account other environmental impacts [9, 56–58]. Also, most of them have the only intent to study European strategy only one country or at district level, without accounts all the 28 countries and the variability of their climatic conditions.

At European level, only [13] includes the LCA for defining the benchmark of housing, identifying 24 archetypes representative of all EU-27 existing residential building stocks at 2010. They used a top-down model for calculating the energy demand for thermal services and equipment, and estimating an average value for net floor area, for period of construction and climatic zone. In fact, EU-27 was divided into three climatic zone, based on the only HDD and similar types of construction materials. The study proposed also the analysis of some eco-innovation of the buildings stock during the entire lifetime of 100 years. However, the use of a top-down approach limits the knowledge on the “real” behavior of the buildings in a specific location of that climatic zone. This work [13] had the only intend to underline the average environmental impacts benchmark of the existing residential buildings. In [55], the authors used the same 24 archetypes for studying the eco-innovation effects on the whole

LCA of the archetypes with the use of an bottom-up energy model. However, the analysis was carried out taking into account only three location for represents the average climatic condition of the EU and scaling proportional the top-down results with the average benefits that was obtained with the bottom-up approach.

## 1.5 OBJECTIVES OF THE THESIS

The purpose of this thesis is to provide a comprehensive assessment of the existing building stock renovation. The basis of a good renovation strategy is establishing an accurate understanding of the building stock, including age, building typology, heating source etc. Given the need for a unique building-physical description for assessing the energy-saving potential of the exiting European building stock renovation, the objective of this thesis is inherent challenges in building-physics based modelling by means of a hybrid modelling approach integrated with LCA. Moreover, the focus of this thesis is on developing an accurate and detailed model for predicting the average energy use for space heating, space cooling, DHW and equipment in residential buildings using widely statistical and technical available data on EU-28 existing building stock at 2010, evaluating the potential energy and environmental savings connect to some renovation strategies.

A detailed, bottom-up breakdown by building type, age, energy carrier, climatic zone, energy performance, occupancy and ownership are a fundamental knowledge requirement to underpin subsequent steps in the European strategy.

Although, the energy performance and environmental effects of traditional buildings have been previously studied in detail, while there is a limited number of works about the all EU heritage. In fact, for a reliable and predict energy models on building stocks, there is a need to provide empirical evidence in terms of its quantifiable benefits from energy to environmental point of view. This study contributes to filling the existing knowledge gap on the existing European building stocks, developing a hybrid bottom up building stock energy model.

In this context, the aim of this research is to create an energy model with different degree of freedom, validating and calibrating the archetypes for account the real energy consumption of the residential sector at 2010 for country. This thesis proposes 672 archetypes for representing the existing European building stock based on the 24 archetypes developed by the JRC through the use of a top/down approach. The potentialities of the energy model are studied testing four types of renovation scenarios that will be studied from the energy and environmental point of view.

The aims of this thesis are to create an integrated model for pushing the EU building stocks towards the decarbonization, accomplishing the dynamic building energy simulation and the LCA.

The dynamic energy simulations in a hybrid engineering bottom-up approach are able to evaluate the potential energy behavior of the housing stocks and their interaction and inter-connection with many internal and external factors. While, the LCA methodology, based on the standards of the ISO 14040 [1] and ISO 14044 [2], is used to quantify environmental impacts associated to the renovation of the whole energy efficiency measures during their lifetime.

In addition to investigate the overall environmental performances of renovation strategies, another aim of this research is to compare the proposed scenarios at macro and micro level, from the single building to the all-European heritage. In detail, the renovation options are selected trying to reduce the use stage energy consumptions and the use of renewable system. The LCA methodological approach allows to study the effects of different solutions as the selection of bio-based materials for the insulation of the buildings envelope or the traditional one, comparing also an intervention on the performance of the envelope with the installation of renewable systems.

In context, the research proposes the realization of a multidisciplinary methodical framework which allows to integrate into the European building renovation design, the life cycle overall performances of the energy performance measure. The aim of the study is in line with the climate changes police and EPBD recast on existing building stocks for calculating:

- The energy efficiency potential of the existing residential building stocks;
- the advantages due to the implementation of retrofit actions, taking into account both direct and indirect energy saving and tracking the avoided environmental emission at national level and at European level;
- Envelope retrofit “NZEB oriented” for assessing environmental benefits/impacts due to the retrofit of the existing building stock.

The methodological approach proposed tried to highlight:

- A multidisciplinary methodological approach as combination of a bottom-up energy model and life cycle perspective;
- A flexible building stocks energy model for studying long term energy strategies defined according to the EPBD 2018.

## 1.6 STRUCTURE OF THE THESIS

The thesis introductory essay is organized as follows: after a short presentation of the research context, aims, and scope of this thesis in Chapter 1, Chapter 2 presents the methodological approach developed for creating 672 archetypes representative of the existing residential European building stock, the definition of retrofit scenarios and the model carried out for evaluating their environmental effects of renovation strategies applied on EU heritage.

In particular, the chapter on the methodological approach is divided in 6 sections:

- Section 2.2 describes the available European datahubs on the building stocks, underlines the available data, the project associated to their realization and the missing data. Also, in this section an overview on the assumptions made for the segmentation processes at macro level is provided;
- Section 2.1 highlights the dynamic simulation environment used for creating the models and explains the methodological steps adopted for the elaboration and run simulations;
- Section 2.3 provides detailed descriptions of each archetype for the application of a bottom approach, dividing the parameters selected in: general information, geometric characteristics thermo-physical characteristics, system and equipment characteristics and occupancy's behavior. At the end of this section, the manufactures archetypes developed are summarized in tables for comparing SFH and MFH built into the same climatic zone and into the same period of construction;
- The methods used for calibrate and validate the energy models are reported in Section 2.4, in order to provide all the useful information on the indicators used for creating a models that represents the energy consumed at 2010 in EU-28;
- For testing the model, four scenarios of retrofit are proposed and the assumption made during this step are reported in Section 2.5;
- Finally, Section 2.6 provides an overview on the methodological aspects of the LCA applied to building system, focusing on the refurbishment. In particular, the goal and scope of the analysis, the methods used, the datasets selected and quantities of materials and technologies are summarized. Also, the environmental Pay Back Time (PBT) calculation are explained.

Chapter 4 and 5 report, respectively, the energy and the environmental results, discussing the key results and some critical issues arising from this work at the end of the chapters. Also, the results are summarized for archetypes, at national level and at macro level. Conclusions are drawn in Chapter 4 and 5, and the possibilities for further research are summarized in Chapter 6, focusing on the benefits of a multidisciplinary approach that combine the dynamic energy simulation and LCA.

# CHAPTER 2. METHODOLOGICAL APPROACH

The aim of this chapter is to describe the methodological approach used in order to answer at the research questions and to show step-by-step the framework applied for the calculation of the energy consumption and environmental benefits/impacts of energy efficiency measure applied to the existing European building stocks at 2010.

The approach of this study is a hybrid engineering bottom-up model, where building characteristics, infiltration rate, energy consumption for appliances and weather data have been analyzed and used as input data. Instead, standard occupancy behavior is used for studying the energy consumption during the operation use. The model includes the definition of archetypes representative of the EU-28 as thermos physical objects for running in a dynamic energy simulation tool. The number of archetypes per country are selected combining the available data on residential buildings for types, period of construction and climate regions, in accordance with the assumption made in [13]. All input data have been selected from literature research, statistical datahubs and technical handbook. The user behavior schedules are defined according to EN ISO 17772 [53].

The thermo-physics models have been implemented for running on EnergyPlus. The calibration and validation steps are carried out to fit the model with statistical energy consumption at 2010, comparing the thermal energy consumption for heating and cooling at European level and national level and identifying the main hotspots linked to the energy modeling approach.

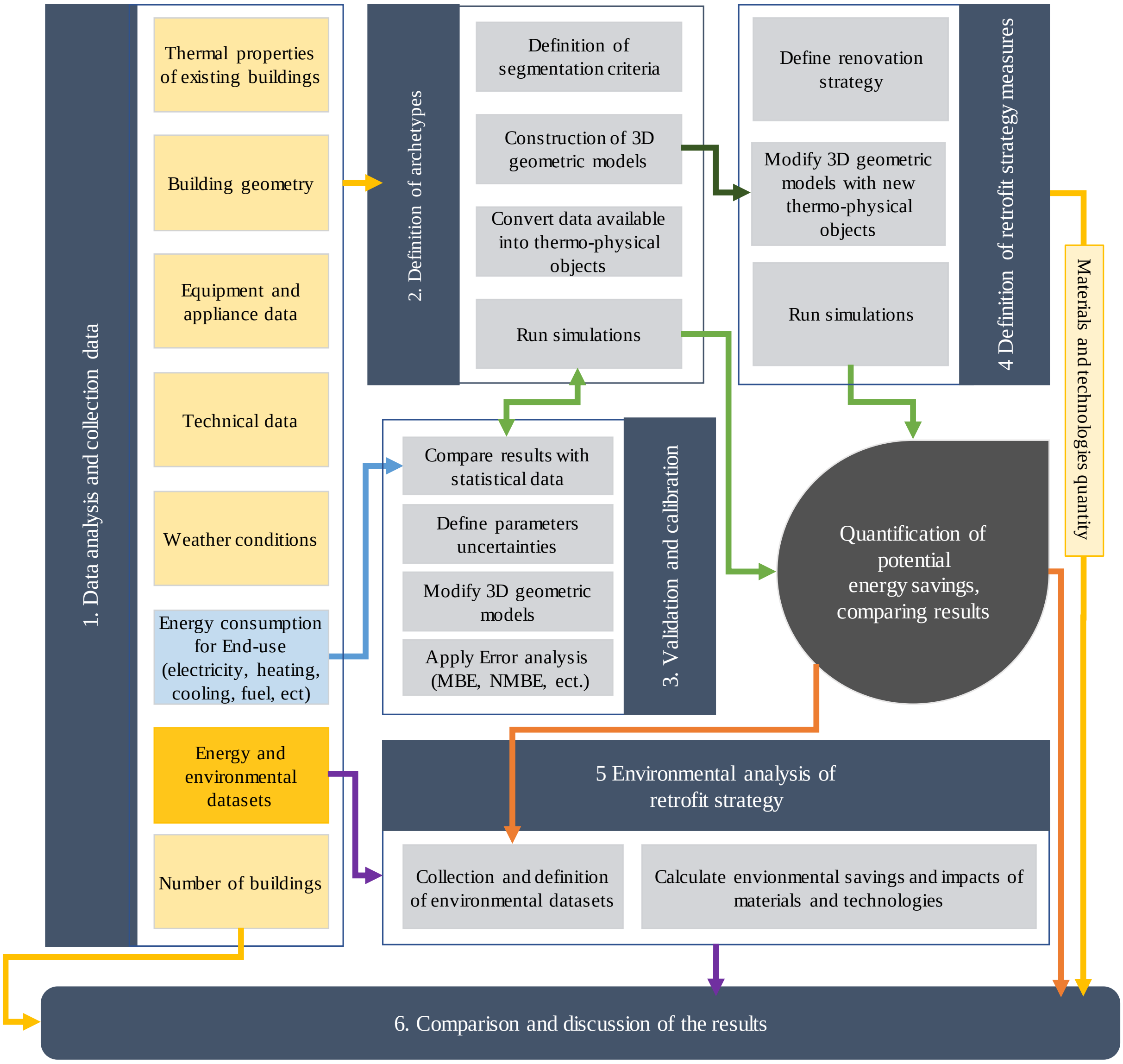
Renovation scenarios are selected for studying the energy and environmental effects of retrofit actions on the baseline scenario in terms of energy consumption at macro (European residential building stocks) and micro level (single archetype). However, in order to account the environmental and energy benefits/impacts of each scenario proposed, an LCA study has been performed to assess the life cycle impacts of materials and technologies that could be included during the renovation process.

The overall methodology of the current study is illustrated in Figure 2.1 and it is summarized into the following steps:

1. Data analysis and collection data;
2. Definition of thermo-physical archetypes;
3. Validation and calibration of the model;
4. Identification and description of the retrofit scenarios
5. Estimation of the potential energy and environmental effects of the retrofit solutions;
6. Comparison and discussion of the results.

The first part of the chapter provides a detailed insight of the European database available and the data gaps on the European building stocks 2.2 In section 2.1 a description of the building energy model is presented, underlining the macro assumption elaborated for the clusters of buildings. In section 2.3, the 672 archetypes performed are described. After that, section 2.4 shows the model calibration and the validation process. Lastly, the description of retrofit scenario is reported and data on the quantity of materials used for the implementation of the renovation scenarios and the performances of new equipment and appliances are reported 2.5.

The last part of the chapter summarizes the life cycle model developed to assess environmental impacts of the building stocks after actions of retrofit. In section 2.6.1 the goal and scope are presented along with the system boundaries and the functional unit. In section 2.6.2the Life Cycle Inventory (LCI) is described identifying the LCI approach and the LCI framework implemented for the case study. In section 2.6.3, the life cycle impact assessment (LCIA) methods and the environmental categories included are presented. Finally, in section 2.6.5, energy and environmental payback times (PBT), calculated for each impact category are shown. The last indicator proposed is bet way for comparing and select the global best energy performance measures.



Legend

| Color | Type | Meaning | Color | Type | Meaning |
|---|---|---|---|---|---|
| 🟩 | Line | Results | 🟨 | Rectangular | Data available |
| 🟦 | Line | Statistical data | 🟧 | Line | Final energy results |
| 🟦 | Rectangular | Statistical data | 🟪 | Line | Final Environmental results |
| 🟦 | Rectangular | Metodological steps | 🟩 | Line | 3D archetype |
| ⬛ | Rectangular | Intermidiate step | ⬜ | Rectangular | Intermidiate step |

**Figure 2.1 Overarching methodology for European building archetypes development**

## 2.1 BUILDING STOCK ENERGY SIMULATION

In this study, EnergyPlus (version 9.1.0) is employed for building energy models. EnergyPlus [59], the building energy simulation program developed by the United States Department of Energy, has been evaluated through several standards, e.g. ASHRAE Standard 140-2011 and IEA BESTEST [60–62]. In detail, EnergyPlus is a software for running dynamic simulations with different time intervals (hourly or sub hourly). It allows for calculating building energy demand and advanced building thermos-physical values. More details regarding EnergyPlus are given in [60, 61]. Several studies on buildings stocks have been performed using EnergyPlus for simulating the energy demands and creating predictive model [45, 63, 64].

Figure 2.2 shows a scheme of EnergyPlus structure and the connection with third party software.

The section summaries the methodology and the modelling steps implemented for creating thermos physical objects for running on EnergyPlus.

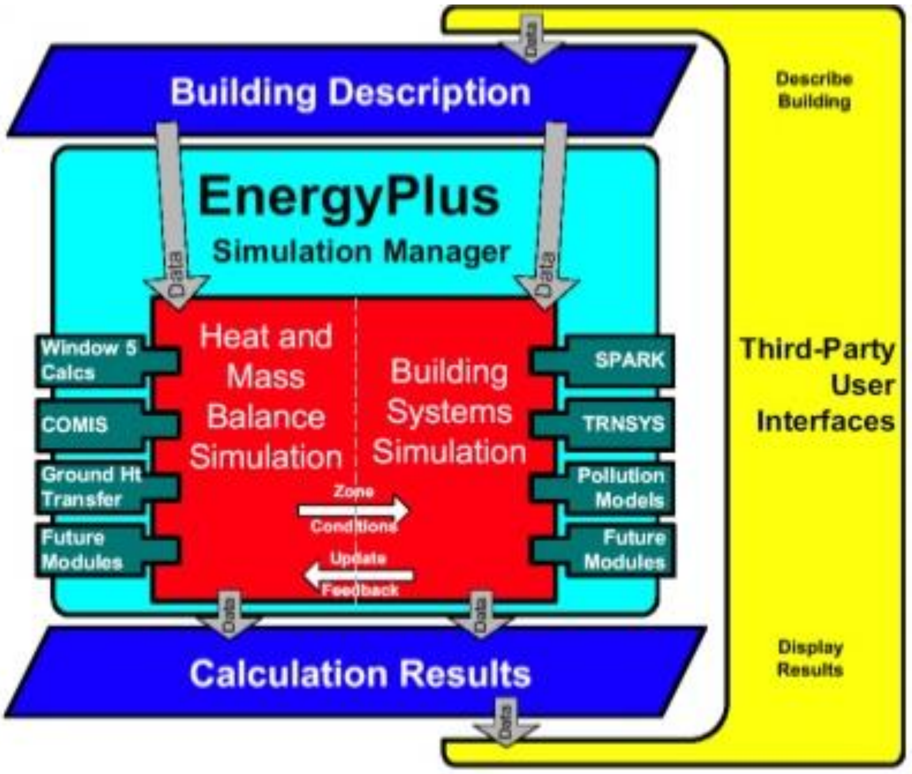


**Figure 2.2 Overall EnergyPlus structure** [65]

Figure 2.1 shows a scheme of the methodology framework applied, which leads to a calibrated and validated energy model:

- Analysis of data available on European database. This step consists of the preliminary analysis of the data available and selection of the most coherent and complete database for describing the European building stocks with temporal and spatial data.

- Definition of archetypes representative of the European building stock heritages as thermos-physical objects. This step describes each input data selected for creating the archetypes. A description of the building's equipment or sub-systems in their interaction with the building is included with the assumption made for their operation schedule and related parameters. the operational requirements must be evaluated, including the analysis of the variables with the largest influence;
- Evaluation of the accuracy of the predicted building stocks model, by means of validation and calibration of the model variables. The process focused on the model parameters uncertainties by manual tuning the unknown variables according to the available macro data on residential sector. For the calibration of the model, an iterative process for leading the model to the real European condition is performed, adjusting some input, while other variables are kept unchanged. The model calibration is repeated until the difference between the simulated and available data on the energy consumption of the residential sector at 2010 is acceptable for identifying the representative model, in term of energy consumption for heating and cooling, at European level.
- For the alternative scenarios, after the definition of the retrofit actions, the new models have been implemented and run with the same weather condition, temperature setpoint schedule and natural ventilation setpoint selected during the validation process.
- Then, the results of both the baseline and alterative scenarios category have been compared.
- The difference between the baseline and renovation scenarios are evaluated in term of energy saving and environmental impacts avoided, applying the LCA. The variation of the energy consumption is analyzed at micro level (for archetype) and at macro level (European 28).

## 2.2 DATA ANALYSIS, COLLECTION AND AGGREGATION PROCESSES

The estimation of the energy consumption, the effects of climate conditions and energy performances strategies requires granular, detailed statistical and technical information at country level.

For the energy policy decisions more detailed information to address future planning interventions on buildings stock is required and should be collected without gaps. Official data on residential sector, energy consumption by fuel, population and households' statistics produced at European level and published by EUROSTAT are presented at aggregate level, which does not allow such a detailed analysis.

For this reason, many European project has been performed for collecting data on building stocks and survey on the energy consumption, behavior of the equipment and of family's components have been conducted.

The main available datahubs on European Building stocks usually group the data into Residential (R), called also domestic or private building, and Non-Residential (NR) buildings, indicated also as the tertiary or commercial sector. With reference to the R sector, a multitude of database have been performed and most of them are published online.

As mentioned above, in order to develop representative models, it is necessary to define archetypes, dividing the current building stock into clusters. In the building sector, there is no standard way to cluster buildings by types and there are also different interpretations of the categories used in statistics [66]. For reducing the degree of freedom connect to archetypes definition, 24 archetypes developed in [66] (representative of the European building stocks) are used as baseline. They were developed with a top-down approach, and in this thesis have been changed into 672 thermo-physical objects. The main features selected to cluster the building stock are: two dwelling typology, four period of construction and three macro climate zones in which the building is located. In addition, it is important to underline that for each country, their residential building stocks are segmented only in 8 archetypes, that multiplied for three geographic location distribution of the buildings and for the number of Member State for climatic zone, become 672 archetypes.

Then, these building models are transformed into thermophysical object and simulated into Energy plus tool. The bottom up approach developed, also, takes into accounts the effects linked to the external climate conditions as temperature, wind and geological location that could generate great variation on the energy consumption for the same model. For that reason, the final number of models carried out are 672 that correspond to the 8 archetypes built for each country (28 countries of EU-28) simulated for geographic locations (3: City, Country and Suburban area).

After a brief description of the database on buildings stocks (i.e. for describing general information on the authors, type of data, gaps, goal and scope of the European database project), the assumptions made for the macro classification of climatic zone, periods of construction and type of houses, the method applied for the quantification of the archetypes, the identification of the possible alternative retrofit scenarios and LCA model implemented are reported into the follow.

### 2.2.1 Brief overview on database and data available

Despite the need of every State to know its own building heritage, there has been developed databases on the European building stocks. However, significant data gaps could be found and it is very difficult to identify a realistic global image of the European buildings' stocks.

A first analysis is conducted on the European building stock database for consulting and comparing data from publications, reports, open-data portals and statistics data elaborated by different research groups. The most useful information on European buildings is obtained from European databases, which collected statistics data and research projects results. In particular, the most famous databases are: ENTRANZE, TABULA, Odyssee, BPIE, JRC-IDEES, ZEBRA and Eurostat. However, each database is characterized by different assumption, period of data collection, data analysis approach and goal and scope of the research project. An overview on the databases are reported in the following.

> ***ENTRANZE*** *and* ***TABULA*** *are research projects commissioned and funded by "Intelligent Energy Europe (IEE)", a body founded by the European Commission in 2003, which supports EU energy efficiency and renewable energy policies, in order to achieve the objectives of the EU 2020 strategy (20% cut on greenhouse gas emissions, 20% improvement in energy efficiency and 20% increase in renewable energy)* [67]. *ENTRANZE (ENforce the TRAnsition to Nearly Zero Energy Buildings in Europe) aims to actively support the development of NZEB policies (in compliance with the 2010 EPBD directive that requires each Nation to draw up plans to increase the number of " almost zero-energy buildings "and the definition of policies and objectives aimed at encouraging the energy retrofit of existing buildings)* [68]. *Through an on-line portal "data Hub", this source provides the most complete data, with respect to other sources, regarding the typological and temporal subdivision of the building heritage, the respective numerical quantity and the dimensional characteristics of the houses, divided by Country.*
>
> *ENTRANZE data was obtained from other researches such as TABULA, ODYSSEE, BPIE and national agencies. However, the ENTRANZE data have some gaps: they do not specify the*

*relevant year and if the dwellings considered are the mirror of the entire living space or if they are excluded from the counts, for example, second homes or empty houses. To overcome this limitation, it has been compared to other sources.*

*TABULA (Typology Approach for Building Stock Energy Assessment) collects information only from thirteen European countries. The research stems from the set of works carried out by each nation individually. Each region classifies building typologies independently, subdivided by epoch, taking as a sample a single building, that could be real or with common characteristics. It follows that each country divides and supplies the data according to different logics; consequently, the same data present discrepancies in the comparison. The results are difficult to be regrouped at European level, as each nation carries out an autonomous typological and temporal subdivision, and often does not analyze the entire building stock but only a representative portion. However, the usefulness of the TABULA research is that by selecting a single representative building for each category, it is described in depth, up to the plant and construction details. It also analyzes the potential energy savings on the representative building by determining the possible retrofit actions* [69].

***ODYSSEE** is a project coordinated by "Enerdata Global Energy Intelligent", an independent research and consultancy company founded in 1991 that aims to monitor energy efficiency trends in Europe. The usefulness, for the purpose of research, was the possibility to derive the number of European households permanently occupied for each country. The site also provides interesting data on statistical consumption broken down by energy source and by state. It also publishes numerous reports for "Enerdata" (global energy intelligence) in which it provides complete pictures of European and national energy efficiency indicators, consumption trends and their division into end-uses. The limitation of the database is that it doesn't present any subdivision of data by type and period of construction of the buildings* [16].

***BPIE** (Building Performance Institute Europe) is aimed at ensuring the effective implementation of the "Energy Performance of Buildings Directive" (EPBD) of 2010, and the "Energy Efficiency Directive" (EED) of 2012. Research is undertaken with a team of experts of each Member State.*

*BPIE provides the data relating to the built area in total square meters for each state, dividing the residential figure by percentage from the tertiary one. Relevant, for research purposes, is the availability of indicative residential consumption for heating, divided by type and time of construction. BPIE also provides average transmittance values for the building components of 27 European countries without Austria). Also, in this case the source presents some criticalities since the data are missing for some countries, the subdivision into typologies and epochs is different for each State and finally the sources indicated for the consumption survey are mostly an estimation or a calculation.*

***EUROSTAT*** *"Statistical Office of the European Union" is the general directorate of the European Commission born in 1953. It collects and processes data from EU Member States, promoting the process of harmonization of statistical methodology among Member States* [17]. *Its mission is to provide the European Union with a statistical information service with comparable data between countries and regions. Eurostat limits the survey to the number of buildings, without specifying the number of dwellings contained therein; uses a typological division methodology different from other research sources, thus hindering comparison methods. The statistical source Eurostat, being more targeted to population surveys, provides data on the composition of the family and on the percentage distribution of inhabitants for the various types of accommodation. The data allow to calculate the average number of people living in different types. Furthermore, Eurostat counts the total residential consumption for each State in Toe, referring to each year from 1990 to 2018.*

*The* ***JRC Integrated Database of the European Energy System*** *(****JRC-IDEES****) has been developed as a necessary input to the POTEnCIA model* [14], *whose level of detail goes much beyond that of official statistics. In detail the database has been collected data on energy consumption for many sectors (as tertiary, transport, global energy, industry, agriculture and residential, etc.) for EU-28. For each sector, temporal data are included from 2000 to 2015. In order to account the environmental impacts, data on CO2 emissions are collected.*

*For the residential sector, JRC-IDEES provides information on the entire energy consumption* *of the sector, the stock of the installed energy equipment, the household consumption expenditure, population and the HDD (extracted from Eurostat). Furthermore, the number of households is quantified, distinguished between the existing stock and new and renovated households.*

*The energy consumption by the representative household is split for end-use: thermal end-uses and specific electricity uses. The first subcategory includes the energy consumption for space heating, space cooling, water heating, and cooking; the second identified the energy consumption per lighting, white appliances (refrigerators and freezers, washing machines, tumble dryers, dishwashers –, multimedia, ICT) and other electric appliances. For each representative component, technical characteristics (as power, related operating hours, the number of appliances, efficiencies, etc.) were estimated. The JRC-IDEES database includes temporal data from 2000 to 2015 for each EU-28 country.*

***ZEBRA2020*** [70] *was launched end of April 2014 in Vienna and monitored the market uptake of low-energy buildings across Europe, thereby generating data and evidence for policy evaluation and optimization. The key objective of this project was to create an observatory for nearly Zero Energy Buildings (nZEBs) based on market studies and various data tools. The project partners systematically leveraged available data and knowledge from the European construction sector as well as from academia (e.g. nZEB best-practice studies and scenarios until 2030). The information gathered was structured and analyzed to derive recommendations and strategies. The project covered seventeen European countries (Austria, Belgium, the Czech Republic, Denmark, France, Germany, Italy, the Netherlands, Norway, Poland, Lithuania, Luxemburg, Romania, Slovakia, Spain, Sweden and the United Kingdom) and about 89% of the European building stock and population. Thus, ZEBRA2020 has actively contributed to meeting the ambitious target of having a 100%-share of nZEBs for new buildings from 2020 and a substantial increase of deep renovations. Many useful data were found on the main materials and technologies used for renovated buildings for climatic zones.*

### 2.2.2 Assumption on climatic zones

Climate encompasses the statistics of temperature, humidity, atmospheric pressure, wind, precipitation, atmospheric particle counts and other meteorological elemental measurements in a given region over long periods. Climate can be contrasted to weather, which is the present condition of these elements and their variations over shorter periods. The climate of a location is affected by its latitude, terrain, and altitude, as well as nearby water bodies and their currents. Climates can be classified according to the average and the typical ranges of different variables, most commonly temperature and precipitation.

Wladimir Köppen [71] originally developed the most commonly used classification scheme. The Köppen classification depends on average monthly values of temperature and precipitation. The most commonly used form of the Köppen classification has five primary types labeled A through E. These primary types are:

- tropical;
- dry;
- mild mid-latitude;
- cold mid-latitude;
- polar.

The five primary classifications can be further divided into secondary classifications such as rain forest, monsoon, tropical savanna, humid subtropical, humid continental, oceanic climate, Mediterranean climate, steppe, subarctic climate, tundra, polar ice cap, and desert.

From Koppen-Geiger climate type of Europe [71], it is possible to observe that the dominant European clime is warm temperate C.

Literature studies show that a subdivision in climatic zones of the Europe based only on the external temperature is considered the best way to identify similar climate zones [13, 72]. Moreover, even the energy consumption of a building is closely related to the surrounding climatic temperatures. By day, this means the sum, extended to all the days of a conventional annual heating period, of the only positive daily differences between the internal comfort temperature and the average daily outdoor temperature. Eurostat studies provide degree day tables for heating and cooling of different European cities sorted by countries.

In order to account that HDD and CDD values change every year and the base scenario represents the European buildings stock built until the 2010, the HDD and CDD at 2010 has been used for the selection of the weather data and the definition of the climatic zone.

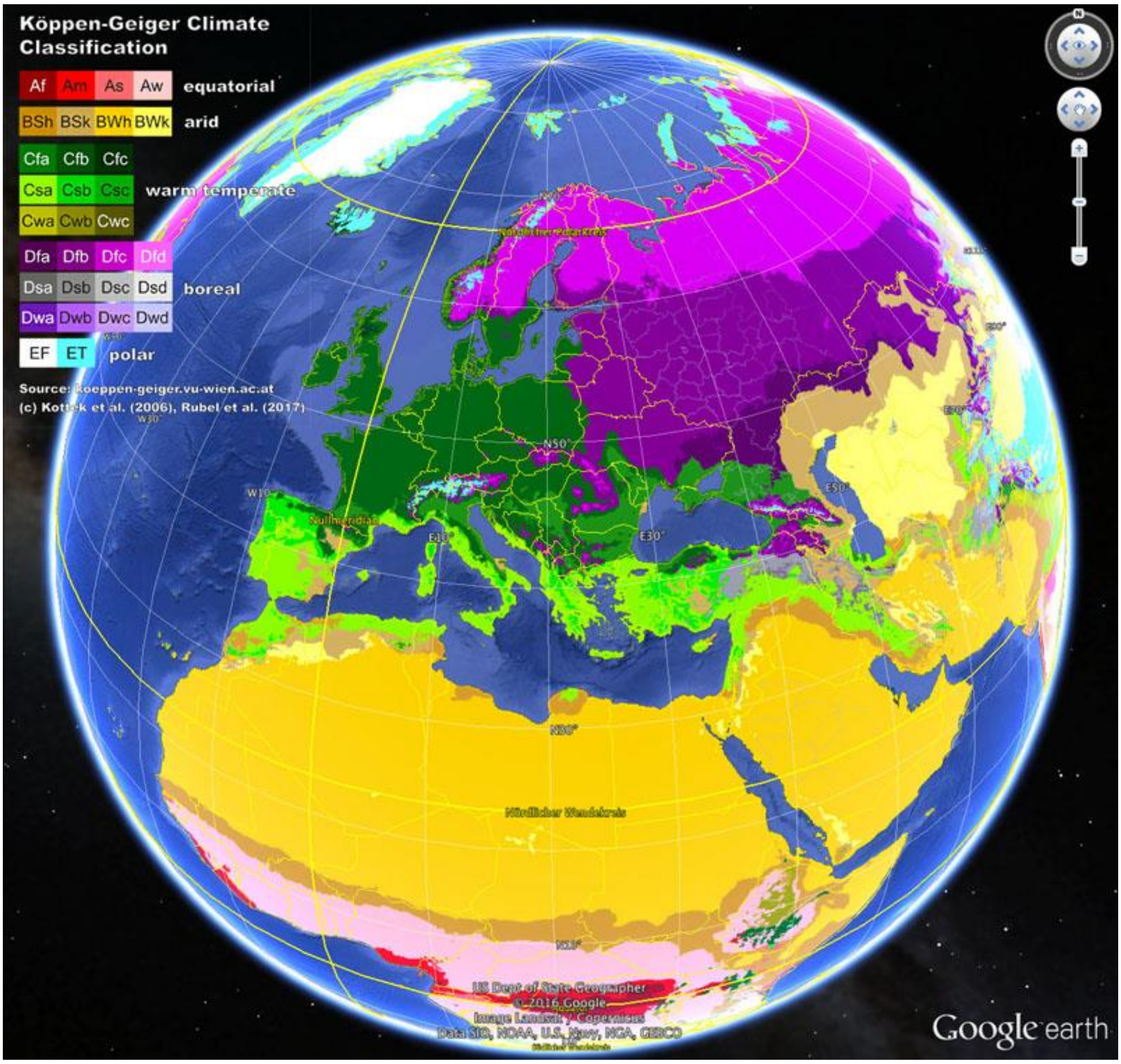


**Figure 2.3 Koppen-Geiger climate type map of Europe**

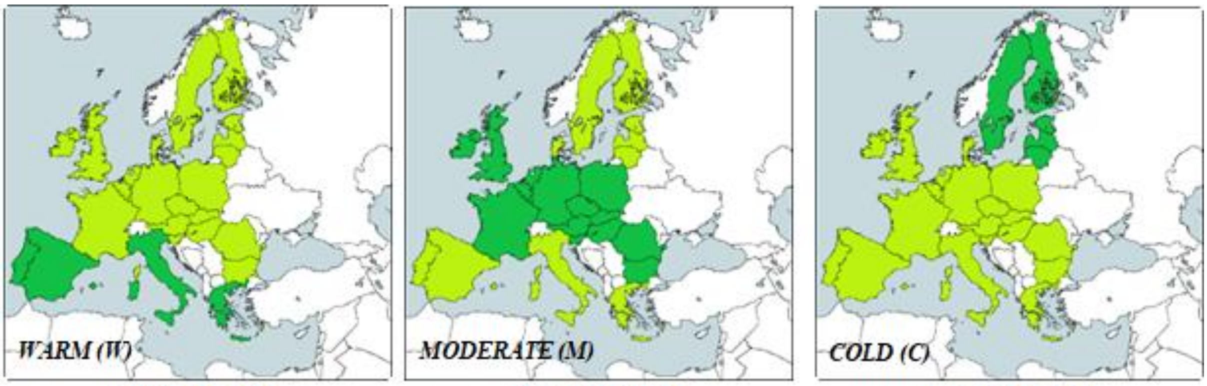
Table 2.1 reports the historical average HDD and CDD values calculated for each country at 2010.

To group the European residential building stock according to the climatic conditions, three macro-areas are identified: Warm (HDD<2300), Moderate (2301<HDD<4000) and Cold (HDD>4001).

However, only the external temperature of the winter period, expressed in degrees’ day, has been taken into account for choosing the macro climatic area in accordance with [13]. Figure 2.4 shows the three climatic zone identified and the countries included.

**Table 2.1 HDD and CDD for each country of EU-28 at 2010** [19]

| Code | HDD | CDD |
|---|---|---|
| **AT** | 3907.07 | 25.16 |
| **BE** | 3190.26 | 18.81 |
| **BG** | 2520.7 | 180.24 |
| **CY** | 495.59 | 732.18 |
| **CZ** | 3830.85 | 26.91 |
| **DE** | 3630.34 | 31.79 |
| **DK** | 3978.3 | 2.19 |
| **EE** | 4884.3 | 42.12 |
| **ES** | 1945.45 | 238.45 |
| **FI** | 6190.94 | 15.63 |
| **FR** | 2760.53 | 36.58 |
| **GB** | 3452.49 | 0 |
| **GR** | 1409.89 | 350.57 |
| **HR** | 2529.1 | 124.63 |
| **HU** | 2950.78 | 97.49 |
| **IE** | 3168.56 | 0 |
| **IT** | 2070.15 | 194.84 |
| **LT** | 4414.32 | 56.87 |
| **LU** | 3360.4 | 33.97 |
| **LV** | 4633.1 | 47.32 |
| **MT** | 402.81 | 499.27 |
| **NL** | 3311.69 | 15.73 |
| **PL** | 3920.08 | 44.64 |
| **PT** | 1293.97 | 261.96 |
| **RO** | 3052.4 | 131.77 |
| **SE** | 6003.16 | 1.33 |
| **SI** | 3134.78 | 44.7 |
| **SK** | 3491.74 | 45.36 |



**HDD:500-2300**
Malta; Cyprus; Portugal; Greece; Spain; Italy.

**HDD:2301-4000**
France; Slovenia; Hungary; Romania; Bulgaria; Ireland; Netherlands; Belgium; Luxembourg; UK; Slovakia; Germany; Austria; Czech Rep.; Poland; Denmark, Croatia.

**HDD: 4001-6000**
Lithuania; Latvia; Estonia; Sweden; Finland.

**Figure 2.4 Climatic zone classification**

### 2.2.3 Assumption on type of households

Each building in EU is unique. For this reason, the definition of archetypes representative of the building stocks required basic assumptions that could affect the "real" behavior of the energy model. In this thesis, the second parameter defined for the cluster of the residential European building stocks is based on the type of construction.

The main building stock databases available identified two macro building stocks: Single Family House (SFH), that is an independent house, and Multi Family House (MFH), that is a building which contains more houses together. The most important step of the collection data is taking into account the right number of buildings at the reference year, because the different European database reports gaps, data missing, incoherent data collected from different national portal.

When an energy model at European level is developed, no complete data could affect the validation and calibration processes. In order to account the last update of the databases ODYSSEE, Table 2.2 reports the number of building stocks divided into SFH and MFH permanently occupied at 2010. In addition, in case of missing data, the number of the total stock have been used and split equal for both SFH and MFH.

**Table 2.2 Number of building stock per country divided into SFH and MFH at 2010**

| Code | MFH | SFH |
|---|---:|---:|
| **AT** | 1,882,042.00 | 1,742,258.00 |
| **BE** | 1,360,394.50 | 3,164,047.30 |
| **BG** | 1,535,500.00 | 1,535,500.00 |
| **CY** | 165,662.00 | 165,662.00 |
| **CZ** | 2,041,074.15 | 2,041,074.15 |
| **DE** | 20,181,485.40 | 17,743,674.60 |
| **DK** | 1,117,000.00 | 1,601,000.00 |
| **EE** | 441,268.90 | 185,600.90 |
| **ES** | 12,476,730.60 | 5,149,722.20 |
| **FI** | 1,230,506.00 | 1,427,602.00 |
| **FR** | 11,952,000.00 | 15,834,000.00 |
| **GB** | 5,372,276.30 | 22,037,296.50 |
| **GR** | 2,491,792.40 | 2,080,469.80 |
| **HR** | 573,658.00 | 915,232.00 |
| **HU** | 1,493,000.00 | 2,385,000.00 |
| **IE** | 176,350.20 | 1,407,050.00 |
| **IT** | 17,662,442.00 | 6,396,454.00 |
| **LT** | 634,985.00 | 634,985.00 |
| **LU** | 99,562.50 | 99,562.50 |
| **LV** | 411,500.00 | 411,500.00 |
| **MT** | 86,416.00 | 64,088.70 |
| **NL** | 2,049,865.00 | 5,018,635.00 |
| **PL** | 6,735,000.00 | 6,735,000.00 |
| **PT** | 1,599,866.70 | 2,302,247.10 |
| **RO** | 3,210,950.00 | 4,239,050.00 |

| Code | MFH | SFH |
|---|---|---|
| **SE** | 2,468,000.00 | 1,929,000.00 |
| **SI** | 302,655.00 | 463,522.00 |
| **SK** | 887,913.90 | 856,866.10 |
| **EU-28** | **100,639,896.55** | **108,566,099.85** |

Then, for understanding which type of buildings is the most representative of the European residential building stocks, a brief description of the SFH and MFH macro categories are reported below with the statistical distribution in each country.

#### 2.2.3.1 Single Family House

The SFH category includes all households with at least four surfaces versus external environment, considering the perimeter walls, roofing and ground connection. This category includes: detached house (six external surfaces), semi-detached house (five external surfaces) and terraced house array (minimum four external surfaces).

Detached houses are non-aggregate housing units, developed from ground to sky, and have a more or less substantial private garden. However, this building typology occupies considerable extensions of land.

Even the houses contained in two-family houses belong to the Single-Family House, called semi-detached houses. They are similar to detached houses by shapes, but consist of two independent dwellings joined together, with a shared or separate private garden. The Single-Family House category also includes terraced houses, that is one of a row of similar houses joined together by their side walls.

For choosing which typology of buildings is more representative of the SFH category, an analysis has been carried out using the data reported on EUROSTAT. Table 2.3 reports the percentage rate of single-family house typologies per country and for EU-28.

**Table 2.3 Percentage rate of Single-Family House typologies at 2010 (Eurostat database ilc_lvho01_1_Data)**

| Row Labels | Detached House | Semi-Detached and Terraced House |
|---|---|---|
| **AT** | 75.66% | 24.34% |
| **BE** | 47.28% | 52.72% |
| **BG** | 82.92% | 17.08% |
| **CY** | 62.04% | 37.96% |
| **CZ** | 77.52% | 22.48% |
| **DE** | 64.44% | 35.56% |
| **DK** | 83.03% | 16.97% |
| **EE** | 84.90% | 15.10% |
| **EL** | 80.43% | 19.57% |

| Row Labels | Detached House | Semi-Detached and Terraced House |
|---|---|---|
| **ES** | 39.26% | 60.74% |
| **FI** | 71.58% | 28.42% |
| **FR** | 66.01% | 33.99% |
| **HR** | 90.69% | 9.31% |
| **HU** | 92.67% | 7.33% |
| **IE** | 39.02% | 60.98% |
| **IT** | 57.08% | 42.92% |
| **LT** | 82.52% | 17.48% |
| **LU** | 65.31% | 34.69% |
| **LV** | 88.05% | 11.95% |
| **MT** | 9.23% | 90.77% |
| **NL** | 21.27% | 78.73% |
| **PL** | 90.94% | 9.06% |
| **PT** | 68.00% | 32.00% |
| **RO** | 97.28% | 2.72% |
| **SE** | 84.28% | 15.72% |
| **SI** | 94.66% | 5.34% |
| **SK** | 95.83% | 4.17% |
| **UK** | 29.80% | 70.20% |
| **EU28** | **60.17%** | **39.83%** |

In particular, only a few numbers of country are characterized by a greater number of semi-Detached and Terraced house than detached houses (e.g. Malta with the 90.77% of Semi-detached house and terraced, followed by Netherland with 78.73% and United Kingdom with 70.20%).

For the SFH, the detached single-family house is the most representative building. Also, the population that live in detached houses accounts for about the 34.6% of EU-28 [66].

### 2.2.3.2 Multi Family House

All houses with less than four dispersing sides belong to the Multi Family House category. Therefore, all the lodgings contained in condominiums, buildings, skyscrapers, which for the most part have only two views. Top-floor apartments that may also have four views are limited cases and are still counted as Multi Family House. The MFH can consist of linear aggregations (building curtains), or aggregations that change direction and tend to circumscribe an internal space (courtyard buildings). In both cases the units are generally grouped together two by two around a vertical connection. The Multi Family House with a tower configuration is rare in Europe.

Eurostat database shows that, at European level, about the 58% of the MFH have more than 10 flats for buildings, as reported in Table 2.4. Also, Table 2.4 shows that MFH with less than 10 flats accounts for about the 95% in Malta, while the other countries have at least 72% (LU) and 69%(BE), instead the other countries are characterized by buildings with more of 10 flats for buildings.

For the MFH, the most representative model is a building with more than 10 flats [66].

**Table 2.4 Percentage rate of Multi-Family House typologies at 2010 (Eurostat database ilc_lvho01_1_Data)**

| Row Labels | Flat >10 | Flat <10 |
|---|---|---|
| **AT** | 65.40% | 34.60% |
| **BE** | 30.88% | 69.12% |
| **BG** | 86.65% | 13.35% |
| **CY** | 32.59% | 67.41% |
| **CZ** | 77.27% | 22.73% |
| **DE** | 31.52% | 68.48% |
| **DK** | 79.02% | 20.98% |
| **EE** | 83.57% | 16.43% |
| **EL** | 41.41% | 58.59% |
| **ES** | 70.62% | 29.38% |
| **FI** | 95.43% | 4.57% |
| **FR** | 65.19% | 34.81% |
| **HR** | 73.95% | 26.05% |
| **HU** | 87.54% | 12.46% |
| **IE** | 57.14% | 42.86% |
| **IT** | 49.72% | 50.28% |
| **LT** | 85.92% | 14.08% |
| **LU** | 27.27% | 72.73% |
| **LV** | 84.73% | 15.27% |
| **MT** | 4.72% | 95.28% |
| **NL** | 70.95% | 29.05% |
| **PL** | 77.99% | 22.01% |
| **PT** | 39.78% | 60.22% |
| **RO** | 92.25% | 7.75% |
| **SE** | 77.21% | 22.79% |
| **SI** | 71.93% | 28.07% |
| **SK** | 87.93% | 12.07% |
| **UK** | 33.09% | 66.91% |
| **EU28** | **58.03%** | **41.97%** |

### 2.2.4 Assumptions on temporal segmentation

The third parameter used for the segmentation of the European building stocks is based on the period of construction. In particular, the age of the buildings in Europe is direct connect with the typology and the geometry shape. In addition, the period of construction affects the characteristics of the building envelope, generating consequences on the energy consumption for heating and cooling. At the building stock level, year of construction is a key parameter because of advancements in construction technology; older buildings normally consume more energy when compared to newer buildings per unit of floor area [73, 74]

In order to account the data available and the assumption made in [13], the archetypes have been identified for 4 periods of construction:

- historical households built before 1945. This category includes all the old buildings (medieval, Renaissance, Baroque and buildings erected since the mid-nineteenth century). Sometimes, they are subjected to protection plan;
- households built between 1945 to 1969: it includes all the households post-war where their facing are usually medium-low market segment, generally built with poor quality building techniques;
- buildings from the 70s to the 90s: it includes all the households born in a period between the greater economic well-being and a first attention to energy saving standardization, the buildings are built with more details;
- households built after the 1990 until 2010: it accounts all the buildings developed with more efficient installations and building envelope and larger areas.

### 2.2.5 **Data discrepancy**

The analysis of the data shows the complexity and the difficulty in comparing the basic data, precisely due to the use of different definitions, different years of survey and different units of measurement. Another limitation is that many data are published State by State in the national language.

Furthermore, many statistics present not perfectly clear typological subdivisions. For example, some sources group terraced houses with independent villas, while others have apartment blocks. Even the temporal subdivision is different for almost all the researches, and even within the same source State by State, segmentation of the heritage made the comparison by grouping very difficult, for example when they are overlapping time bands. As regards the definition of the number of dwellings, the difficulty is in the information expressed either in number of dwellings or in number of buildings or in number of dwellings per thousand inhabitants. In defining the residential surface, the data varies from square meters of useful surface to square meters of heated surface, and is, however, not always available. Going further into the qualitative details for each type of house and period, the research is even more scarce than sources, and consequently even more laborious.

The overall data collected within the European researches are often, in turn, elaborations of investigations carried out by every single State and for which the methods of detection are not expressly indicated. To overcome the numerical differences found from one database to another, comparisons have been made through the use of other sources not mentioned above [75]. A further observation is that the available data on residential energy consumption, broken down by type of dwelling and period, are lacking, and in the sources in which they can be found, however, a certain imprecision is noted: often they are averages obtained from the registers of certifications energy or even estimates or personal judgments of experts in the field [14, 17]. All of these elements could affect each energy buildings stocks analysis. In addition, more details on the types of database selected, their possible combination and why they are selected are reported into the following sections.

## 2.3 DESCRIPTION OF THE ARCHETYPES FOR THE ENERGY MODELS

For developing bottom up building stocks models, archetypes representative of the whole EU heritage is required for evaluating the energy consumed for heating and cooling, and by equipment and lighting.

In order to provide a building physics bottom up model, the archetypes are elaborated according to [13], where a top-down was applied for calculating the energy and environmental impacts of the benchmark products of building stocks for EU-27. However, the application of a bottom up models required higher detail of information and several modeling assumptions.

Several studies have reported that the most relevant variables that affect energy consumption in a building are: internal temperature; weekly occupancy schedules; air change rate; domestic hot water (DHW) use frequency [50]. However, these variables are not sufficient to provide the parameters to define representative archetypes, thus additional variables should be included: wall, ceiling, floor and window U-values; dwelling geometry; heating system; DHW systems; dwelling floor area; climate condition and natural ventilation.

The main parameters used for running a bottom up model could be summarized in the following five macro categories:

1. General information
2. Geometric characteristics
3. Thermal characteristics
4. System and equipment characteristics
5. Operational characteristics

Table 2.5 reports all the main parameters required for the models with higher detail.

**Table 2.5 Parameters required for a bottom up buildings model**

| Category | Parameters |
|---|---|
| **General information** | Year of construction<br>Type (*i.e.* detached, semidetached house, among others) |
| | Geographic location (*i.e.* urban, rural) |
| | Climatic Zone |
| **Geometric characteristics** | Floor area (Heating floor area, Cooling floor area, unheated floor area) |
| | Number of stories |
| | Window area |
| | Story height |
| | Window/Wall ratio |
| | Wall/Floor ratio |
| | Orientation |
| **Thermos physics characteristics** | Envelope |
| | Ventilation system |
| | Infiltration |
| | Glazing type |
| | Conductivity |
| | Internal temperature |
| | Insulation level |
| **System and equipment characteristics** | Cooling system Efficiency |
| | Heating system Efficiency |
| | Domestic hot water (DHW) |
| | Fuel |
| **Use characteristics** | Occupancy level |
| | Lighting and equipment |
| | Household income |

### 2.3.1 General information

The segmentation criteria applied in this thesis, as mentioned above, are, first of all, connect to the following macro categories:

- Climatic Zone;
- Period of construction,
- Type of buildings (SFH and MFH).

The nomenclature assigned to the archetypes is reported in Table 2.6.

**Table 2.6 Nomenclature of the archetypes**

| Type | Climatic zone | Period of construction | Number | Name |
|---|---|---|---|---|
| **SFH** | Warm (W) | <1945 | 1 | SFH_W_<1945 |
| | | 1945-1969 | 2 | SFH_W_1945-1969 |
| | | 1970-1989 | 3 | SFH_W_1970-1989 |
| | | 1990-2010 | 4 | SFH_W_1990-2010 |
| | Moderate (M) | <1945 | 5 | SFH_M_<1945 |

| Type | Climatic zone | Period of construction | Number | Name |
|---|---|---|---|---|
| | | 1945-1969 | 6 | SFH_M_1945-1969 |
| | | 1970-1989 | 7 | SFH_M_1970-1989 |
| | | 1990-2010 | 8 | SFH_M_1990-2010 |
| | Cold (C) | <1945 | 9 | SFH_C_<1945 |
| | | 1945-1969 | 10 | SFH_C_1945-1969 |
| | | 1970-1989 | 11 | SFH_C_1970-1989 |
| | | 1990-2010 | 12 | SFH_C_1990-2010 |
| **MFH** | Warm (W) | <1945 | 13 | MFH_W_<1945 |
| | | 1945-1969 | 14 | MFH_W_1945-1969 |
| | | 1970-1989 | 15 | MFH_W_1970-1989 |
| | | 1990-2010 | 16 | MFH_W_1990-2010 |
| | Moderate (M) | <1945 | 17 | MFH_M_<1945 |
| | | 1945-1969 | 18 | MFH_M_1945-1969 |
| | | 1970-1989 | 19 | MFH_M_1970-1989 |
| | | 1990-2010 | 20 | MFH_M_1990-2010 |
| | Cold (C) | <1945 | 21 | MFH_C_<1945 |
| | | 1945-1969 | 22 | MFH_C_1945-1969 |
| | | 1970-1989 | 23 | MFH_C_1970-1989 |
| | | 1990-2010 | 24 | MFH_C_1990-2010 |

#### 2.3.1.1 Type of houses

Based on the European databases and JRC’s assumption, the archetypes are grouped into two macro categories: SFH and MFH. For each of them different typologies of dwellings could be identified, characterized by different thermal elements, windows, walls, roof and geometrical shapes for climatic zone and for period of construction.

#### 2.3.1.2 Period of construction

The archetypes are identified for the following periods of construction: <1945, 1945-1969, 1970-1989, and 1990-2010 [13].

The temporal classification of the European residential building stocks is performed using two European databases: ENTRANZE and EU building observatory. The first one collected data until 2008; instead, the second is updated at 2015. Both sources produce a more fragmented subdivision than the one that the present work taken into account for the quantification and definition of the archetypes. Just for examining the evolution of the building stock with more detail, in this context of analysis, the data selected from both databases are reported in Appendix [13, 15, 68].

In order to account the limits of the European database, the percentage rate of buildings is calculated assuming that:

- the number of SFH and MFH built in the period 2009 -2010 (reported in Table A3) are added to ENTRANZEE data (Table A1-2) and where data is not split in SFH or MFH, the new constructions are divided equally between both;
- the number of buildings is aggregated in 4 periods of construction (before 1945, 1945-1969, 1970-1989 and 1990-2010);
- the number of buildings constructed in Latvia is calculated using the data from BPIE database (reported in Table A5), where completed data are found only for the year 2014, where data on Austria are not reported. Considering that only 1% of dwellings are built after 2010, the percentage rate is used for calculating the number of households built during the four periods of construction, adding the 1% at the households built before 1945;
- No data on the Italian new constructions divided in SFH and MFH had been found for the period 2009-10. For that reason, the total number of buildings built in 2009 and 2010 have been split equally for SFH and MFH;
- assumptions on the demolition rate are not included into the study, because it is out of the scope of the model performed.

The ratio of building stocks built in different decades are reported in Table 2.7.

**Table 2.7 Breakdown of the European building stocks for period of construction and type of house**

| | MFH | | | | SFH | | | |
|---|---|---|---|---|---|---|---|---|
| | **< 1945** | **1945-1969** | **1970-1989** | **1990-2010** | **< 1945** | **1945-1969** | **1970-1989** | **1990-2010** |
| **AT** | 26.55% | 28.88% | 23.32% | 21.25% | 20.92% | 28.39% | 29.43% | 21.25% |
| **BE** | 33.99% | 18.88% | 24.53% | 22.60% | 40.50% | 22.50% | 22.85% | 14.14% |
| **BG** | 4.89% | 23.65% | 37.09% | 34.37% | 21.52% | 33.30% | 28.81% | 16.36% |
| **CY** | 0.14% | 3.36% | 27.97% | 68.53% | 4.39% | 12.74% | 31.09% | 51.78% |
| **CZ** | 15.19% | 37.46% | 32.95% | 14.39% | 33.25% | 25.51% | 22.57% | 18.68% |
| **DE** | 18.35% | 36.08% | 31.22% | 14.35% | 25.08% | 28.46% | 25.30% | 21.16% |
| **DK** | 40.63% | 23.62% | 18.93% | 16.82% | 31.99% | 27.29% | 24.88% | 15.84% |
| **EE** | 10.07% | 28.24% | 49.70% | 11.99% | 43.75% | 25.03% | 16.53% | 14.68% |
| **ES** | 9.20% | 23.84% | 32.40% | 34.57% | 21.66% | 20.70% | 27.32% | 30.33% |
| **FI** | 10.57% | 24.91% | 39.50% | 25.02% | 16.94% | 25.67% | 32.71% | 24.69% |

|  | MFH |  |  |  | SFH |  |  |  |
|---|---|---|---|---|---|---|---|---|
|  | **< 1945** | **1945-1969** | **1970-1989** | **1990-2010** | **< 1945** | **1945-1969** | **1970-1989** | **1990-2010** |
| **FR** | 28.75% | 17.53% | 31.88% | 21.84% | 22.51% | 17.56% | 37.00% | 22.93% |
| **GB** | 24.48% | 25.11% | 22.26% | 28.15% | 43.19% | 24.65% | 17.63% | 14.54% |
| **GR** | 7.99% | 29.09% | 40.93% | 21.99% | 8.22% | 29.93% | 42.10% | 19.75% |
| **HR** | 3.22% | 6.40% | 9.69% | 80.69% | 6.29% | 11.23% | 14.90% | 67.58% |
| **HU** | 37.73% | 24.72% | 16.74% | 20.82% | 12.89% | 25.62% | 42.03% | 19.46% |
| **IE** | 12.31% | 8.00% | 10.93% | 68.76% | 16.97% | 15.81% | 25.21% | 42.02% |
| **IT** | 20.44% | 35.50% | 33.67% | 10.40% | 33.17% | 27.05% | 29.14% | 10.63% |
| **LT** | 22.84% | 26.35% | 39.52% | 11.29% | 30.42% | 28.96% | 29.26% | 11.36% |
| **LU** | 16.28% | 25.65% | 23.68% | 34.39% | 34.16% | 25.16% | 24.70% | 15.98% |
| **LV** | 22.22% | 37.37% | 30.30% | 10.10% | 22.22% | 37.37% | 30.30% | 10.10% |
| **MT** | 8.12% | 19.49% | 24.45% | 47.95% | 25.55% | 22.22% | 32.64% | 19.59% |
| **NL** | 20.43% | 27.08% | 30.14% | 22.34% | 23.11% | 24.22% | 30.65% | 22.01% |
| **PL** | 19.24% | 20.92% | 28.11% | 31.73% | 21.17% | 24.13% | 22.83% | 31.86% |
| **PT** | 8.64% | 15.80% | 40.54% | 35.03% | 16.44% | 19.42% | 35.07% | 29.07% |
| **RO** | 2.52% | 23.18% | 67.23% | 7.06% | 16.19% | 34.69% | 37.76% | 11.36% |
| **SE** | 31.43% | 30.21% | 24.08% | 14.28% | 32.70% | 27.35% | 30.11% | 9.84% |
| **SI** | 31.88% | 22.11% | 27.31% | 18.70% | 30.60% | 19.97% | 27.78% | 21.64% |
| **SK** | 15.14% | 35.65% | 31.51% | 17.70% | 32.41% | 24.87% | 22.00% | 20.71% |

#### 2.3.1.3 Climatic Zone

For the definition of the archetypes, the weather condition is used as one of the main segmentation criteria. For that reason, the European climatic conditions are split in three macro climatic zones: Warm (W), Moderate (M) and Cold (C). The macro climatic zones are identified in accordance with JRC’s archetypes for the identification of an average envelope and area dimension for group of countries.

For the representation of the outdoor conditions, local weather data at hourly resolution are required for running the bottom up energy model. In order to account that each country has external temperature that could be different between cities of the same country.

The database of EnergyPlus weather files (epw) and the National Solar Radiation Data Base are used for choosing which file is more representative of the average weather condition of each European country examined at 2010. This database contains information on the different weather file models developed. Each of this model is created for including information on outdoor temperature, relative humidity, solar radiation, wind direction and wind speed.

For the scope of the thesis, 4263 weather data with format TMYx [76] and 107 IWEC [77] have been analyzed, the distribution of file used for countries are reported in Table 2.8.

In order to account that each weather model is characterized by different methodological approach, the files selected are grouped into three macro categories:

1. IWEC weather file;
2. TMYx weather file;
3. TMYx weather file completed with climatic data between 2003-2017.

For each group of files, 28 weather files have been selected for representing the average European climatic condition at 2010 (Table 2.1). In fact, the choose of the weather file has been performed using the calculation methods propose from EUROSTAT for defining the average HDD and CDD per year and then, the calculated HDD and CDD of the weather files have been compared with Table 2.1. The selection criteria imposed are the minimal deviation for both indices respect the EUROSTAT values. In fact, the HDD and CDD, calculated using the methodology applied by Eurostat, constitute a common and comparable basis. Although, the use of these HDDs and CDDs represents an approximation of reality, but acceptable for the purposes of the study.

**Table 2.8 Number of weather file for countries**

| Row Labels | Number of weather file for countries |
|---|---|
| **AT** | 228 |
| **BE** | 66 |
| **BG** | 78 |
| **CY** | 36 |
| **CZ** | 85 |
| **DE** | 437 |
| **DK** | 134 |
| **EE** | 47 |
| **ES** | 152 |
| **FI** | 327 |
| **FR** | 405 |
| **GB** | 563 |
| **GR** | 96 |
| **HR** | 75 |
| **HU** | 73 |
| **IE** | 55 |
| **IT** | 248 |
| **LT** | 26 |
| **LU** | 5 |
| **LV** | 49 |
| **MT** | 2 |
| **NL** | 82 |
| **PL** | 235 |
| **PT** | 72 |
| **RO** | 226 |
| **SE** | 477 |
| **SI** | 37 |

| Row Labels | Number of weather file for countries |
|---|---|
| **SK** | 54 |
| **Total** | **4370** |

For calculating the heating degree days (Heating Degree Days, HDD) of European countries, Eurostat has detected weather data from METEONORM, a global meteorological reference which gives access to a catalog of high-precision meteorological data. Instead, this thesis uses only opensource weather data reported online. EUROSTAT defines:

- the HDD index as "the severity of the cold in a specific time period taking into consideration outdoor temperature and average room temperature (in other words the need for heating)";
- the CDD index as "the severity of the heat in a specific time period taking into consideration outdoor temperature and average room temperature (in other words the need for cooling)"[19].

Based on these definitions, the calculation of the both indices rely on the base temperature, which represents:

- for the HDD, the lowest daily mean air temperature not leading to indoor heating (15°C);
- for CDD, the highest daily mean air temperature not leading to indoor cooling (24°C).

Identifying the base temperature equal for each country is not really the correct way, because it depends on several factors based on the building and the environment condition. However, the approach is used for comparing the results of each European country[19]. The Eqs 2.1 and 2.2 are implemented on MATLAB environmental for calculating the HDD and CDD indexes of the 4370-weather file analyzed.

$$\begin{aligned}&If \;\; T_m \leq 15°C \\ &Then \; \left[ HDD \; = \; \sum_i (18°C \; - \; \overline{T_{im}}) \right] \\ &Else \; \left[ HDD \; = \; 0 \right]\end{aligned} \qquad \textbf{Eq. 2.1}$$

$$\begin{aligned}&If \;\; T_m \geq 24°C \\ &Then \; \left[ CDD = \sum_i (T_{im} - 21°C) \right] \\ &Else \; \left[ CDD \; = \; 0 \right]\end{aligned} \qquad \textbf{Eq. 2.2}$$

where $T_{im}$ is the mean air temperature of day *i*. The complete code is reported in Appendix B.

Figure 2.5 and Figure 2.6 reports the difference between the weather data with the minor HDD/CDD respect one with the greater results compared with the statistical data. It is possible observe that greater differences between HDD and CDD have been recorded from the weather stations along country. For that reason, the selection of the weather data should be done based on the most representative average climatic condition for each country and not for climatic zone.

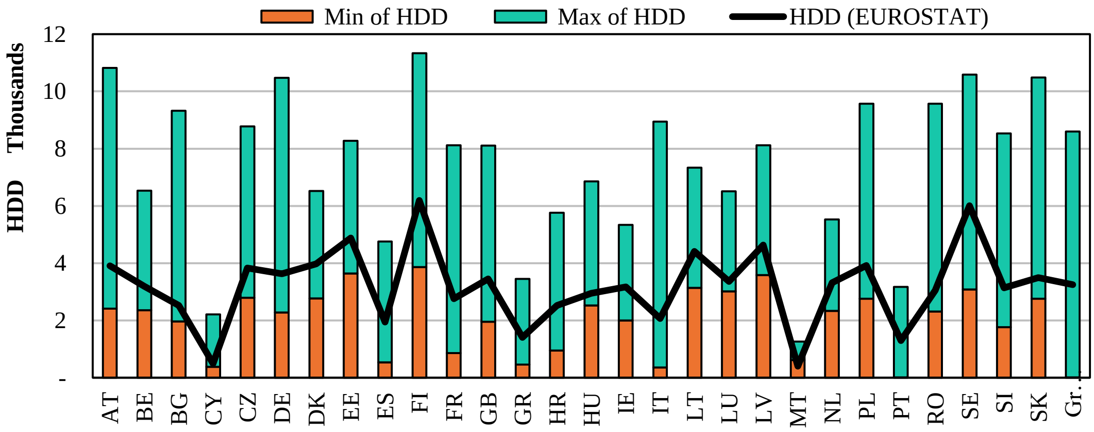


**Figure 2.5 Range of HDD calculated per countries**

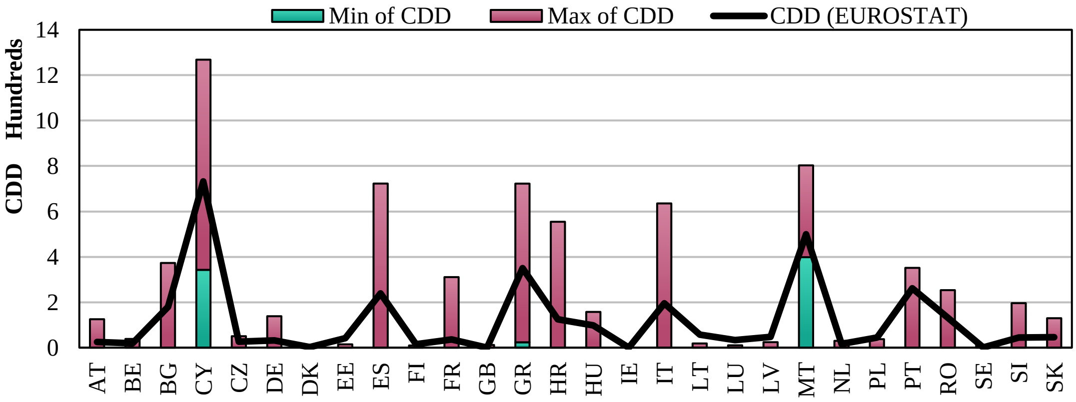


**Figure 2.6 Range of CDD calculated per countries**

The selected weather files for each group are reported in Table A 4 in Appendix.

### 2.3.1.4 Geographic locations

The geographic location is a necessary input for evaluating the climatic condition in different construction site (as type of terrain, the wind and sun expositions, influencing the energy consumption for heating and cooling. The average distribution of the residential buildings in Europe is 42% in the urban center, 30% in intermediate urban areas, and the remaining 28% in rural areas. Of course, this distribution differs among countries [78]. For defining the geographic location of the European building stock, data on percentage rate of households built in different zone (as city, suburbs, urban) of the country are used as reported on EUROSTAT and shown in Figure 2.7 and Figure 2.8, divided for MFH and SFH.

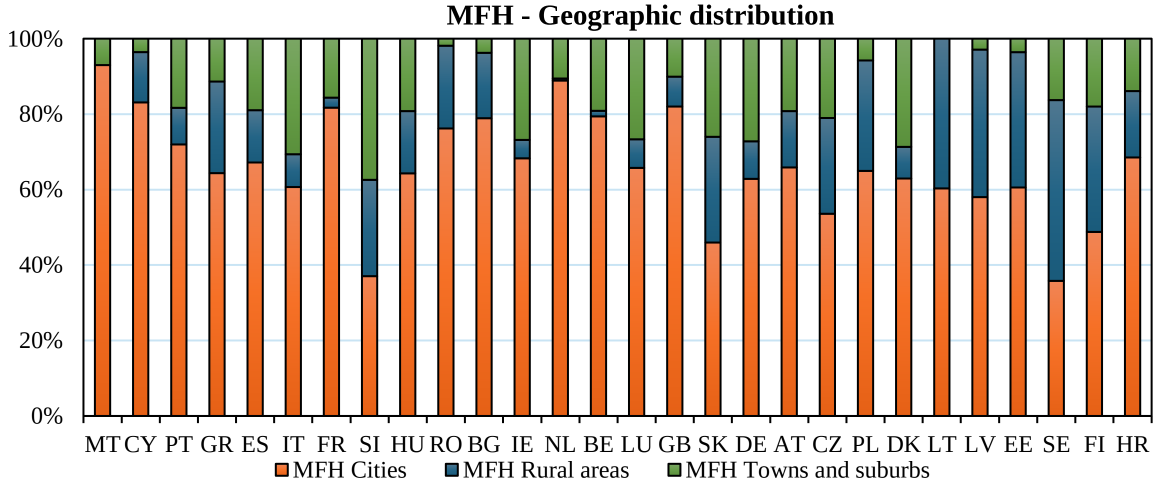


**Figure 2.7 The fraction rate of buildings location at 2010 for each Country (Eurostat ilc_lvho01).**

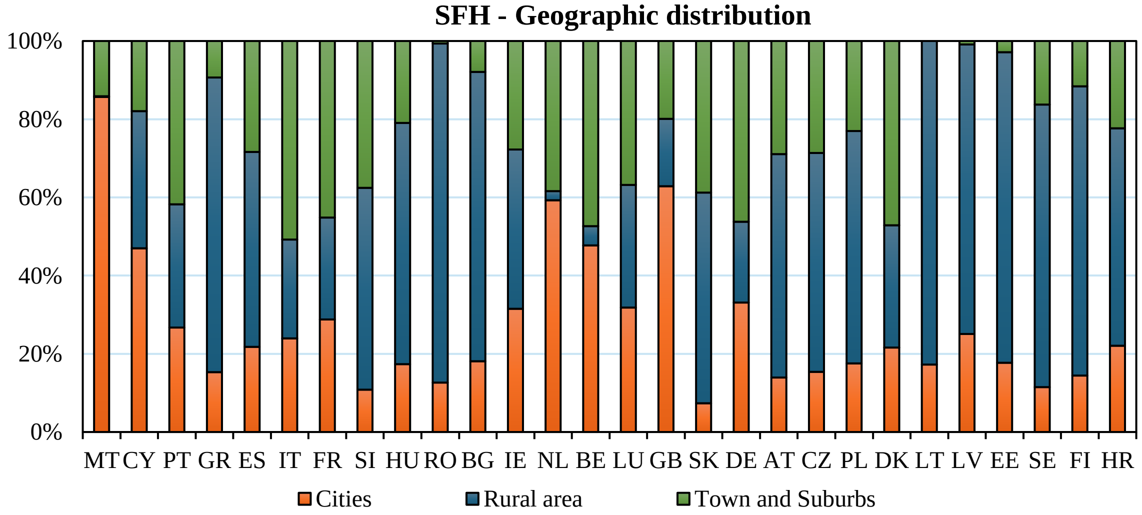


**Figure 2.8 The fraction rate of buildings location at 2010 for each Country (Eurostat ilc_lvho01).**

For simulating the effects connect to the *situ* and *climatic condition*, Energy Plus allows to account the geographic location into the object *"field:Terrain"*. In fact, "*The site's terrain affects how the wind hits the building – as does the building height*". EnergyPlus identified five subcategories of terrain, reported in Table 2.9.

**Table 2.9 Values for “Terrain” from EnergyPlus manual**

| Terrain Type Value | Terrain Description |
|---|---|
| **Country** | Flat, Open Country |
| **Suburbs** | Rough, Wooded Country, Suburbs |
| **City** | Towns, city outskirts, center of large cities |
| **Ocean** | Ocean, Bayou flat country |
| **Urban** | Urban, Industrial, Forest |

The data reported on Eurostat and the object developed into Energy Plus are combined for accounting the terrain effects for the following subcategories:

- Suburbs, for the Town and Suburbs area identified from EUROSTAT,
- City, for the city area identified from EUROSTAT and
- Country for the Rural area identified from EUROSTAT.

These parameters affect the energy required for heating and cooling, because it influence the outdoor wind speed, outdoor temperature and terrain property (ASHRAE 2001).

### 2.3.2 **Geometric characteristics**

Dwelling geometry is a key determinant in the space heating energy consumption of a dwelling since it affects the dwelling’s heat loss through the number of exposed walls and the average floor area. Furthermore, built form is also seen as an important characteristic for determining options for energy efficient refurbishment. For instance, renovation of multi-story buildings requires more technically complex solutions than of single-family houses. Most of the geometrical characteristic is assumed similar to the representative archetypes reported on the technical drawing in [13].

#### 2.3.2.1 Floor area and shape

The average floor area for archetypes is selected from [13], where the area was calculated as average square meter for each building, based on the information available on the average surface for period of construction and for typology of house. When data missed, they have been assumed equal to average floor area reported on EUROSTAT at 2010. The floor area was calculated grouping the data for each climatic zone and period of construction. Table 2.10 and Table 2.11 report the average area of the archetypes. These data have been used for creating the 3D physical model and running the simulation.

**Table 2.10 Area of the SFH archetypes**

| | SFH_W_<1945 | SFH_W_1945-1969 | SFH_W_1970-1989 | SFH_W_1990-2010 | SFH_M_<1945 | SFH_M_1945-1969 | SFH_M_1970-1989 | SFH_M_1990-2010 | SFH_C_<1945 | SFH_C_1945-1969 | SFH_C_1970-1989 | SFH_C_1990-2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Area [m$^2$]** | 100 | 100 | 100 | 130 | 90 | 90 | 100 | 100 | 100 | 100 | 120 | 120 |

**Table 2.11 Area of the MFH archetypes**

| | MFH_W_<1945 | MFH_W_1945-1969 | MFH_W_1970-1989 | MFH_W_1990-2010 | MFH_M_<1945 | MFH_M_1945-1969 | MFH_M_1970-1989 | MFH_M_1990-2010 | MFH_C_<1945 | MFH_C_1945-1969 | MFH_C_1970-1989 | MFH_C_1990-2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Area [m$^2$]** | 90 | 90 | 90 | 90 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |

The representative building models are selected in accordance with the technical drawings of the "representative products" in basket of products housing [13] and developed in order to respect the statistical area calculated for each archetype.

**Figure 2.9 Technical drawing of the houses – Example of SFH (100m$^2$) space distribution**

The example of the technical drawing of first archetype (SFH <1945 in warm climatic zone) is reported in Figure 2.9, where quotes of the dimension and destination use of the rooms are indicated. More details are reported into Appendix and in [13].

The roof of the buildings could be identified as pitched or flat. The pitched roof is the most common and widespread construction elements [72]. In EU, for each archetype build in cold and moderate climatic zone, the pitched roof is assumed as representative of the SFH building stocks. In the warm climatic zone, the roof of all archetypes is flat, excepted for the SFH built before the 1990. Also, the MFHs of the moderate climatic zone are characterized by flat roofs. Statistical data and decision made are reported in [13, 66, 72, 79]. The pitched roofs' inclination is established around 30% (constant value for the inclined roofs of all models) [72]. The thermal behavior of the entire roof depends mainly on the intended use of the attic space. For each archetype with a pitched roof, the attic space is accounted as an unheated volume used. For the multifamily house, the stair space is unheated volume.

The physics models are developed with the SketchUp tool and with Open Source plug-in [80]. Example of physical and geometric models developed are illustrated in Figure 2.10.

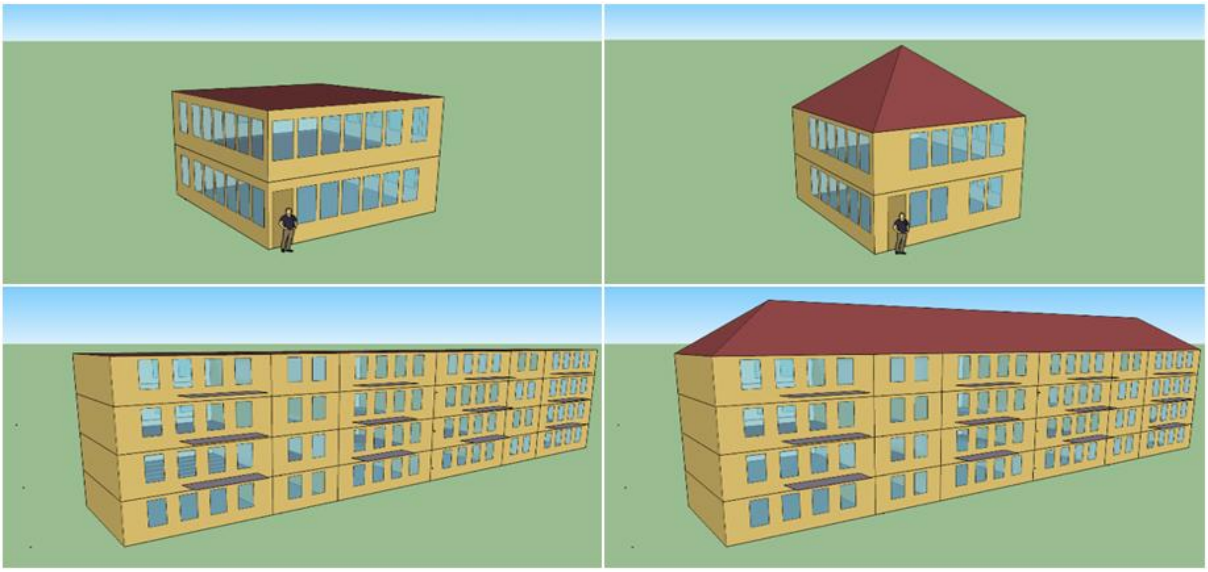


**Figure 2.10 Example of SFH and MFH models with pinched roof and flat roof**

2.3.2.2 Number of stores and their height

The number of stories is based on the research [66] and verified with the Tabula database. As mentioned above, the most common SFH has two stories. Instead, the most common MFHs is a building with more than 10 apartments joined together as demonstrated in section 2.2.3.2. The authors in [66] assumed a building with 4 stories and 16 apartments. The similar geometric shape is used in this thesis.

The story height of each archetype was identified in [66] for climatic zone. In particular, after a research on Tabula database, they identified that the average height for the warm climatic zone is 2.7 m and for the others climatic zones is 2.5 m.

#### 2.3.2.3 Window area and Wall/Floor ratio

The transparent surface plays a crucial role within the building system, because they greatly affect the way in which space is created and used, on the indoor comfort of the inhabitants, but also on the same energy performance and consumption. For that reason, the renewed attention to the benefits guaranteed by a correct use of sunlight has promoted numerous researches about the subject and encouraged continuous evolution of the glass-door system for the new constructions.

The functions attributed to transparent surfaces are numerous. The most important issue is related to the thermal-energy contribute, affected by the outdoor climatic conditions and the use of the building zone. In fact, the dimension of the windows must ensure adequate natural lighting avoiding the increasing of heat losses and solar radiation in warm climate. Another function linked to the geometrical characteristics is the natural ventilation that is regulated through the windows opened or closed to guarantee the correct air exchange and therefore to respond to the problem of healthiness inside the rooms.

No having enough data on generic dimensions of the transparent surfaces and their orientation distribution at European level, the Window to Wall Ratio WWR factor assumed in [13] is used for the energy buildings model.

WWR is defined as the ratio between the sum of all the transparent surfaces, including the window frames, and the overall external area of wall, including both the transparent and opaque parts present outside.

In [13], the global WWR is calculated for respecting the standard on the minimal WWR required for each end use zone of the house (kitchen, bedroom, restroom etc.) and calculate the global area. The WWR for rooms and for archetypes is indicated in [13, 72], but it doesn’t include real dimensions of the transparent surfaces. The geometrical dimension of the windows is assumed for having the global WWR value for archetypes, respecting the position of the internal space (Figure 2.9) and the height of the facades.

#### 2.3.2.4 Orientation

No having information on the typical orientation of the European heritage, the orientation of the building stocks is assumed in order to maximize the radiation effects, establishing:

- For each SFH, the north façade is represented by the wall with the minor number of windows.
- For the MFH, the windows are only on the east and west facades of the buildings in order to account the same characteristics for each floor of the buildings and for maximizing the solar irradiation during the day for the cold climatic zone.

### 2.3.3 **Thermos physics characteristics**

Construction methods and thus the resulting heat transfer coefficients (U -values) of building elements have changed considerably over time. A categorization of the envelope based on the period of construction and climatic zone is adopted in the model following the assumptions and the data calculated in [13, 72].

The determination of constructive elements characteristics, namely material thickness, heat transfer coefficient and thermal capacity for running into Energy Plus, is explained hereafter and calculated for reproduce the statistical U-value calculated in [13].

#### 2.3.3.1 Envelope

Two type of stratigraphy could be identified at European level: massive or lightweight.

The archetypes envelope are implemented following the stratigraphy considerate as the benchmark of the European climatic zone, for type of houses and period of construction [72]. In particular, a massive building envelope system is assumed to be representative of all EU dwellings in the warm and moderate climates. For cold climates, a massive building envelope system is assumed for the Multi-Family Houses (MFH), whereas a lightweight construction system is assumed for the Single-Family Houses (SFH). Stone wool is chosen as traditional insulation because it (together with glass wool) accounts for 60% of the market of insulating materials in Europe; organic foamy materials, expanded and extruded polystyrene and polyurethane, account for only 27% of the market in accordance with [13, 55]. Detailed information on opaque structures stratigraphy are reported into the summary section of this chapter. In order to provide a global and clear information on all the models, thickness, conductance and materials are included in appendix.

### 2.3.3.2 Natural ventilation

The occupants´ actions related to the building control systems, such as ventilating an indoor environment, is generally neither a simple reflex action not a rational well thought out act. Nevertheless, among individuals or even households, behavior appears to be fairly consistent, indicating that a "subjective rationality" exists in behavior. For that reason, the natural ventilation is set during the calibration and validation steps for regulating the cooling and heating demands when the outdoor temperature varies from 18°C to 26°C. The wind speeds are lockup at 2 m/s. The test base model is developed without natural ventilation object, for checking the behavior of the model. Then, the object of Energy Plus used for simulating the natural ventilation is *ZoneVentilation:WindandStackOpenArea.* The parameters required are set as in Table 2.12.

**Table 2.12 Natural ventilation parameters**

| Name | Parameters range |
|---|---|
| **Zone Name** | Each thermal zone heated |
| **Opening Area {m$^2$}** | 0.9 to 3 |
| **Opening Area Fraction Schedule Name** | Always on Continuous |
| **Opening Effectiveness {dimensionless}** | auto calculate |
| **Effective Angle {deg}** | 117 |
| **Height Difference {m}** | Based on story height for thermal zone (0,3,6,9 m) |
| **Discharge Coefficient for Opening** | auto calculate |
| **Minimum Indoor Temperature {C}** | Range of 20 to 24 °C |
| **Maximum Indoor Temperature {C}** | 100 |
| **Delta Temperature {deltaC}** | -100 |
| **Minimum Outdoor Temperature {C}** | Range of 18 to 20 |
| **Maximum Outdoor Temperature {C}** | 26 |
| **Maximum Wind Speed {m/s}** | 2 |

### 2.3.3.3 Infiltration

The infiltration is defined as any outdoor air that enters in building construction and immediately mixed with the zone air. The infiltration calculation is quite complicate with elevated uncertainty degree.

The most common procedure converts the infiltration rate in air change for hour. Different methodologies have been identified in literature to calculate the energy contribute linked to the infiltration. Energy Plus allows to calculate the infiltration through three models. The first is the "Design Flow Rate" model and it is based on environmental conditions modifying a design flow rate. The second is the "Effective Leakage Area" model based on Sherman and Grimsrud [81].The third is the "Flow Coefficient" model based on Walker and Wilson (1998).

The model formulations for the Effective Leakage Area and Flow Coefficient models are from the ASHRAE Handbook of Fundamentals (2001 Chapter 26; 2005 Chapter 27) where they are referred to as “Basic” and “Enhanced”, respectively. The ASHRAE standard reports the common factors that could be selected for different building.

In this research, based on the available data that could be considerate as representative of the European heritage, the methodology applied for infiltration contribute is the object *Infiltration design flow rate*. The infiltration model required the definition of the average value of Air change hour (ACH),whose have been selected from literature for period of construction [45, 82] (Table 2.13).

**Table 2.13 ACH per period of construction (reworked** [45, 82]**)**

| | **Period of construction** | | | |
|---|---|---|---|---|
| | **<1945** | **1945-1969** | **1970-1989** | **1990-2010** |
| **Air change hours [1/h]** | 0.815 | 0.790 | 0.710 | 0.275 |

During the calibration process, the ACH have changed at least of ±0.005 for avoiding big discrepancies between the archetypes during the calibration process.

### 2.3.3.4 Glazing type

The U value is selected from [13], where it was calculated as arithmetic mean of transmittance value reported on BPIE and ENTRANZE weighted for the number of buildings that each archetype represents. Also, the typologies of frame and glass for each transparent element is detailed reported in [13].

Table 2.14 shows the main technical and thermal characteristics of windows for each archetype. Each single transparent element has been developed into windows tool.

**Table 2.14 Main technical and thermal characteristics of windows for each archetype** [13]

| **Archetypes** | **U-value [W/m$^2$ K]** | **Frame** | **Glass** |
|---|---|---|---|
| **SFH_W_<1945** | 4 | wood frame | single glass |
| **SFH_W_1945-1969** | 4 | wood frame | single glass |
| **SFH_W_1970-1989** | 3.45 | wood frame | single glass |
| **SFH_W_1990-2010** | 3 | wood frame | single glass |
| **SFH_M_<1945** | 3.65 | wood frame | single glass |
| **SFH_M_1945-1969** | 3.65 | wood frame | single glass |
| **SFH_M_1970-1989** | 2.65 | wood frame | single glass |
| **SFH_M_1990-2010** | 1.84 | PVC frame | double glass |

| Archetypes | U-value [W/m$^2$ K] | Frame | Glass |
|---|---|---|---|
| **SFH_C_<1945** | 2.3 | wood frame | single glass |
| **SFH_C_1945-1969** | 2.3 | wood frame | single glass |
| **SFH_C_1970-1989** | 2.01 | wood frame | double glass |
| **SFH_C_1990-2010** | 1.87 | wood frame | triple glass |
| **MFH_W_<1945** | 4.8 | wood frame | single glass |
| **MFH_W_1945-1969** | 4.8 | wood frame | single glass |
| **MFH_W_1970-1989** | 4.9 | aluminum frame | double glass |
| **MFH_W_1990-2010** | 3.75 | aluminum frame | double glass |
| **MFH_M_<1945** | 3.81 | wood frame | double glass |
| **MFH_M_1945-1969** | 3.81 | wood frame | double glass |
| **MFH_M_1970-1989** | 2.9 | PVC frame | double glass |
| **MFH_M_1990-2010** | 1.93 | PVC frame | double glass |
| **MFH_C_<1945** | 2.2 | wood frame | single glass |
| **MFH_C_1945-1969** | 2.2 | wood frame | single glass |
| **MFH_C_1970-1989** | 2.04 | wood frame | double glass |
| **MFH_C_1990-2010** | 1.97 | alum frame | double glass |

#### 2.3.3.5 Conductivity

Material properties have been selected using ASHRAE handbook and European construction standard on materials property [51, 83]. For developing the models, the thermal conductivity of each construction material is accounted for creating an opaque packages with the statistical U-value calculated into [13], consequently making changes to the material packages to be similar at the statistical reference transmittance.

The equation for calculating the U-value is reported in the following:

$$U_{value} = \frac{1}{R_T} \qquad \textbf{Eq. 2.3}$$

$$R_T = R_{in} + R_1 + \cdots + R_n + R_{out} \qquad \textbf{Eq. 2.4}$$

$$R_n = \frac{s}{\lambda} \qquad \textbf{Eq. 2.5}$$

where:

U is the transmittance of the opaque surface, $R_T$ is total resistance, λ is the conductivity of the surface and s is the thickness of each surface.

The indoor and outdoor resistance are assumed constant for horizontal and vertical surfaces in each climatic zone [53]:

- $R_{h,out}$ and $R_{h,in}$ are respectively 0.10 and 0.04 (m$^2$ K)/W;
- $R_{v,out}$ and $R_{v,in}$ are respectively 0.13 and 0.04 (m$^2$ K)/W.

#### 2.3.3.6 Internal Temperature

The required internal temperature is considered as the average temperature desired inside the house by its occupants to achieve their comfort (20-26°C) [53], and it is assumed to be constant on time and unvaried in space in the first model performed. During the calibration, this variable is varied from 18°C to 20°C for the heating temperature set point and from 26°C to 28°C for the cooling temperature set point.

#### 2.3.3.7 Insulation level

The insulation level depends on the period of construction of the archetypes. The typical stratigraphy is elaborated as shown on the report [66]. However, for avoid incongruences between the archetypes, the authors provide the same insulation for all climatic zones and archetypes. In particular, the insulation materials selected is stone wool and it is considerate as the most used in EU [66].

### 2.3.4 **System and equipment characteristics**

In order to account all the information required for implementing a bottom up model, the following data have been collected for EU-28 at 2010 from JRC-IDEES database (category: residential building stocks) [14]:

- Cooling system Efficiency;
- Heating system Efficiency;
- Domestic hot water (DHW) efficiency;
- Fuel types.

Census data in EU-28 include information about energy carriers for heating, cooling and DHW systems on building level as average value for countries. Building systems, such as heating, cooling and domestic hot water systems (DHW), and their efficiencies are crucial for the calculation of the final and primary energy consumption of buildings stocks. The different available technologies for heating and DHW exhibit highly different efficiencies and emission factors for type of fuel used and for country. Based on this information, a set of energy systems and their typical efficiencies are defined and provided for the baseline scenario at 2010.

#### 2.3.4.1 Cooling and heating system efficiency

Heating is normally the largest energy use in the home. For this reason, and because of the high variety of existing equipment, it is a critical requirement for the knowledge of the energy consumption of households.

Throughout much of the EU, energy use for the cooling of homes is a residual component of total household consumption. However, for countries in Southern Europe it can account for a significant proportion of energy use. The higher temperatures of the summer season and higher disposable incomes have resulted in an increase in the number of appliances used for domestic air conditioning. This trend is likely to continue, particularly if a larger proportion of people in warmer climates work from home. For these reasons, it was necessary to make a more comprehensive analysis of the air conditioner penetration rate per regions in order to compare the results of the simulations with the statistical data at 2010.

For modelling the 672 archetypes with a bottom up approach, the ideal loads have been calculated for having indoor condition of comfort for inhabitants and in a second moment the thermal-energy required has been split for type of fuels used and efficiencies of heating and cooling systems selected for countries.

In addition, given the great diversity of the climate in the EU, the variety of ways in which families keep their homes warm or cold, and different heating and cooling systems/appliance, any cross-EU analysis can be complex. In order to compare the results across-European countries, only set points of temperature are established.

Table 2.15 shows the efficiencies of heating and cooling systems at 2010. Data are collected in accordance with JRC-IDEES database for each EU-28 country.

## Table 2.15 Average efficiency of heating and cooling systems

| Country | Solids | Liquified petroleum gas (LPG) | Gas/Diesel oil incl. biofuels (GDO) | Gases incl. biogas | Biomass and wastes | Geothermal energy | Derived heat | Advanced electric heating | Conventional Electric Heating | AC |
|---|---|---|---|---|---|---|---|---|---|---|
| **AT** | 0.55 | 0.66 | 0.64 | 0.68 | 0.56 | - | 0.84 | 1.70 | 0.82 | 2.61 |
| **BE** | 0.53 | 0.65 | 0.63 | 0.67 | 0.55 | - | 0.79 | 1.65 | 0.80 | 2.66 |
| **BG** | 0.46 | 0.58 | 0.60 | 0.63 | 0.47 | - | 0.69 | 1.55 | 0.73 | 2.13 |
| **CY** | - | 0.49 | 0.47 | - | 0.40 | 0.73 | - | 1.62 | 0.71 | 2.16 |
| **CZ** | 0.48 | - | - | 0.62 | 0.49 | - | 0.72 | 1.44 | 0.71 | 2.31 |
| **DE** | 0.60 | 0.71 | 0.69 | 0.73 | 0.62 | 0.89 | 0.91 | 2.08 | 0.86 | 2.45 |
| **DK** | - | 0.69 | 0.66 | 0.71 | 0.59 | - | 0.87 | 2.07 | 0.80 | 2.52 |
| **EE** | - | - | 0.64 | 0.66 | 0.51 | - | 0.76 | 1.56 | 0.73 | 2.53 |
| **ES** | 0.49 | 0.61 | 0.59 | 0.64 | 0.50 | 0.81 | - | 1.59 | 0.72 | 2.35 |
| **FI** | 0.49 | 0.61 | 0.59 | 0.63 | 0.49 | - | 0.74 | 1.71 | 0.71 | 2.29 |
| **FR** | 0.55 | 0.67 | 0.65 | 0.68 | 0.56 | 0.84 | 0.84 | 1.72 | 0.82 | 2.47 |
| **GB** | 0.54 | 0.66 | 0.65 | 0.68 | 0.57 | - | 0.82 | 1.62 | 0.77 | 2.58 |
| **GR** | - | - | 0.58 | 0.66 | 0.49 | 0.80 | 0.73 | 1.49 | 0.72 | 2.24 |
| **HR** | 0.49 | - | 0.66 | 0.63 | 0.48 | - | 0.72 | - | 0.73 | 2.23 |
| **HU** | 0.47 | 0.59 | - | 0.61 | 0.50 | - | 0.71 | 1.47 | 0.73 | 2.22 |
| **IE** | 0.52 | 0.65 | 0.64 | 0.68 | 0.53 | - | - | 1.71 | 0.76 | 2.49 |
| **IT** | 0.52 | 0.63 | 0.62 | 0.65 | 0.54 | 0.79 | 0.81 | 1.96 | 0.76 | 2.28 |
| **LT** | 0.50 | - | 0.66 | 0.67 | 0.52 | - | 0.76 | - | 0.76 | 2.35 |
| **LU** | 0.55 | - | 0.65 | 0.69 | 0.55 | - | - | 1.81 | 0.78 | 2.41 |
| **LV** | 0.50 | - | 0.65 | 0.66 | 0.51 | - | 0.76 | - | 0.76 | 2.17 |
| **MT** | - | 0.53 | - | - | 0.68 | - | - | 1.37 | 0.68 | 2.16 |
| **NL** | 0.57 | - | 0.68 | 0.70 | 0.58 | - | 0.86 | 1.91 | 0.82 | 2.69 |
| **PL** | 0.50 | - | 0.64 | 0.66 | 0.51 | 0.81 | 0.76 | 1.80 | 0.78 | 2.31 |
| **PT** | - | 0.65 | 0.65 | 0.67 | 0.52 | - | 0.80 | 1.88 | 0.75 | 2.43 |
| **RO** | 0.47 | - | 0.59 | 0.60 | 0.48 | 0.74 | 0.69 | 1.65 | 0.72 | 2.12 |
| **SE** | 0.57 | - | 0.65 | 0.70 | 0.58 | - | 0.87 | 1.72 | 0.82 | 2.48 |
| **SI** | 0.54 | 0.65 | 0.63 | 0.67 | 0.55 | 0.84 | 0.81 | 1.83 | 0.77 | 2.40 |
| **SK** | 0.48 | - | - | 0.60 | 0.48 | - | 0.70 | 1.45 | 0.68 | 2.37 |
| **EU-28** | **0.51** | **0.64** | **0.65** | **0.68** | **0.54** | **0.82** | **0.80** | **1.68** | **0.79** | **2.32** |

### 2.3.4.2 Domestic Hot Water (DHW)

Another important energy contribute is associated to domestic hot water (DHW). For simulating the energy required for the DHW in EnergyPlus, the water consumed is assumed equal to 60l per person a day.

It is furthermore assumed that the water in input has the following characteristics [55]:

- $T_{in}$ (warm climate) = 15 °C;
- $T_{in}$ (moderate climate) = 10 °C;
- $T_{in}$ (cold climate) = 5 °C;
- $T_{user}$ = 45 °C.

The user temperature of the hot water is set at 45°C [55], in order to account the water consumed for shower, vacuum, sink, washing machine and dishwashing. It is important notice that no distinction is performed between all the contribute, but the energy consumed for vacuum, washing machine and dishwashing is taken into account in the equipment categories.

The DHW model developed is realized as auto size boiler with an efficient of 1. Then, the thermal energy results are multiplied for the average efficiency of the DHW systems (Table A 11) for calculating the contribute of each fuel used for countries.

For the DHW model, a schedule of end-use is developed using the European profile propose by the Annex 42 of the International Energy Agency [84], the profile has been reworked for having a use factor per month and per day (Figure 2.11 and Figure 2.12). The consume of water is proportional to the daily profile shown in figures.

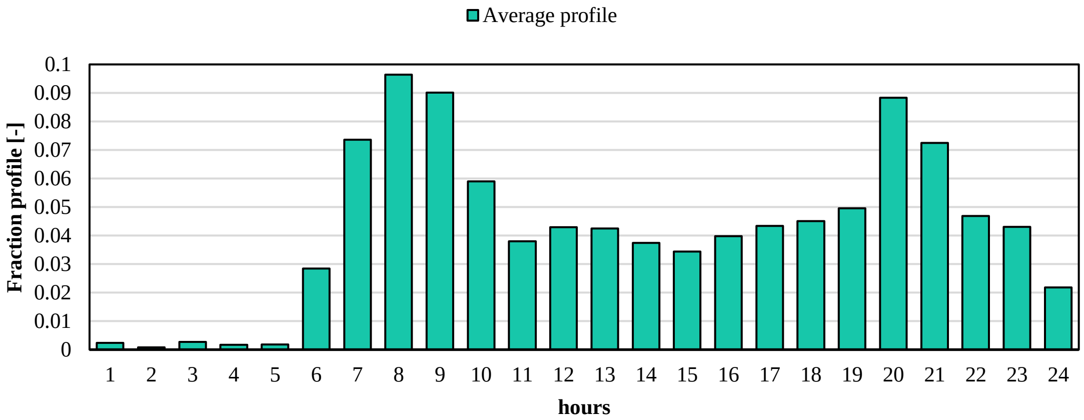


**Figure 2.11 Daily water profile per person**

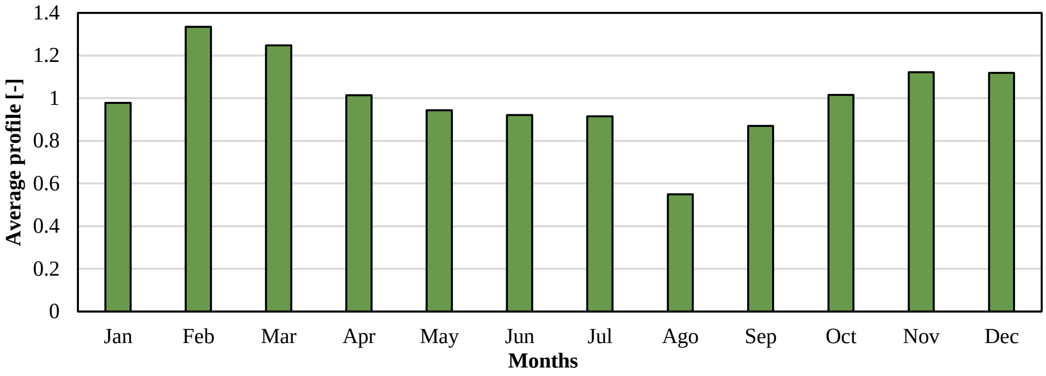


**Figure 2.12 Monthly water profile per person**

#### 2.3.4.3 Fuel types

For determining the contribute of each fuel used by each representative model of the European residential buildings, the available data relating to the energy sources consumption for each State has been taken into account. The data for 2010 is taken from the JRC-IDEES source, which reports data until 2015. Since no other database reports the same detailed information, the data in question has been analyzed. The database provides a subdivision of the data for countries. Therefore, the data reflect the final energy consumption of the residential sector in 2010 in Eurostat.

For each EU-28 country, the percentage of energy sources consumption is identified for heating, cooking and DHW. The cooling systems use electricity as unique resource.

The data extrapolated for percentage rate of fuels used for countries at 2010 are reported in Appendix (Table A 7 and Table A 8)[14].

### 2.3.5 **Use characteristics**

Internal heat gains are mainly due to the presence of occupants, electric appliances, lighting and internal solar gains. Internal solar gains are calculated by EnergyPlus during the simulation, while the gains produced by other sources must be calculated in advance and inserted as inputs in the software.

In fact, several inputs should be set for representing the building's internal conditions, including the occupants' presence, activities and their indoor environment preferences. However, the use of a physics bottom up energy models applied to archetypes required the definition of scalar values (e.g. the nominal floor area per person (m 2

/P), the installed lighting capacity (W/m 2 ), thermostat settings ( °C) etc.), and of information about the temporal variation of the occupants' presence, activities and indoor settings, usually referred to standard schedules or statistical data for representing all the European building stocks.

The methodologies used to determine the internal gains from the presence of occupants, electric appliances and lighting are outlined in the following sub-sections.

#### 2.3.5.1 Occupancy level

Internal heat gains correlated to occupants' presence can be obtained considering the time during which the dwelling is occupied, the number of occupants in the dwelling and the performed activity. As mentioned in chapter 1, each country, according to its culture and its economic perspective, has different trends in living the house, whether it refers to the average number of people for family and to the tendency to have spaces more or less extensive per person or technologies used. For that reason, a standard definition is defined for representing the behavior profile of inhabitants for the European building stock. The schedule on occupancies' presence is available on ISO 17772 [53].

In order to account that the number of inhabitants for dwelling has not been changed so much in the last decades, the number of occupants assumed in this research is that calculated by [13]. The authors calculate that value dividing the number of people that lives in an SFH or in an MFH for the number of buildings in a specific climatic zone at 2010. Table 2.16 reports the number of people individuated for climatic zones and for type of house.

**Table 2.16 Number of people/dwelling**

| Climatic zone | SFH | MFH |
|---|---|---|
| Warm | 3.43 | 2.03 |
| Moderate | 2.71 | 2.05 |
| Cold | 2.83 | 1.67 |

Occupants' heat loads are based on CIBSE Guide A and are presented in Table 2.17 [85]. Each archetype has been modelled with different number of occupants based on the statistical data and literature calculation.

**Table 2.17 Heat loads from occupants**

| Degree of activity | Total rate of heat emission [W] | Total rate of sensible heat emission [W] | Total rate of Latent heat emission [W] |
|---|---|---|---|
| **Seated, very light work** | 115 | 70 | 45 |

The square meter for occupants for archetype is reported in Table 2.18.

**Table 2.18 Square meters for inhabitants**

| Name | Surface ($m^2$) per capita |
|---|---|
| **SFH_W_<1945** | 29.15 |
| **SFH_W_1945-1969** | 29.15 |
| **SFH_W_1970-1989** | 29.15 |
| **SFH_W_1990-2010** | 37.90 |
| **SFH_M_<1945** | 33.21 |
| **SFH_M_1945-1969** | 33.21 |
| **SFH_M_1970-1989** | 36.90 |
| **SFH_M_1990-2010** | 36.90 |
| **SFH_C_<1945** | 35.34 |
| **SFH_C_1945-1969** | 35.34 |
| **SFH_C_1970-1989** | 42.40 |
| **SFH_C_1990-2010** | 42.40 |
| **MFH_W_<1945** | 44.33 |
| **MFH_W_1945-1969** | 44.33 |
| **MFH_W_1970-1989** | 44.33 |
| **MFH_W_1990-2010** | 44.33 |
| **MFH_M_<1945** | 29.27 |
| **MFH_M_1945-1969** | 29.27 |
| **MFH_M_1970-1989** | 29.27 |
| **MFH_M_1990-2010** | 29.27 |
| **MFH_C_<1945** | 35.93 |
| **MFH_C_1945-1969** | 35.93 |
| **MFH_C_1970-1989** | 35.93 |
| **MFH_C_1990-2010** | 35.93 |

Occupancy presences are based on the standardized occupancy schedules reported into ISO 17772 [53] (Figure 2.13).

#### 2.3.5.2 Lighting and equipment

Another main use of energy by households' houses is associated with electrical equipment and lighting. The importance of the electricity consumption in households is twofold. Firstly because of the existing high use of this equipment, the increase in consumer demand for electronic products and the difficultly in replacement by equipment using other sources of energy; secondly, because of the amount of primary energy necessary to produce the electricity. High consumption of electricity in the household sector varies during certain times of the day and month of the year.

For calculate the electricity consumed for lighting and equipment in a year for each archetype, the energy consumption at 2010 reported in JRC-IDEES is selected and reworked for climatic zone in order to account electricity consumed for each archetype, taking into account the number of people and square meters.

Table 2.19 shows the electricity consumed for lighting and appliances per climatic zone. The data split for country are reported in Appendix A.

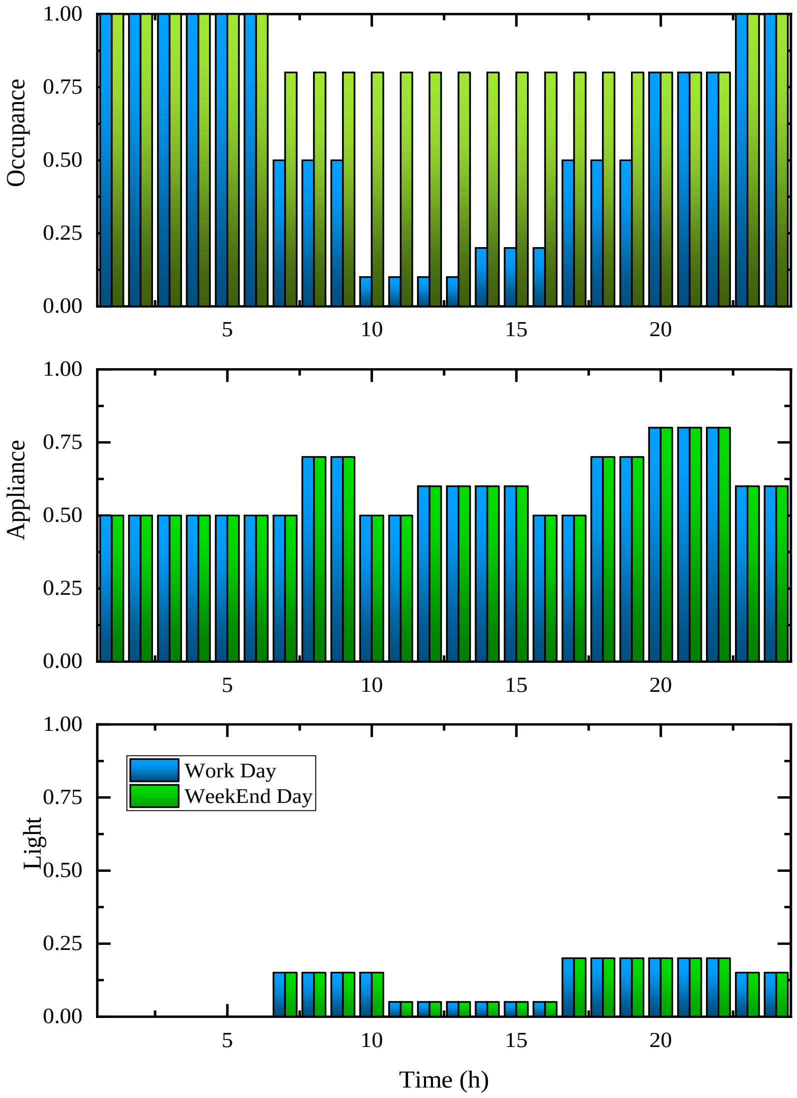


**Figure 2.13 Occupancies, appliances and lighting schedules for work and weekend day**[53]

The specific electricity consumed for archetypes has been calculated dividing the total energy consumed at 2010 for the total number buildings and for the area as in the following Eq. 2.6.

$$El_{k,j,people} = \frac{El_{tot,j}}{S_{tot,j}} \cdot \frac{S_k}{people_k}$$ **Eq. 2.6**

where El is the electricity consumed, S is the net surface of the dwelling and people are the number of inhabitants for the k-th archetypes; the subscripts k, j, tot are respectively the k-th archetype, the j-th country and the total quantity.

**Table 2.19 Electricity consumed for lighting and equipment at 2010 per climatic zone [kToe]**

| Values | W | M | C |
|---|---|---|---|
| **Clothes dryer** | 312.00 | 1,700.58 | 157.15 |
| **Dishwasher** | 518.24 | 1,203.20 | 88.33 |
| **ICT equipment** | 629.09 | 1,941.71 | 127.24 |
| **Lighting** | 1,680.65 | 5,228.82 | 352.92 |
| **Other appliances (vacuum cleaners, irons etc.)** | 957.99 | 2,638.76 | 175.67 |
| **Refrigerators and freezers** | 1,825.06 | 5,887.55 | 406.97 |
| **TV and multimedia** | 2,604.75 | 7,765.75 | 521.20 |
| **Washing machine** | 791.60 | 2,090.59 | 136.76 |

**Table 2.20 Electricity consumed at 2010 for lighting and equipment per each climatic zone [Wh/(m$^2$ person y)]**

| | W | M | C |
|---|---|---|---|
| **Clothes dryer** | 739.11 | 1,732.33 | 2,308.81 |
| **Dishwasher** | 1,227.69 | 1,225.67 | 1,297.73 |
| **ICT equipment** | 1,490.28 | 1,977.96 | 1,869.41 |
| **Lighting** | 3,981.39 | 5,326.46 | 5,185.16 |
| **Other appliances (vacuum cleaners, irons etc.)** | 2,269.46 | 2,688.03 | 2,580.99 |
| **Refrigerators and freezers** | 4,323.50 | 5,997.50 | 5,979.31 |
| **TV and multimedia** | 6,170.57 | 7,910.76 | 7,657.61 |
| **Washing machine** | 1,875.27 | 2,129.63 | 2,009.28 |

The electrical input to the equipment ultimately appears as heat that contributes to zone loads. In EnergyPlus this heat is divided into four different fractions. Three of these are given by the input fields Fraction Latent, Fraction Radiant and Fraction Lost. A fourth, defined as the fraction of the heat provided by electric equipment to the zone air, is calculated by the program as:

$$f_{\text{convected}} = 1.0 - (\text{Fraction Latent} + \text{Fraction Radiant} + \text{Fraction Lost}) \qquad \textbf{Eq. 2.7}$$

For the lighting technologies, detailed information has been collected from EU building observatories, where data on the penetration rate of the different lighting technologies at European level have been collected.

Figure shows the breakdown of lighting technologies at 2010.

The percentage of lighting technologies (Figure 2.16) has been used for distribute energy consumption for the different technologies for each archetype and studying the lightings' heat loads of each lamp.

The electrical input to lighting ultimately appears as heat that contributes to zone loads or to return air heat gains. In EnergyPlus this heat is divided into: Return Air Fraction, Fraction Radiant and Fraction Visible. A fourth, defined as the fraction of the heat from lights connected to the zone air, is calculated by the program as [59]:

$$\mathbf{f_{convected}} = \mathbf{1.0 - (Return\ Air\ Fraction + Fraction\ Radiant + Fraction\ Visible)} \qquad \textbf{Eq. 2.8}$$

Where $f_{convected}$ must be more or equal to 0.0.

These parameters have been selected for type of lamp and luminaire, selected from [51].

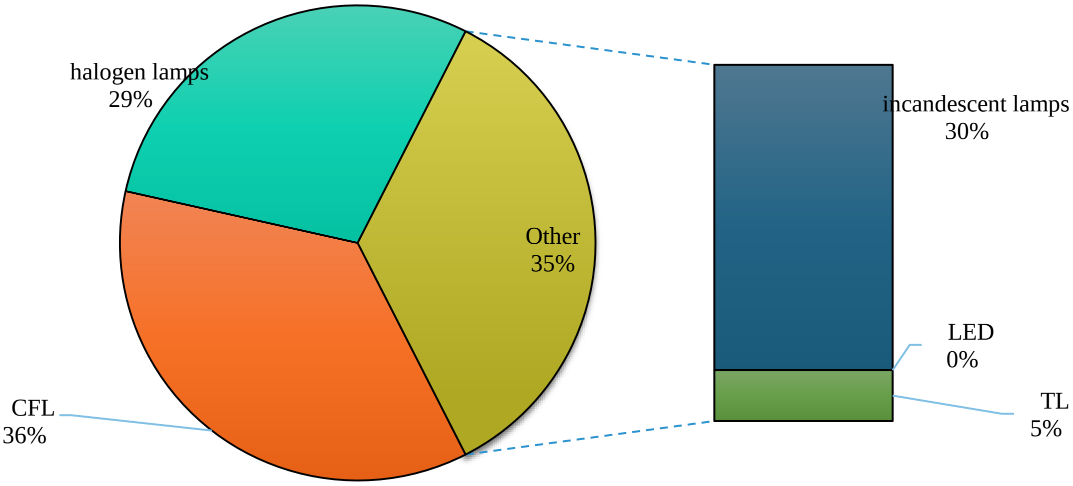


**Figure 2.14 Type of lighting breakdown at 2010**

The final data calculated for each archetype are reported from Table A 14 to Table A. 17.

**Table 2.21 Fraction Radiant and Fraction Visible per lamps**

| Device | Fraction Radiant [-] | Fraction Visible [-] |
|---|---|---|
| **CFL** | 0.95 | 0.05 |
| **Halogen** | 0.95 | 0.05 |
| **Incandescent** | 0.95 | 0.05 |
| **LED** | 0.32 | 0.68 |
| **TL** | 0.48 | 0.52 |

### 2.3.5.3 Household income

It is assumed that the overall system availability, which describes the time during which the heating system can be used, is continuous 24h at day.  However, in order to calculate a realistic annual final heating energy consumption, in the simulation, the heating system is regulated only as function of internal temperature set point in order to compare the energy required for heating and cooling with statistical data and for different climatic zones. The heating and cooling loads are also affected by natural ventilation, which is set as function of the outdoor temperature and wind speed.

### 2.3.6 Resume of the main features of the Archetypes

Each individual building in the structured dataset contains its own set of values for different variables (features). The values for each variable are aggregated for buildings that belong to one particular segment (archetype). This aggregation resulted in a single set of values for the associated variables. For instance, there is a single set of values for each variable associated with one particular dwelling type. Aggregation of values for the segments created using dwelling types only and dwelling types with age bands is achieved using the arithmetic mean. These mean values for each dwelling type represent the characteristics of a unique building archetype. Therefore, 8 building archetypes were identified on the basis of dwelling type segmentation per each country and 672 sub-scale building archetypes are identified based on the dwelling type with geolocation (3) segmentation and weather condition (28).

| | SFH | | | MFH | | |
|---|---|---|---|---|---|---|
| Number of buildings | 3,722,345.06 | | | 5,068,929.91 | | |
| Period of construction | <1945 | | | <1945 | | |
| Climatic Zone | Warm | | | Warm | | |
| Weather files | 6 (MT,CY,ES,GR,PT,IT) | | | 6 (MT,CY,ES,GR,PT,IT) | | |
| Geographic location percentage rate | | | | | | |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| MT | 86% | 0% | 14% | 93% | 0% | 7% |
| CY | 47% | 35% | 18% | 83% | 13% | 4% |
| PT | 27% | 32% | 42% | 72% | 10% | 18% |
| GR | 15% | 75% | 9% | 64% | 24% | 11% |
| ES | 22% | 50% | 28% | 67% | 14% | 19% |
| IT | 24% | 25% | 51% | 61% | 9% | 31% |
| Floor area | 100.00 | | | 90.00 | | |
| Number of stories | 2.00 | | | 4.00 | | |
| Story height | 2.70 | | | 2.70 | | |
| Window/Wall ratio | 0.29 | | | 0.22 (only external wall with windows) | | |
| Wall/Floor ratio | 1.53 | | | 0.54 (only external wall with windows) | | |
| Envelope | | | | | | |
| - *Roof* | Pitched roof:<br>Clay_tiles_7cm<br>Reinf_concrete4cm1.92<br>Reinf_concrete16cm1.92<br>Reinf_concrete4cm1.92<br>Reinf_concrete16cm1.92<br>Gypsumsand_Plaster1cm | | | Flat roof:<br>Bitume<br>Light_concrete5cm(screed)1.15<br>Reinf_concrete4cm0.47<br>Reinf_concrete16cm1.15<br>Gypsumsand_Plaster1cm | | |
| - *Wall* | Gypsumsand_Plaster2cm<br>Mansory_Brick25cm0.66<br>Gypsumsand_Plaster1cm | | | Gypsumsand_Plaster2cm<br>Mansory_Brick12cm0.72<br>Air Wall Material_5cm<br>Mansory_Brick8cm0.72<br>Gypsumsand_Plaster1cm | | |
| - *Floor* | Mansory_structure_orizontal4cm1.15<br>Mansory_structure_orizontal16cm0.5<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | | Reinf_concrete4cm1.92<br>Reinf_concrete16cm0.51<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | |
| - *Windows* | Single glass with wood frame | | | Single glass with wood frame | | |
| Statistical U-value [W/(m$^2$ K)] | | | | | | |
| - *Roof* | 2.32 | | | 2.25 | | |
| - *Wall* | 1.71 | | | 1.76 | | |
| - *Floor* | 1.76 | | | 1.81 | | |
| - *Windows* | 4.00 | | | 4.80 | | |
| Ventilation system | No | | | No | | |
| Infiltration (ACH [1/h]) | 0.82 | | | 0.82 | | |
| Number of inhabitant | 3.43 | | | 2.03 | | |

| | SFH | | | MFH | | |
|---|---|---|---|---|---|---|
| Number of buildings | 3,783,586.60 | | | 10,185,691.55 | | |
| Period of construction | 1945-1969 | | | 1945-1969 | | |
| Climatic Zone | Warm | | | Warm | | |
| Weather files | 6 (MT,CY,ES,GR,PT,IT) | | | 6 (MT,CY,ES,GR,PT,IT) | | |
| Geographic location percentage rate | | | | | | |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| MT | 86% | 0% | 14% | 93% | 0% | 7% |
| CY | 47% | 35% | 18% | 83% | 13% | 4% |
| PT | 27% | 32% | 42% | 72% | 10% | 18% |
| GR | 15% | 75% | 9% | 64% | 24% | 11% |
| ES | 22% | 50% | 28% | 67% | 14% | 19% |
| IT | 24% | 25% | 51% | 61% | 9% | 31% |
| Floor area | 100.00 | | | 90.00 | | |
| Number of stories | 2.00 | | | 4.00 | | |
| Story height | 2.70 | | | 2.70 | | |
| Window/Wall ratio | 0.29 | | | 0.22 (only external wall with windows) | | |
| Wall/Floor ratio | 1.53 | | | 0.54 (only external wall with windows) | | |
| Envelope | | | | | | |
| - *Roof* | Pitched roof:<br>Clay_tiles_7cm<br>Reinf_concrete4cm1.92<br>Reinf_concrete16cm1.92<br>Reinf_concrete4cm1.92<br>Reinf_concrete16cm1.92<br>Gypsumsand_Plaster1cm | | | Flat roof:<br>Bitume<br>Light_concrete5cm(screed)1.15<br>Reinf_concrete4cm0.47<br>Reinf_concrete16cm1.15<br>Gypsumsand_Plaster1cm | | |
| - *Wall* | Gypsumsand_Plaster2cm<br>Mansory_Brick25cm0.66<br>Gypsumsand_Plaster1cm | | | Gypsumsand_Plaster2cm<br>Mansory_Brick12cm0.72<br>Air Wall Material_5cm<br>Mansory_Brick8cm0.72<br>Gypsumsand_Plaster1cm | | |
| - *Floor* | Mansory_structure_orizontal4cm1.15<br>Mansory_structure_orizontal16cm0.5<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | | Reinf_concrete4cm1.92<br>Reinf_concrete16cm0.51<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | |
| - *Windows* | Single glass with wood frame | | | Single glass with wood frame | | |
| Statistical U-value [W/(m$^2$ K)] | | | | | | |
| - *Roof* | 2.32 | | | 2.25 | | |
| - *Wall* | 1.71 | | | 1.76 | | |
| - *Floor* | 1.76 | | | 1.81 | | |
| - *Windows* | 4.00 | | | 4.80 | | |
| Ventilation system | No | | | No | | |
| Infiltration (ACH [1/h]) | 0.79 | | | 0.79 | | |
| Number of inhabitants | 3.43 | | | 2.03 | | |

| | SFH | | | MFH | | |
|---|---|---|---|---|---|---|
| Number of buildings | 4,893,305.42 | | | 11,643,229.55 | | |
| Period of construction | 1970-1989 | | | 1970-1989 | | |
| Climatic Zone | Warm | | | Warm | | |
| Weather files | 6 (MT,CY,ES,GR,PT,IT) | | | 6 (MT,CY,ES,GR,PT,IT) | | |
| Geographic location percentage rate | | | | | | |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| MT | 86% | 0% | 14% | 93% | 0% | 7% |
| CY | 47% | 35% | 18% | 83% | 13% | 4% |
| PT | 27% | 32% | 42% | 72% | 10% | 18% |
| GR | 15% | 75% | 9% | 64% | 24% | 11% |
| ES | 22% | 50% | 28% | 67% | 14% | 19% |
| IT | 24% | 25% | 51% | 61% | 9% | 31% |
| Floor area | 100.00 | | | 90.00 | | |
| Number of stories | 2.00 | | | 4.00 | | |
| Story height | 2.70 | | | 2.70 | | |
| Window/Wall ratio | 0.29 | | | 0.22 (only external wall with windows) | | |
| Wall/Floor ratio | 1.53 | | | 0.54 (only external wall with windows) | | |
| Envelope | | | | | | |
| - *Roof* | Pitched roof:<br>Clay_tiles<br>Reinf_concrete4cm1.2<br>Reinf_concrete16cm1.92<br>Mansory_structure_orizontal4cm1.15<br>Reinf_concrete16cm1.92<br>Gypsumsand_Plaster1cm | | | Flat roof:<br>Bitume<br>Light_concrete5cm(screed)1.15<br>Mansory_structure_orizontal4cm1.15<br>Reinf_concrete16cm0.735<br>Gypsumsand_Plaster1cm | | |
| - *Wall* | Gypsumsand_Plaster2cm<br>Mansory_Brick25cm0.53<br>Gypsumsand_Plaster1cm | | | Gypsumsand_Plaster2cm<br>Mansory_Brick12cm0.5<br>Air Wall Material_5cm<br>Mansory_Brick8cm0.53<br>Gypsumsand_Plaster1cm | | |
| - *Floor* | Reinf_concrete4cm0.77<br>Mansory_structure_orizontal16cm0.5<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | | Reinf_concrete4cm1.4<br>Reinf_concrete16cm1.92<br>Insulation1cm<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | |
| - *Windows* | Single glass with wood frame | | | Single glass with wood frame | | |
| Statistical U-value [W/(m$^2$ K)] | | | | | | |
| - *Roof* | 2.19 | | | 2.11 | | |
| - *Wall* | 1.47 | | | 1.47 | | |
| - *Floor* | 1.71 | | | 1.73 | | |
| - *Windows* | 3.45 | | | 4.90 | | |
| Ventilation system | No | | | No | | |
| Infiltration (ACH [1/h]) | 0.71 | | | 0.71 | | |
| Number of inhabitants | 3.43 | | | 2.03 | | |

| | SFH | | | MFH | | |
|---|---|---|---|---|---|---|
| Number of buildings | 3,604,811.39 | | | 7,769,554.51 | | |
| Period of construction | 1990-2010 | | | 1990-2010 | | |
| Climatic Zone | Warm | | | Warm | | |
| Weather files | 6 (MT,CY,ES,GR,PT,IT) | | | 6 (MT,CY,ES,GR,PT,IT) | | |
| Geographic location percentage rate | | | | | | |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| MT | 86% | 0% | 14% | 93% | 0% | 7% |
| CY | 47% | 35% | 18% | 83% | 13% | 4% |
| PT | 27% | 32% | 42% | 72% | 10% | 18% |
| GR | 15% | 75% | 9% | 64% | 24% | 11% |
| ES | 22% | 50% | 28% | 67% | 14% | 19% |
| IT | 24% | 25% | 51% | 61% | 9% | 31% |
| Floor area | 130.00 | | | 90.00 | | |
| Number of stories | 2.00 | | | 4.00 | | |
| Story height | 2.70 | | | 2.70 | | |
| Window/Wall ratio | 0.31 | | | 0.22 (only external wall with windows) | | |
| Wall/Floor ratio | 1.53 | | | 0.57 | | |
| Envelope | | | | | | |
| - *Roof* | Flat roof:<br>Bitume<br>Light_concrete8cm(screed)1.15<br>Insulation2cm<br>Reinf_concrete4cm1.92<br>Reinf_concrete16cm1.92<br>Gypsumsand_Plaster1cm | | | Flat roof:<br>Bitume<br>Light_concrete5cm(screed)1.15<br>Insulation2cm<br>Reinf_concrete4cm0.68<br>Reinf_concrete16cm1.92<br>Gypsumsand_Plaster1cm | | |
| - *Wall* | Gypsumsand_Plaster2cm<br>Mansory_Brick12cm0.5<br>Insulation2cm<br>Mansory_Brick20cm0.72<br>Gypsumsand_Plaster1cm | | | Gypsumsand_Plaster2cm<br>Mansory_Brick12cm0.49<br>Insulation2cm<br>Mansory_Brick20cm0.72<br>Gypsumsand_Plaster1cm | | |
| - *Floor* | Reinf_concrete16cm0.435<br>Reinf_concrete4cm0.435<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | | Reinf_concrete4cm0.77<br>Reinf_concrete16cm1.15<br>Insulation1cm<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | |
| - *Windows* | Single glass with wood frame | | | Single glass with wood frame | | |
| Statistical U-value [W/(m$^2$ K)] | | | | | | |
| - *Roof* | 1.18 | | | 1.16 | | |
| - *Wall* | 0.82 | | | 0.81 | | |
| - *Floor* | 1.48 | | | 1.52 | | |
| - *Windows* | 3.00 | | | 3.75 | | |
| Ventilation system | No | | | No | | |
| Infiltration (ACH [1/h]) | 0.28 | | | 0.28 | | |
| Number of inhabitants | 3.43 | | | 2.03 | | |

| | SFH | | | MFH | | |
|---|---|---|---|---|---|---|
| Number of buildings | 21,269,362.02 | | | 13,297,139.59 | | |
| Period of construction | <1945 | | | <1945 | | |
| Climatic Zone | Moderate | | | Moderate | | |
| Weather files | 17 (FR, SI, HU, RO, BG, IE, NL, BE, LU, GB, SK, DE, AT, CZ, PL, DK, HR) | | | 17 (FR, SI, HU, RO, BG, IE, NL, BE, LU, GB, SK, DE, AT, CZ, PL, DK, HR) | | |
| Geographic location percentage rate | | | | | | |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| FR | 29% | 26% | 45% | 82% | 3% | 16% |
| SI | 11% | 52% | 38% | 37% | 26% | 37% |
| HU | 17% | 62% | 21% | 64% | 16% | 19% |
| RO | 13% | 87% | 1% | 76% | 22% | 2% |
| BG | 18% | 74% | 8% | 79% | 17% | 4% |
| IE | 32% | 41% | 28% | 68% | 5% | 27% |
| NL | 59% | 2% | 38% | 89% | 1% | 11% |
| BE | 48% | 5% | 47% | 79% | 1% | 19% |
| LU | 32% | 31% | 37% | 66% | 8% | 27% |
| GB | 63% | 17% | 20% | 82% | 8% | 10% |
| SK | 7% | 54% | 39% | 46% | 28% | 26% |
| DE | 33% | 21% | 46% | 63% | 10% | 27% |
| AT | 14% | 57% | 29% | 66% | 15% | 19% |
| CZ | 15% | 56% | 29% | 54% | 25% | 21% |
| PL | 18% | 59% | 23% | 65% | 29% | 6% |
| DK | 22% | 31% | 47% | 63% | 8% | 29% |
| HR | 17% | 83% | 0% | 60% | 40% | 0% |
| Floor area | 90.00 | | | 60.00 | | |
| Number of stories | 2.00 | | | 4.00 | | |
| Story height | 2.50 | | | 2.50 | | |
| Window/Wall ratio | 0.30 | | | 0.26 (only external wall with windows) | | |
| Wall/Floor ratio | 1.49 | | | 0.65 (only external wall with windows) | | |
| Envelope | | | | | | |
| - *Roof* | Pitched roof:<br>Clay_tiles<br>Mansory_structure_orizontal4cm1.15<br>Reinf_concrete16cm0.738<br>Mansory_structure_orizontal4cm1.15<br>Reinf_concrete16cm0.738<br>Gypsumsand_Plaster1cm | | | Flat roof:<br>Bitume<br>Light_concrete5cm(screed)1.15<br>Insulation2cm0.053<br>Reinf_concrete4cm1.92<br>Reinf_concrete16cm1.92<br>Gypsumsand_Plaster1cm | | |
| - *Wall* | Gypsumsand_Plaster2cm<br>Mansory_Brick25cm0.565<br>Gypsumsand_Plaster1cm | | | Gypsumsand_Plaster2cm<br>Mansory_Brick30cm0.705<br>Gypsumsand_Plaster2cm | | |
| - *Floor* | Mansory_structure_orizontal16cm0.5<br>Reinf_concrete4cm0.5<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | | Reinf_concrete4cm1.4<br>Reinf_concrete16cm1.56<br>Insulation1cm<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | |
| - *Windows* | Single glass with wood frame | | | Double glass with wood frame | | |
| Statistical U-value [W/($m^2$ K)] | | | | | | |
| - *Roof* | 1.38 | | | 1.42 | | |
| - *Wall* | 1.54 | | | 1.55 | | |
| - *Floor* | 1.63 | | | 1.67 | | |
| - *Windows* | 3.65 | | | 3.81 | | |
| Ventilation system | No | | | No | | |
| Infiltration (ACH [1/h]) | 0.82 | | | 0.82 | | |
| Number of inhabitants | 2.71 | | | 2.05 | | |

|  | SFH |  |  | MFH |  |  |
|---|---|---|---|---|---|---|
| Number of buildings | 21,269,362.02 |  |  | 16,991,728.74 |  |  |
| Period of construction | 1945-1969 |  |  | 1945-1969 |  |  |
| Climatic Zone | Moderate |  |  | Moderate |  |  |
| Weather files | 17 (FR, SI, HU, RO, BG, IE, NL, BE, LU, GB, SK, DE, AT, CZ, PL, DK, HR) |  |  | 17 (FR, SI, HU, RO, BG, IE, NL, BE, LU, GB, SK, DE, AT, CZ, PL, DK, HR) |  |  |
| Geographic location percentage rate |  |  |  |  |  |  |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| FR | 29% | 26% | 45% | 82% | 3% | 16% |
| SI | 11% | 52% | 38% | 37% | 26% | 37% |
| HU | 17% | 62% | 21% | 64% | 16% | 19% |
| RO | 13% | 87% | 1% | 76% | 22% | 2% |
| BG | 18% | 74% | 8% | 79% | 17% | 4% |
| IE | 32% | 41% | 28% | 68% | 5% | 27% |
| NL | 59% | 2% | 38% | 89% | 1% | 11% |
| BE | 48% | 5% | 47% | 79% | 1% | 19% |
| LU | 32% | 31% | 37% | 66% | 8% | 27% |
| GB | 63% | 17% | 20% | 82% | 8% | 10% |
| SK | 7% | 54% | 39% | 46% | 28% | 26% |
| DE | 33% | 21% | 46% | 63% | 10% | 27% |
| AT | 14% | 57% | 29% | 66% | 15% | 19% |
| CZ | 15% | 56% | 29% | 54% | 25% | 21% |
| PL | 18% | 59% | 23% | 65% | 29% | 6% |
| DK | 22% | 31% | 47% | 63% | 8% | 29% |
| HR | 17% | 83% | 0% | 60% | 40% | 0% |
| Floor area | 90.00 |  |  | 60.00 |  |  |
| Number of stories | 2.00 |  |  | 4.00 |  |  |
| Story height | 2.50 |  |  | 2.50 |  |  |
| Window/Wall ratio | 0.30 |  |  | 0.26 (only external wall with windows) |  |  |
| Wall/Floor ratio | 1.49 |  |  | 0.65 (only external wall with windows) |  |  |
| Envelope |  |  |  |  |  |  |
| - *Roof* | Pitched roof:<br>Clay_tiles<br>Mansory_structure_orizontal4cm1.15<br>Reinf_concrete16cm0.738<br>Mansory_structure_orizontal4cm1.15<br>Reinf_concrete16cm0.738<br>Gypsumsand_Plaster1cm |  |  | Flat roof:<br>Bitume<br>Light_concrete5cm(screed)1.15<br>Insulation2cm0.053<br>Reinf_concrete4cm1.92<br>Reinf_concrete16cm1.92<br>Gypsumsand_Plaster1cm |  |  |
| - *Wall* | Gypsumsand_Plaster2cm<br>Mansory_Brick25cm0.565<br>Gypsumsand_Plaster1cm |  |  | Gypsumsand_Plaster2cm<br>Mansory_Brick30cm0.705<br>Gypsumsand_Plaster2cm |  |  |
| - *Floor* | Mansory_structure_orizontal16cm0.5<br>Reinf_concrete4cm0.5<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles |  |  | Reinf_concrete4cm1.4<br>Reinf_concrete16cm1.56<br>Insulation1cm<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles |  |  |
| - *Windows* | Single glass with wood frame |  |  | Double glass with wood frame |  |  |
| Statistical U-value [W/(m$^2$ K)] |  |  |  |  |  |  |
| - *Roof* | 1.38 |  |  | 1.42 |  |  |
| - *Wall* | 1.54 |  |  | 1.55 |  |  |
| - *Floor* | 1.63 |  |  | 1.67 |  |  |
| - *Windows* | 3.65 |  |  | 3.81 |  |  |
| Ventilation system | No |  |  | No |  |  |
| Infiltration (ACH [1/h]) | 0.79 |  |  | 0.79 |  |  |
| Number of inhabitants | 2.71 |  |  | 2.05 |  |  |

|  | SFH |  |  | MFH |  |  |
|---|---|---|---|---|---|---|
| Number of buildings | 23,056,972.65 |  |  | 19,592,907.87 |  |  |
| Period of construction | 1970-1989 |  |  | 1970-1989 |  |  |
| Climatic Zone | Moderate |  |  | Moderate |  |  |
| Weather files | 17 (FR, SI, HU, RO, BG, IE, NL, BE, LU, GB, SK, DE, AT, CZ, PL, DK, HR) |  |  | 17 (FR, SI, HU, RO, BG, IE, NL, BE, LU, GB, SK, DE, AT, CZ, PL, DK, HR) |  |  |
| Geographic location percentage rate |  |  |  |  |  |  |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| FR | 29% | 26% | 45% | 82% | 3% | 16% |
| SI | 11% | 52% | 38% | 37% | 26% | 37% |
| HU | 17% | 62% | 21% | 64% | 16% | 19% |
| RO | 13% | 87% | 1% | 76% | 22% | 2% |
| BG | 18% | 74% | 8% | 79% | 17% | 4% |
| IE | 32% | 41% | 28% | 68% | 5% | 27% |
| NL | 59% | 2% | 38% | 89% | 1% | 11% |
| BE | 48% | 5% | 47% | 79% | 1% | 19% |
| LU | 32% | 31% | 37% | 66% | 8% | 27% |
| GB | 63% | 17% | 20% | 82% | 8% | 10% |
| SK | 7% | 54% | 39% | 46% | 28% | 26% |
| DE | 33% | 21% | 46% | 63% | 10% | 27% |
| AT | 14% | 57% | 29% | 66% | 15% | 19% |
| CZ | 15% | 56% | 29% | 54% | 25% | 21% |
| PL | 18% | 59% | 23% | 65% | 29% | 6% |
| DK | 22% | 31% | 47% | 63% | 8% | 29% |
| HR | 17% | 83% | 0% | 60% | 40% | 0% |
| Floor area | 100.00 |  |  | 60.00 |  |  |
| Number of stories | 2.00 |  |  | 4.00 |  |  |
| Story height | 2.70 |  |  | 2.70 |  |  |
| Window/Wall ratio | 0.30 |  |  | 0.26 (only external wall with windows) |  |  |
| Wall/Floor ratio | 1.49 |  |  | 0.65 (only external wall with windows) |  |  |
| Envelope |  |  |  |  |  |  |
| - *Roof* | Pitched roof:<br>Clayconcrete_tiles<br>Plywood2cm<br>Insulation5cm0.05<br>Reinf_concrete16cm1.92<br>Mansory_structure_orizontal4cm1.15<br>Gypsumsand_Plaster1cm |  |  | Flat roof:<br>Bitume<br>Light_concrete5cm(screed)1.15<br>Insulation4cm<br>Reinf_concrete4cm1.92<br>Reinf_concrete16cm1.92<br>Gypsumsand_Plaster1cm |  |  |
| - *Wall* | Gypsumsand_Plaster2cm<br>Mansory_Brick30cm0.37<br>Gypsumsand_Plaster1cm |  |  | Gypsumsand_Plaster2cm<br>Mansory_Brick12cm0.72<br>Insulation2cm<br>Mansory_Brick8cm0.53<br>Gypsumsand_Plaster1cm |  |  |
| - *Floor* | Reinf_concrete16cm1.92<br>Reinf_concrete4cm0.68<br>Insulation2cm<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles |  |  | Reinf_concrete16cm1.92<br>Reinf_concrete4cm0.68<br>Insulation2cm<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles |  |  |
| - *Windows* | Single glass with wood frame |  |  | Double glass with wood frame |  |  |
| Statistical U-value [W/(m$^2$ K)] |  |  |  |  |  |  |
| - *Roof* | 0.72 |  |  | 0.75 |  |  |
| - *Wall* | 0.98 |  |  | 0.98 |  |  |
| - *Floor* | 1.16 |  |  | 1.16 |  |  |
| - *Windows* | 2.65 |  |  | 2.90 |  |  |
| Ventilation system | No |  |  | No |  |  |
| Infiltration (ACH [1/h]) | 0.71 |  |  | 0.71 |  |  |
| Number of inhabitants | 2.71 |  |  | 2.05 |  |  |

| | SFH | | | MFH | | |
|---|---|---|---|---|---|---|
| Number of buildings | 16,997,313.98 | | | 12,958,461.93 | | |
| Period of construction | 1990-2010 | | | 1990-2010 | | |
| Climatic Zone | Moderate | | | Moderate | | |
| Weather files | 17 (FR, SI, HU, RO, BG, IE, NL, BE, LU, GB, SK, DE, AT, CZ, PL, DK, HR) | | | 17 (FR, SI, HU, RO, BG, IE, NL, BE, LU, GB, SK, DE, AT, CZ, PL, DK, HR) | | |
| Geographic location percentage rate | | | | | | |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| FR | 29% | 26% | 45% | 82% | 3% | 16% |
| SI | 11% | 52% | 38% | 37% | 26% | 37% |
| HU | 17% | 62% | 21% | 64% | 16% | 19% |
| RO | 13% | 87% | 1% | 76% | 22% | 2% |
| BG | 18% | 74% | 8% | 79% | 17% | 4% |
| IE | 32% | 41% | 28% | 68% | 5% | 27% |
| NL | 59% | 2% | 38% | 89% | 1% | 11% |
| BE | 48% | 5% | 47% | 79% | 1% | 19% |
| LU | 32% | 31% | 37% | 66% | 8% | 27% |
| GB | 63% | 17% | 20% | 82% | 8% | 10% |
| SK | 7% | 54% | 39% | 46% | 28% | 26% |
| DE | 33% | 21% | 46% | 63% | 10% | 27% |
| AT | 14% | 57% | 29% | 66% | 15% | 19% |
| CZ | 15% | 56% | 29% | 54% | 25% | 21% |
| PL | 18% | 59% | 23% | 65% | 29% | 6% |
| DK | 22% | 31% | 47% | 63% | 8% | 29% |
| HR | 17% | 83% | 0% | 60% | 40% | 0% |
| Floor area | 100.00 | | | 60.00 | | |
| Number of stories | 2.00 | | | 4.00 | | |
| Story height | 2.70 | | | 2.70 | | |
| Window/Wall ratio | 0.31 | | | 0.22 (only external wall with windows) | | |
| Wall/Floor ratio | 1.53 | | | 0.57 | | |
| Envelope | | | | | | |
| - *Roof* | Pitched roof:<br>Clayconcrete_tiles<br>Plywood2cm<br>Insulation10cm<br>Reinf_concrete16cm1.92<br>Reinf_concrete4cm1.92<br>Gypsumsand_Plaster1cm | | | Flat roof:<br>Bitume<br>Light_concrete5cm(screed)1.15<br>Insulation10cm<br>Reinf_concrete4cm1.92<br>Reinf_concrete16cm1.92<br>Gypsumsand_Plaster1cm | | |
| - *Wall* | Gypsumsand_Plaster2cm<br>Mansory_Brick30cm0.37<br>Gypsumsand_Plaster1cm | | | Gypsumsand_Plaster2cm<br>Mansory_Brick20cm0.5<br>Insulation4cm<br>Mansory_Brick12cm0.5<br>Gypsumsand_Plaster1cm | | |
| - *Floor* | Reinf_concrete16cm1.92<br>Reinf_concrete4cm0.68<br>Insulation2cm<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | | Reinf_concrete16cm1.92<br>Reinf_concrete4cm0.47<br>Insulation7cm<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | |
| - *Windows* | Double glass with PVC frame | | | Double glass with PVC frame | | |
| Statistical U-value [W/(m$^2$ K)] | | | | | | |
| - *Roof* | 0.35 | | | 0.39 | | |
| - *Wall* | 0.50 | | | 0.54 | | |
| - *Floor* | 0.49 | | | 0.51 | | |
| - *Windows* | 1.84 | | | 1.93 | | |
| Ventilation system | No | | | No | | |
| Infiltration (ACH [1/h]) | 0.28 | | | 0.28 | | |
| Number of inhabitants | 2.71 | | | 2.05 | | |

| | SFH | | | MFH | | |
|---|---|---|---|---|---|---|
| Number of buildings | 1,197,914.93 | | | 1,253,424.77 | | |
| Period of construction | <1945 | | | <1945 | | |
| Climatic Zone | Cold | | | Cold | | |
| Weather files | 5 (LT, LV, EE, SE, FI) | | | 5 (LT, LV, EE, SE, FI) | | |
| Geographic location percentage rate | | | | | | |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| LT | 17% | 83% | 0% | 60% | 40% | 0% |
| LV | 25% | 74% | 1% | 58% | 39% | 3% |
| EE | 18% | 79% | 3% | 61% | 36% | 4% |
| SE | 11% | 72% | 16% | 36% | 48% | 16% |
| FI | 14% | 74% | 12% | 49% | 33% | 18% |
| Floor area | 100.00 | | | 60.00 | | |
| Number of stories | 2.00 | | | 4.00 | | |
| Story height | 2.50 | | | 2.50 | | |
| Window/Wall ratio | 0.30 | | | 0.26 (only external wall with windows) | | |
| Wall/Floor ratio | 1.49 | | | 0.65 (only external wall with windows) | | |
| Envelope | | | | | | |
| - *Roof* | Pitched roof:<br>Clayconcrete_tiles<br>Plywood2cm<br>Insulation4cm<br>Plywood2cm<br>Gypsumsand_Plaster1cm | | | Pitched roof:<br>Clay_tiles<br>Plywood2cm<br>Insulation4cm0.05<br>Reinf_concrete4cm1.2<br>Reinf_concrete16cm1.15<br>Gypsumsand_Plaster1cm | | |
| - *Wall* | Plywood1.5cm0.09<br>Air Wall Material_3cm0.60<br>Insulation4cm | | | Mansory_Brick12cm0.30<br>Air Wall Material_3cm0.60<br>Insulation3cm0.05<br>Mansory_Brick8cm0.72<br>gypsumplasterboard1.5cm | | |
| - *Floor* | Reinf_concrete16cm1.92<br>Reinf_concrete4cm0.5<br>Insulation8cm0.05<br>Light_concrete8cm(screed)1.15<br>wood_paviment1cm | | | Reinf_concrete16cm1.15<br>Reinf_concrete4cm0.435<br>Insulation5cm0.04<br>Light_concrete8cm(screed)1.15<br>wood_paviment1cm | | |
| - *Windows* | Double glass with wood frame | | | Double glass with wood frame | | |
| Statistical U-value [W/(m$^2$ K)] | | | | | | |
| - *Roof* | 0.75 | | | 0.79 | | |
| - *Wall* | 0.64 | | | 0.71 | | |
| - *Floor* | 0.49 | | | 0.57 | | |
| - *Windows* | 2.30 | | | 2.20 | | |
| Ventilation system | No | | | No | | |
| Infiltration (ACH [1/h]) | 0.82 | | | 0.82 | | |
| Number of inhabitants | 2.50 | | | 1.63 | | |

| | SFH | | | MFH | | |
|---|---|---|---|---|---|---|
| Number of buildings | 1,183,964.92 | | | 1,520,068.94 | | |
| Period of construction | 1945-1969 | | | 1945-1969 | | |
| Climatic Zone | Cold | | | Cold | | |
| Weather files | 5 (LT, LV, EE, SE, FI) | | | 5 (LT, LV, EE, SE, FI) | | |
| Geographic location percentage rate | | | | | | |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| LT | 17% | 83% | 0% | 60% | 40% | 0% |
| LV | 25% | 74% | 1% | 58% | 39% | 3% |
| EE | 18% | 79% | 3% | 61% | 36% | 4% |
| SE | 11% | 72% | 16% | 36% | 48% | 16% |
| FI | 14% | 74% | 12% | 49% | 33% | 18% |
| Floor area | 100.00 | | | 60.00 | | |
| Number of stories | 2.00 | | | 4.00 | | |
| Story height | 2.50 | | | 2.50 | | |
| Window/Wall ratio | 0.30 | | | 0.26 (only external wall with windows) | | |
| Wall/Floor ratio | 1.49 | | | 0.65 (only external wall with windows) | | |
| Envelope | | | | | | |
| - *Roof* | Pitched roof:<br>Clayconcrete_tiles<br>Plywood2cm<br>Insulation4cm<br>Plywood2cm<br>Gypsumsand_Plaster1cm | | | Pitched roof:<br>Clay_tiles<br>Plywood2cm<br>Insulation4cm0.05<br>Reinf_concrete4cm1.2<br>Reinf_concrete16cm1.15<br>Gypsumsand_Plaster1cm | | |
| - *Wall* | Plywood1.5cm0.09<br>Air Wall Material_3cm0.60<br>Insulation4cm | | | Mansory_Brick12cm0.30<br>Air Wall Material_3cm0.60<br>Insulation3cm0.05<br>Mansory_Brick8cm0.72<br>gypsumplasterboard1.5cm | | |
| - *Floor* | Reinf_concrete16cm1.92<br>Reinf_concrete4cm0.5<br>Insulation8cm0.05<br>Light_concrete8cm(screed)1.15<br>wood_paviment1cm | | | Reinf_concrete16cm1.15<br>Reinf_concrete4cm0.435<br>Insulation5cm0.04<br>Light_concrete8cm(screed)1.15<br>wood_paviment1cm | | |
| - *Windows* | Double glass with wood frame | | | Double glass with wood frame | | |
| Statistical U-value [W/(m$^2$ K)] | | | | | | |
| - *Roof* | 0.75 | | | 0.79 | | |
| - *Wall* | 0.64 | | | 0.71 | | |
| - *Floor* | 0.49 | | | 0.57 | | |
| - *Windows* | 2.30 | | | 2.20 | | |
| Ventilation system | No | | | No | | |
| Infiltration (ACH [1/h]) | 0.79 | | | 0.79 | | |
| Number of inhabitants | 2.50 | | | 1.63 | | |

| | SFH | | | MFH | | |
|---|---|---|---|---|---|---|
| Number of buildings | 1,329,438.30 | | | 1,799,024.27 | | |
| Period of construction | 1970-1989 | | | 1970-1989 | | |
| Climatic Zone | Cold | | | Cold | | |
| Weather files | 5 (LT, LV, EE, SE, FI) | | | 5 (LT, LV, EE, SE, FI) | | |
| Geographic location percentage rate | | | | | | |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| LT | 17% | 83% | 0% | 60% | 40% | 0% |
| LV | 25% | 74% | 1% | 58% | 39% | 3% |
| EE | 18% | 79% | 3% | 61% | 36% | 4% |
| SE | 11% | 72% | 16% | 36% | 48% | 16% |
| FI | 14% | 74% | 12% | 49% | 33% | 18% |
| Floor area | 120.00 | | | 60.00 | | |
| Number of stories | 2.00 | | | 4.00 | | |
| Story height | 2.70 | | | 2.70 | | |
| Window/Wall ratio | 0.28 | | | 0.26 (only external wall with windows) | | |
| Wall/Floor ratio | 1.49 | | | 0.65 (only external wall with windows) | | |
| Envelope | | | | | | |
| - *Roof* | Pitched roof:<br>Clayconcrete_tiles<br>Plywood2cm<br>Insulation4cm<br>Plywood4cm | | | Pitched roof:<br>Clay_tiles<br>Plywood2cm0.4<br>Insulation5cm0.05<br>Reinf_concrete4cm1.92<br>Reinf_concrete16cm1.92<br>Gypsumsand_Plaster1cm | | |
| - *Wall* | Plywood1.5cm0.28<br>Air Wall Material_3cm0.60<br>Insulation8cm0.05<br>gypsumplasterboard2.5cm0.35 | | | Mansory_Brick12cm0.22<br>Insulation3cm0.05<br>Mansory_Brick8cm0.25<br>gypsumplasterboard1.5cm | | |
| - *Floor* | Reinf_concrete16cm1.92<br>Reinf_concrete4cm0.77<br>Insulation8cm<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | | Reinf_concrete16cm1.15<br>Mansory_structure_orizontal4cm1.15<br>Insulation6cm<br>Light_concrete8cm(screed)1.15<br>wood_paviment1cm | | |
| - *Windows* | Single glass with wood frame | | | Double glass with wood frame | | |
| Statistical U-value [W/(m$^2$ K)] | | | | | | |
| - *Roof* | 0.71 | | | 0.73 | | |
| - *Wall* | 0.52 | | | 0.54 | | |
| - *Floor* | 0.43 | | | 0.51 | | |
| - *Windows* | 2.01 | | | 2.04 | | |
| Ventilation system | No | | | No | | |
| Infiltration (ACH [1/h]) | 0.71 | | | 0.71 | | |
| Number of inhabitants | 2.50 | | | 1.63 | | |

| | SFH | | | MFH | | |
|---|---|---|---|---|---|---|
| Number of buildings | 671,629.31 | | | 853,642.57 | | |
| Period of construction | 1990-2010 | | | 1990-2010 | | |
| Climatic Zone | Cold | | | Cold | | |
| Weather files | 5 (LT, LV, EE, SE, FI) | | | 5 (LT, LV, EE, SE, FI) | | |
| Geographic location percentage rate | | | | | | |
| Name country | City | Country | Suburbs | City | Country | Suburbs |
| LT | 17% | 83% | 0% | 60% | 40% | 0% |
| LV | 25% | 74% | 1% | 58% | 39% | 3% |
| EE | 18% | 79% | 3% | 61% | 36% | 4% |
| SE | 11% | 72% | 16% | 36% | 48% | 16% |
| FI | 14% | 74% | 12% | 49% | 33% | 18% |
| Floor area | 120.00 | | | 60.00 | | |
| Number of stories | 2.00 | | | 4.00 | | |
| Story height | 2.70 | | | 2.70 | | |
| Window/Wall ratio | 0.28 | | | 0.26 (only external wall with windows) | | |
| Wall/Floor ratio | 1.53 | | | 0.65 (only external wall with windows) | | |
| Envelope | | | | | | |
| - *Roof* | Pitched roof:<br>Clayconcrete_tiles<br>Plywood2cm<br>Insulation7cm<br>Plywood4cm | | | Pitched roof:<br>Clay_tiles<br>Plywood2cm<br>Insulation8cm0.05<br>Reinf_concrete4cm0.77<br>Reinf_concrete16cm1.15<br>Gypsumsand_Plaster1cm | | |
| - *Wall* | Plywood1.5cm0.28<br>Air Wall Material_3cm0.60<br>Insulation3cm0.05<br>Insulation8cm0.05<br>gypsumplasterboard2.5cm0.35 | | | Mansory_Brick12cm0.22<br>Insulation3cm0.05<br>Mansory_Brick8cm0.25<br>gypsumplasterboard1.5cm | | |
| - *Floor* | Reinf_concrete16cm1.92<br>Mansory_structure_orizontal4cm1.15<br>Insulation11cm<br>Light_concrete8cm(screed)1.15<br>Ceramic_tiles | | | Reinf_concrete16cm1.92<br>Reinf_concrete4cm0.77<br>Insulation9cm<br>Light_concrete8cm(screed)1.15<br>wood_paviment1cm | | |
| - *Windows* | Double glass with PVC frame | | | Double glass with PVC frame | | |
| Statistical U-value [W/($m^2$ K)] | | | | | | |
| - *Roof* | 0.47 | | | 0.48 | | |
| - *Wall* | 0.39 | | | 0.58 | | |
| - *Floor* | 0.33 | | | 0.38 | | |
| - *Windows* | 1.87 | | | 1.97 | | |
| Ventilation system | No | | | No | | |
| Infiltration (ACH [1/h]) | 0.28 | | | 0.28 | | |
| Number of inhabitants | 2.50 | | | 1.63 | | |

## 2.4 VALIDATION AND CALIBRATION

A common problem in building stock simulations is connect to a gap between simulated performance and measured data. There can be many contributing factors to this ‘performance gap’ but most commonly, the source of error stems from inaccuracies associated with assumptions used in place of hard-to-measure building inputs. Well thought out validation is essential when describing the physical processes in buildings and dealing with the complexity of building energy modelling. Ideally, the performance of a building energy simulation tool (excel model, analysis software) should be validated against measured data from a real building. However, such data is not always available as urban indoor and outdoor environments are too complex to be instrumented sufficiently. The differences between theoretical and actual energy consumption are considered to arise from a multitude of factors, especially in energy building stock models. Theoretical energy use in data sources is based on normalized conditions, based on a quasi-steady-state method, such as indoor temperature of 20-26 °C in the vast majority of buildings and heating degree days, as well as heating of the entire floor area. Infiltration rate is assumed on the basis of the characteristics of the construction elements, etc. The way that occupants use the building in reality probably differs from these assumptions. According to several authors [86–89], occupants' behavior and lifestyle is thought to be a key factor in the discrepancy between theoretical and actual heating energy use and is correlated to energy performance.

Therefore, for a building stock model to be useful and provide a meaningful contribution, it must be calibrated and validated to best represent the average consumption and behavior of the representative buildings. Once calibrated and validated, a model can be used to investigate a wide variety of aspects regarding the building. By calibration of the initial model, the objective is to maintain fidelity in the simulation model through a systematic process. Calibration is an expression which has been used here to express the process of finding optimal values for a set of uncertain-input parameters to obtain the maximum accuracy in a simulation model in comparison with statistical data. By the method applied in the current work, calibration is an iterative process starting with the base case model, over the successive steps, to obtain a model which faithfully represents the thermal performance of the building stocks. During the calibration process, it is quite common to use a "trial and error" method, given the large number of parameters involved. Before starting the entire calibration assessment, a decision regarding the possible most significant input parameter elements must be made. As shown Table 2.22, Heo et al. [90] identified within the building physics domain the four main categories, to be the sources of uncertainties in building models, when carrying out building energy evaluations. Their identification has a great impact on the model reliability.

**Table 2.22 Source of uncertainty in building energy models** [90].

| Category | Factors |
|---|---|
| **Scenario uncertainty** | Outdoor weather conditions<br>Building usage/occupancy schedule |
| **Building physical/operational uncertainty** | Building envelope properties<br>Internal gains<br>Heating and cooling system schedule<br>Operation and control settings |
| **Model inadequacy** | Modelling assumptions<br>Simplification in the model algorithm<br>Ignored phenomena in the algorithm |
| **Observation error** | Statistical data accuracy |

However, in order to account that most of the data have been selected from statistical database, only few parameters have been taken into account: natural ventilation, infiltration, temperature setpoints and weather files.

To validate the results produced from the building model statistical techniques are employed as a method to assess the accuracy of outputs and the consistency of the same. In detail, error quantification is completed using the following metrics:

- mean bias error (MBE);
- normalized Mean Bias Error (NMBE);
- root mean square error (RMSE);
- coefficient of variation of the root mean square error (CV(RMSE));
- R-Squared ($R^2$).

These metrics are selected for this work due to the following reasons:

- they are the most commonly statistical indices used to evaluate the error between measured and simulated data of the building energy models [91, 92], translating the formulas for comparing the data results at European level with statistical data measured at 2010 for space heating and cooling demand;
- they express the model uncertainty in different ways and do not always correspond [93]. For example the NMBE is useful to evaluate the overall positive or negative bias of a model, while CV(RMSE) measures the variance of the model [94].

MBE is the average of the errors of a sample space and is reported in Eq. 2.9. Generally, it is a good indicator of the overall behavior of the simulated data with regards to the regression line of the sample. In Eq. 2.9, $m_i$ is the statistical value, $s_i$ is the simulated one and n the number of statistical data points. Positive values mean that the model under-predicts measured data, and a negative one means over-prediction. However, the main problem with this index is that it is subject to cancellation errors where the sum of positive and negative values could reduce the value of MBE.

$$MBE = \frac{\sum_{i=1}^{n}\left(m_i - s_i\right)}{n} \qquad \textbf{Eq. 2.9}$$

NMBE (Eq. 2.10) is a normalization of the MBE index that is used to scale the results of MBE, making them comparable. It quantifies the MBE index by dividing it by the mean of measured values ( $\overline{m}$ ), giving the global difference between the real values and the predicted ones. As in the case of MBE, positive and negative values mean the under- or over-prediction of this normalization.

$$NMBE = \frac{1}{\overline{m}} \cdot \frac{\sum_{i=1}^{n}\left(m_i - s_i\right)}{n} \cdot 100 \qquad \textbf{Eq. 2.10}$$

The RMSE (Eq. 2.11) is a measure of the variability of the data. For every hour, the error, or difference in paired data points is calculated and squared.

$$RMSE = \sqrt{\frac{1}{n} \cdot \sum_{i=1}^{n}\left(m_i - s_i\right)^2} \qquad \textbf{Eq. 2.11}$$

CV(RMSE) measures the variability of the errors between measured and simulated values (). It gives an indication of the model’s ability to predict the overall load shape that is reflected in the data. It is not subject to cancellation errors, and hence, ASHRAE Guidelines [95, 96], FEMP [97] and IPMVP [98, 99] use it with NMBE to verify the accuracy of the models.

$$CV(RMSE) = \frac{1}{\overline{m}} \cdot \sqrt{\frac{1}{n} \cdot \sum_{i=1}^{n}\left(m_i - s_i\right)^2} \cdot 100 \qquad \textbf{Eq. 2.12}$$

Finally, $R^2$ indicates how close simulated values are to the regression line of the statistical values. It is another statistical index commonly used to measure the uncertainty of the models. It is limited to between 0.00 and 1.00 where the upper value means that the simulated values match the measured ones perfectly and the lower ones do not.

$$R^2 = \left( \frac{n \cdot \sum_{i=1}^{n} m_i \cdot s_i - \sum_{i=1}^{n} m_i \cdot \sum_{i=1}^{n} s_i}{\sqrt{\left( n \cdot \sum_{i=1}^{n} m_i{}^2 - \left( \sum_{i=1}^{n} m_i \right)^2 \right) - \left( n \cdot \sum_{i=1}^{n} s_i{}^2 - \left( \sum_{i=1}^{n} s_i \right)^2 \right)}} \right)^2 \qquad \textbf{Eq. 2.13}$$

The $R^2$ value have been calculated on the entire set of results for heating, cooling and for both at European level. In order to compare the results of the bottom up model with statistical data reported on JRC-IDEES, the results of each single archetypes have been multiplied for a shape factor, calculated as:

$$\mathbf{f_{s,i}} = \frac{\mathbf{A_{i,c}}}{\mathbf{\bar{A}_c}} \qquad \textbf{Eq. 2.14}$$

where:

F is shape factor of i-th archetypes, A indicates the net useful floor for the i-th archetypes in the c-th country and Ã is the average floor area calculated for the c-th country on JRC-IDEES. The shape factors calculated is reported in Table 2.23. Then, the results are aggregated as in equation:

$$\mathbf{E_{tot,country}} = \sum_{\mathbf{i}}^{\mathbf{672}} (\mathbf{f_s\,NE})_{\mathbf{i,c}} \qquad \textbf{Eq. 2.15}$$

where:

$E_{tot,c}$ is total energy simulated for comparing the results with statistical data, N indicates the number of buildings that i-th archetype represents in the c-th country and E is the energy demand of each archetype in each country.

**Table 2.23 Correction factor for comparing and validate the models [m$^2$/m$^2$]**

| | SFH | | | | MFH | | | |
|---|---|---|---|---|---|---|---|---|
| | < 1945 | 1945-1969 | 1970-1989 | 1990-2010 | < 1945 | 1945-1969 | 1970-1989 | 1990-2010 |
| **MT** | 1.23 | 1.23 | 1.23 | 0.94 | 1.35 | 1.35 | 1.35 | 1.35 |
| **CY** | 1.41 | 1.41 | 1.41 | 1.08 | 1.56 | 1.56 | 1.56 | 1.56 |
| **PT** | 1.06 | 1.06 | 1.06 | 0.81 | 1.17 | 1.17 | 1.17 | 1.17 |
| **GR** | 0.88 | 0.88 | 0.88 | 0.68 | 0.97 | 0.97 | 0.97 | 0.97 |
| **ES** | 0.99 | 0.99 | 0.99 | 0.76 | 1.09 | 1.09 | 1.09 | 1.09 |
| **IT** | 0.94 | 0.94 | 0.94 | 0.72 | 1.04 | 1.04 | 1.04 | 1.04 |
| **FR** | 1.02 | 1.02 | 0.93 | 0.93 | 1.57 | 1.57 | 1.57 | 1.57 |
| **SI** | 0.86 | 0.86 | 0.78 | 0.78 | 1.32 | 1.32 | 1.32 | 1.32 |

| | SFH | | | | MFH | | | |
|---|---|---|---|---|---|---|---|---|
| | **< 1945** | **1945-1969** | **1970-1989** | **1990-2010** | **< 1945** | **1945-1969** | **1970-1989** | **1990-2010** |
| **HU** | 0.83 | 0.83 | 0.76 | 0.76 | 1.27 | 1.27 | 1.27 | 1.27 |
| **RO** | 0.48 | 0.48 | 0.44 | 0.44 | 0.74 | 0.74 | 0.74 | 0.74 |
| **BG** | 0.78 | 0.78 | 0.71 | 0.71 | 1.20 | 1.20 | 1.20 | 1.20 |
| **IE** | 0.88 | 0.88 | 0.81 | 0.81 | 1.36 | 1.36 | 1.36 | 1.36 |
| **NL** | 1.16 | 1.16 | 1.06 | 1.06 | 1.79 | 1.79 | 1.79 | 1.79 |
| **BE** | 1.36 | 1.36 | 1.24 | 1.24 | 2.09 | 2.09 | 2.09 | 2.09 |
| **LU** | 1.42 | 1.42 | 1.30 | 1.30 | 2.19 | 2.19 | 2.19 | 2.19 |
| **GB** | 1.01 | 1.01 | 0.92 | 0.92 | 1.55 | 1.55 | 1.55 | 1.55 |
| **SK** | 0.94 | 0.94 | 0.86 | 0.86 | 1.44 | 1.44 | 1.44 | 1.44 |
| **DE** | 1.02 | 1.02 | 0.94 | 0.94 | 1.57 | 1.57 | 1.57 | 1.57 |
| **AT** | 1.09 | 1.09 | 1.00 | 1.00 | 1.68 | 1.68 | 1.68 | 1.68 |
| **CZ** | 0.84 | 0.84 | 0.77 | 0.77 | 1.29 | 1.29 | 1.29 | 1.29 |
| **PL** | 0.80 | 0.80 | 0.73 | 0.73 | 1.23 | 1.23 | 1.23 | 1.23 |
| **DK** | 1.25 | 1.25 | 1.15 | 1.15 | 1.93 | 1.93 | 1.93 | 1.93 |
| **LT** | 0.63 | 0.63 | 0.52 | 0.52 | 1.06 | 1.06 | 1.06 | 1.06 |
| **LV** | 0.62 | 0.62 | 0.52 | 0.52 | 1.04 | 1.04 | 1.04 | 1.04 |
| **EE** | 0.66 | 0.66 | 0.55 | 0.55 | 1.11 | 1.11 | 1.11 | 1.11 |
| **SE** | 1.03 | 1.03 | 0.85 | 0.85 | 1.73 | 1.73 | 1.73 | 1.73 |
| **FI** | 0.88 | 0.88 | 0.73 | 0.73 | 1.48 | 1.48 | 1.48 | 1.48 |
| **HR** | 0.89 | 0.89 | 0.81 | 0.81 | 1.37 | 1.37 | 1.37 | 1.37 |

## 2.5 ALTERNATIVE RENOVATION SCENARIOS OF EU BUILDING STOCKS

The purpose of this section is to provide a comprehensive assessment of the existing building stock renovation. The basis of a good renovation strategy is establishing an accurate understanding of the building stock, including age, building typology, heating source etc. A detailed, bottom-up breakdown by building type, age, energy carrier, climatic zone, energy performance, occupancy and ownership are a fundamental knowledge requirement to underpin subsequent steps in the European strategy.

The term “renovation” has been used to describe a wide variety of improvements to an existing building or group of buildings. Different levels of renovation can be distinguished depending on the type of intervention and savings obtained. Renovation can involve the installation of renewable energy sources (RES) as well as the replacement or upgrade of all building elements to reduce energy consumption towards zero levels. The refurbishment of a building façade (i.e. walls and windows) provides a different energy saving level compared to the retrofit of the overall building envelope and systems (heating, ventilation and air conditioning - HVAC, lighting, etc).

Adopting BPIE parameters [15], the energy performance of a building can be improved by the implementation of a single measure, such as a new heating system or roof insulation. Such interventions are referred to “small retrofit” or “minor renovation”. Many discussions have risen around the meaning of "major", “deep” and “NZEBs” renovations [20].

However, the reduction of the energy use during the operation of the building requires the use of new technologies or materials most efficient, that could affect the energy and environmental impacts connect to production stage of this materials. In fact, the environmental impacts of the housing stock are caused by several main drivers. This thesis focuses on reducing the operational energy use in buildings, which is identified as an important driver of environmental hotspot of the European housing stock [13], applying energy efficiency measures on the building stock. The measures to be tested have been selected based on the analysis of several policy priorities (i.e. improving energy efficiency, extending the production of energy from renewable resources, moving towards bio-economy and moving towards nZEB policies) combined with the findings of energy simulations of a broader set of interventions. The scenarios have been selected based on their relevance, efficiency and type of intervention for applying the EPBD recast for a small retrofit and for a partial nZEB renovation at macro scale.

The scenarios proposed cover four types of interventions: (1) increasing the insulation level of the building envelope (i.e. outer walls), (2) improving technical systems with RES (i.e. integrating solar thermal system, PV system), (3) acting on behavioral changes of the building users (consumers) (i.e. night setback setpoint temperature) and (4) acting an improvement of the building envelope with a partial nZEB renovation (e.g. increase insulation of opaque surface and installed most energy efficient windows). The selected interventions have been developed including the use of standard materials and bio-based materials, creating sub- scenarios.

Four scenarios have been modelled, namely related to:

1) Increase insulation level of outer walls, using as material insulation:
    a. Bio-based materials (wood boards, cork slab and cellulose fiber);
    b. Rock wool insulation materials.
2) Renewable system installation:
    a. Solar thermal storage for DHW;
    b. Photovoltaic panels.
3) Night setpoint turn off;

4) nZEB oriented interventions:

   a. Increase insulation in Wall, roof and floor and fenestration surface with better energy performance.

### 2.5.1 Scenario I: Insulation of the walls

The first scenario focuses on improving the building envelope thermal resistance by adding insulation in the outer walls.

The scenario of reducing the thermal transmittance has been calculated in order to account EPBD recast directives, and its application at Member State level. As mentioned above, it is important notice that not all the countries have yet imposed the minimal U-value required for new construction or for renovated buildings. For that reason, Table 2.24 summarized the U-value for walls imposed by EPBD recast for some countries and where data missing, the U-value suggested for climatic zone on EURIMA datahubs are used to complete the data collection, that collected data for 31countries of Europe reporting the low and high U-value recommended for each country. For the case studies the selection of the data has been performed based on the weather station selected after the validation process and low value indicated. Table 2.24 summarized the minimal value of the transmittance suggested for each country.

**Table 2.24 The U-value requirement or propose for EU-28 countries**

| code | Wall [W/m²K] | Reference |
|---|---|---|
| **MT** | 0.86 | [100] |
| **CY** | 0.85 | [100] |
| **PT** | 0.6 | [100] |
| **GR** | 0.45 | [100] |
| **ES** | 0.73 | [100] |
| **IT** | 0.32 | [100] |
| **FR** | 0.36 | [101] |
| **SI** | 0.6 | [101] |
| **HU** | 0.45 | [100] |
| **RO** | 0.7 | [101] |
| **BG** | 0.5 | [101] |
| **IE** | 0.6 | [100] |
| **NL** | 0.37 | [101] |
| **BE** | 0.32 | [100] |
| **LU** | 0.32 | [100] |
| **GB** | 0.3 | [100] |
| **SK** | 0.46 | [101] |
| **DE** | 0.28 | [100] |
| **AT** | 0.35 | [100] |

| code | Wall [W/m²K] | Reference |
|---|---|---|
| **CZ** | 0.38 | [101] |
| **PL** | 0.3 | [101] |
| **DK** | 0.3 | [100] |
| **LT** | 0.2 | [101] |
| **LV** | 0.25 | [101] |
| **EE** | 0.25 | [101] |
| **SE** | 0.145 | [100] |
| **FI** | 0.17 | [100] |
| **HR** | 0.9 | [101] |

The average U-value, for each dwelling type in each climatic zone, has been derived combining data from the number of buildings that each archetype represents and the minimal U-value required Table 2.25.

**Table 2.25 Final U-value wall per archetypes and per climatic zone [W/m$^2$ K]**

| | MFH | | | | SFH | | | |
|---|---|---|---|---|---|---|---|---|
| | < 1945 | 1945-1969 | 1970-1989 | 1990-2010 | < 1945 | 1945-1969 | 1970-1989 | 1990-2010 |
| **W** | 0.42 | 0.45 | 0.49 | 0.60 | 0.48 | 0.49 | 0.52 | 0.59 |
| **M** | 0.34 | 0.34 | 0.37 | 0.35 | 0.34 | 0.36 | 0.37 | 0.35 |
| **C** | 0.17 | 0.17 | 0.18 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |

The insulation materials selected are based on the introduction of bio-economy directives and the use of bio-materials. In this context and in order to account the environmental profile developed on Ecoinvent [102], the materials selected are:

a) **Bio-based materials:**

   i) wood boards;

   ii) cork slab and

   iii) cellulose fiber;

b) **Rock wool insulation materials.**

The thermophysical technical characteristics of the insulation materials have been selected from [72, 102, 103] and reported in Table 2.26. For each archetype, the thickness of insulation materials required for obtaining the minimal U-value calculated is shown in Table 2.27.

**Table 2.26 Technical and thermal characteristics of the insulation materials**

| | Conductibility $\lambda$ [W/m K] | Density $\rho$ [kg/m$^3$] |
|---|---|---|
| **Wood Boards** | 0.075 | 400 |
| **Cork Slab** | 0.040 | 100 |
| **Cellulose Fiber** | 0.039 | 60 |

| | Conductibility λ [W/m K] | Density ρ [kg/m$^3$] |
|---|---|---|
| **Stone Wool** | 0.040 | 50 |

**Table 2.27 Thickness [m] of insulation materials per archetypes**

| Archetypes | Wood Boards [m] | Cork Slab [m] | Cellulose Fiber [m] | Stone Wool [m] |
|---|---|---|---|---|
| **SFH_W_<1945** | 0.12 | 0.06 | 0.06 | 0.06 |
| **SFH_W_1945-1969** | 0.12 | 0.06 | 0.06 | 0.06 |
| **SFH_W_1970-1989** | 0.10 | 0.05 | 0.05 | 0.05 |
| **SFH_W_1990-2010** | 0.04 | 0.02 | 0.02 | 0.02 |
| **SFH_M_<1945** | 0.18 | 0.09 | 0.09 | 0.09 |
| **SFH_M_1945-1969** | 0.16 | 0.09 | 0.09 | 0.09 |
| **SFH_M_1970-1989** | 0.13 | 0.07 | 0.07 | 0.07 |
| **SFH_M_1990-2010** | 0.04 | 0.02 | 0.02 | 0.02 |
| **SFH_C_<1945** | 0.28 | 0.15 | 0.15 | 0.15 |
| **SFH_C_1945-1969** | 0.28 | 0.15 | 0.15 | 0.15 |
| **SFH_C_1970-1989** | 0.27 | 0.14 | 0.13 | 0.14 |
| **SFH_C_1990-2010** | 0.20 | 0.10 | 0.10 | 0.10 |
| **MFH_W_<1945** | 0.14 | 0.08 | 0.08 | 0.08 |
| **MFH_W_1945-1969** | 0.13 | 0.07 | 0.07 | 0.07 |
| **MFH_W_1970-1989** | 0.11 | 0.06 | 0.06 | 0.06 |
| **MFH_W_1990-2010** | 0.04 | 0.02 | 0.02 | 0.02 |
| **MFH_M_<1945** | 0.17 | 0.09 | 0.09 | 0.09 |
| **MFH_M_1945-1969** | 0.17 | 0.09 | 0.09 | 0.09 |
| **MFH_M_1970-1989** | 0.13 | 0.07 | 0.07 | 0.07 |
| **MFH_M_1990-2010** | 0.05 | 0.03 | 0.03 | 0.03 |
| **MFH_C_<1945** | 0.28 | 0.14 | 0.15 | 0.14 |
| **MFH_C_1945-1969** | 0.27 | 0.13 | 0.14 | 0.13 |
| **MFH_C_1970-1989** | 0.25 | 0.12 | 0.12 | 0.12 |
| **MFH_C_1990-2010** | 0.28 | 0.15 | 0.15 | 0.15 |

Table 2.27 shows that a greater quantity of materials is required into the cold climatic zone than into the moderate and in the warm. Each new stratigraphy is implemented into the validated base models, adding the insulation materials on the walls.

As explained before, the benefits (in terms of reduced energy use) of the additional insulation are calculated via dynamic energy simulations (hybrid physics bottom–up approach).

### 2.5.2 Scenario II: Renewable systems

The second scenario focuses on the installation of a thermal solar system for the production of domestic hot water and of a photovoltaic system (PV) for the production of the electricity required by the equipment and lighting. The expected results are a reduction of the energy spent in a water heater and the electricity purchased from the grid. This scenario has been split in two, namely related to:

1) Solar thermal systems;
2) PV systems.

The modeling technic applied and the assumption made are reported into the following sections.

### 2.5.2.1 Scenario II.a: Solar thermal system

The solar collectors achieve levels of efficiency variable on the basis of the plant in which they are installed. Among the solar collectors for low and medium temperature systems such as residential buildings the most commons types are:

- glazed flat plate collectors;
- unglazed flat plate collectors;
- vacuum tube collectors;
- heat pipe.

In the simulations, it is decided to implement flat-plate collectors as reported on Energy Plus tool.

The plane solar collector can be considered, for simplicity, a heat exchanger that uses the entire incident solar radiation, both the direct and the diffuse to enhance the temperature of a flow of an operative fluid. In particular in plane collectors the absorbent surface is equal to the one that intercepts the solar radiation (aperture surface). The main design parameter in the installation is the area of the collectors needed to produce the heat required. The extension of the collector's field depends on the solar radiation intercepted, on the heat losses of the collector itself, on the heat loss attributable to the rest of the installation and on the use expected for the solar system (DHW generation, space heating or both).

The process temperatures achievable with flat solar collectors are between 20 ° C and 90 ° C, this justifies their application in the residential sector. The solar panels are fitted with brackets so that they can be stuck on top of the roof tiles ensuring a good anchorage to the roof itself.

For this scenario, a collector surface of 1.2 $m^2$/person is assumed for both the single family and multi-family houses. For the single-family houses, a storage tank of 250 l is assumed in the warm climate and 200 l in the moderate and cold climate. For the multi-family houses, it is assumed that one large storage tank (2500 l in the warm climate, 1400 l in the moderate and 1000 l in the cold climate) is installed for the whole building. These data are selected in according with [55], where an analysis of possible eco-interventions were applied to the same archetypes. However, the simulations were run only with 1 weather data for climatic zone.

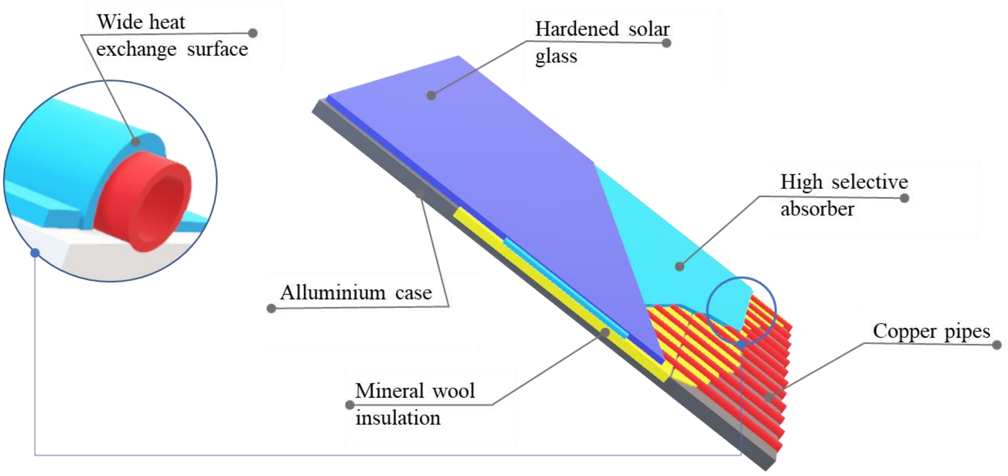


**Figure 2.15 Example of a glazed flat solar collectors' system**

This scenario is developed, only, for analyzing the effects connect to the use of renewable energy for produces DHW. The input temperature of the water is assumed the same of the base scenario, as explained in section Domestic Hot Water (DHW). The schedule of DHW consumed is maintained equal to the base model.

#### 2.5.2.1.1 Solar Collector Heating System Plant Connections

This section provides an overview of how solar heating systems is modelled. The solar heating system is constructed using a combination of solar collectors, pumps, water tanks and water heaters. The solar collector is connected on the demand side of the plant loop. Multiple collector modules is combined in series using the normal plant connection rules reported on [104]. Also, in order to account that the solar heating system is for domestic hot water usage only, the field *Use Flow Rate Fraction Schedule Name* of the WaterHeater:Mixed object is used to avoid additional plant connections [104].

In this scenario a simple solar collector plant loop connection is accounted as reported in Figure 2.16.

In climates with a cold season, the solar heating system must be designed to avoid the risk of fluid freezing in the solar collector or exposed pipes and causing damage. For avoiding the freezing risk, the model is simulated using the *Recirculation system* in EnergyPlus tool. This strategy automatically recirculates warm liquid from the storage tank back through the collector to maintain the system above the freezing point. There are system losses using this method. This is simulated in EnergyPlus by using *AvailabilityManager:LowTemperatureTurnOn* to force the system to turn on when the outdoor air temperature or collector outlet temperature falls below a specified minimum. The same assumptions are applied at each archetype.

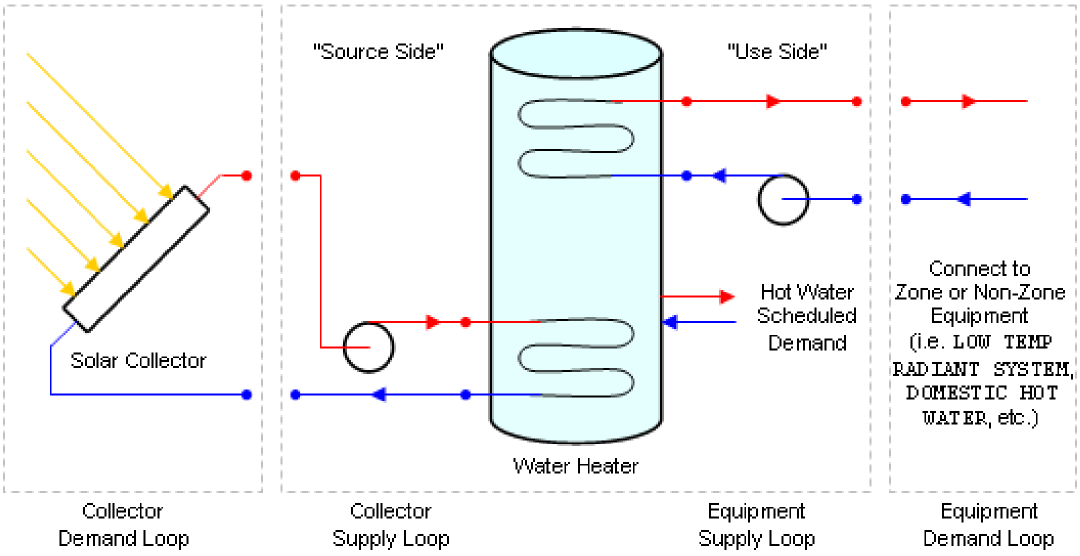


**Figure 2.16 Solar Collector Plant Loop Connection Diagram** [104]

### 2.5.2.2 Scenario II.B: PV system

The PV achieve levels of efficiency variable on the site, where it is installed. Usually, it is account that a family have a power consume of 3kWp. However, this value depends on the type of family composition and electric equipment installed. The PV system is generally composed by PV panels, inverter and electric distribution. The PV module is simulated as connect in series.

The model is developed in Energyplus as grid-connected photovoltaic system (PV) for the production of electricity. The photovoltaic system has a peak power of 3kW for SFH and 2x16kW for MFH, in order to account the available space on the roof and the family composition.

The inverter is simulated in auto size mode with an efficiency of 0.96 and a DC to AC Size ratio of 1.1.

Each PV system has an area of about 21 $m^2$ for SFH and 228 $m^2$ for MFH. The data are selected in accord with

[105] and scaled for the scenario. The PV systems are developed as integrated into roof with an incident angle of 30° (inclination of the roof).

### 2.5.3 Scenario III: Night setback of setpoint temperature

The third scenario focuses on reducing the room temperature at night, referred to as night setback of setpoint temperature for heating and, on increasing the room temperature at night for cooling. This scenario is included as an example of potential behavioral strategy of the inhabitants. In this scenario, it is investigated the potential energy saving that it is possible obtain with heating and cooling system turned off during the night or through the heating and cooling limited to some hours in a day. In particular, this scenario accounts the effects connect to turn off the thermostat during the 23:00 and the 5:00 of each day of the year.

### 2.5.4 Scenario IV: Refurbishment nZEB oriented

For the last scenario, the building envelope thermal resistance is improved by adding insulation in the outer walls, floor and roof and installing most efficient windows.

This scenario reduces the U-value to the average minimal transmittance of the envelope, calculated in order to account EPBD recast directives, and its application at countries level. As mentioned above, it is important notice that not all the countries have yet imposed the minimal U-value required for new construction or for renovated buildings. For that reason, Table 2.28 summarized the U-value for walls, roofs and floors imposed by EPBD recast for some countries and where data miss, the U-value suggested for climatic zone on EURIMA datahubs are used to complete the data collection.

For the case studies, the selection of the data is carried out taken into account the weather station of the location selected as representative of the climate condition of the Member State, after the validation process. The low value indicated on EURIMA is selected. Table 2.28 summarized the minimal value of the transmittance suggested for each country. Then, an average U-value for archetypes is calculated taken into account the number of buildings that represent into each climatic zone. Instead, the same approach is applied to the definition of the minimal U-value for windows. However, for this case, no data on U-value required for fenestration were found into EURIMA datahubs.

**Table 2.28 U-value suggested for country [W/($m^2$ K)]**

| code | Wall | Roof | Floor | Window | Reference |
|---|---|---|---|---|---|
| **MT** | 0.86 | 0.295 | 0.86 | 2.85 | [100] |
| **CY** | 0.85 | 0.75 | 0.75 | 3.8 | [100] |
| **PT** | 0.6 | 0.45 | 0.45 | 3.3 | [100] |
| **GR** | 0.45 | 0.4 | 0.4 | 2.8 | [100] |
| **ES** | 0.73 | 0.41 | 0.5 | 3.5 | [100] |
| **IT** | 0.32 | 0.26 | 0.32 | 2 | [100] |
| **FR** | 0.36 | 0.2 | 0.27 |  | [101] |
| **SI** | 0.6 | 0.25 | 0.45 |  | [101] |
| **HU** | 0.45 | 0.25 | 0.45 | 1.6 | [100] |
| **RO** | 0.7 | 0.33 | 0.6 |  | [101] |
| **BG** | 0.5 | 0.3 | 0.5 |  | [101] |
| **IE** | 0.6 | 0.3 | 0.6 | 3 | [100] |
| **NL** | 0.37 | 0.37 | 0.37 |  | [101] |
| **BE** | 0.32 | 0.27 | 0.35 | 1.3 | [100] |
| **LU** | 0.32 | 0.25 | 0.32 | 1.5 | [100] |
| **GB** | 0.3 | 0.2 | 0.25 | 2 | [100] |
| **SK** | 0.46 | 0.3 | 0.35 |  | [101] |
| **DE** | 0.28 | 0.2 | 0.35 | 1.3 | [100] |
| **AT** | 0.35 | 0.2 | 0.4 | 1.4 | [100] |
| **CZ** | 0.38 | 0.3 | 0.45 |  | [101] |
| **PL** | 0.3 | 0.3 | 0.6 |  | [101] |
| **DK** | 0.3 | 0.2 | 0.2 | 1.8 | [100] |
| **LT** | 0.2 | 0.16 | 0.25 |  | [101] |
| **LV** | 0.25 | 0.2 | 0.25 |  | [101] |
| **EE** | 0.25 | 0.16 | 0.25 |  | [101] |
| **SE** | 0.145 | 0.105 | 0.13 | 1.2 | [100] |
| **FI** | 0.17 | 0.09 | 0.09 | 1 | [100] |
| **HR** | 0.9 | 0.65 | 0.75 |  | [101] |

The average U-value, for each dwelling type in each climatic zone, are derived combining data from the number of buildings that each archetype represents and the minimal U-value required (Table 2.25) and reported in Table 2.29.

**Table 2.29 Final U-value per archetypes and per climatic zone [W/$m^2$ K]**

| U-value [W/$m^2$ K] |  | MFH |  |  |  | SFH |  |  |  |
|---|---|---|---|---|---|---|---|---|---|
|  |  | < 1945 | 1945-1969 | 1970-1989 | 1990-2010 | < 1945 | 1945-1969 | 1970-1989 | 1990-2010 |
| **Wall** | W | 0.42 | 0.45 | 0.49 | 0.60 | 0.48 | 0.49 | 0.52 | 0.59 |
|  | M | 0.34 | 0.34 | 0.37 | 0.35 | 0.34 | 0.36 | 0.37 | 0.35 |
|  | C | 0.17 | 0.17 | 0.18 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| **Roof** | W | 0.30 | 0.32 | 0.34 | 0.38 | 0.33 | 0.35 | 0.36 | 0.39 |
|  | M | 0.23 | 0.24 | 0.25 | 0.25 | 0.23 | 0.24 | 0.24 | 0.24 |
|  | C | 0.12 | 0.12 | 0.13 | 0.11 | 0.12 | 0.12 | 0.11 | 0.11 |
| **Floor** | W | 0.33 | 0.35 | 0.37 | 0.47 | 0.37 | 0.39 | 0.40 | 0.48 |
|  | M | 0.35 | 0.38 | 0.39 | 0.35 | 0.33 | 0.36 | 0.36 | 0.34 |
|  | C | 0.13 | 0.11 | 0.14 | 0.12 | 0.13 | 0.10 | 0.11 | 0.11 |
| **Windows** | W | 2.19 | 2.34 | 2.51 | 3.21 | 2.45 | 2.60 | 2.73 | 3.25 |
|  | M | 1.59 | 1.52 | 1.57 | 1.49 | 1.77 | 1.69 | 1.69 | 1.57 |
|  | C | 0.92 | 0.82 | 0.90 | 0.96 | 0.94 | 0.78 | 0.86 | 0.92 |

The insulation materials selected are the same reported in Table 2.26. For each of these materials, as calculated in the scenario I, the optimal thickness of insulation is calculated for roof and floor. These data are reported in Table

2.30 and Table 2.31.

**Table 2.30 Thickness [m] of insulation materials for roof per archetypes**

| Archetypes | wood boards [m] | cork slab [m] | cellulose fiber[m] | Rock wool [m] |
|---|---|---|---|---|
| **SFH_W_<1945** | 0.22 | 0.11 | 0.11 | 0.11 |
| **SFH_W_1945-1969** | 0.20 | 0.10 | 0.10 | 0.10 |
| **SFH_W_1970-1989** | 0.18 | 0.09 | 0.09 | 0.09 |
| **SFH_W_1990-2010** | 0.14 | 0.07 | 0.07 | 0.07 |
| **SFH_M_<1945** | 0.30 | 0.15 | 0.15 | 0.15 |
| **SFH_M_1945-1969** | 0.23 | 0.13 | 0.13 | 0.13 |
| **SFH_M_1970-1989** | 0.20 | 0.11 | 0.11 | 0.11 |
| **SFH_M_1990-2010** | 0.08 | 0.04 | 0.04 | 0.04 |
| **SFH_C_<1945** | 0.41 | 0.22 | 0.22 | 0.22 |
| **SFH_C_1945-1969** | 0.41 | 0.22 | 0.22 | 0.22 |
| **SFH_C_1970-1989** | 0.27 | 0.14 | 0.13 | 0.14 |
| **SFH_C_1990-2010** | 0.38 | 0.19 | 0.19 | 0.19 |
| **MFH_W_<1945** | 0.21 | 0.12 | 0.12 | 0.12 |
| **MFH_W_1945-1969** | 0.22 | 0.12 | 0.12 | 0.12 |
| **MFH_W_1970-1989** | 0.18 | 0.10 | 0.10 | 0.10 |
| **MFH_W_1990-2010** | 0.14 | 0.07 | 0.07 | 0.07 |
| **MFH_M_<1945** | 0.28 | 0.15 | 0.15 | 0.15 |
| **MFH_M_1945-1969** | 0.17 | 0.09 | 0.09 | 0.09 |
| **MFH_M_1970-1989** | 0.20 | 0.11 | 0.11 | 0.11 |
| **MFH_M_1990-2010** | 0.03 | 0.02 | 0.02 | 0.02 |
| **MFH_C_<1945** | 0.44 | 0.22 | 0.24 | 0.22 |
| **MFH_C_1945-1969** | 0.46 | 0.22 | 0.24 | 0.22 |
| **MFH_C_1970-1989** | 0.47 | 0.23 | 0.23 | 0.23 |
| **MFH_C_1990-2010** | 0.41 | 0.22 | 0.22 | 0.22 |

**Table 2.31 Thickness [m] of insulation materials for floor per archetypes**

| Archetypes | wood boards [m] | cork slab [m] | cellulose fiber[m] | Rock wool [m] |
|---|---|---|---|---|
| **SFH_W_<1945** | 0.16 | 0.08 | 0.08 | 0.08 |
| **SFH_W_1945-1969** | 0.15 | 0.08 | 0.08 | 0.08 |
| **SFH_W_1970-1989** | 0.15 | 0.08 | 0.08 | 0.08 |
| **SFH_W_1990-2010** | 0.12 | 0.06 | 0.06 | 0.06 |
| **SFH_M_<1945** | 0.20 | 0.10 | 0.10 | 0.10 |
| **SFH_M_1945-1969** | 0.18 | 0.10 | 0.10 | 0.10 |
| **SFH_M_1970-1989** | 0.15 | 0.08 | 0.08 | 0.08 |
| **SFH_M_1990-2010** | 0.04 | 0.02 | 0.02 | 0.02 |
| **SFH_C_<1945** | 0.28 | 0.15 | 0.15 | 0.15 |
| **SFH_C_1945-1969** | 0.28 | 0.15 | 0.15 | 0.15 |
| **SFH_C_1970-1989** | 0.27 | 0.14 | 0.13 | 0.14 |
| **SFH_C_1990-2010** | 0.30 | 0.15 | 0.15 | 0.15 |
| **MFH_W_<1945** | 0.16 | 0.09 | 0.09 | 0.09 |
| **MFH_W_1945-1969** | 0.15 | 0.08 | 0.08 | 0.08 |
| **MFH_W_1970-1989** | 0.15 | 0.08 | 0.08 | 0.08 |
| **MFH_W_1990-2010** | 0.14 | 0.07 | 0.07 | 0.07 |
| **MFH_M_<1945** | 0.17 | 0.09 | 0.09 | 0.09 |
| **MFH_M_1945-1969** | 0.17 | 0.09 | 0.09 | 0.09 |
| **MFH_M_1970-1989** | 0.15 | 0.08 | 0.08 | 0.08 |
| **MFH_M_1990-2010** | 0.03 | 0.02 | 0.02 | 0.02 |
| **MFH_C_<1945** | 0.30 | 0.15 | 0.16 | 0.15 |
| **MFH_C_1945-1969** | 0.30 | 0.15 | 0.16 | 0.15 |
| **MFH_C_1970-1989** | 0.27 | 0.13 | 0.13 | 0.13 |
| **MFH_C_1990-2010** | 0.28 | 0.15 | 0.15 | 0.15 |

For modeling the windows with the new transmittance value, assumption on the main typologies of windows sell for climatic zone has been performed. In particular, the data reported on ZEBRA2020 datahubs on the typologies of glazing used for the renovation towards nZEB have been used for choosing the glass and frame for climatic zone. Zebra2020 summarized data for 5 climatic zones. The definition of these climatic zones is reported in Table 2.32.

**Table 2.32 Definition of climatic zone on ZEBRA2020** [70]

| Climatic Zone | Heating and cooling degree day | Climate |
|---|---|---|
| **Zone A** | Buildings with Heating Degree Day >= 1962 and Cooling Degree Day >= 525 | Cold winters and warm summers |
| **Zone B** | Buildings with Heating Degree Day >= 1962 and Cooling Degree Day < 525 | Cold winters and mild summers |
| **Zone C** | Buildings with Heating Degree Day< 886 and Cooling Degree Day >= 525 | Warm winters and warm summers |
| **Zone D** | Buildings with Heating Degree Day between 886 and 1962 and Cooling Degree Day < 525 | Temperate winters and mild summers |
| **Zone E** | Buildings with Heating Degree Day between 886 and 1962 and Cooling Degree Day >= 525 | Temperate winters and warm summers |

In this thesis, the following assumptions are made, based on the HDDs and CDDs:

- The warm climatic zone has been assumed as Zone A;
- The moderate and cold climatic zones have been assumed as Zone B.

Figure 2.17 shows that the climatic zone A is characterized by 33% of the windows sell that are double Lo-e glazing and 50% are unknow. While, the climatic zone B bought for about the 64% triple glass and only the 30% of the windows are not knew.

For that reason, both SFH and MFH in warm climatic zone are modelled with double glass property. Instead, the cold and moderate climatic zone are simulated with a triple glass. The fenestration typologies are selected combining the U-value of windows calculated for each archetype, the assumptions above mentioned and the windows database reported on EnergyPlus.

Table 2.33 summarizes the object of fenestration selected from EnergyPlus, and compares the statistical U-value calculated with the U-value of the object.

Based on thermal efficient technologies installed, the infiltration object has been set equal at the ACH calculated for archetype built during the period 1990-2010. All the other parameter doesn't change.

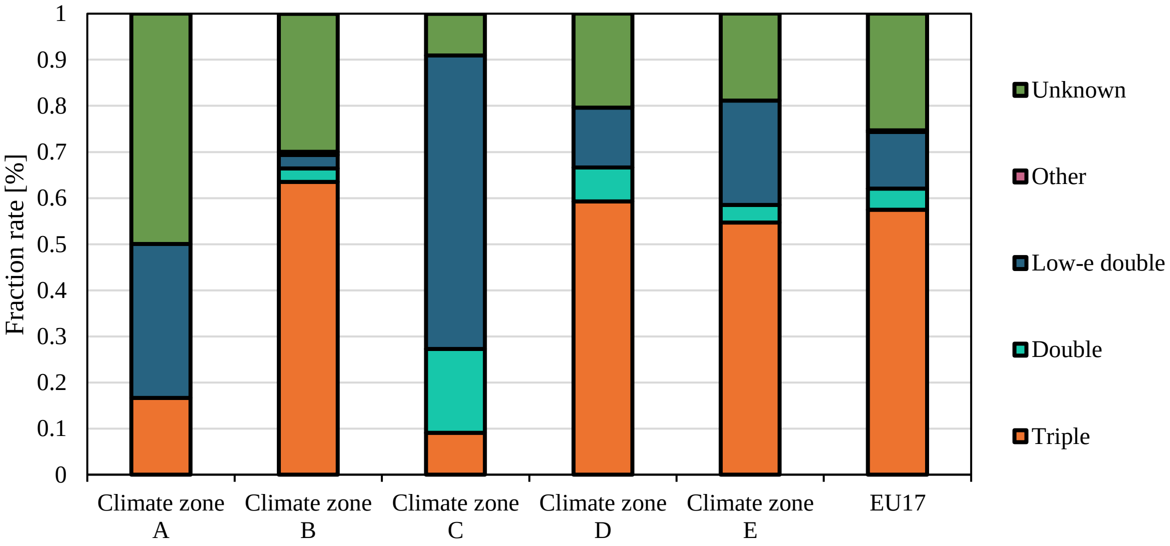


**Figure 2.17 Percentage rate of the most used glazing type at 2015 for different climatic zone** [70]

Table 2.33 Fenestration object characteristics for archetypes

| Archetypes | EnergyPlus Object | U-value object [W/m$^2$ K] | U-value retrofit [W/m$^2$ K] | Error [%] |
|---|---|---|---|---|
| **SFH_W_<1945** | Dbl LoE (e2=.2) Clr 3 | 2.57 | 2.45 | 5% |
| **SFH_W_1945-1969** | Dbl Ref-D Tint 6mm/13mm Air | 2.66 | 2.60 | 2% |
| **SFH_W_1970-1989** | Dbl LoE (e2=.4) Clr 3mm/6mm Air | 2.76 | 2.73 | 1% |
| **SFH_W_1990-2010** | Dbl Ref-D Tint 6mm/6mm Air | 3.07 | 3.25 | -6% |
| **SFH_M_<1945** | Trp Clr 3mm/13mm Air | 1.73 | 1.77 | -2% |
| **SFH_M_1945-1969** | Trp Clr 3mm/13mm Arg | 1.68 | 1.69 | -1% |
| **SFH_M_1970-1989** | Trp Clr 3mm/13mm Arg | 1.68 | 1.69 | 0% |
| **SFH_M_1990-2010** | Trp Clr 3mm/13mm Air | 1.71 | 1.57 | 8% |
| **SFH_C_<1945** | Trp LoE (e5=.1) Clr 3mm/13mm Arg | 1.12 | 0.94 | 17% |
| **SFH_C_1945-1969** | Trp LoE (e5=.1) Clr 3mm/13mm Arg | 1.11 | 0.78 | 30% |
| **SFH_C_1970-1989** | Trp LoE (e5=.1) Clr 3mm/13mm Arg | 1.11 | 0.86 | 22% |
| **SFH_C_1990-2010** | Trp LoE (e5=.1) Clr 3mm/13mm Arg | 1.08 | 0.92 | 14% |
| **MFH_W_<1945** | Dbl Elec Ref Colored 6mm/6mm Air | 2.36 | 2.19 | 7% |
| **MFH_W_1945-1969** | Dbl Elec Ref Colored 6mm/6mm Air | 2.47 | 2.34 | 5% |
| **MFH_W_1970-1989** | Dbl Ref-D Tint 6mm/13mm Air | 2.61 | 2.51 | 4% |
| **MFH_W_1990-2010** | Dbl Ref-D Tint 6mm/6mm Air | 3.01 | 3.21 | -7% |
| **MFH_M_<1945** | Trp Clr 3mm/13mm Arg | 1.61 | 1.59 | 1% |
| **MFH_M_1945-1969** | Trp Clr 3mm/13mm Arg | 1.54 | 1.52 | 1% |
| **MFH_M_1970-1989** | Trp Clr 3mm/13mm Arg | 1.59 | 1.57 | 1% |
| **MFH_M_1990-2010** | Trp Clr 3mm/13mm Arg | 1.66 | 1.49 | 11% |
| **MFH_C_<1945** | Trp LoE (e5=.1) Clr 3mm/13mm Arg | 1.11 | 0.92 | 19% |
| **MFH_C_1945-1969** | Trp LoE (e5=.1) Clr 3mm/13mm Arg | 1.11 | 0.82 | 27% |
| **MFH_C_1970-1989** | Trp LoE (e5=.1) Clr 3mm/13mm Arg | 1.11 | 0.90 | 19% |
| **MFH_C_1990-2010** | Trp LoE (e5=.1) Clr 3mm/13mm Arg | 1.11 | 0.96 | 13% |

## 2.6 LIFE CYCLE ASSESSMENT: BUILDING RETROFIT

In this thesis, LCA methodology is applied to the materials and technologies used for renovate the archetypes according to the international standards of series ISO 14040 [1, 2]. In the following paragraphs the different methodology steps will be defined in detail. Moreover, in order to compare the environmental impacts due to the retrofit of the building life cycle to the environmental impacts potentially saved of energy and during the use stage, environmental payback times are calculated for each impact category analyzed. The scope of this work is to evaluate the potential environmental benefits and impacts of some energy efficient measure applied on the building stocks at European level.

The energy and environmental saving have been calculated for single model and then, have been multiplied for the number of buildings that each archetype represents.

The standards of the ISO 14040 series [1, 2]. define a calculation method that allows for evaluating the environmental behavior of any product and also establish how to communicate the results of this evaluation. The general LCA methodology consists of four phases (Figure 2.18), which will be described in detail in the following sections.

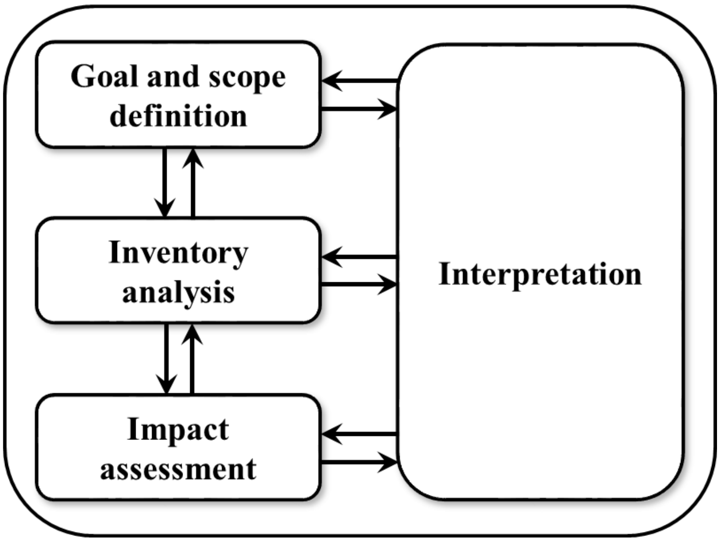


**Figure 2.18 Stages of LCA methodology**

In particular, LCA approach adapted to the building replacement is defined in UNI 15978 [106] that represents a methodological guide for the quantification of the environmental impacts on buildings and indicates the used of the EN 15804 for making the LCA of construction products. The standard is applicable to new and existing buildings and refurbishment projects. In detail, EN 15804 [107] is organized according to the "modularity principle" of construction products' life cycle, different from the UNI EN 15978 [106]. In fact, the UNI EN 15978 divides the building's life cycle into different information modules (A, B, C, D) which represent the product stage, construction stage, use stage, end-of-life and benefits and loads beyond the building lifecycle, shown in Figure 2.19, where A1 to C4 cover the "impacts and environmental aspects" developed within the system boundary, while D module covers benefits and loads that go beyond the system boundary.

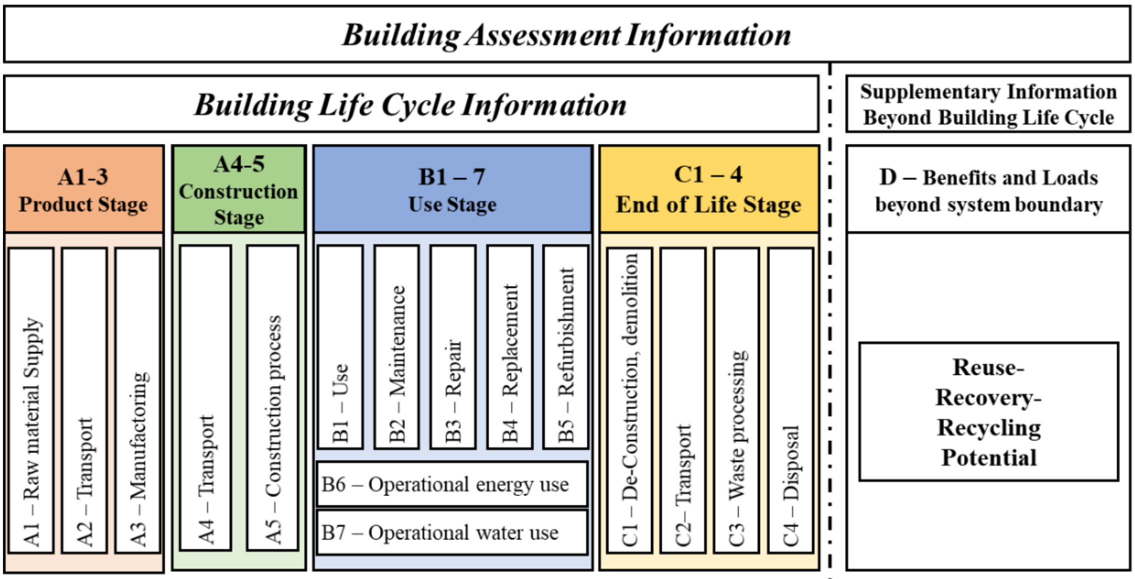


**Figure 2.19 Modular information for the different stages of the building assessment** [106]**.**

In this thesis, the environmental impacts of the refurbishment stage (B5) of the buildings is carried out only for observing the environmental impacts of the renovation strategies proposed.

### 2.6.1 **Goal and scope definition**

The whole LCA process is guided by the direction set in the Goal and Scope Definition phase [1, 2]. This phase help to maintain consistency of the LCA.

According to the standard ISO 14040 [1, 2], this point include a definition of the product or system that is going to be studied, the functional unit, the system boundaries, allocation procedures and data quality.

#### 2.6.1.1 LCA goals

The main goals of this study can be briefly summarized as follows:

- investigate the environmental impacts connect to the renovation of the European existing building stock;
- assess the contribution to environmental impacts of each stage of the life cycle of the construction products used for the retrofit of the building stocks compared to the potential energy saving during the operation use;
- evaluate if the environmental impacts potentially avoided thanks to the renewable energy produced during the use stage compensate the environmental impacts due to the refurbishment stage of the building stocks.

The life cycle impacts of renovations have been determined by an attributional LCA including an inventory process-analysis (described in the next section), which allowed not only identifying the most significant hotspot but also to evaluate which scenarios will have significant energy and environmental benefits.

The novelty of the methodologies proposed is into the definition of average environmental impacts connect to the fuels rate used for heat and electricity production.

#### 2.6.1.2 Specification of the object of assessment

The object of assessment is the materials and technologies used for the energy efficient measures applicable to the existing building stock, including them production processes, transportation and installation, excluding the environmental impacts connected to use of other materials (as constructive materials, end-use of the existing stratigraphy, ect) because they are out of the boundary conditions. The main characteristics of the materials and systems are described in the section 2.5.

#### 2.6.1.3 Functional unit

According to the standard ISO 14040 [1] the functional unit is defined as the quantified performance of a product system for use as a reference unit. Defining an adequate functional unit (FU) is essential when one of the main goals of the study is to allow future comparisons.

According to the most commonly functional unit used in buildings stocks and single building LCA studies, the FU are, respectively, 1 archetype [108–110]. However, the LCA is not performed on all the life cycle of the building but it is finalized to insulation materials and renewable energy technologies installable. For that reason, in order to compare all the 672 archetypes, a declared unit has been accounted. The declare unit used is 1m$^2$ of useful floor area with reference to 1 year (in a reference period of 30years). The declared unit selected allows to compare the archetypes for period of construction, climatic zone, type of buildings and for possible retrofit scenarios.

#### 2.6.1.4 System boundaries

The system boundaries determine the processes that are taken into account for the object of assessment. In this thesis, the object of assessment is the archetype retrofitted and its operation use with particular effects connected to the installation of some insulation materials in additional to the existing stratigraphy. This includes all the upstream and downstream processes needed for retrofitting the building, from the acquisition of raw materials to their use, without taking into account the substitution of the existing insulation materials (reported in [66]).

### 2.6.2 **Life cycle inventory analysis**

With regard to retrofit scenarios, typical renovation actions are selected considering the EPBD recast directives and bio economy directive. The same materials and technologies are assumed for each archetype, for observing the effects that the same technology could have on different buildings. The renovation of the buildings is assumed for starting at the same reference year (2010) for all the archetypes. All of the technical solution of the envelope (as insulation materials and windows) of the representative buildings retrofitted have been modelled taking into account the thermophysical property of the technologies used (e.g. U-value), the thickness of the insulation materials required for reducing the transmittance and the type of windows (e.g. double glasses, triple, etc.). The standard insulation material chosen into the I and IV scenarios are selected in accord to [13], where the stone wool is used as insulation material for all the “representative products”, because it accounts for about 60% of the market of insulation materials. Then, for taking into account the European bio-economy directive, other three insulation bio-based materials are selected from Ecoinvent database 3.0.

With regard to the heating and cooling system, no data has been assumed because it is out from the selected system boundaries. Substitution will be taken into account during the rest of life of the representative archetypes, dividing the UL of each technologies respect the rest of life of each dwelling.

The system boundaries of material production include: the extraction of raw materials or the use of recycled

materials( as available in Ecoinvent 3.4 datasets, referring to EU-28 when possible), the transport to the manufacturing plant; the production stage and the transport to archetypes site (generally assumed 50km [13]).
The elements of the building's technologies used during the retrofit action included in the inventory are:

Scenario I. Insulation materials applied to the outer wall (wood board, rock wool, cellulose fiber and cork);

Scenario II. : RES installation:

  a. Solar collectors, storage and pumps;

  b. PV panels and inverter;

Scenario III. No technologies are used;

Scenario IV. Insulation materials applied to the envelope (wood board, stone wool, cellulose fiber and cork slab) and new windows installation.

The environmental benefits will be calculated comparing the embodied energy of each technologies with the potential environmental savings obtainable in one year.
In order to account that the energy models developed during this thesis are based on the representative dwelling analyzed in [13], where LCA of the whole buildings were carried out, more of the assumptions made are selected from there.

#### 2.6.2.1 LCI of technologies and materials used during the renovation

The impacts of the transport from the manufacturing plant to the dwelling site is assumed equal to 50 km for insulation materials and windows with a lorry of 3.5-7.5 t (Ecoinvent dataset: Transport, van <3.5 t/RER U) and a distance of 50km with a van of less 3.5t (Ecoinvent dataset: Transport, lorry <3.5 t/RER U) is accounted for the solar collectors and for the PV systems, in accordance with [13, 55].
For the insulation materials scenarios, the rock wool insulation is modelled in accordance to the [13, 55], where the Ecoinvent datasets selected is "rock wool production CH, Alloc Rec, U". While, for the bio-based materials, the following Ecoinvent datasets are selected:

1. "Wood wool {RER}| production | Cut-off, U" for the wood wool boards;
2. "Cellulose fiber, inclusive blowing in {CH}| production | Cut-off, U" for the cellulose fiber insulation;
3. "Cork slab {RER}| production | Cut-off, U" for the cork slab insulation;

4. “Stone wool {CH}| stone wool production | Cut-off, U” for the stone wool insulation

Therefore, as suggest in literature [13], the impacts of the assembly/installation phase is assumed to be equal to 4% of the impacts of production processes of the materials used.

The materials and systems quantities are reported in Table 2.34.

**Table 2.34 LCI materials used for archetypes (Scenario I)**

| Archetypes | Wood Boards [kg] | Cellulose Fiber [kg] | Cork Slab[kg] | Stone wool [kg] |
|---|---|---|---|---|
| **SFH_W_<1945** | 5,178.24 | 388.37 | 647.28 | 323.64 |
| **SFH_W_1945-1969** | 5,178.24 | 388.37 | 647.28 | 323.64 |
| **SFH_W_1970-1989** | 4,315.20 | 323.64 | 539.40 | 269.70 |
| **SFH_W_1990-2010** | 1,918.08 | 143.86 | 239.76 | 119.88 |
| **SFH_M_<1945** | 6,868.80 | 515.16 | 858.60 | 429.30 |
| **SFH_M_1945-1969** | 6,105.60 | 515.16 | 858.60 | 429.30 |
| **SFH_M_1970-1989** | 5,023.20 | 405.72 | 676.20 | 338.10 |
| **SFH_M_1990-2010** | 1,545.60 | 115.92 | 193.20 | 96.60 |
| **SFH_C_<1945** | 11,088.00 | 891.00 | 1,485.00 | 742.50 |
| **SFH_C_1945-1969** | 11,088.00 | 891.00 | 1,485.00 | 742.50 |
| **SFH_C_1970-1989** | 12,204.00 | 881.40 | 1,582.00 | 791.00 |
| **SFH_C_1990-2010** | 9,040.00 | 678.00 | 1,130.00 | 565.00 |
| **MFH_W_<1945** | 5,140.80 | 440.64 | 734.40 | 367.20 |
| **MFH_W_1945-1969** | 4,773.60 | 385.56 | 642.60 | 321.30 |
| **MFH_W_1970-1989** | 4,039.20 | 330.48 | 550.80 | 275.40 |
| **MFH_W_1990-2010** | 1,468.80 | 110.16 | 183.60 | 91.80 |
| **MFH_M_<1945** | 4,593.40 | 364.77 | 607.95 | 303.98 |
| **MFH_M_1945-1969** | 4,593.40 | 364.77 | 607.95 | 303.98 |
| **MFH_M_1970-1989** | 3,512.60 | 283.71 | 472.85 | 236.43 |
| **MFH_M_1990-2010** | 1,351.00 | 121.59 | 202.65 | 101.33 |
| **MFH_C_<1945** | 7,565.60 | 607.95 | 945.70 | 472.85 |
| **MFH_C_1945-1969** | 7,295.40 | 567.42 | 878.15 | 439.08 |
| **MFH_C_1970-1989** | 6,755.00 | 486.36 | 810.60 | 405.30 |
| **MFH_C_1990-2010** | 7,565.60 | 607.95 | 1,013.25 | 506.63 |

**Table 2.35 LCI materials used for archetypes (Scenario IV)**

| Archetypes | Wood Boards [kg] | Cellulose Fiber [kg] | Cork Slab[kg] | Stone wool [kg] | Windows surface [$m^2$] |
|---|---|---|---|---|---|
| **SFH_W_<1945** | 20,287.04 | 1,521.53 | 2,535.88 | 1,267.94 | 44.40 |
| **SFH_W_1945-1969** | 19,094.24 | 1,461.89 | 2,436.48 | 1,218.24 | 44.40 |
| **SFH_W_1970-1989** | 17,436.00 | 1,337.52 | 2,229.20 | 1,114.60 | 44.40 |
| **SFH_W_1990-2010** | 15,396.48 | 1,154.74 | 1,924.56 | 962.28 | 54.00 |
| **SFH_M_<1945** | 25,044.80 | 1,878.36 | 3,130.60 | 1,565.30 | 39.60 |
| **SFH_M_1945-1969** | 21,009.92 | 1,769.30 | 2,948.84 | 1,474.42 | 39.60 |
| **SFH_M_1970-1989** | 18,939.20 | 1,538.88 | 2,564.80 | 1,282.40 | 44.40 |
| **SFH_M_1990-2010** | 6,316.80 | 473.76 | 789.60 | 394.80 | 44.40 |
| **SFH_C_<1945** | 38,522.40 | 3,097.68 | 5,162.80 | 2,581.40 | 42.00 |
| **SFH_C_1945-1969** | 38,522.40 | 3,097.68 | 5,162.80 | 2,581.40 | 42.00 |
| **SFH_C_1970-1989** | 38,098.08 | 2,751.53 | 4,938.64 | 2,469.32 | 42.00 |
| **SFH_C_1990-2010** | 41,647.36 | 3,123.55 | 5,205.92 | 2,602.96 | 42.00 |
| **MFH_W_<1945** | 18,460.80 | 1,574.64 | 2,624.40 | 1,312.20 | 10.80 |
| **MFH_W_1945-1969** | 18,093.60 | 1,465.56 | 2,442.60 | 1,221.30 | 10.80 |
| **MFH_W_1970-1989** | 15,919.20 | 1,302.48 | 2,170.80 | 1,085.40 | 10.80 |
| **MFH_W_1990-2010** | 11,548.80 | 866.16 | 1,443.60 | 721.80 | 10.80 |
| **MFH_M_<1945** | 15,249.40 | 1,217.25 | 2,028.75 | 1,014.38 | 9.45 |

| Archetypes | Wood Boards [kg] | Cellulose Fiber [kg] | Cork Slab[kg] | Stone wool [kg] | Windows surface [m$^2$] |
|---|---|---|---|---|---|
| **MFH_M_1945-1969** | 12,644.60 | 1,004.13 | 1,673.55 | 836.78 | 9.45 |
| **MFH_M_1970-1989** | 11,800.60 | 958.59 | 1,597.65 | 798.83 | 9.45 |
| **MFH_M_1990-2010** | 2,771.80 | 263.67 | 439.45 | 219.73 | 9.45 |
| **MFH_C_<1945** | 25,088.80 | 2,028.75 | 3,136.10 | 1,568.05 | 9.45 |
| **MFH_C_1945-1969** | 25,292.20 | 1,988.22 | 3,068.55 | 1,534.28 | 9.45 |
| **MFH_C_1970-1989** | 24,278.20 | 1,765.08 | 2,941.80 | 1,470.90 | 9.45 |
| **MFH_C_1990-2010** | 23,904.80 | 1,922.19 | 3,203.65 | 1,601.83 | 9.45 |

For the Solar collector system, the Ecoinvent datasets “Solar collector system, Cu flat plate collector, one-family house, hot water {CH}| solar collector system installation, Cu flat plate collector, one-family house, hot water | Cut-off, U” and “Solar collector system, Cu flat plate collector, multiple dwelling, hot water {CH}| solar collector system installation, Cu flat plate collector, multiple dwelling, hot water | Cut-off, U” are used, respectively, for SFH and MFH. While, for the PV systems, the Ecoinvent datasets “Photovoltaic slanted-roof installation, 3kWp, multi-Si, laminated, integrated, on roof {CH}| photovoltaic slanted-roof installation, 3kWp, multi-Si, laminated, integrated, on roof | Alloc Rec, U”, that accounts also the inverter and electric equipment, the installation and End-of-life, is used into the model. For calculating the impacts connect to the transport of the PV and Solar systems the weight indicated on Ecoinvent database has been assumed of each archetype. The installation impacts are included into the selected datasets.

The appropriate Ecoinvent datasets are included as base and modified according to the sizing and quantity of new technologies and materials.

#### 2.6.2.2 Maintenance and replacement of components

The system boundary for replacement of buildings components includes the production of the componence to be replaced, their transportation (50 km), and the end-of-life of the removed components until the final disposal process of demolition of the building. Data on average replacements interval are found in the literature [13, 66] and in Ecoinvent datasets[111]: 30 years for mineral insulation, 30 for the PV systems and 30 for solar panels systems.

The End of life stage (EoL) for technologies is included into each scenario and it is modelled without accounts the benefits of recycling from the rest of the system.

The system boundary of the EoL for the materials and technologies are modelled as in [13, 55], including: demolition, transport (50 km) and waste treatment. Data on this topic are not always available and those that are in Ecoinvent dataset could be characterized by uncertainty rate on the data sources used [13].

#### 2.6.2.3 LCI of the use stage

This thesis accounts only the potential benefits that could be generated during the operation use of the building. The use stage accounts only the potential energy and environmental benefits/impacts connect to the implementation of the renovation scenarios proposed. In particular, the change in heating and cooling demand have been calculated subtracting the heating and cooling loads of the alternative scenarios to the energy consumption of the baseline.

During the use stage the energy consumed for heating, cooling, cooking, DHW, equipment and lighting, should be split for type of fuel used by each country of EU28.

The energy consumed for each model is calculated as mentioned in section above, where the energy model is descripted. To define the environmental impacts related to energy demand, it is also required to specify which type of fuels is used. Except for Cooling demand and for equipment, the energy consumed by the other categories are split in about 8 sources for heating and 9 for DHW as reported in Table A.5, A.6 and A.7.

For modelling the electricity consumption, the national electricity mix are assumed for each country (Ecoinvent datasets: “alloc def, U”)[13]. With regards the water consumption, assumed equal to 60 l per day per person [55], it is not include into the study, because no changes are performed from the baseline scenario.

The avoided impacts for the heating demands are calculated assuming different datasets-based on the type of fuels used into each Member State. The dataset is selected in accordance to the definition of the type fuel, reported on Eurostat:

- **Solid fuels** are fossil fuels covering various types of coals and solid products derived from coals. They consist of carbonized vegetable matter and usually have the physical appearance of a black or brown rock. The operation use of the plant has been assumed equal to the Ecoinvent datasets <<Heat, central or small-scale, other than natural gas {Europe without Switzerland}| heat production, hard coal briquette, stove 5-15kW | Cut-off, U>>. The heating demand from the plant simulated are scaled for taking onto account the statistical efficiency of the average stock used in each country and efficiency factor of 70% assumed into the datasets;
- **Biomass and waste** fuels used during the production of heating demand have been assumed at an <<Heat,

central or small-scale, other than natural gas {CH}| heat production, mixed logs, at wood heater 6kW | Cut-off, U>> where the mixed log accounts the average technologies that produce heating from wood elements. No other specific dataset have been found on the average impacts of heating systems that use a mix of biomass and waste as benchmarks and the assumption made here is in line with the assumptions made in [13].

- **Derived heat** is the heat used for warming spaces and for industrial processes and is obtained by burning combustible fuels like coal, natural gas, oil, renewables (biofuels) and wastes, or also by transforming electricity to heat in electric boilers or heat pumps. The impacts of the derived heat are assumed equal to the datasets for district heating at European level, selecting the Ecoinvent datasets Heat, district or industrial, other than natural gas {Europe without Switzerland}| market for heat, district or industrial, other than natural gas | Cut-off, U, where the dataset was modelled accounts that the shares of heat supplying activities amount to about 52% heat from coal and peat, 16% heat from oil, 18 % heat from biofuels, 11% heat from waste and 2% heat from other sources as reported from IEA statistics for the year 2009.
- **The share of the Geothermal energy** amounts for at least 1.05% into SI heat mix and for less than 0.5% for the other regions. A cut-off of the geothermal energy is performed due to the fact that no datasets on geothermal heat has been found into Ecoinvent 3 database and taking into account the cut-off rules (<5%);
- Thermal energy for DHW produced from solar is modelled with the datasets <<Heat, central or small-scale, other than natural gas {CH}| operation, solar collector system, Cu flat plate collector, multiple dwelling, for hot water | Cut-off, U>>. However, the goal and scope of this study is to calculate the possible avoided impacts, in order to account that the installation of new solar thermal collectors don’t affects the production of existing DHW solar plant;
- **Gas included biogas** has been assumed with <<Heat, central or small-scale, natural gas {Europe without Switzerland}| heat production, natural gas, at boiler modulating <100kW | Cut-off, U>>;
- Heating produced by **Liquified petroleum gas (LPG**) has been assumed to the dataset selected for natural gas, modified in order to account the different type of fuels used (Ecoinvent dataset: Liquified petroleum gas {CH}| market for |Cut – off,U) with Energy power respect natural gas of about 25:1;
- **Gas/Diesel oil incl. biofuels (GDO)** has been assumed as <<Heat, central or small-scale, other than natural gas {CH}| heat production, light fuel oil, at boiler 10kW condensing, non-modulating | Cut-off, U>>.

During the construction of the heating profile for countries, particular attention should be done to the type of quantity required by the datasets. In fact, the datasets could be developed for accounting the final energy required or the thermal service provided. For that reason, the penetration rate of each technology in terms of thermal services provided are used for each boiler or plant except for electric boiler, electric heat pump and district heating that are modelled in LCA a provided service from the grid. During the elaboration of the profile, these sources are taken into account as final energy, dividing the thermal service for the average efficiency of each technologies.

Instead for the other sources, the Eco invent datasets have been divided for the efficiency accounted into database and multiplied for the efficiency of each technology and for each country (Table A).

### 2.6.3 Life cycle impact assessment (LCIA)

In this phase, from the LCI are evaluated the potential environmental impacts [1, 2]. Indicators used represent the quantified environmental impacts and aspects caused by the object of assessment during its whole life cycle. Table 2.36 shows the categories of environmental impact used for the assessment. The impact assessment is based on the methods recommended by the European Product Environmental Footprint (PEF)[112, 113]. The environmental impact categories have been characterized using the ILCD 2011 Midpoint v1.08, in accordance with [13, 55, 79][114]. Moreover, in accordance with [115] and [116], the land use and water resource depletion impact categories are excluded (as a result of the low availability and high uncertainty of LCI data).

**Table 2.36 Categories of environmental impact**

| ILCD Impact Category | Unit | Acronym |
|---|---|---|
| **Climate change** | kg CO2 eq | CC |
| **Ozone depletion** | kg CFC-11 eq | OD |
| **Human toxicity, non-cancer effects** | CTUh | HT_CE |
| **Human toxicity, cancer effects** | CTUh | HT_nCE |
| **Particulate matter** | kg $PM^2.5$ eq | PM |
| **Ionizing radiation HH** | kBq U235 eq | IR_hh |
| **Photochemical ozone formation** | kg NMVOC eq | POF |
| **Acidification** | molc H+ eq | AC |
| **Terrestrial eutrophication** | molc N eq | ET |
| **Freshwater eutrophication** | kg P eq | EuF |
| **Marine eutrophication** | kg N eq | EuM |
| **Freshwater ecotoxicity** | CTUe | Ec_FW |
| **Mineral, fossil & ren resource depletion** | kg Sb eq | RD_MFR |

The modelling of the stages of the life cycle of building elements, materials and equipment for the quantification of environmental indicators has been carried out using SimaPro v8.5 software[117].

### 2.6.4 Interpretation

The last step in LCA according to ISO are Interpretation. The results will be interpreted according to the goal and scope of the study, comparing the results for dwellings, climatic zone and period of construction.

### 2.6.5 Environmental payback times

In order to compare the primary energy use and environmental impacts due to the rest of dwelling life to the primary energy use and environmental impacts potentially avoided thanks retrofit scenarios, energy and environmental payback times (PBT) have been calculated for each impact category (Table 2.36) analyzed in the LCIA stage.

**Table 2.37 Energy and the environmental payback times**

| Category | Symbol | Unit |
|---|---|---|
| **Payback time Climate change** | $PBT_{CC}$ | years |
| **Payback time Ozone depletion** | $PBT_{OD}$ | years |
| **Payback time Human toxicity, non-cancer effects** | $PBT_{HT\_CE}$ | years |
| **Payback time Human toxicity, cancer effects** | $PBT_{HT\_nCE}$ | years |
| **Payback time Particulate matter** | $PBT_{PM}$ | years |
| **Payback time Ionizing radiation HH** | $PBT_{IR\_hh}$ | years |
| **Payback time Photochemical ozone formation** | $PBT_{POF}$ | years |
| **Payback time Acidification** | $PBT_{AC}$ | years |
| **Payback time Terrestrial eutrophication** | $PBT_{ET}$ | years |
| **Payback time Freshwater eutrophication** | $PBT_{EuF}$ | years |
| **Payback time Marine eutrophication** | $PBT_{EuM}$ | years |
| **Payback time Freshwater ecotoxicity** | $PBT_{Ec\_FW}$ | years |
| **Payback time Mineral, fossil & ren resource depletion** | $PBT_{RD\_MFR}$ | years |

According to the literature [118], the environmental payback times are defined as the times taken to compensate the potential impacts due to the entire building life cycle with the reduction in impact due to the annual renewable energy produced by the building systems. However, in this thesis, a different payback time index has been calculated applying Eq. 2.14, in order to account the potential energy saving respect the energy spent for each retrofit scenario.

$$PBT_j = \frac{I_{0,j}}{I_{1,j}}$$ **Eq. 2.16**

Where $I_{0,j}$ is the potential impact for the impact category j due to the technology's life cycle and $I_{1,j}$ is the impact avoided due to the retrofit action during the operation use and the reference study period.

The environmental conversion depends from type of retrofit intervention.

# CHAPTER 3. ENERGY RESULTS

The first part of the research was spent in the collection of data and information on activities related to the proposed study. Particular attention was paid for identifying the compromise between the statistical data and the technical ones.

Six hundred seventy-two (672) building categories are accounted as a representative sample of the residential building stock around Europe, and for each one, a set of parameters are selected and the heating and cooling energy demands, as well as for the domestic hot water (DHW) energy demand, are evaluated.

This chapter shows the analysis of the validation processes performed and the results of each single archetypes, compared for common characteristics (as period of construction, climatic zone, country and geographic location). The third part of the chapter reports the results of the potential benefits/impacts during the application of deep or no-deep renovation processes of the archetypes.

## 3.1 VALIDATION

This section, regarding the previously defined concepts and applied methods, focuses on modelling and simulation of energy consumption related to the European building stocks described in the chapter above. Validation of the building stock models are an essential step for having a scenario that could be defined useful to the goal of the study.

Therefore, to ensure that the buildings energy model is an accurate representation of reality and that their data outputs are reliable, it is critical that the property of the archetypes – validated- can be in line with the energy consumption of the European building stocks. By comparing the output of the model with global statistical data from European database on building stocks, errors in the model can be identified and tuned to a point where the building models can be said to be a satisfactory representation of the real energy consumption of the residential buildings for each EU28 country. The desired results are modelled for representing the building stock over any given year with reasonable accuracy, based on the thermos physical characteristics, period of construction and climatic zone, in order to account some retrofit actions, climate change strategies and application of the European directives on the existing building stocks.

Usually, validation is usually achieved through the calibration of the model, mentioned in the previous chapter, comparing the simulated results to the statistical or measured data and analyzing the discrepancies between the two, and the insights gained, to improve the model. This process is repeated until model accuracy is considered to be acceptable [96]. However, in order to account the infinite combinations of buildings 'parameters that could affect the heating and cooling load in each country, the calibration process is based on definition of about 16k archetypes, grouped for type of parameters changed (as natural ventilation objects parameters (8 idf files) and weather data format (3x28)), multiplied for number of buildings that represent, summarized, and, then, compared to the statistical data taken into accounts the net floor area modelled with the average area of the country. The best fitted model for country is selected used for choosing which model with have the minor deviation from reality at European level. Then, the model is validated at country level.

### 3.1.1 Building models validation results

The outputs of the energy model are compared with statistical data reported in JRC-IDEES database. The statistical data compared are heating and cooling energy consumed for each country at 2010. The calibration process is carried out grouping the results of 16128 simulations for country and at European level, for ventilation parameters and weather data groups, multiplying the results of each archetype for the number of buildings that represents. Then, after the identification of the best model for the heating demand, more calibration processes have been performed for reducing the gaps between the simulated and measured values for the cooling demand. It is possible to tune the building models, acting mainly on temperature setpoint and the natural ventilation to best match the real European building stocks.

To validate the results, statistical techniques have been implemented to assess the accuracy of outputs and the consistency of the archetypes at macro level. In detail, error quantification has been performed using the following metrics:

- mean bias error (MBE);
- normalized mean bias error (NMBE);
- root mean square error (RMSE);
- coefficient of variation of the root mean square error (CV(RMSE)),
- R-Square meter (R2).

The methodology is applied mainly at region level for identifying the calibrated case that have the minimal deviation, and then at European level for testing the model respect the global statistical data at 2010 for heating and cooling. The energy model is selected as the most representative of the European energy consumed by the residential sector at 2010 based on the indicators calculated for heating, cooling and for both. It is important remember that the statistical information on the cooling are limited to number of "Air conditioner for household" and no effective cooling space respect the reality and no information for period of construction was found. For that reason, the ideal cooling energy resulted are scaled for accounting the penetration rate of air conditioner as mentioned above.

One of the calibrated models gives an error of NMBE less than 3% for cooling demand and 1% for heating at European level, the CV(RMSE) shows an error superior to 200%, that means that the results are not accounted as satisfy at country level. The results of the simulated scenarios of calibration are reported on Figure 3.1 and Figure 3.2, comparing , respectively, the results of heating and cooling of different models elaborated during the calibrations, where in red is shown the statistical data and with the markers are indicated the results of each single model calibrated with same condition of ventilation, temperature set point and infiltration. The simulations have been adjusted to match the global heating and cooling at statistical level for each country, multiplying the annual heating and cooling ideal loads of each archetype for the ratio between their net floor area and the average net floor area indicated at country level in [14].

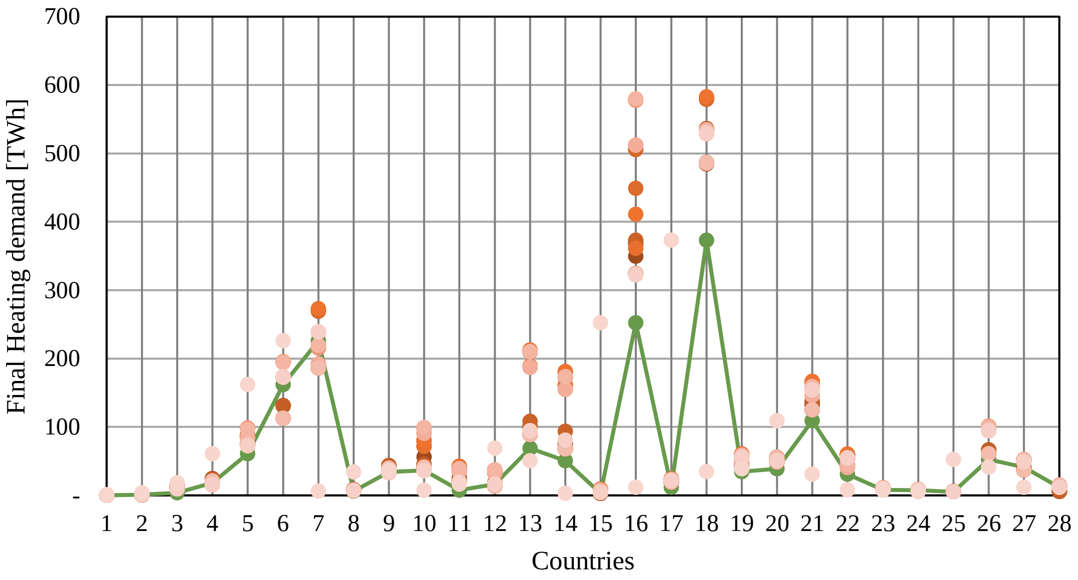


**Figure 3.1 Results final heating demand of calibrated models compared to statistical energy consumption (red line)**

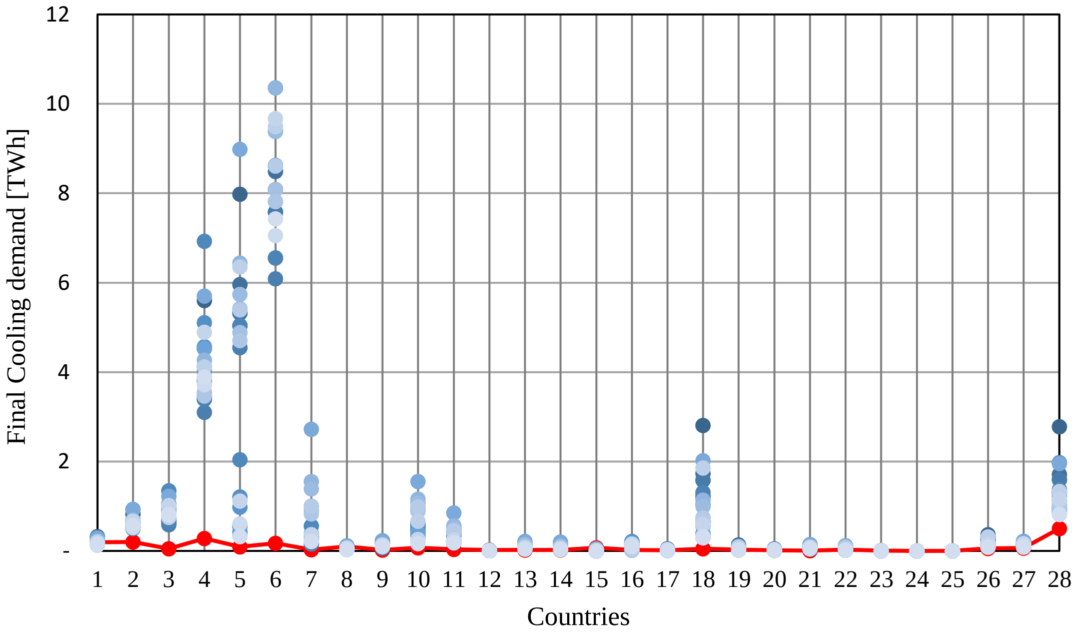


**Figure 3.2 Results final cooling demand of calibrated models compared to statistical energy consumption (red line)**

The results of the validated model are reported into the following section. In particular, at European level, the model differs of about 0.09TWh of the final energy required for cooling and 4.01TWh for heating, while accounting both the thermal contribute the final thermal energy required the MBE is at least 1.96TWh with an

NMBE of the -6.45%. Squared-R shows that the simulated model is similar to the trend of the statistical data collected by JRC-IDEES.

**Table 3.1 Results of error metrics applied for the validation process**

| Index | Unit | Cooling | Heating | Global thermal energy |
|---|---|---|---|---|
| **MBE** | TWh | (0.09) | 4.01 | 1.96 |
| **NMBE** | [%] | 8.08% | -6.71% | -6.45% |
| **RMSE** | TWh | 0.34 | 8.75 | 6.19 |
| **CV(RMSE)** | [%] | 31% | 15% | 20% |
| **R-squared** | [%] | 99.21% | 99.72% | 99.77% |

The MBEs are negative for heating, which means the statistical value is more likely to be smaller than the simulated results, while the MBE for cooling are positive with an average deviation of 0.09 TWh at country level. Instead, all NMBEs are within ± 9%. It shows that the deviations between simulated and statistical values are small. Also, R-squared shows that at European level the model has an accuracy of about 99%. The difference between the statistical energy required at European level for heating and cooling at 2010 (respectively 1672.08 and 30.51 TWh) and the simulated values (1773.41 and 28.08 TWh) are 111.33 and -2.43 TWh (percentage variation equal to 6.71% and -8.08%).

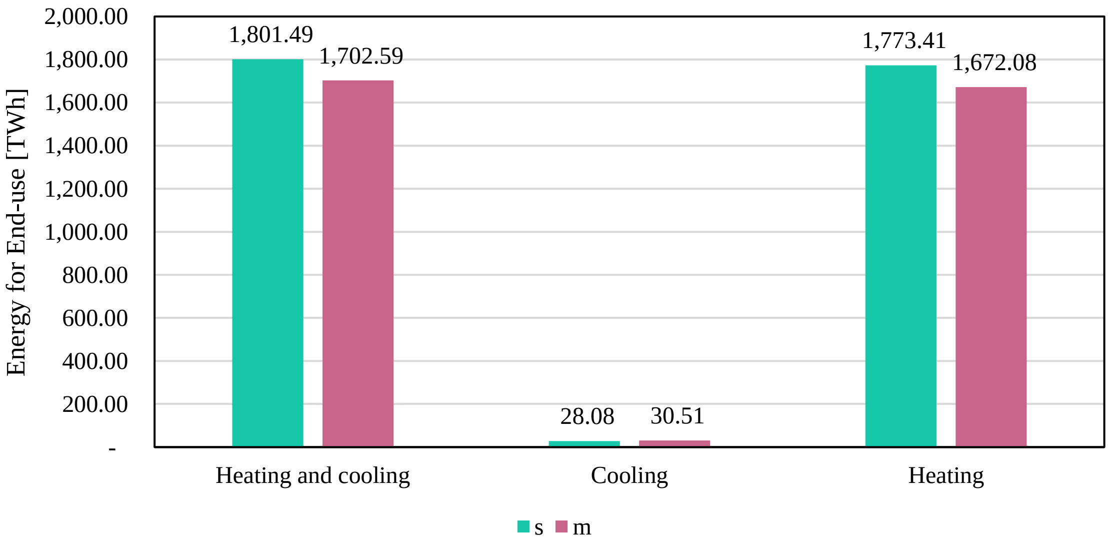


**Figure 3.3 Comparison of the statistical (m) and simulated (s) thermal energy required [TWh] at 2010 at European level.**

Part of the uncertain error is connected to the conversion of the statistical data from thousand tons of oil equivalent (ktoe) to kWh, where the order of conversion is equal to 1.163x$10^7$ (about 1.163x$10^{-2}$ TWh for ktoe).

However, the model is built for estimate also which could be the future energy required for cooling if all the building have an AC system. At European level, the results show that the total ideal energy required for cooling demand is 10 times the energy consumed at 2010.

In order to verified that the model could be satisfactory for climatic zones, the data have been aggregated for identifying which climatic zone is more similar to the statistical data, avoiding the error erased from the other climatic zone. Table 3.2 reports the value of MBE, NMEBE, RMSE, CV(RMSE) and R-squared for climatic zone, for heating and cooling energy and for both thermal energies required.

**Table 3.2 Error validation for climatic zone**

| | **Cooling** | | | **Heating** | | |
|---|---|---|---|---|---|---|
| | W | M | C | W | M | C |
| **Simulated** | 21.68 | 4.93 | 0.30 | 92.55 | 1,580.45 | 112.51 |
| **Measured** | 21.21 | 7.01 | 0.49 | 85.90 | 1,483.62 | 104.04 |
| **MBE** | (0.08) | 0.12 | 0.04 | (1.11) | (5.70) | (1.69) |
| **NMBE** | -2.19% | 29.62% | 39.89% | -7.74% | -6.53% | -8.14% |
| **RMSE** | 0.57 | 0.28 | 0.06 | 3.71 | 11.01 | 0.81 |
| **CV(RMSE)** | 16.07% | 76.12% | 107.96% | 9.06% | 13.25% | 3.64% |
| **R2** | 99.52% | 99.72% | 99.95% | 99.93% | 99.70% | 99.99% |

The MBE of the cold energy model is less than 1.7TWh of the final energy required for heating and -0.04TWh for cooling, while accounting both the thermal contribute the final thermal energy required, the MBE is at least TWh with an NMBE of -8%. Instead, the warm climatic zone is characterized by an NMBE for heating of -8% and of -2% for cooling, although the global thermal energy differs only for the -7%. In addition, R-squared for each climatic zone is in a range of about 99% (Table 3.2).

A detail information of the results for country are shown in Figure 3.4 and Figure 3.5, respectively for heating and cooling spaces.

It is possible observe that energy model for heating gives results similar to the statistical value, with exception for DE and PT for heating and IT for cooling. Moreover, the other countries spent for cooling less than 0.5TWh of thermal service.

Figure 3.4 and Figure 3.5 show the results deviation for country. It is possible observe that a focus on the regional level is better than a model that accounts only results at global level, because the energy models could lose a lot of useful information on the archetypes developed. In addition, the deviation of the results from statistical value is not surprising since the heating and cooling demand significantly depends on a various number of factors, which are hard to predict on individual country level such as the exact user behavior, the air leakage through the building envelope as well as the right construction details.

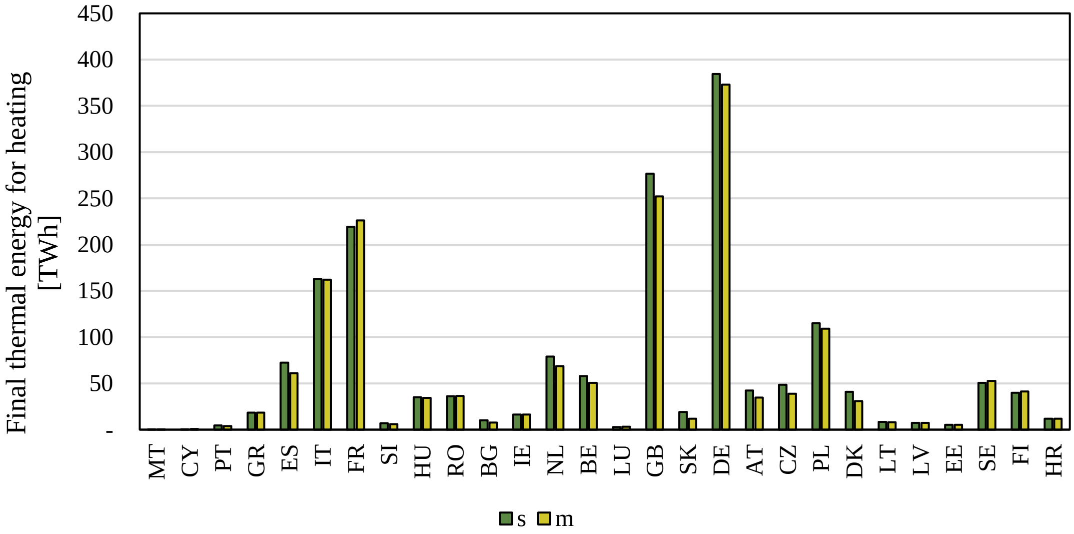


**Figure 3.4 Thermal energy use for heating at country level: comparison between statistical (m) and simulated (s) value**

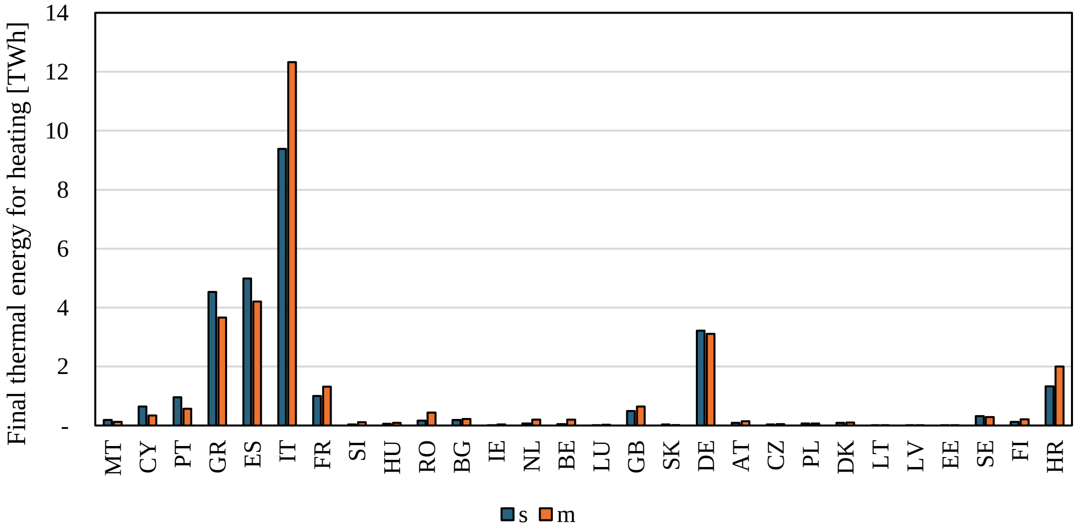


**Figure 3.5 Thermal energy use for cooling at country level: comparison between statistical (m) and simulated (s) value**

The model is built to have the same behavior for each country during the reference year to obtain single building more comparable independent by the climatic zone and geographic location. Many of the given results that even individual building energy model predictions may significantly differ from measured results due to uncertainties such as infiltration rates and occupant behavior, and when comparing aggregated annual measured versus simulated energy use of multiple buildings, these individual model inaccuracies tend to average out. However, this energy model can predict with a precision of about 33% for about the 80% of the country analyzed for the heating demands.

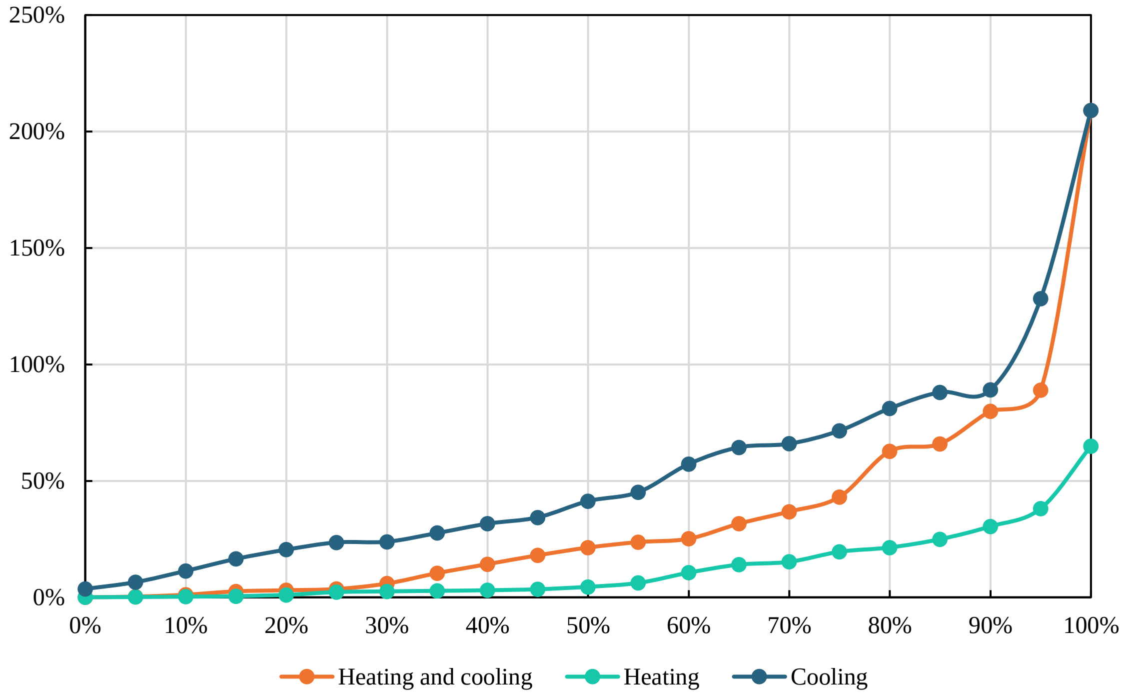


**Figure 3.6 Percentile of the validated base scenario for heating and cooling demand**

## 3.2 ARCHETYPES RESULTS

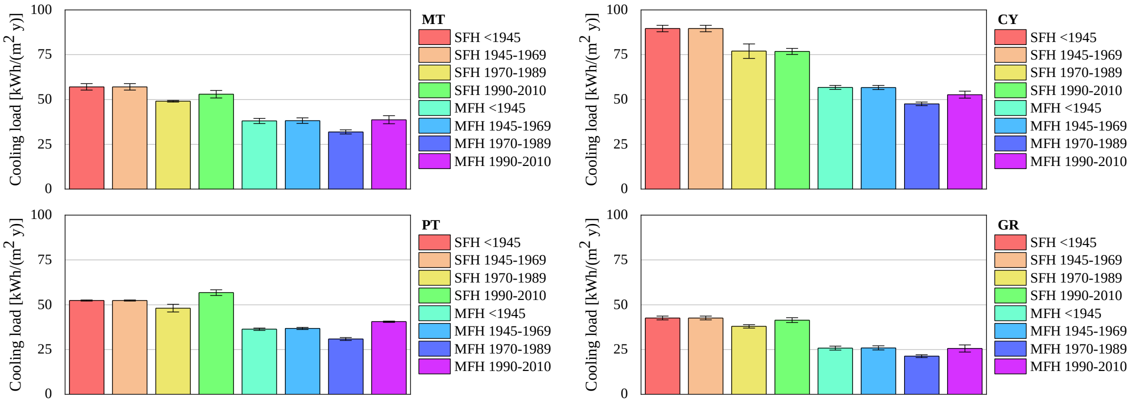
After the validation and calibration steps, it was possible to investigate the energy performance of the existing building stock. This section is focus on the analysis of the results for single archetype, calculating the mean and standard deviation for heating and cooling of the archetypes built in a specific climatic zone and simulated in different countries. In the first part of the section, to study the answer of the dynamic model, the ideal thermal loads have been analyzed for each country of the EU-28, comparing the results for different geographic location and for weather data with the results of a top down model on 24 archetypes developed for identifying the benchmark of LCA of the EU-27. The standard deviation for the 672 archetypes has been reported in order to investigate the effects connect to the geographic locations on the single archetypes. Then, in order to investigate also the thermal energy consumption for heating and cooling for different country, the ideal load results have been aggregated for climatic zone. An example of the energy consumption for DHW and equipment are reported.

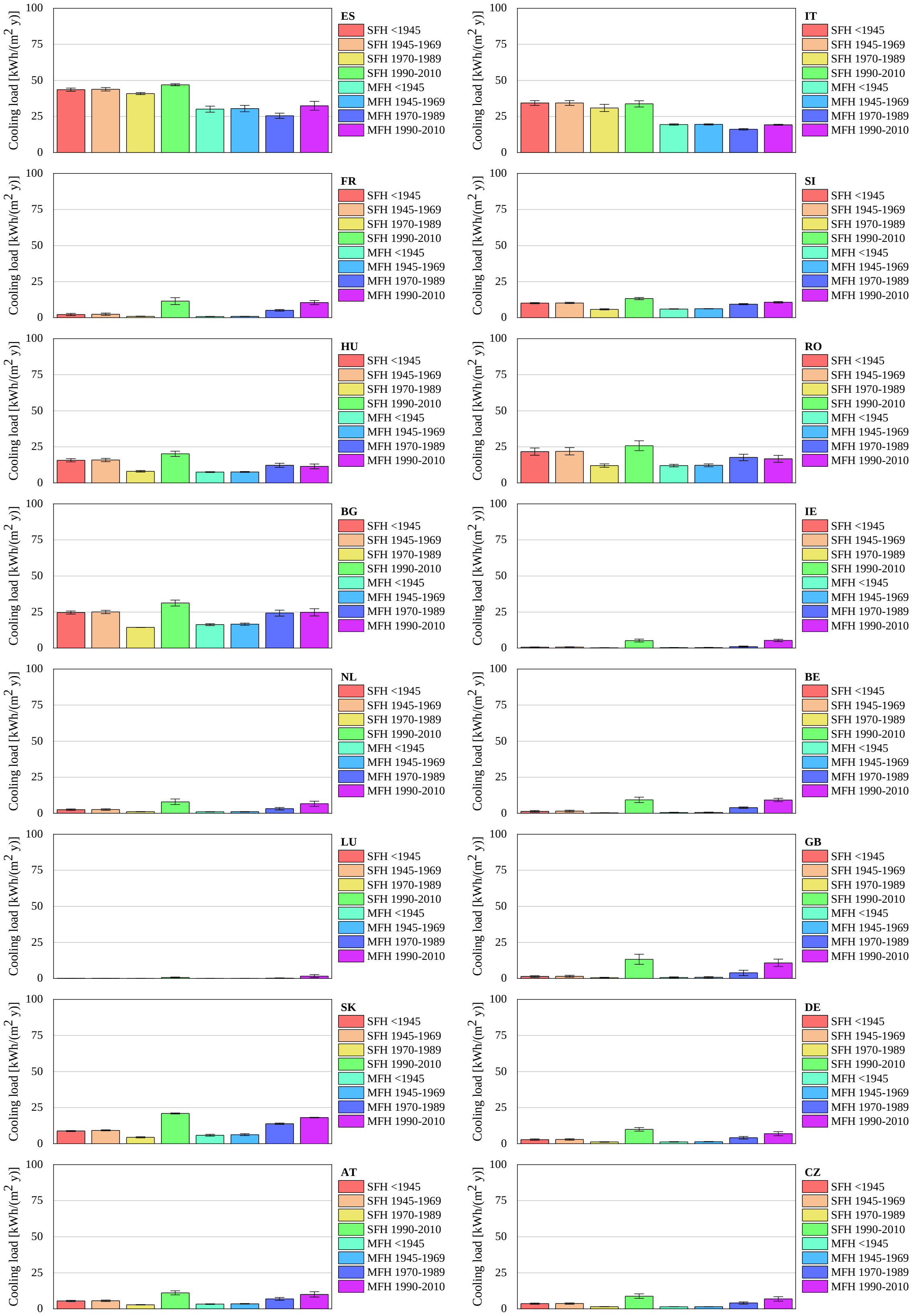
### 3.2.1 Heating and cooling results

The bottom up approach in contrast to the top down allows to studying and analyzing the results of each single archetypes, comparing the thermal energy demand for period of construction, for climatic zone, for country and for geographic location.

In this section, a brief overview on the European building stock is reported and compared with the statistical average assumption of the energy consumption for heating demand. During this analysis, the ideal cooling loads are not scaled for the penetration rate of AC. Figure 3.7 shows the standard deviation generated in the different geographic location. In fact, it is important understand how this parameter affects the energy demand for heating and cooling. The percentage standard deviation respect to average value for country and for type of archetypes could be different for more than 50% for some of them, only changing the geographic location. In particular, the analysis shows that:

- for the warm zone, the geographic location parameter affects the heating load in a range of about 2% to 60% (Italy – MFH <1945) and 1% to 33% (Portugal SFH <1970) for cooling;
- for moderate climatic zone, the geographic location parameter affects the heating load in a range of about 1% to 58% (SI – MFH <1945-1969 and SFH 1970-1989) and 0% to 85% (SI SFH and MFH 1970-1990) for cooling;
- the geographic location parameter affects the heating load in a range of about 4% to 8% and 3% to 6% for cooling.




Cooling load [kWh/(m$^2$ y)]
0
25
50
75
100
ES
IT
FR
SI
HU
RO
BG
IE
NL
BE
LU
GB
SK
DE
AT
CZ
SFH <1945
SFH 1945-1969
SFH 1970-1989
SFH 1990-2010
MFH <1945
MFH 1945-1969
MFH 1970-1989
MFH 1990-2010

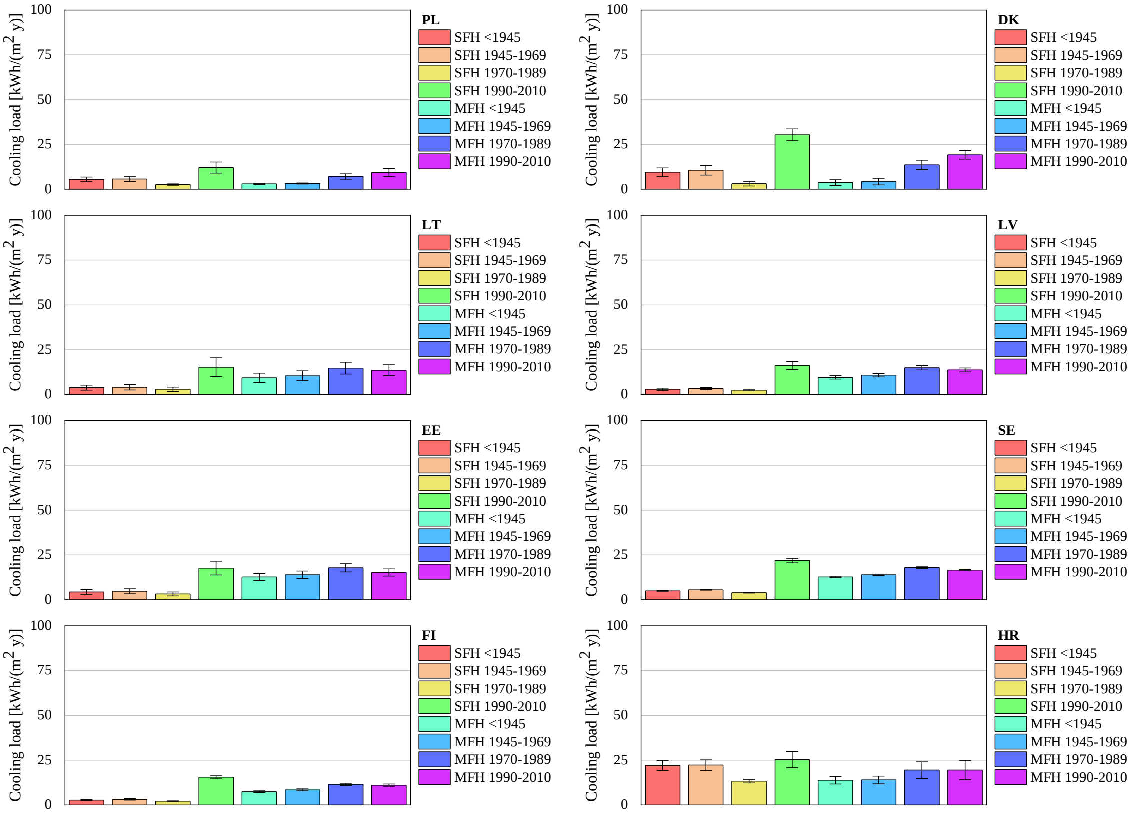
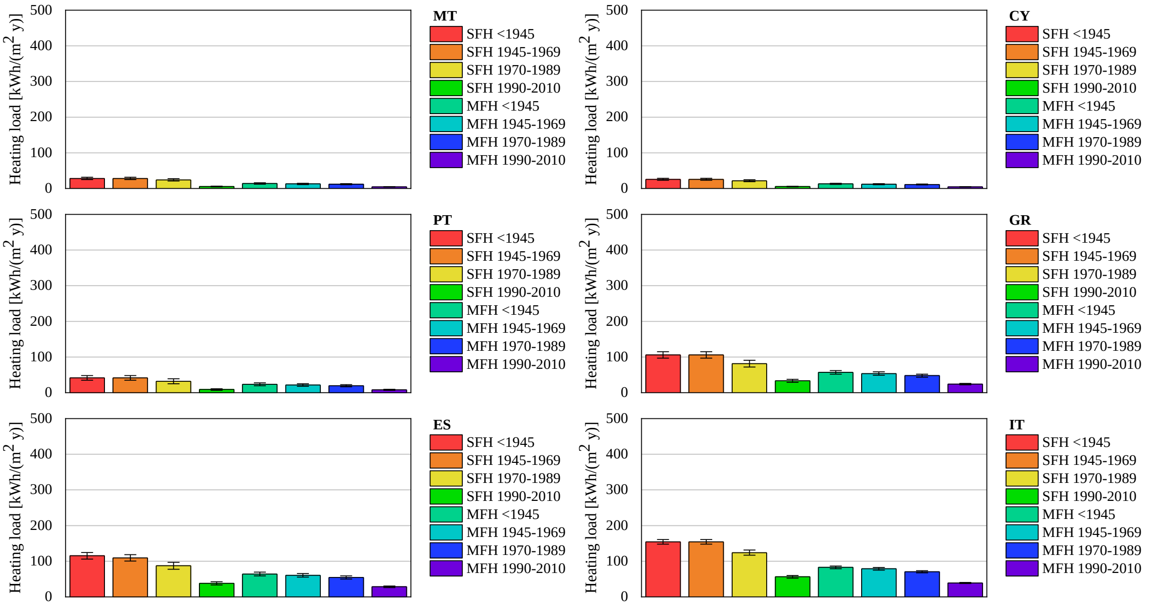
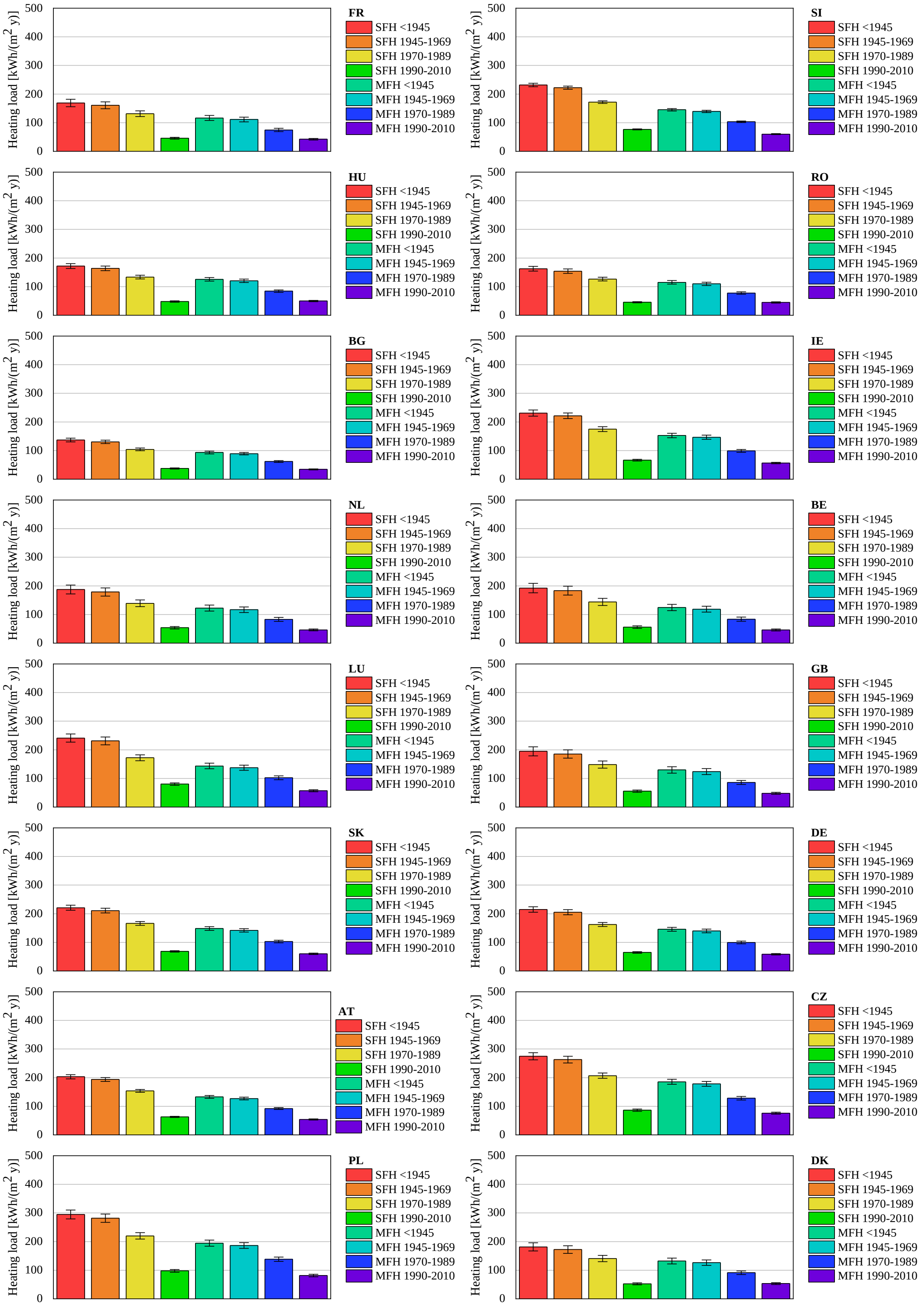


**Figure 3.7 standard deviation of cooling thermal energy for geographic location (rural, city and suburbs)**




Heating load [kWh/(m$^2$ y)]
0
100
200
300
400
500
FR
SI
HU
RO
BG
IE
NL
BE
LU
GB
SK
DE
AT
CZ
PL
DK
SFH <1945
SFH 1945-1969
SFH 1970-1989
SFH 1990-2010
MFH <1945
MFH 1945-1969
MFH 1970-1989
MFH 1990-2010

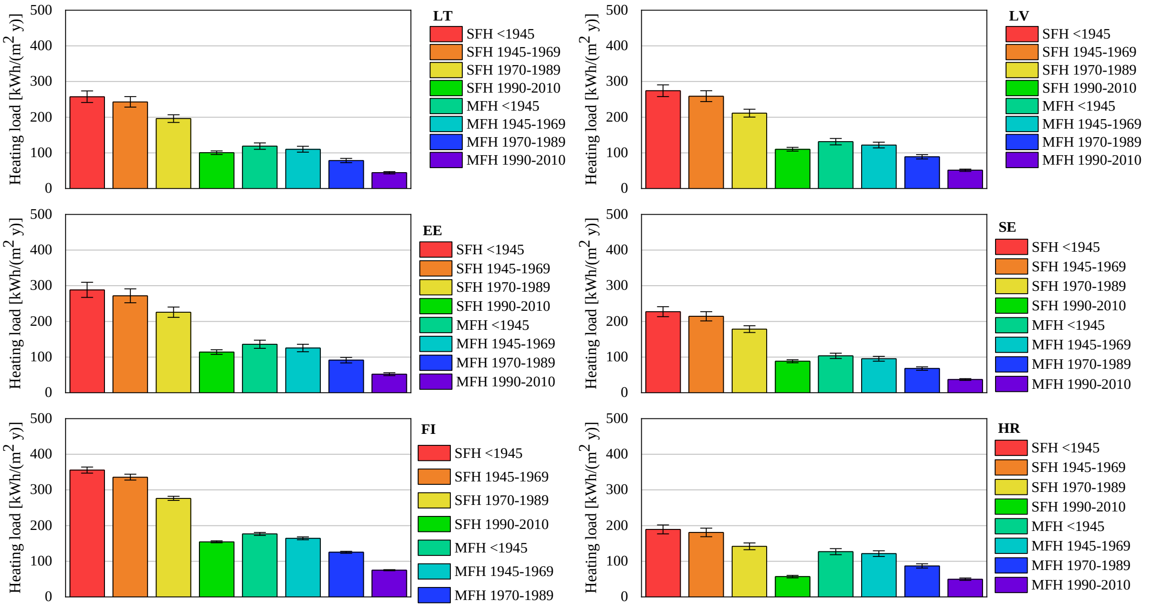


**Figure 3.8 standard deviation of heating thermal energy for geographic location (rural, city and suburbs)**

This particular deviation depends from the outdoor climatic conditions as wind and temperature. Warm climatic zone is characterized by outdoor temperature near to the heating and cooling set point, allowing the use of natural ventilation blocked up with a velocity of the wind of 2m/s. For that reason, the households into a rural geographic location are subject to major velocity of wind that reduce the use of natural ventilation.

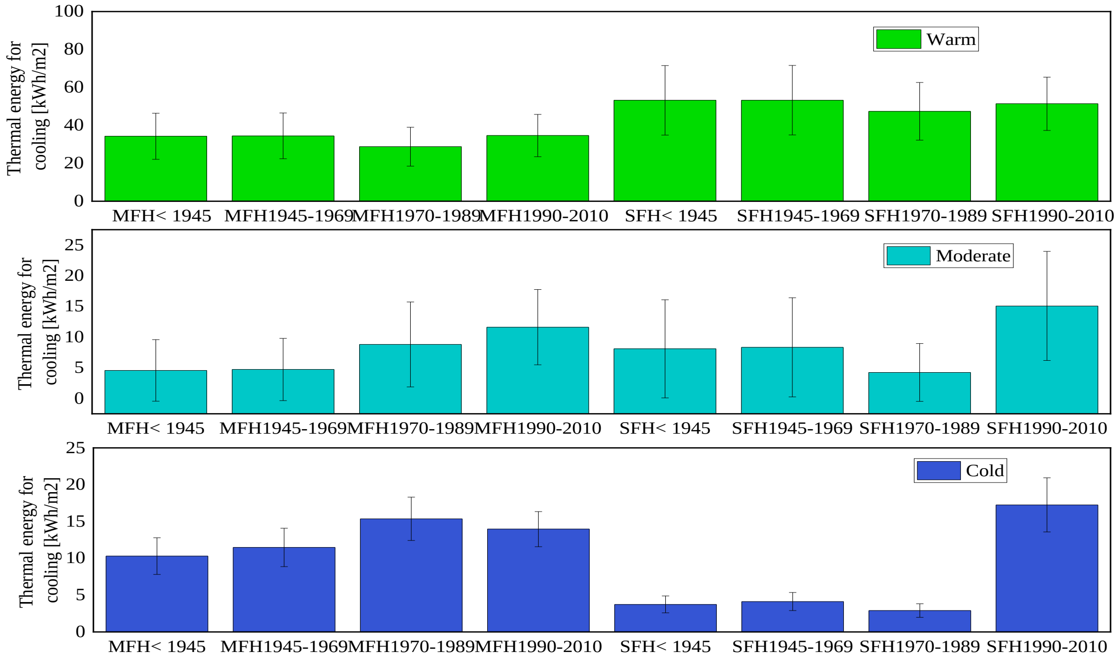


**Figure 3.9 Standard deviation and mean value of cooling demand for climatic zone**

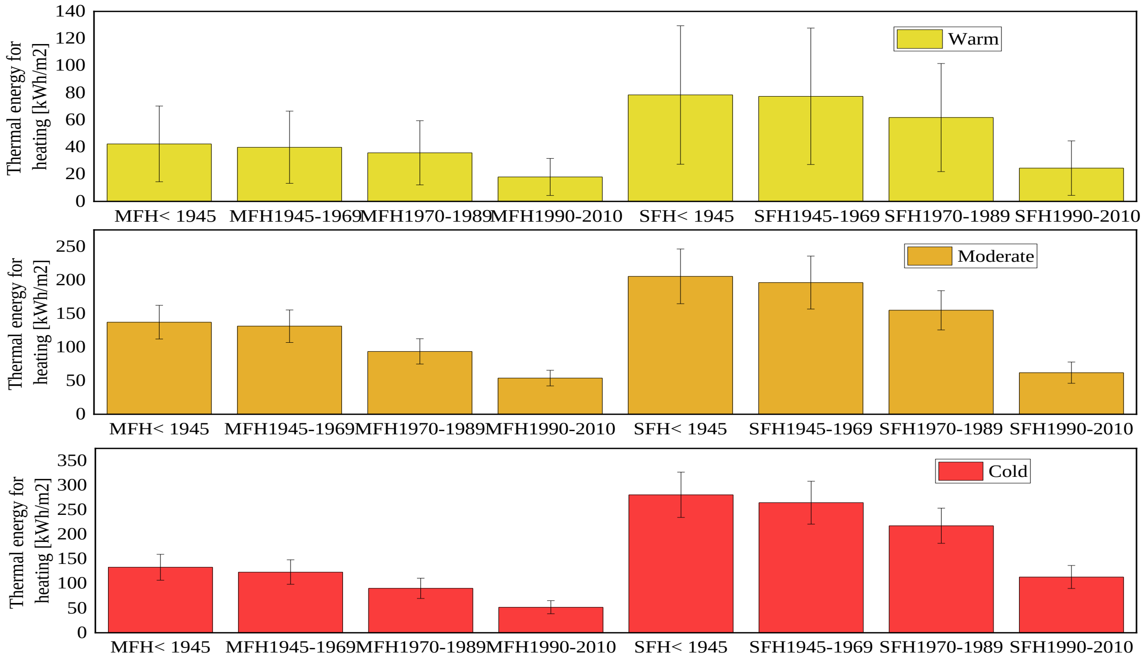


**Figure 3.10 Standard deviation and mean value for heating demand for climatic zone**

The geographic location affects also the infiltration that is not possible taking to under control. In contrast, the cold climatic zone is characterized by better performance of the envelope of the buildings and the temperature are under the temperature set point imposed for the ventilation, requiring more energy for heating from the HVAC systems.

The graph show that analyzing the data for archetypes and for climatic zone the energy demand for heating and cooling varies more in all climatic zone, with standard deviation of about 10-18kWh/m$^2$ and 13-50 for warm zone respectively for heating and cooling, while for the moderate and cold zone the standard deviations are about half or less than in warm climatic zone. In fact, the warm climatic zone include countries with variegated climatic condition (e.g. in Italy, the climatic condition in Palermo are totally different from the climatic condition in Milan), although the classification has been done for the average HDD registered at 2010 from Eurostat, the number of buildings are aggregate for country, without account their distribution for different climatic zone.

For comparing the models, the results are converted with a geometric mean mathematics model taking into accounts the number of buildings that the archetypes represent.

In addition, the results indicate that the energy required for the SFH is greater than that required by the MFH, due to the number of external surfaces.

**Table 3.3 Standard deviation for climatic zones**

| | Cooling [kWh/m$^2$] | | | Heating [kWh/m$^2$] | | |
|---|---|---|---|---|---|---|
| | W | M | C | W | M | C |
| **MFH< 1945** | 12.15 | 5.02 | 2.50 | 27.89 | 25.13 | 26.34 |
| **MFH1945-1969** | 12.10 | 5.08 | 2.61 | 26.59 | 24.23 | 24.80 |
| **MFH1970-1989** | 10.27 | 6.92 | 2.94 | 23.67 | 18.83 | 20.60 |
| **MFH1990-2010** | 11.18 | 6.14 | 2.38 | 13.67 | 11.59 | 13.32 |
| **SFH< 1945** | 18.34 | 8.00 | 1.15 | 50.99 | 40.84 | 46.17 |
| **SFH1945-1969** | 18.31 | 8.08 | 1.23 | 50.27 | 39.44 | 43.62 |
| **SFH1970-1989** | 15.19 | 4.70 | 0.92 | 39.86 | 29.21 | 35.73 |
| **SFH1990-2010** | 14.05 | 8.89 | 3.68 | 20.08 | 15.90 | 23.52 |

### 3.2.2 Domestic Hot Water

In this section, a brief overview on the results of thermal energy required for the DHW is reported for underline the energy consumption per people during the base scenario. As mentioned above, the water consumed has been assumed equal to 60l per day and per person.

The water final use temperature has been set to 45°C for all the countries and the intel temperature change for climatic zone (15°C for W, 10°C for M and 5°C for C).

The final ideal thermal energy used for DHW is reported in Table 3.4 for observing how change the energy required for climatic zone and for type of household.

**Table 3.4 Ideal final thermal energy required for DHW [kWh/y]**

| Month | SFH_W | MFH_W | SFH_M | MFH_M | SFH_C | MFH_C |
|---|---|---|---|---|---|---|
| **Jan** | 187.68 | 111.13 | 172.87 | 132.05 | 206.34 | 120.73 |
| **Feb** | 238.85 | 141.42 | 219.99 | 168.05 | 262.60 | 153.65 |
| **Mar** | 237.97 | 140.90 | 219.18 | 167.43 | 261.63 | 153.08 |
| **Apr** | 187.79 | 111.19 | 172.96 | 132.12 | 206.46 | 120.80 |
| **May** | 180.77 | 107.04 | 166.50 | 127.19 | 198.75 | 116.29 |
| **Jun** | 170.90 | 101.19 | 157.41 | 120.24 | 187.89 | 109.94 |
| **Jul** | 173.21 | 102.56 | 159.53 | 121.87 | 190.43 | 111.42 |
| **Aug** | 107.45 | 63.62 | 98.96 | 75.60 | 118.13 | 69.12 |
| **Sep** | 162.35 | 96.13 | 149.53 | 114.22 | 178.49 | 104.43 |
| **Oct** | 195.34 | 115.66 | 179.92 | 137.44 | 214.76 | 125.66 |
| **Nov** | 208.18 | 123.27 | 191.75 | 146.47 | 228.88 | 133.92 |
| **Dec** | 207.79 | 123.03 | 191.39 | 146.20 | 228.45 | 133.67 |
| **Total** | **2,258.29** | **1,337.14** | **2,080.00** | **1,588.89** | **2,482.79** | **1,452.70** |

### 3.2.3 Electricity for equipment and lighting results

The electricity consumed for lighting and equipment is responsible of about the 12.4% of the total final energy use at residential level.

The total electricity energy consumed for equipment and lighting are reported in for archetypes and for type of equipment.

It is possible observe that the annual electricity demand, calculated as function of people and total squared meter for climatic zone, is greater in SFH than in MFH. Also, it is possible investigate the contribute on the total energy consumption for single equipment and for climatic zone (e.g. the energy consumption for lighting in cold climatic zone is more than into the others, due to the smaller different inhabitant behavior and their life style.

### 3.2.4 Global energy required at European level

From the analysis of the results for heating, cooling, DHW, equipment and lighting for single archetype, it was possible observe that:

- The older buildings are responsible for about 2 times the energy consumed for heating more than the buildings built during the period 1990-2010 in all countries;
- The MFH built before the 1970 consume less energy than in SFH of the same period of construction due to the number of dispersing sides, e.g. for heating demand it has been noticed that the average difference in all countries is in a range of about 27% - 62%, expect for the HU, where the MFH 1990-2010 consumes about the 4% more than that consumed by the SFH built into the same period;
- While for cooling demand, different trends have been noticed, because the number of dispersing sides reduced the energy demand for cooling, increasing the thermal energy associated to the infiltration loads.

Aggregating the results for archetypes, multiplying the heating, cooling and DHW demand and electricity spent for equipment and lighting for the number of buildings that each archetype represents, Figure 3.14 shows the global energy percentage consumed by each archetype at European level.

It is possible observe that:

- the SFH built before 1990 are responsible for about 60% of the global energy required from the residential European building stock at 2010;
- similar trend to European stocks is observable in many countries, except for CY, where the SFH 1990-2010 are responsible for about the 42% of global energy required from the residential sector due to exponential number of households built after the 1990.
- Different energy subdivision has been noticed for ES, where the energy demand seems equally divided

for each the archetypes with exception for MFH built before the 1945;

- In IT, the MFH built before 1990 are responsible for about the 40% of the global energy required.

In order to accounts the ideal loads for cooling, the percentage impacts at European level have been calculated. Figure 3.15 shows that:

- at European level thermal energy consumed for heating accounts for about the 71% (181 Mtoe), followed by the thermal energy demand for DHW with a 21%;
- the results for climatic zone show that, in the warm climatic zone, if all the energy required for cooling is satisfy, the cooling space could be responsible for about 15 -60% of the thermal energy required; while into the cold and moderate climatic zone, the cooling demand affects for less than 10%.

### 3.2.5 Comparison Bottom up and Top down models

In order to verify that the models are good, the ideal heating loads resulted from the simulation has been compared with results of a tow down model conducted on the same archetypes for envelope and useful floor space.

Figure shows the heating demand estimated for the 24 archetypes developed with a top down model in [13].

Figure 3.11 shows that energy consumption is not the same in both the models, this could be depended on the following reasons:

a) The research on the top down has been conducted during a period where data on the number of the permanently occupied buildings were not complete and the number of buildings used are less than that used in this thesis;

b) The top down model doesn’t allow to taking into accounts the thermophysical property of the buildings, e.g. the energy required for the SFH in C climatic zone consume more thermal energy for heating than that calculated with the tow down model, in contrast the MFH requires less thermal energy;

c) The limits of the top down can be observed comparing the results but also into the impossibility to add more detailed information than that available on the European database. The results are aggregated for climatic zone and don’t allow to observe the behavior of each archetypes in different climate condition (Figure 3.12).

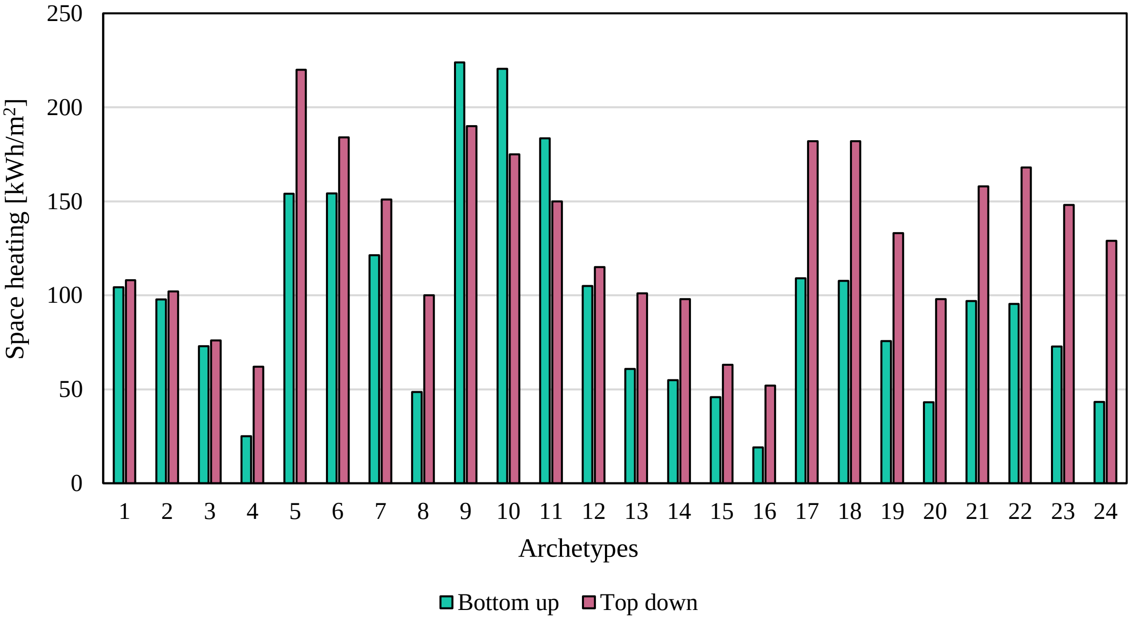
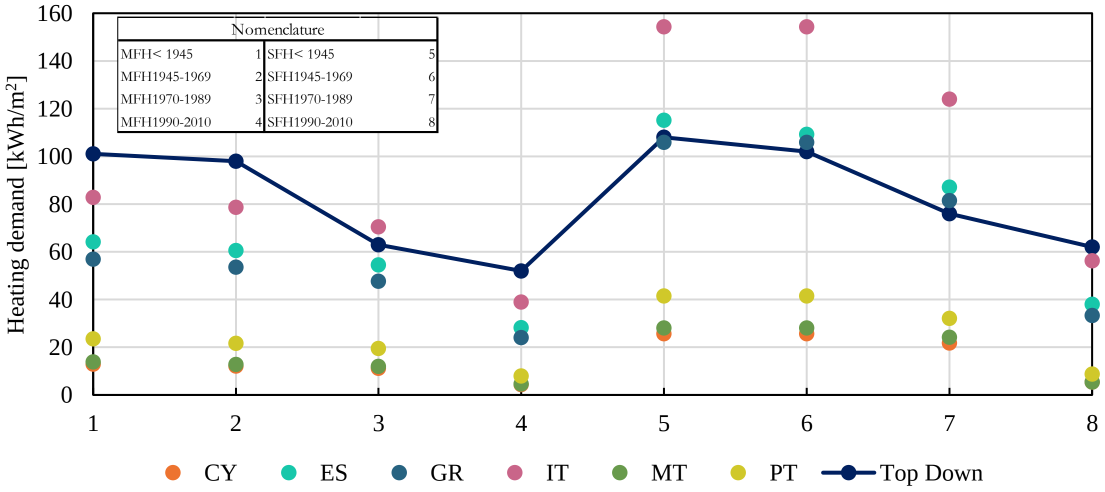


**Figure 3.11 Comparison of the final heating demand results from bottom up and top down model**

Figure 3.12 shows that the final energy required from the same archetypes simulated in all the countries included into a specific climatic zone have totally different energy required from that indicated by the top down model (line blue). For example, SFH<1945 in MT are less than half of the energy indicated into the top down model.



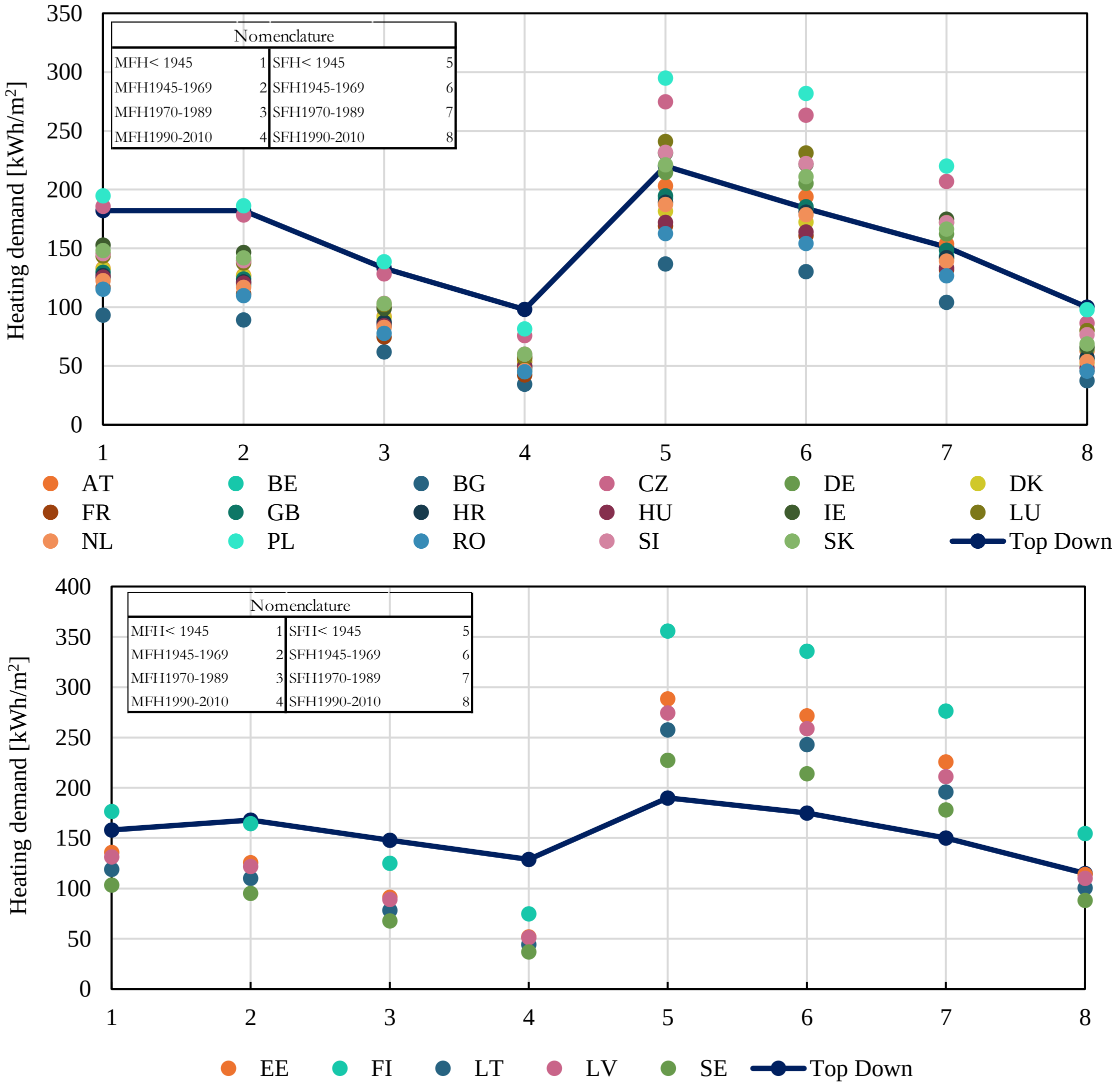


**Figure 3.12 Scatter of the thermal energy required for the same archetypes simulated with the bottom up approach in comparison with the top down results for archetypes (line dark blue)**

The absolute percentage variation for climatic zone and for the i-th archetypes in comparison with the top down results has been calculated (Figure 3.13) and the results show that less than 20% of the archetypes have a percentage variation of about 11% (M) and 20% (C and W). The 90% of the archetypes into the moderate climatic zone have absolute percentage variations less than in other climatic zones.

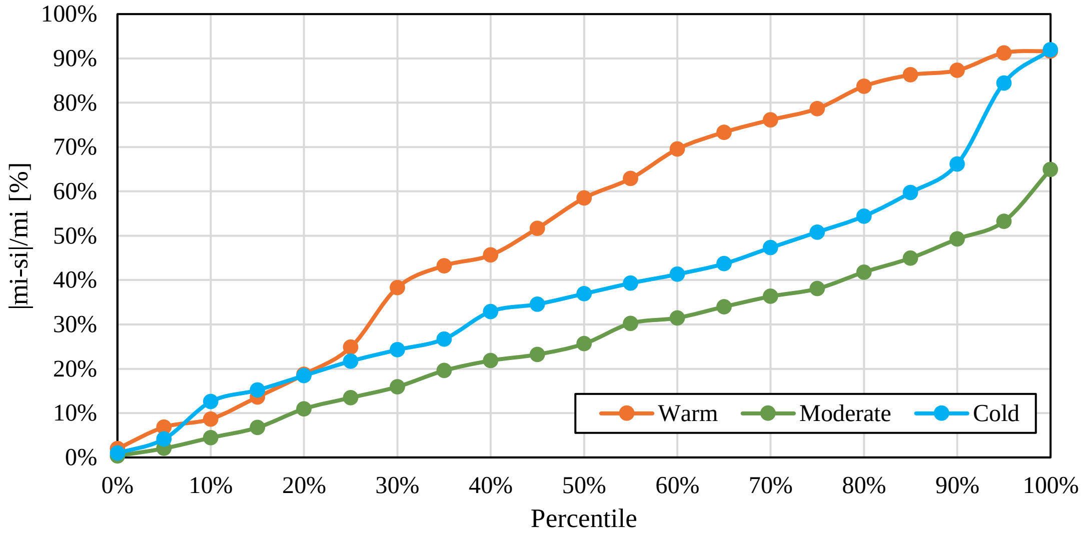


**Figure 3.13 Percentile of the percentage variation: comparison simulated (s) i-th archetypes and top down results (m)**

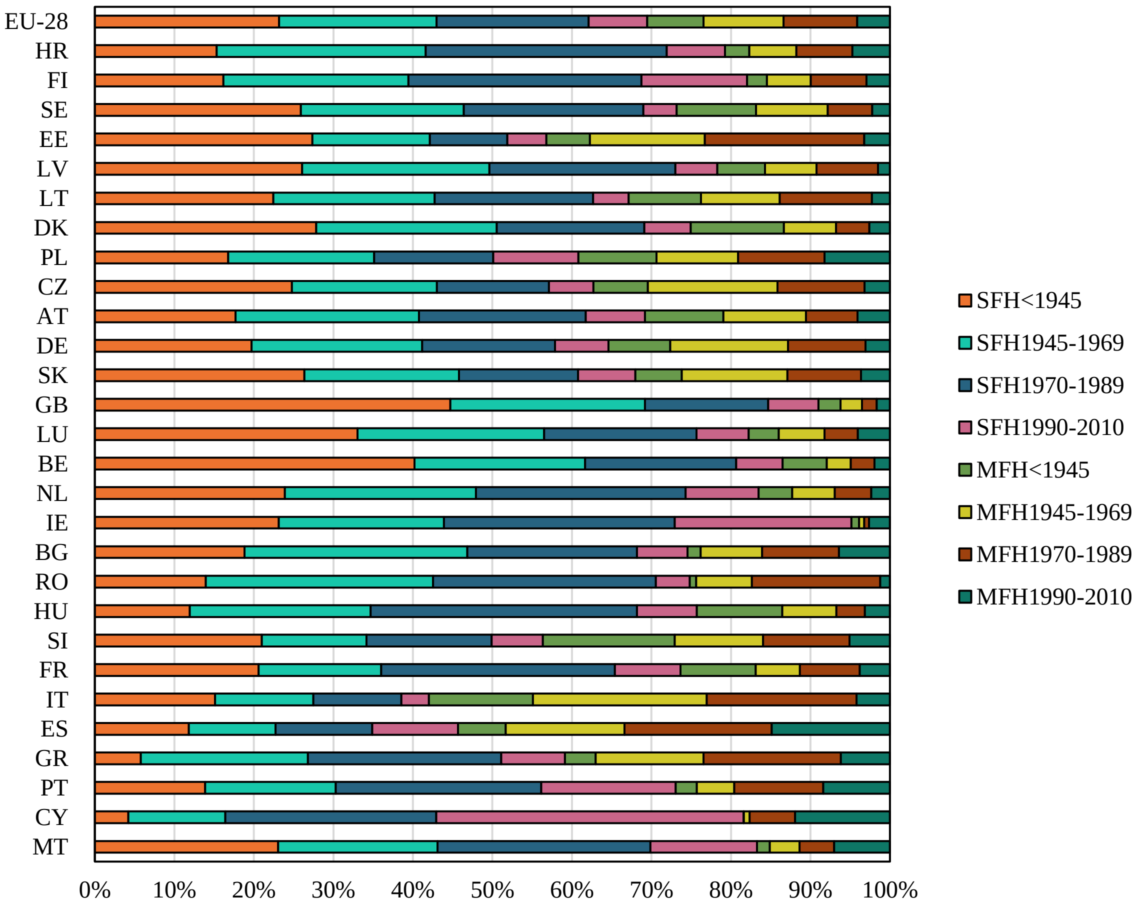


**Figure 3.14 Breakdown of the total energy use for archetypes (sum of primary energy for heating, cooling, DHW and equipment)**

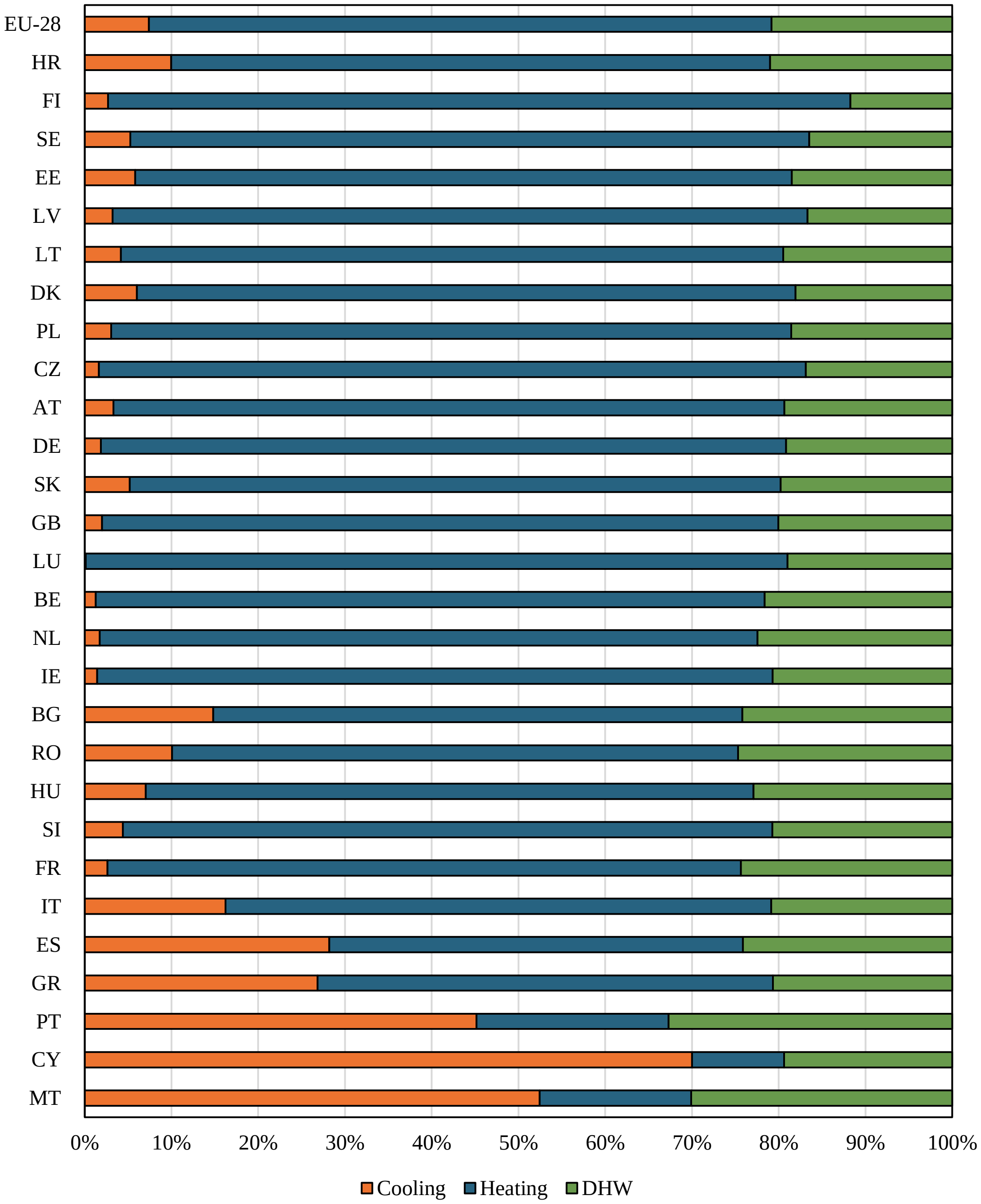


**Figure 3.15 Breakdown of the total thermal energy use for EU-28 (heating, cooling and DHW)**

## 3.3 ALTERNATIVE ENERGY SCENARIOS RESULTS

This section investigates energy performance of the existing building stock after the retrofitted scenarios. In the first part of the section, to study the answer of the dynamic model to the retrofit actions, the ideal reductions of thermal loads have been calculated for each country of the EU-28 and for each archetype. Firstly, the standard deviation for the 672 archetypes have been reported in order to investigate the effects connect to the geographic locations on the single archetypes and for climatic zone.

Secondly, a comparison at aggregated level has been performed, in order to investigate the potential effects on the energy required during the operation use. This section reports the results for each scenario, investigating the effects for archetypes, regions and then, country level.

### 3.3.1 Scenario I: Insulation of the walls

The fist scenario focus on the application of insulation panels for improving the thermal performance of the envelope towards to active the minimal U-value directives for climatic zone and for archetypes. As mentioned above, the U-value calculation has been performed in order to account the number of buildings that each archetype represents for climatic zone, this approach allows to investigate the effects connect to the use of the same envelope performance in countries with a similar HDD, but not equal. This scenario has been performed for verifying how the quantity of insulation materials could affect the heating and cooling loads in different ways for the same archetypes (e.g. decreasing the energy demand for heating and increasing that for cooling).

In Table 3.5, a comparison among the effect connect to the action applied to all the archetypes of the same climatic zone is shown. The results have been calculated as average of the initial value divided for geographic location and country. The deviation of the heating energy demand and of the cooling demand is presented as a percentage of the value of the not retrofitted building (Baseline), for each one of the cases studied. This kind of representation of the results aims to show in an immediate way which climatic zone have the most effective benefits/impacts. The results are reported as arithmetic mean.

**Table 3.5 Final energy demand pre- and post-retrofit for Warm climatic zone Scenario I**

| **Data** | | | **Period of construction** | **Average results baseline scenario [kWh/m$^2$]** | **Deviation Retrofit scenario [kWh/m$^2$]** |
|---|---|---|---|---|---|
| **Cooling demand** | C | MFH | < 1945 | 10.31 | 38% |
| | | | 1945-1969 | 11.48 | 33% |
| | | | 1970-1989 | 15.37 | 24% |
| | | | 1990-2010 | 13.96 | 38% |
| | | SFH | < 1945 | 3.73 | 22% |
| | | | 1945-1969 | 4.13 | 32% |
| | | | 1970-1989 | 2.90 | 35% |

| Data | | | Period of construction | Average results baseline scenario [kWh/m$^2$] | Deviation Retrofit scenario [kWh/m$^2$] |
|---|---|---|---|---|---|
| | | | 1990-2010 | 17.26 | 20% |
| | M | MFH | < 1945 | 4.56 | 46% |
| | | | 1945-1969 | 4.73 | 41% |
| | | | 1970-1989 | 8.80 | 52% |
| | | | 1990-2010 | 11.61 | 59% |
| | | SFH | < 1945 | 8.09 | 53% |
| | | | 1945-1969 | 8.32 | 28% |
| | | | 1970-1989 | 4.24 | 29% |
| | | | 1990-2010 | 15.07 | 81% |
| | W | MFH | < 1945 | 34.26 | 4% |
| | | | 1945-1969 | 34.46 | 10% |
| | | | 1970-1989 | 28.76 | 4% |
| | | | 1990-2010 | 34.62 | 2% |
| | | SFH | < 1945 | 53.20 | 8% |
| | | | 1945-1969 | 53.25 | 1% |
| | | | 1970-1989 | 47.40 | 5% |
| | | | 1990-2010 | 51.39 | 10% |
| **Heating demand** | C | MFH | < 1945 | 133.23 | -27% |
| | | | 1945-1969 | 123.45 | -25% |
| | | | 1970-1989 | 90.33 | -17% |
| | | | 1990-2010 | 51.91 | -36% |
| | | SFH | < 1945 | 280.65 | -13% |
| | | | 1945-1969 | 264.67 | -24% |
| | | | 1970-1989 | 217.56 | -31% |
| | | | 1990-2010 | 113.45 | -13% |
| | M | MFH | < 1945 | 137.30 | -30% |
| | | | 1945-1969 | 131.39 | -21% |
| | | | 1970-1989 | 93.78 | -19% |
| | | | 1990-2010 | 53.95 | -22% |
| | | SFH | < 1945 | 205.71 | -24% |
| | | | 1945-1969 | 196.40 | -26% |
| | | | 1970-1989 | 155.14 | -19% |
| | | | 1990-2010 | 62.05 | -17% |
| | W | MFH | < 1945 | 42.35 | -39% |
| | | | 1945-1969 | 39.90 | -21% |
| | | | 1970-1989 | 35.87 | -28% |
| | | | 1990-2010 | 18.01 | -31% |
| | | SFH | < 1945 | 78.44 | -26% |
| | | | 1945-1969 | 77.45 | -35% |
| | | | 1970-1989 | 61.79 | -25% |

| Data | Period of construction | Average results baseline scenario [kWh/m$^2$] | Deviation Retrofit scenario [kWh/m$^2$] |
|---|---|---|---|
|  | 1990-2010 | 24.54 | -21% |

It possible observe that:

- The application of insulation layer on the building’s walls could reduce the heating demand of about 17-36%;
- Instead, the ideal loads cooling demand increase in all climatic zone and for each archetype,
- Cold climatic zone is characterized by greater reduction of energy in comparison to the other climatic zone, although the energy required for cooling could be 38% more than the baseline;
- The older households are characterized by greater reduction of absolute energy.

In order to underline the potential of the methodological approach applied, a comparison between the effects of the refurbishment action on SFH<1945 in each country is reported in Figure 3.16, Figure 3.17 and Figure 3.18 respectively for warm, cold and moderate climatic zone.

As mentioned above, the effects are different for countries (Figure 3.16, Figure 3.17 and Figure 3.18).

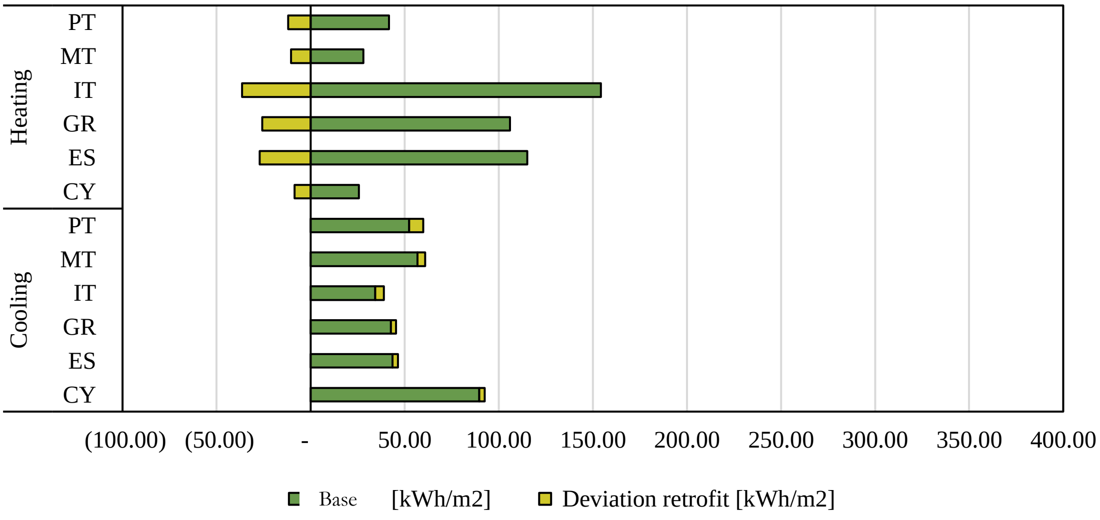


**Figure 3.16 Refurbishment effects for SFH<1945 (W)**

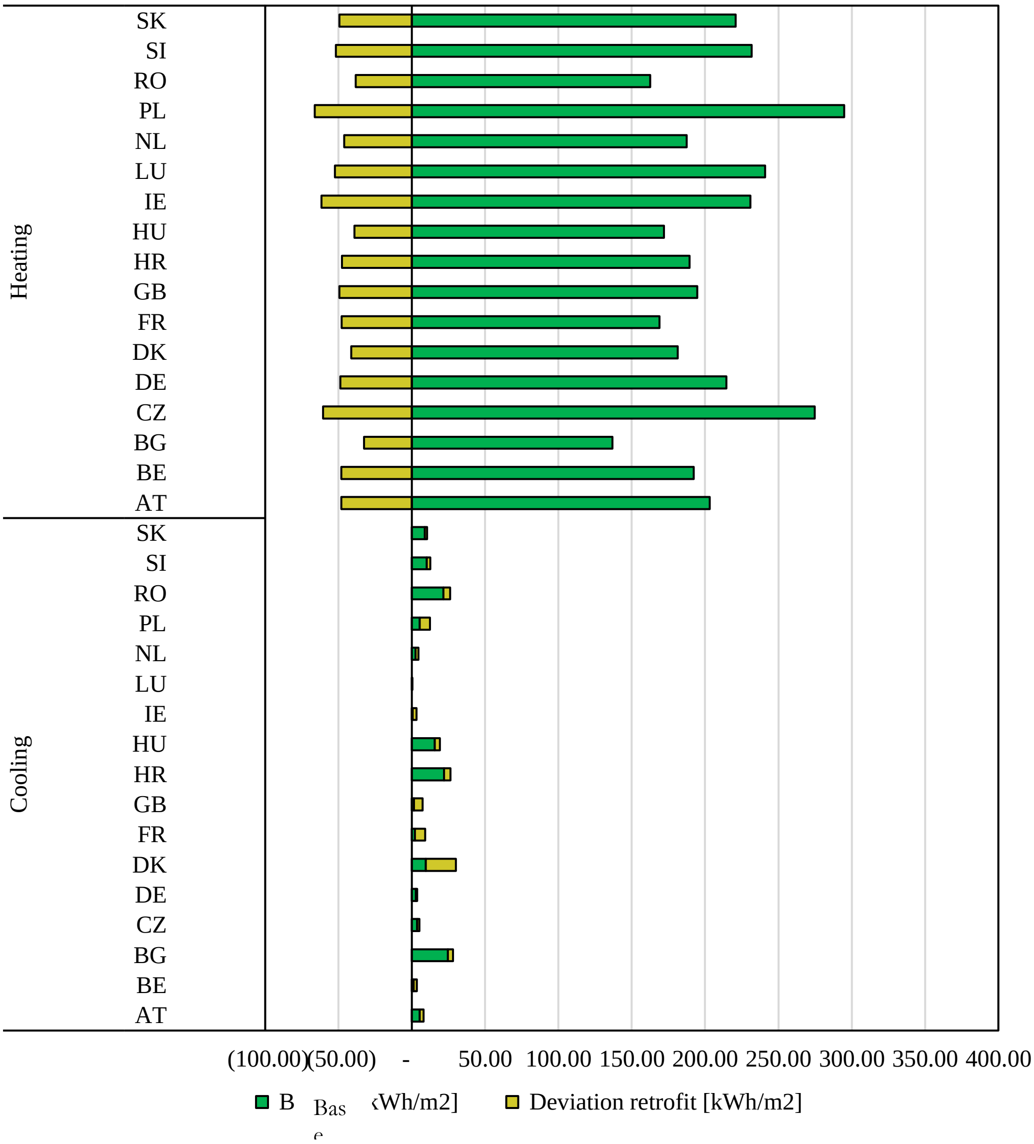


**Figure 3.17 Refurbishment effects for SFH<1945 (M)**

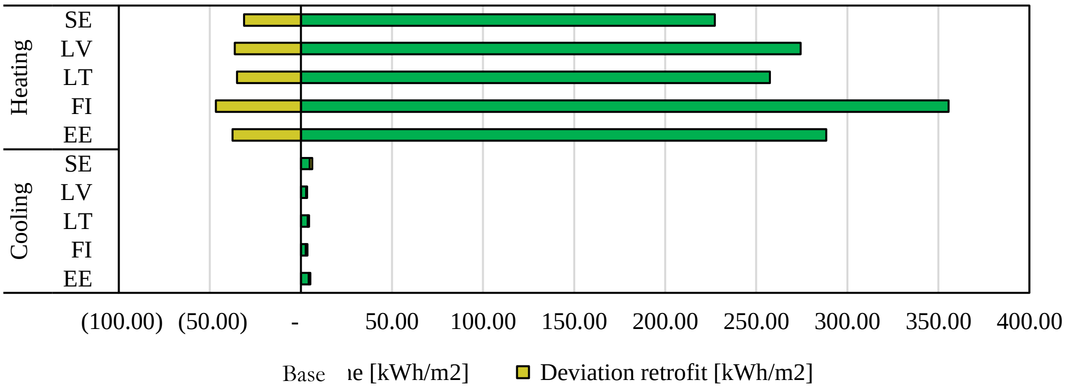


**Figure 3.18 Refurbishment effects for SFH<1945 (C)**

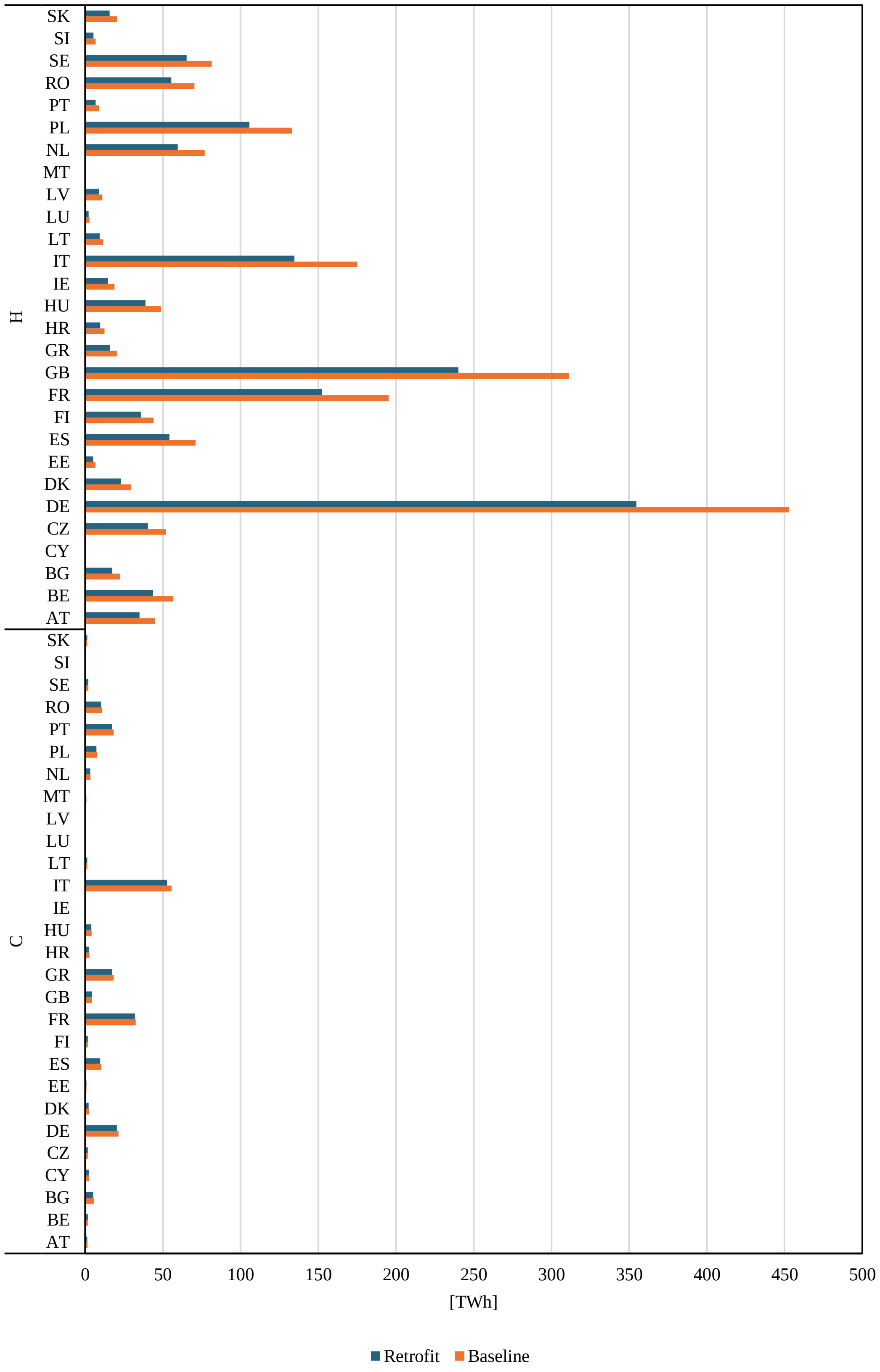


Figure 3.19 Heating and cooling demand pre- and post-retrofit action (Scenario I)

### 3.3.2 Scenario II: Renewable systems

This scenario focus on the installation of renewable energy system for reduce the DHW and electricity required for equipment and lighting and for observe how the same system could affect in different ways the energy required for climatic zone and for archetypes. In particular, the second scenario focuses on the installation of a thermal solar system for the production of domestic hot water and of a photovoltaic panels (PV) for the production of the electricity required from each house, resulting in a reduced need of additional water heating and electricity purchased from the grid.

This scenario has been split in two, namely related to:

1) Solar thermal systems;
2) PV systems.

#### 3.3.2.1 Solar thermal collectors

In this section the results of the DHW reduction are summarized for archetypes and an overview on the hourly energy generation for solar panels for climatic zone are shown. In order to account that the solar thermal system includes the use of an instantaneous boiler accomplished with the tank of solar panels, the results are shown as average value for climatic zone and for archetypes reporting the final thermal energy provided by the boiler and that provided by the solar panels. Also, the percentage of solar energy supply is reported.

Percentage penetration of the thermal solar energy varies in a range of about 22% to 30% into cold climatic zone, instead for the warm climatic zone, the solar thermal energy cover about the 55-61% of the total energy required for DHW. The results of the MFH are reported for all the building, joining together the energy benefits of each household (divided the value for 16, for a comparison of the results for single house).

It is possible observe that the energy required depend on the number of persons for households (60l per person) and from the type of house, because the type of plant has been accounted with different proportional dimension.

Observing the annual energy produced for country, the greater thermal energy generation is around the 09:00-15:00 for all the countries as reported in Figure, where the annual thermal energy produced for each SFH built before the 1945 sited in city geographic location is reported.

In order to account the thermal energy generated by solar panel systems in each country, Figure reports the total thermal energy reduced at regional level for each country.

Figure 3.20 shows the percentage of thermal energy for DHW that could be produced by the solar collector system for country.

It is possible observe that:

- The largest potential energy saving could be obtained in the warm climatic zone, where the use of the solar collector system could reduce the use of an instantaneous boiler of about 55% in all the climatic zone (about 48 TWh). The greater benefits are generated for CY, where the results show that 69% of the thermal energy could be produced by thermal solar collector, followed by PT with about the 64% and MT with 62%; while in IT, it is at least 49%. Although, the temperature set point for the DHW have been established as input, the solar irradiation and outdoor temperature affect the lost thermal energy thought the storage;
- The cold climatic zone is characterized by at least 26% of the potential thermal energy saving, where the greater benefits are calculated for SE with 31% (about 2.48TWh) followed by LV and LT (29 and 27%). While FI climatic conditions allow to obtain at least a 18% of the potential thermal energy saving;
- With a focus on the moderate climatic zone, it is possible notice that the thermal energy saving could vary from the 29% in SI to the 56% in HU, due to the variability of the climatic conditions of the countries involved.

**Table 3.6 Average final energy demand pre- and post-retrofit of the Scenario II.a**

| Climatic zone | Type | Period of construction | Water Heater with instantaneous boiler [kWh] | Solar Thermal Water [kWh] | Average of Percentage |
|---|---|---|---|---|---|
| **C** | MFH | < 1945 | 16,727.61 | 4,606.50 | 22% |
| | | 1945-1969 | 16,727.61 | 4,606.50 | 22% |
| | | 1970-1989 | 16,727.61 | 4,606.50 | 22% |
| | | 1990-2010 | 16,727.61 | 4,606.50 | 22% |
| | SFH | < 1945 | 1,716.27 | 755.89 | 30% |
| | | 1945-1969 | 1,716.17 | 756.08 | 30% |
| | | 1970-1989 | 1,760.04 | 677.75 | 28% |
| | | 1990-2010 | 1,765.52 | 670.37 | 27% |
| **M** | MFH | < 1945 | 16,374.18 | 7,065.70 | 30% |
| | | 1945-1969 | 16,374.18 | 7,065.70 | 30% |
| | | 1970-1989 | 16,374.18 | 7,065.70 | 30% |
| | | 1990-2010 | 16,374.18 | 7,065.70 | 30% |
| | SFH | < 1945 | 1,298.62 | 1,055.70 | 44% |
| | | 1945-1969 | 1,299.38 | 1,054.45 | 44% |

| Climatic zone | Type | Period of construction | Water Heater with instantaneous boiler [kWh] | Solar Thermal Water [kWh] | Average of Percentage |
|---|---|---|---|---|---|
| | | 1970-1989 | 1,286.38 | 1,074.45 | 45% |
| | | 1990-2010 | 1,283.01 | 1,079.68 | 45% |
| W | MFH | < 1945 | 9,031.03 | 10,957.83 | 55% |
| | | 1945-1969 | 9,031.03 | 10,957.83 | 55% |
| | | 1970-1989 | 9,031.03 | 10,957.83 | 55% |
| | | 1990-2010 | 9,031.03 | 10,957.83 | 55% |
| | SFH | < 1945 | 1,088.83 | 1,686.86 | 61% |
| | | 1945-1969 | 1,058.38 | 1,744.26 | 62% |
| | | 1970-1989 | 1,056.68 | 1,746.40 | 62% |
| | | 1990-2010 | 1,052.50 | 1,753.15 | 62% |

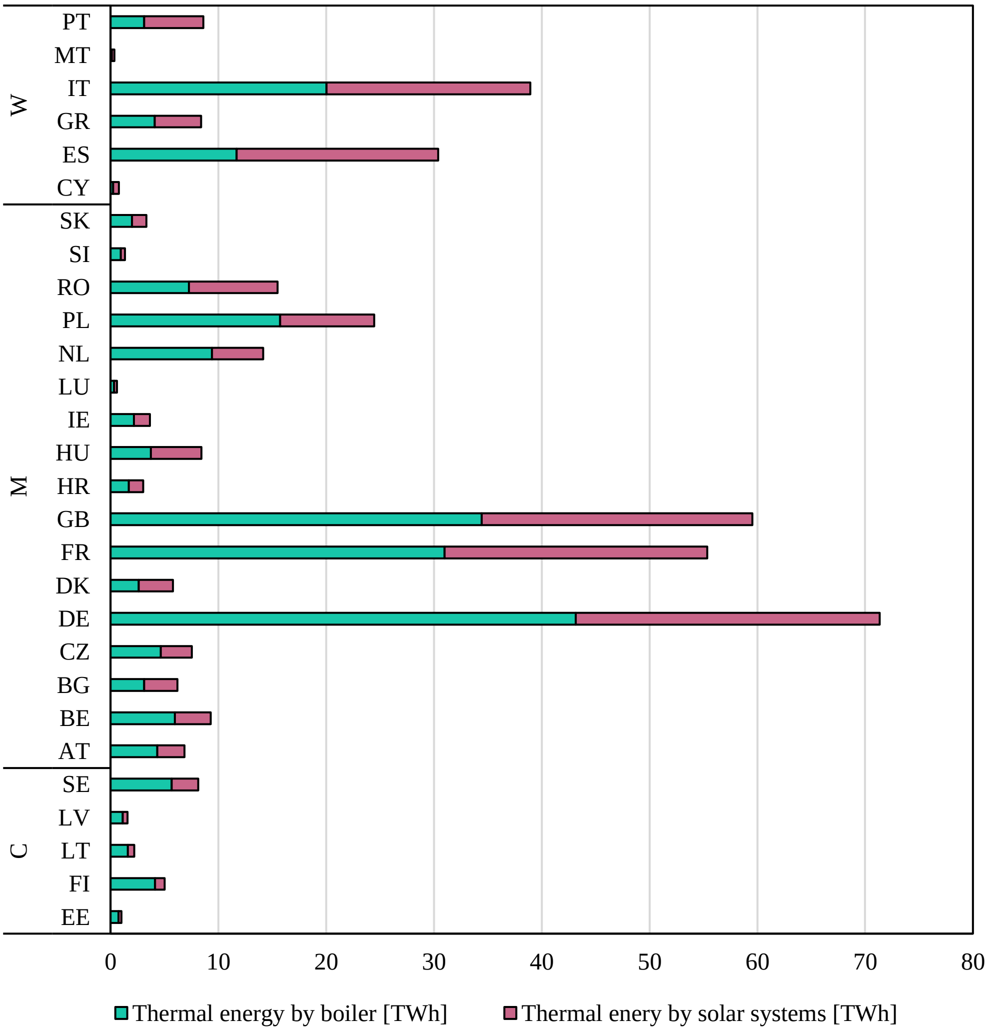


Figure 3.20 Breakdown of the thermal energy produced from solar system and thermal energy supply by instantaneous boiler at country level

#### 3.3.2.2 PV panels

In this section the results of the electricity produced by the PV systems are summarized for archetypes and at country level. The PV systems includes the PV panels and an inverter with a conversion factor of 0.9. the energy produced lost during the conversion is not reported because the efficiency of the inverter is out from the goal of the study.

The electricity required from the grid varies in a range of about 20% to 24% into cold climatic zone, instead for the warm climatic zone, the PV energy generated cover about the 33% of the total energy required by the equipment.

The percentage variation for the country is connect to the solar radiation that is greater into the country as IT or ES than into country as FI or SE. Also, the electricity consumed by the archetypes of cold climatic zone is more than that consumed into warm climatic zone due to the less numbers of daylight hours.

In fact, as mentioned above, the electricity consumed by the equipment is calculated as function of the useful floor area and number of people for house, the electricity generated from each PV system is equal in all SFH and MFH of the same climatic zone.

In order to account the electricity generated by PV system in each country, Figure reports the total kWh of electricity consumed at regional level for each country, splitting the data for the energy auto-consumed and electricity from grid.

This scenario show that:

- the countries of the moderate climatic zone with the use of PV systems could reduce the energy from grid of about 21% (LU) – 53% (HU). The electricity produced from the PV systems in LU is lower than the other countries due to the low global irradiation reported into the weather file used for the simulation. In contrast, HU is characterized by a good solar radiation similar to warm country as IT, MT, etc. The global electricity produced from the installation of the PV systems in all the existing households could produce about 6381 TWh in a year, with a benefit of about 3768TWh of electricity send to the grid.
- the countries of the cold climatic zone with the use of PV systems could reduce the energy from grid of about 25% (EE) – 30% (LV). The global electricity produced from the installation of the PV systems in all the existing households could produce about 412 TWh in a year, with a benefit of about 109TWh of electricity send to the grid.

- the countries of the warm climatic zone with the use of PV systems could reduce the energy from grid of about 47% (GR) – 56% (CY). The global electricity produced from the installation of the PV systems in all the existing households could produce about 2585 TWh in a year, with a benefit of about 1644TWh of electricity send to the grid. Due to the greatest number of building in IT, these PV systems installed in Italy could reduce the electricity of the warm climatic zone of about 12% with the surplus of the energy not directly consumed, while ES of about the 13%. Although the number of buildings in Italy are more than in Spain, the share of type of house could affects a lot the supply energy.

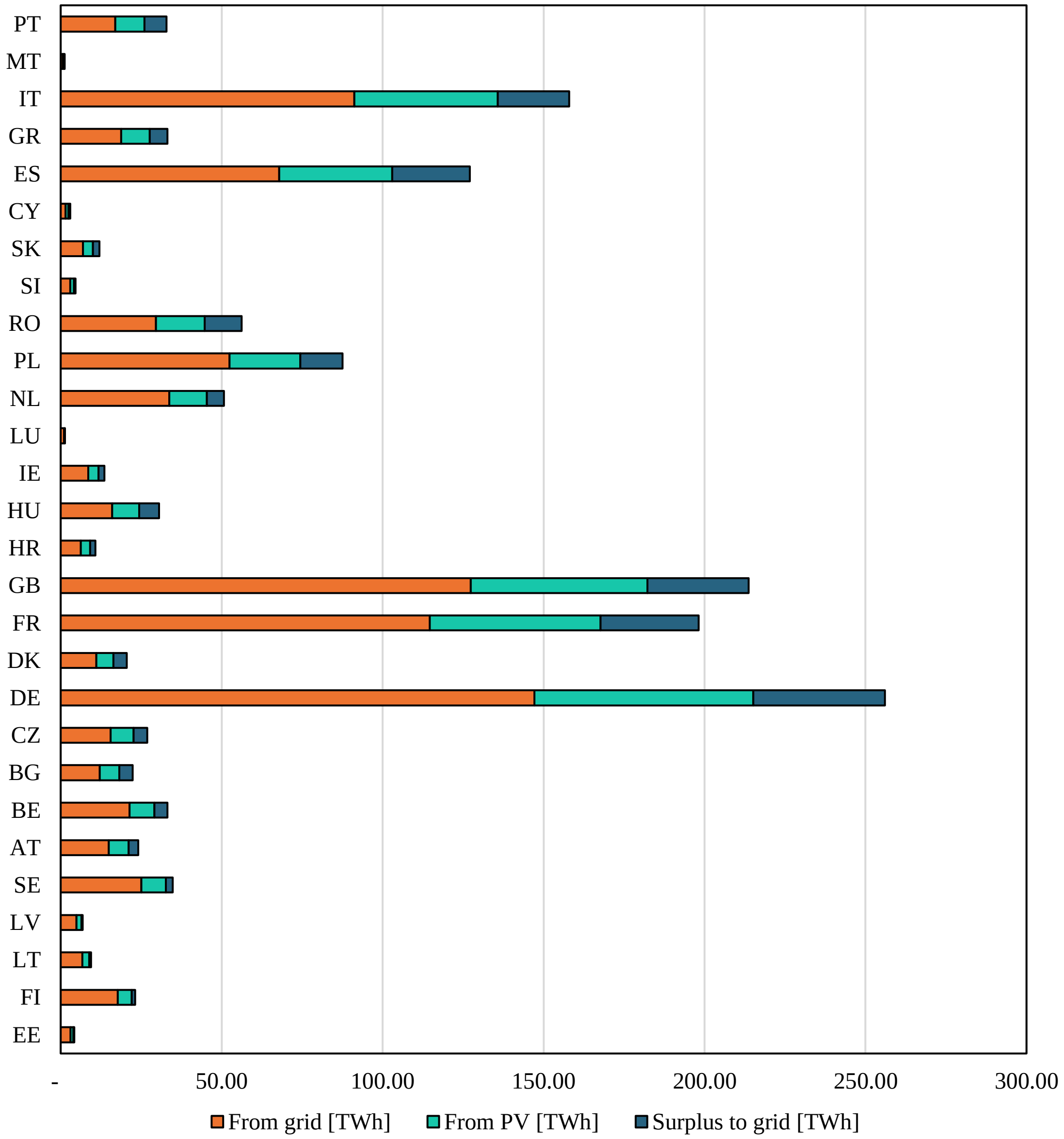


**Figure 3.21 Breakdown of the electricity produced from PV and required from grid at country level.**

**Table 3.7 Average final energy demand pre- and post-retrofit into Scenario II.b**

| Type | | Period of construction | Average of Total electricity for equipment [kWh] | Average of Total on side electricity generation [kWh] | Average Surplus of Electricity to grid [kWh] | Electricity auto-consumption [%] | Average of percentage of Surplus Electricity produced going to grid [%] |
|---|---|---|---|---|---|---|---|
| C | MFH | < 1945 | 5,000.74x16 | 25,301.22 | 5,881.37 | 24.27% | 23.11% |
| | | 1945-1969 | 5,000.74 x16 | 25,301.22 | 5,881.37 | 24.27% | 23.11% |
| | | 1970-1989 | 5,000.74 x16 | 25,301.22 | 5,881.37 | 24.27% | 23.11% |
| | | 1990-2010 | 5,000.74 x16 | 25,301.22 | 5,881.37 | 24.27% | 23.11% |
| | SFH | < 1945 | 9,801.34 | 2,888.08 | 658.15 | 22.75% | 22.80% |
| | | 1945-1969 | 9,801.34 | 2,888.08 | 658.15 | 22.75% | 22.80% |
| | | 1970-1989 | 11,761.61 | 2,888.08 | 447.03 | 20.75% | 15.49% |
| | | 1990-2010 | 11,761.61 | 2,888.08 | 447.03 | 20.75% | 15.49% |
| M | MFH | < 1945 | 4,258.86 x16 | 31,420.20 | 10,952.12 | 30.04% | 33.27% |
| | | 1945-1969 | 4,258.86 x16 | 31,420.20 | 10,952.12 | 30.04% | 33.27% |
| | | 1970-1989 | 4,258.86 x16 | 31,420.20 | 10,952.12 | 30.04% | 33.27% |
| | | 1990-2010 | 4,258.86 x16 | 31,420.20 | 10,952.12 | 30.04% | 33.27% |
| | SFH | < 1945 | 6,963.40 | 3,479.68 | 1,383.27 | 30.11% | 37.65% |
| | | 1945-1969 | 6,963.40 | 3,479.68 | 1,383.27 | 30.11% | 37.65% |
| | | 1970-1989 | 7,737.11 | 3,479.68 | 1,235.75 | 29.00% | 33.59% |
| | | 1990-2010 | 7,737.11 | 3,479.68 | 1,235.75 | 29.00% | 33.59% |
| W | MFH | < 1945 | 5,020.74 x16 | 42,553.62 | 15,408.25 | 33.79% | 35.96% |
| | | 1945-1969 | 5,020.74 x16 | 42,553.62 | 15,408.25 | 33.79% | 35.96% |
| | | 1970-1989 | 5,020.74 x16 | 42,553.62 | 15,408.25 | 33.79% | 35.96% |
| | | 1990-2010 | 5,020.74 x16 | 42,553.62 | 15,408.25 | 33.79% | 35.96% |
| | SFH | < 1945 | 7,126.92 | 4,659.14 | 2,145.04 | 35.28% | 45.79% |
| | | 1945-1969 | 7,126.92 | 4,659.14 | 2,145.04 | 35.28% | 45.79% |
| | | 1970-1989 | 7,126.92 | 4,659.14 | 2,145.04 | 35.28% | 45.79% |
| | | 1990-2010 | 9,264.99 | 4,659.14 | 1,611.97 | 32.89% | 34.35% |

### 3.3.3 Scenario III: Night setpoint temperature

The third scenario focus on the application of strategies for reducing the heating and cooling demand, acting on the behavior of the inhabitants for climatic zone and for archetypes. As mentioned above, all the simulations are run taken into accounts all the same parameters resulted from the calibration, except for the temperature setpoint assumed equal to 20°C for winter season and 26°C for summer season and turning-off the HVAC system during the night.

This scenario has been performed for verifying how a single occupancies behavior action could reduce the heating and cooling loads in different ways for the same archetypes.

In Table 3.8, a comparison among the effect connect to the action applied to all the archetypes of the same climatic zone is shown. The results have been calculated as average of the initial value divided for geographic location and country. The reductions of heating energy demand and of cooling demand is presented as a percentage of the value of the not baseline building stocks (Baseline), for each one of the cases studied. This kind of representation of the results aims to show in an immediate way which climatic zone have the most effective benefits/impact. The results are reported as arithmetic mean grouped for archetypes.

**Table 3.8 Average energy demand for heating and cooling into the baseline scenario and the percentage of energy saved after the retrofit scenario (Scenario III)**

| Data | | | Period of construction | Baseline scenario [kWh/m$^2$] | Retrofit scenario Reduction [%] |
|---|---|---|---|---|---|
| Cooling demand | C | MFH | < 1945 | 10.31 | 5% |
| | | | 1945-1969 | 11.48 | 4% |
| | | | 1970-1989 | 15.37 | 5% |
| | | | 1990-2010 | 13.96 | 7% |
| | | SFH | < 1945 | 3.73 | 4% |
| | | | 1945-1969 | 4.13 | 7% |
| | | | 1970-1989 | 2.90 | 7% |
| | | | 1990-2010 | 17.26 | 3% |
| | M | MFH | < 1945 | 4.56 | 6% |
| | | | 1945-1969 | 4.73 | 3% |
| | | | 1970-1989 | 8.80 | 4% |
| | | | 1990-2010 | 11.61 | 7% |
| | | SFH | < 1945 | 8.09 | 2% |
| | | | 1945-1969 | 8.32 | 7% |
| | | | 1970-1989 | 4.24 | 7% |
| | | | 1990-2010 | 15.07 | 2% |

| Data | | | Period of construction | Baseline scenario [kWh/m$^2$] | Retrofit scenario Reduction [%] |
|---|---|---|---|---|---|
| | W | MFH | < 1945 | 34.26 | 7% |
| | | | 1945-1969 | 34.46 | 5% |
| | | | 1970-1989 | 28.76 | 5% |
| | | | 1990-2010 | 34.62 | 7% |
| | | SFH | < 1945 | 53.20 | 4% |
| | | | 1945-1969 | 53.25 | 7% |
| | | | 1970-1989 | 47.40 | 7% |
| | | | 1990-2010 | 51.39 | 4% |
| **Heating demand** | C | MFH | < 1945 | 133.23 | 16% |
| | | | 1945-1969 | 123.45 | 23% |
| | | | 1970-1989 | 90.33 | 20% |
| | | | 1990-2010 | 51.91 | 13% |
| | | SFH | < 1945 | 280.65 | 27% |
| | | | 1945-1969 | 264.67 | 17% |
| | | | 1970-1989 | 217.56 | 18% |
| | | | 1990-2010 | 113.45 | 24% |
| | M | MFH | < 1945 | 137.30 | 18% |
| | | | 1945-1969 | 131.39 | 24% |
| | | | 1970-1989 | 93.78 | 23% |
| | | | 1990-2010 | 53.95 | 17% |
| | | SFH | < 1945 | 205.71 | 27% |
| | | | 1945-1969 | 196.40 | 19% |
| | | | 1970-1989 | 155.14 | 20% |
| | | | 1990-2010 | 62.05 | 26% |
| | W | MFH | < 1945 | 42.35 | 19% |
| | | | 1945-1969 | 39.90 | 29% |
| | | | 1970-1989 | 35.87 | 29% |
| | | | 1990-2010 | 18.01 | 18% |
| | | SFH | < 1945 | 78.44 | 36% |
| | | | 1945-1969 | 77.45 | 24% |
| | | | 1970-1989 | 61.79 | 23% |
| | | | 1990-2010 | 24.54 | 34% |

It is possible observe that the energy demand for cooling is reduced of about 3-7%, while the heating demand could be reduced of about 20-30%. Greater benefits could be notice into the older households, where the worst performance of the envelope affects the capability of the building to maintain the temperature of setpoint for winter and summer season acceptable during the night.

At country level, the results have been aggregated for taking into accounts the number of buildings that each archetype represents.

For the heating demand, DE represents the country with the most energy savable (about 88TWh), followed by UK (80TWh) and IT (45TWh). Instead, for cooling demand, reduction of the energy demand is at least 4TWh for ES, followed by IT with a reduction of about 76TWh.

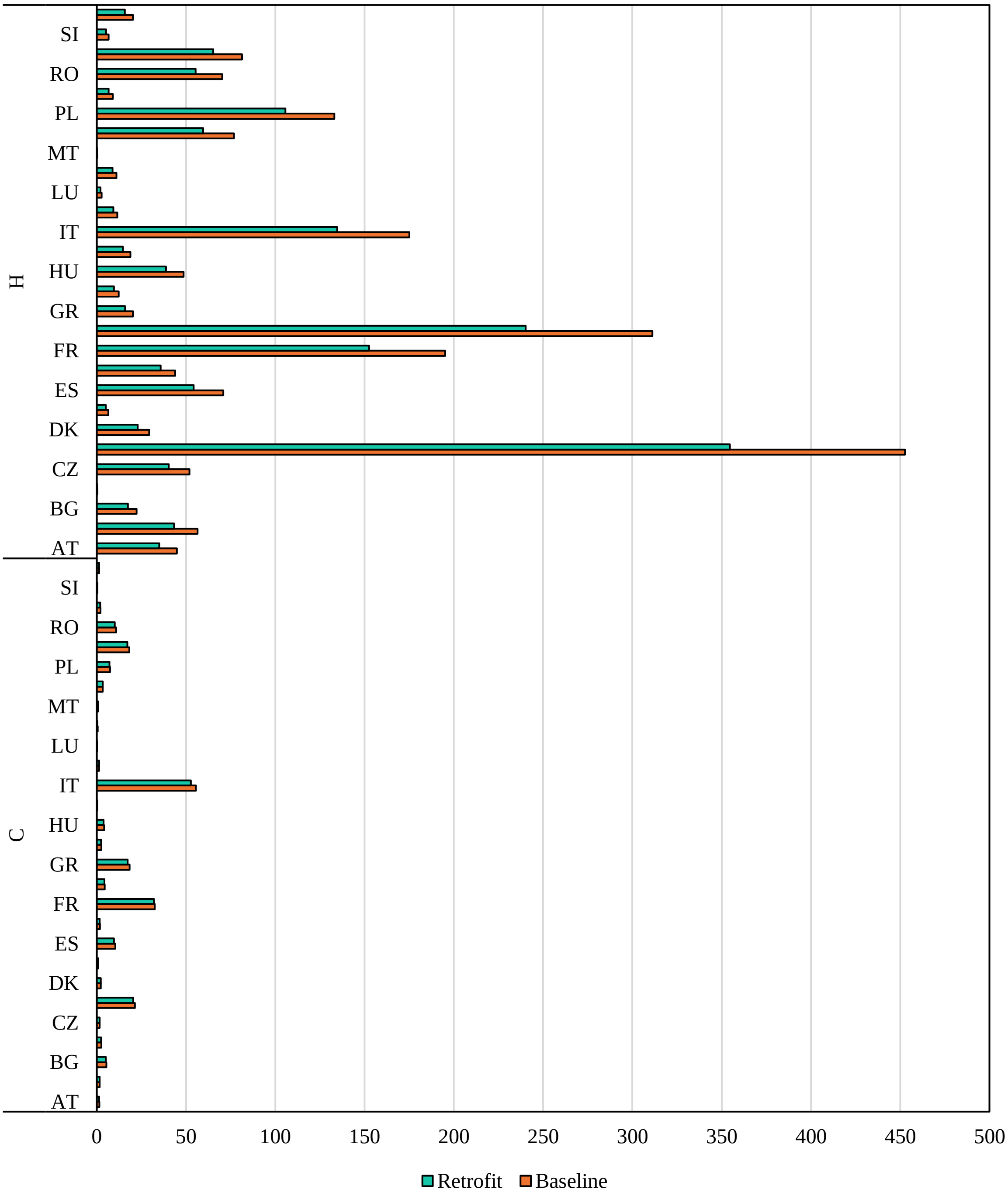


**Figure 3.22 Global energy demand for heating and cooling of the baseline scenario vs retrofit scenario at country level (Scenario III)**

### 3.3.4 Scenario IV: Refurbishment nZEB oriented

This section reports the main results of the last scenario proposed. Scenario IV focus on a refurbishment towards nZEB of all existing building stocks. As mentioned above, the envelope of the energy models has been changed for reducing the U-value of floor, wall, roof and windows. Also, in order to account the RED for the existing building stocks, the results of this scenario are combined with the installation of PV and solar thermal systems proposed into the scenario III.

This scenario has been performed for verifying how the performance of the envelope could affect the energy demand (e.g. the energy demand for heating decreases and that for cooling increase).

In Table 3.5, a comparison among the effect connect to the action applied to all the archetypes of the same climatic zone is shown. The results have been calculated as average of the initial value divided for geographic location and country. The deviation of the heating energy demand and of the cooling demand is presented as a percentage of the value of the not retrofitted building (Baseline), for each one of the cases studied. This kind of representation of the results aims to show in an immediate way which climatic zone have the most effective benefits/impact. The results are reported as arithmetic mean.

**Table 3.9 Final energy demand pre- and post-retrofit for climatic zone Scenario IV**

| Data | | | Period of construction | Average results baseline scenario [kWh/m$^2$] | Deviation Retrofit scenario [kWh/m$^2$] |
|---|---|---|---|---|---|
| **Cooling demand** | C | MFH | < 1945 | 10.31 | 38% |
| | | | 1945-1969 | 11.48 | 33% |
| | | | 1970-1989 | 15.37 | 24% |
| | | | 1990-2010 | 13.96 | 38% |
| | | SFH | < 1945 | 3.73 | 22% |
| | | | 1945-1969 | 4.13 | 32% |
| | | | 1970-1989 | 2.90 | 35% |
| | | | 1990-2010 | 17.26 | 20% |
| | M | MFH | < 1945 | 4.56 | 46% |
| | | | 1945-1969 | 4.73 | 41% |
| | | | 1970-1989 | 8.80 | 52% |
| | | | 1990-2010 | 11.61 | 59% |
| | | SFH | < 1945 | 8.09 | 53% |
| | | | 1945-1969 | 8.32 | 28% |
| | | | 1970-1989 | 4.24 | 29% |
| | | | 1990-2010 | 15.07 | 81% |
| | W | MFH | < 1945 | 34.26 | 4% |
| | | | 1945-1969 | 34.46 | 10% |

|  |  |  |  |  |  |
|---|---|---|---|---|---|
|  |  |  | 1970-1989 | 28.76 | 4% |
|  |  |  | 1990-2010 | 34.62 | 2% |
|  |  | SFH | < 1945 | 53.20 | 8% |
|  |  |  | 1945-1969 | 53.25 | 1% |
|  |  |  | 1970-1989 | 47.40 | 5% |
|  |  |  | 1990-2010 | 51.39 | 10% |
| **Heating demand** | C | MFH | < 1945 | 133.23 | -27% |
|  |  |  | 1945-1969 | 123.45 | -25% |
|  |  |  | 1970-1989 | 90.33 | -17% |
|  |  |  | 1990-2010 | 51.91 | -36% |
|  |  | SFH | < 1945 | 280.65 | -13% |
|  |  |  | 1945-1969 | 264.67 | -24% |
|  |  |  | 1970-1989 | 217.56 | -31% |
|  |  |  | 1990-2010 | 113.45 | -13% |
|  | M | MFH | < 1945 | 137.30 | -30% |
|  |  |  | 1945-1969 | 131.39 | -21% |
|  |  |  | 1970-1989 | 93.78 | -19% |
|  |  |  | 1990-2010 | 53.95 | -22% |
|  |  | SFH | < 1945 | 205.71 | -24% |
|  |  |  | 1945-1969 | 196.40 | -26% |
|  |  |  | 1970-1989 | 155.14 | -19% |
|  |  |  | 1990-2010 | 62.05 | -17% |
|  | W | MFH | < 1945 | 42.35 | -39% |
|  |  |  | 1945-1969 | 39.90 | -21% |
|  |  |  | 1970-1989 | 35.87 | -28% |
|  |  |  | 1990-2010 | 18.01 | -31% |
|  |  | SFH | < 1945 | 78.44 | -26% |
|  |  |  | 1945-1969 | 77.45 | -35% |
|  |  |  | 1970-1989 | 61.79 | -25% |
|  |  |  | 1990-2010 | 24.54 | -21% |

## 3.4 RESULTS: DISCUSSION AND FINAL REMARKS

Simulations of the 672 archetypes are carried out using about 1700 weather data for the EU-28. The results generated from these simulations, calibrated and validated, are aggregated for country and for thermal services required at 2010, multiplying the ideal load required for heating and cooling by each archetype for the number of buildings that represents. The data are compared to that measured from the JRC-IDEES database, correcting the data for the ratio between the net floor area of the archetypes and the average net floor area taken into account in the datahubs for the 2010. In order to verify that model developed is sufficiently representative of the existing

European building stocks in order to be able to generate reliable results for the purposes of the research presented here. The assessment of thermal behavior of the building stock models are performed according to five metrics, including the normalized mean bias error (NMBE) and the coefficient of variation of the root mean square error, CV(RMSE). These results are summarized at European level, the root mean square error (RMSE) of the simulated heating and cooling ideal load 7.164TWh and 0.626TWh in comparison with the statistical data.

**Table 3.10 European Heating and cooling validation results summary at 2010**

| | **Cooling** | **Heating** | **Both** |
|---|---|---|---|
| **MBE [TWh]** | 0.086 | (3.619) | (1.766) |
| **NMBE [%]** | 8.20% | -6.06% | -5.81% |
| **RMSE[TWh]** | 0.626 | 7.164 | 5.085 |
| **CV(RMSE) [%]** | 57.45% | 12.00% | 16.73% |
| **$R^2$ [%]** | 97.52% | 99.81% | 99.83% |

The summary of the validation results of the thermal energy services indicates a heating and cooling ideal load required by the models respectively of about 1,773.41 TWh and 28.08 TWh (value multiplied for the air conditioner penetration rate and the ratio between the archetypes floor area and the average net surface). Therefore, the building stock model can be said to be valid for the purposes of the research conducted and it is then will be used to analyze the energy performance of each archetype.

The 672 buildings are developed as thermophysical objects for running into the Energy plus simulations with a bottom up approach. In order to account the potential benefits of a bottom up approach in comparison with a top down model, the results are compared identifying that the weather condition could affect for than the 50% the average energy demand for heating and cooling calculated with a top down approach. Large variation could have the model changing the weather data selected from an SFH to an MFH and from a country to another in the same climatic zone.

The model energy results show that about the 70% of thermal energy used in EU-28 residential building stock is associated to the heating, if the ideal cooling demand is satisfied.

Using all the data from the model, it is estimated that EU-28 consume about 1697TWh for heating and 287TWh for cooling.

The DHW thermal energy calculated from the model is about 2MWh for archetype in a year.

In order to observe the potential energy saving that could be generated by some retrofit actions, alternative scenarios are proposed, where it is calculated that:

- At European level, the installation of insulation materials for improving the performance of the envelope of all buildings could be reduce the energy required for heating of about 418.9 TWh and an increase of about 106.42 TWh for cooling demand (if all the buildings have air conditioner technologies in the house). Instead, a partial refurbishment towards nZEB could be reduce the thermal energy demand for heating of about 1355 TWh and increasing cooling demand of 81.6TWh.
- The application of a solar collector system and a PV system in all the buildings could reduce the thermal energy demand for DHW of about 179.64 TWh and the electricity required from the grid of 620TWh. Also, the surplus of electricity produced by the PV is about 228.65TWh of energy that could reduce the electricity produced by fossil fuel;
- The reduction of heating and cooling demand during the night could reduce the thermal energy demand of about 412 and 14TWh.

# CHAPTER 4. LIFE CYCLE ASSESSMENT RESULTS

This chapter presents the LCA results. The first section shows the results for the heating and DHW datasets elaborated for each country and a comparison between the electricity energy and environmental mix defined on Ecoinvent 3.4 database at national level. Moreover, according to the European Standard UNI EN 15978 [106] and in order to achieve the goals set in goal and scope definition stage, more details are shown for each alternative scenario. In detail, section … shows the environmental impacts produced during the materials production, the transports of materials and components to the building site and the End-of-life following the assumption reported above into the methodological approach chapter. Next section shows the environmental impacts/benefits produced during operation use as variation from baseline scenario. Finally, in order to compare the primary energy use and environmental impacts/benefit due to the application of alternative scenarios on the existing building stocks, the potential environmental impacts avoided thanks to the renewable energy produced during the use stage and insulation material installed. Also, for each the environmental payback times (PBTs), for each impact category analyzed in the LCIA stage, are calculated.

At the end, for all the scenarios, the European environmental impacts and the PBt are analyzed for observing the effects at macro level.

All results are expressed in terms of archetypes for one year and for country.

The total primary avoided energy throughout the rest of the building's life at aggregated level varies for each country and for each archetype. Also, in order to account the national electricity, heating and DHW mix, the environmental datasets have been implemented as reported into the section above.

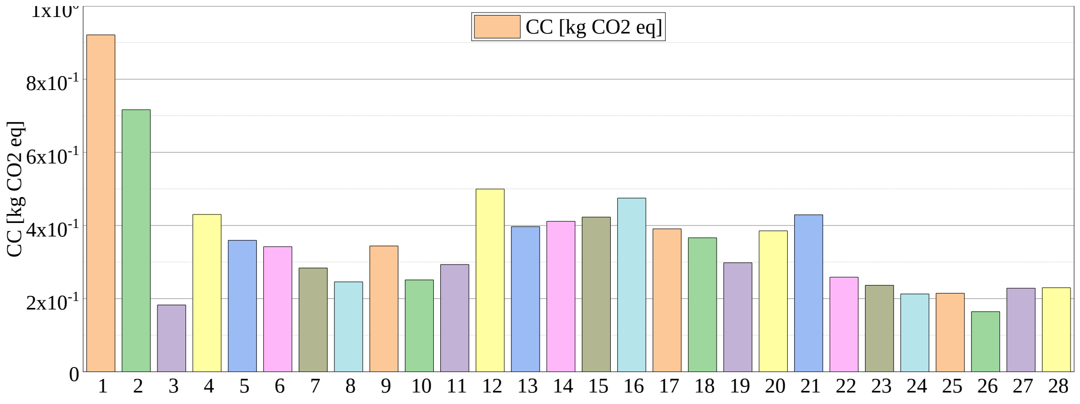
## 4.1 LIFE CYCLE IMPACTS OF MATERIALS AND ENERGY NATIONAL MIX

### 4.1.1 Life cycle impacts of energy demand

In order to account that each region is characterized by intense use of different type of fuels and by technologies efficiency; for calculating the environmental impacts avoided, the heating, cooling and DHW impacts profiles are necessary steps for understanding the real benefits that could be obtained for a building built in specific period of construction and studied into a different climatic condition.

As mentioned above, the calculation of 1kWh of thermal energy for heating and DHW in each country has been calculated taken into account the average efficiency and the thermal energy service provided by each technology at regional level. In particular, for comparing the impacts for country, the results are aggregated into graphs for type of impact categories. The presentation of the impacts related to 1kWh of thermal energy and of electricity is useful to understand the avoided impacts connect to all scenarios proposed. It is important remember that these impacts profiles are representative of the national energy mix at 2010.

The impacts profile of 1 kWh of thermal energy spent for cooling is not reported because depends on the electricity profile of each country divided for the average efficiencies of the AC technologies.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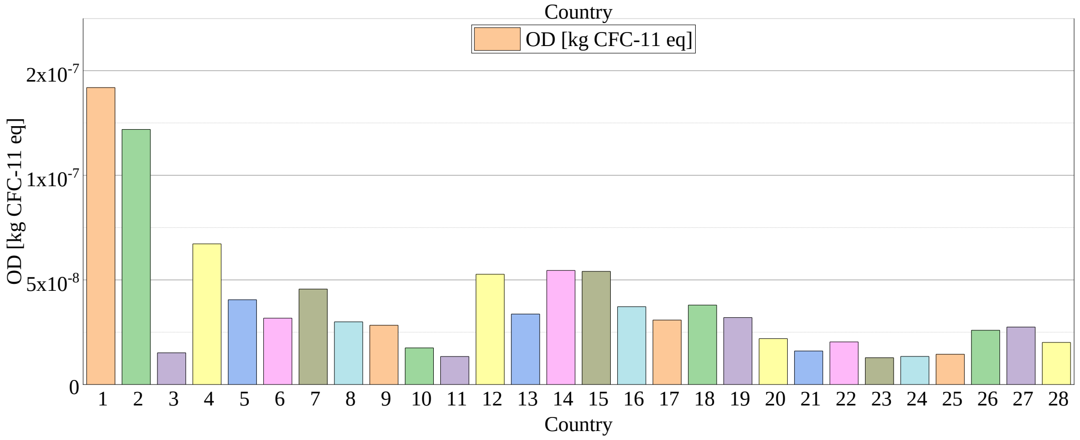
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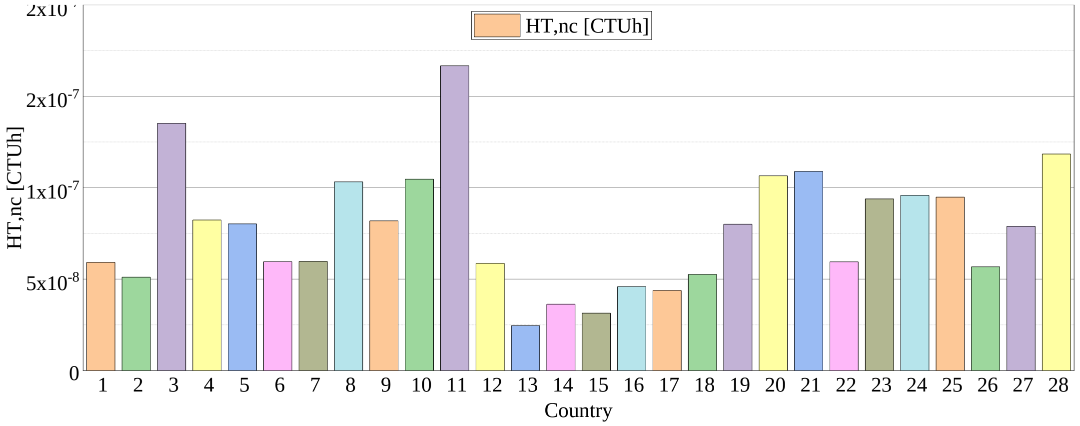
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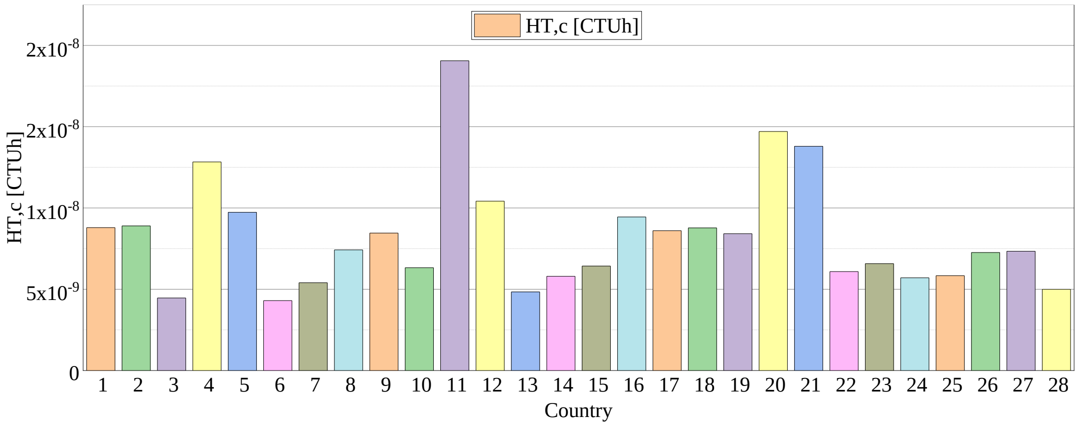
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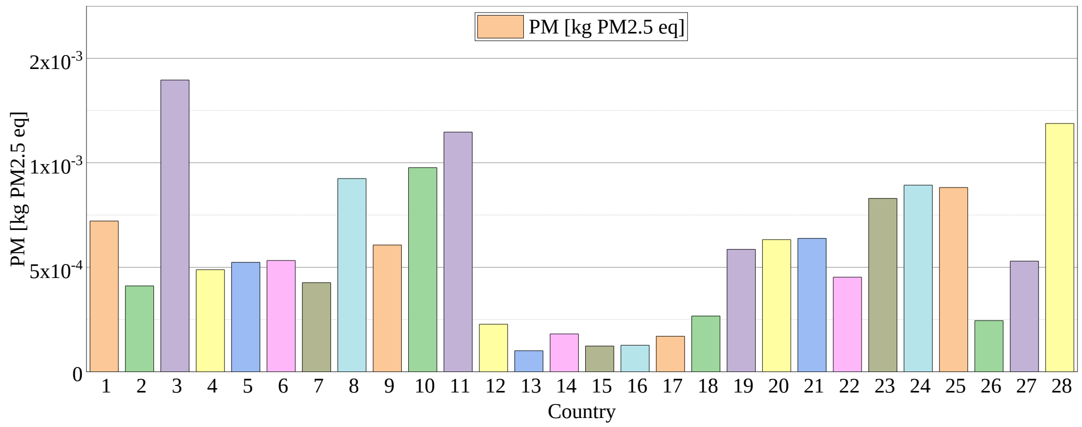
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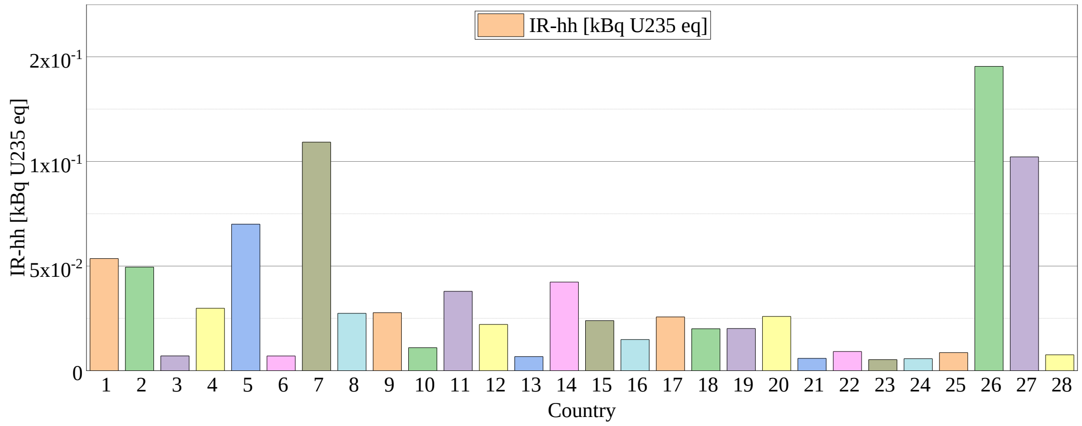
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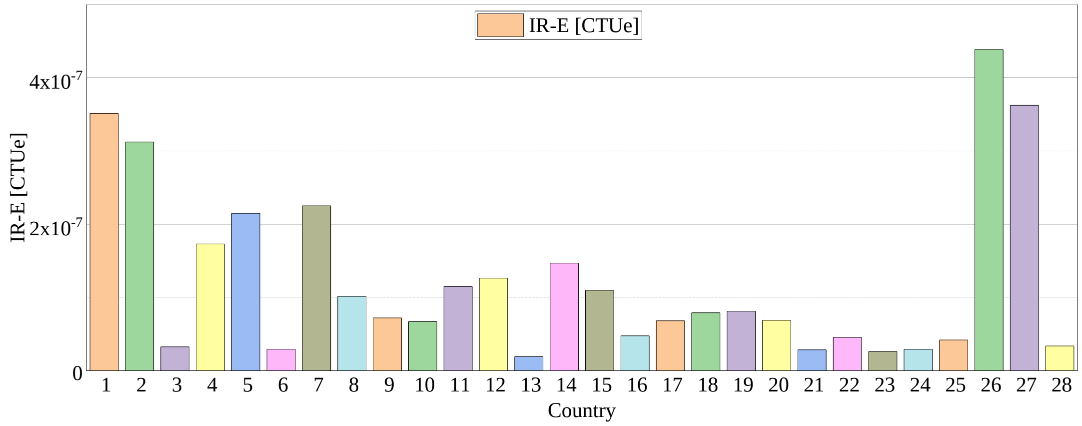
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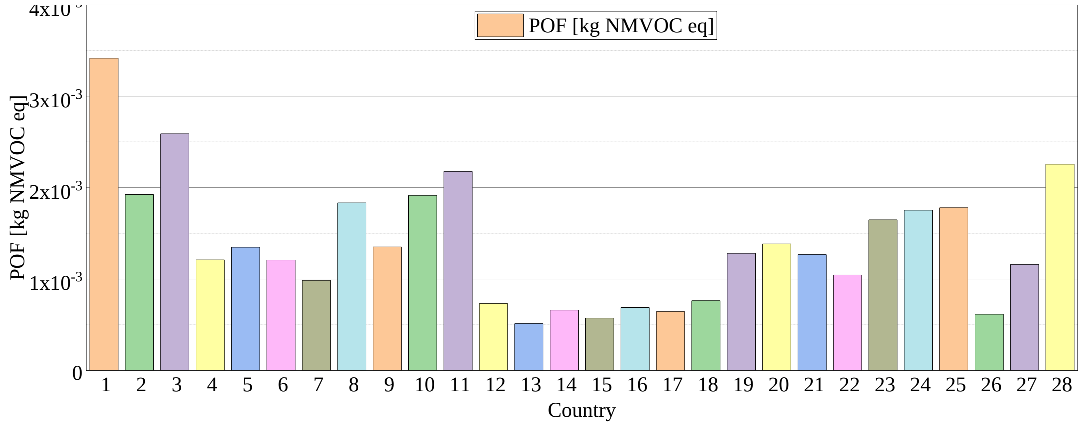
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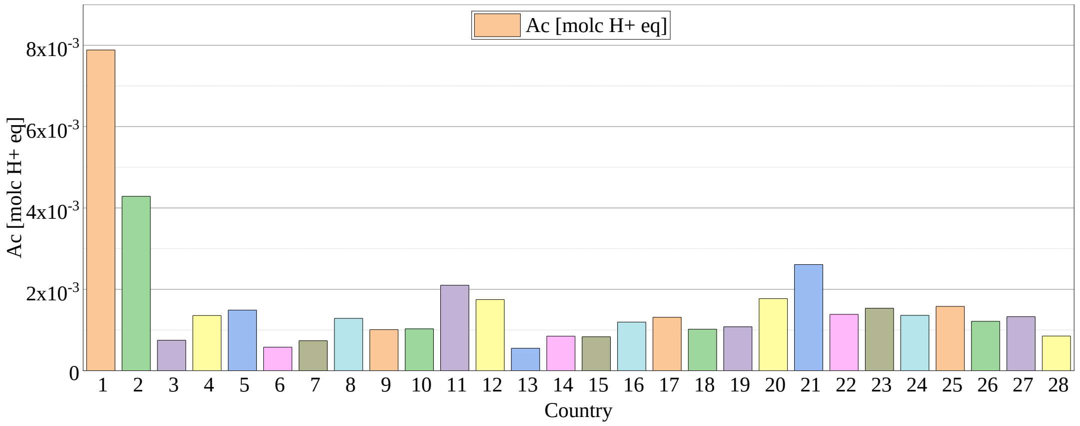
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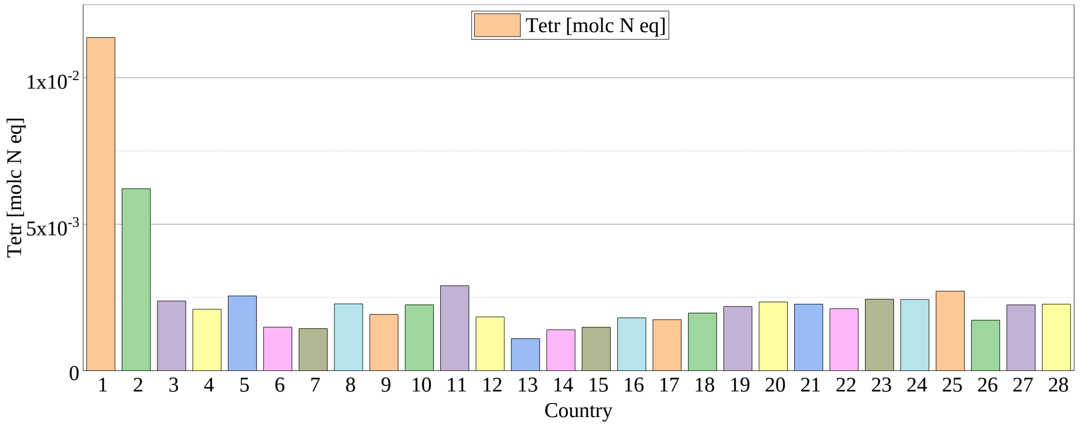
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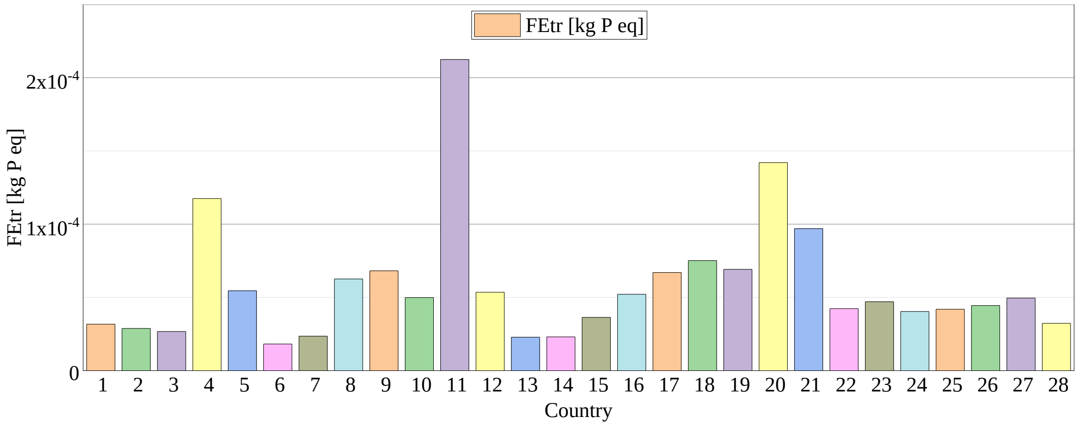
Country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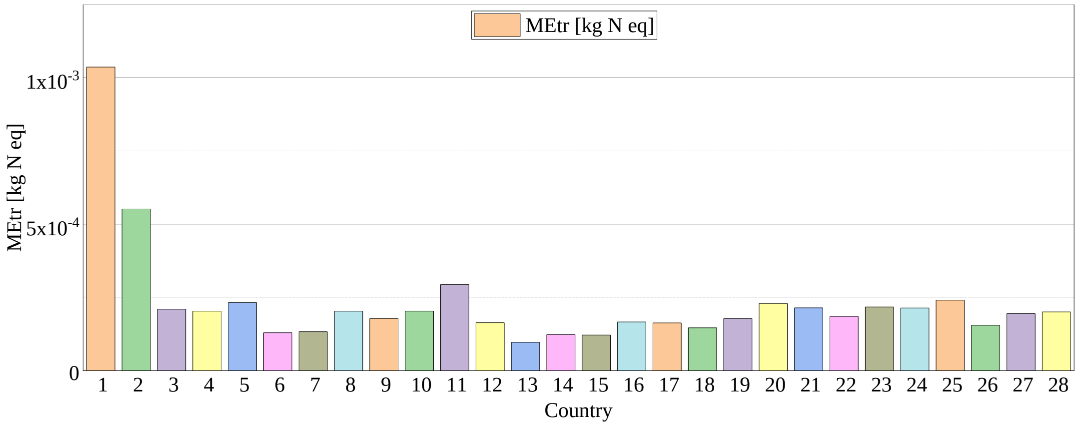
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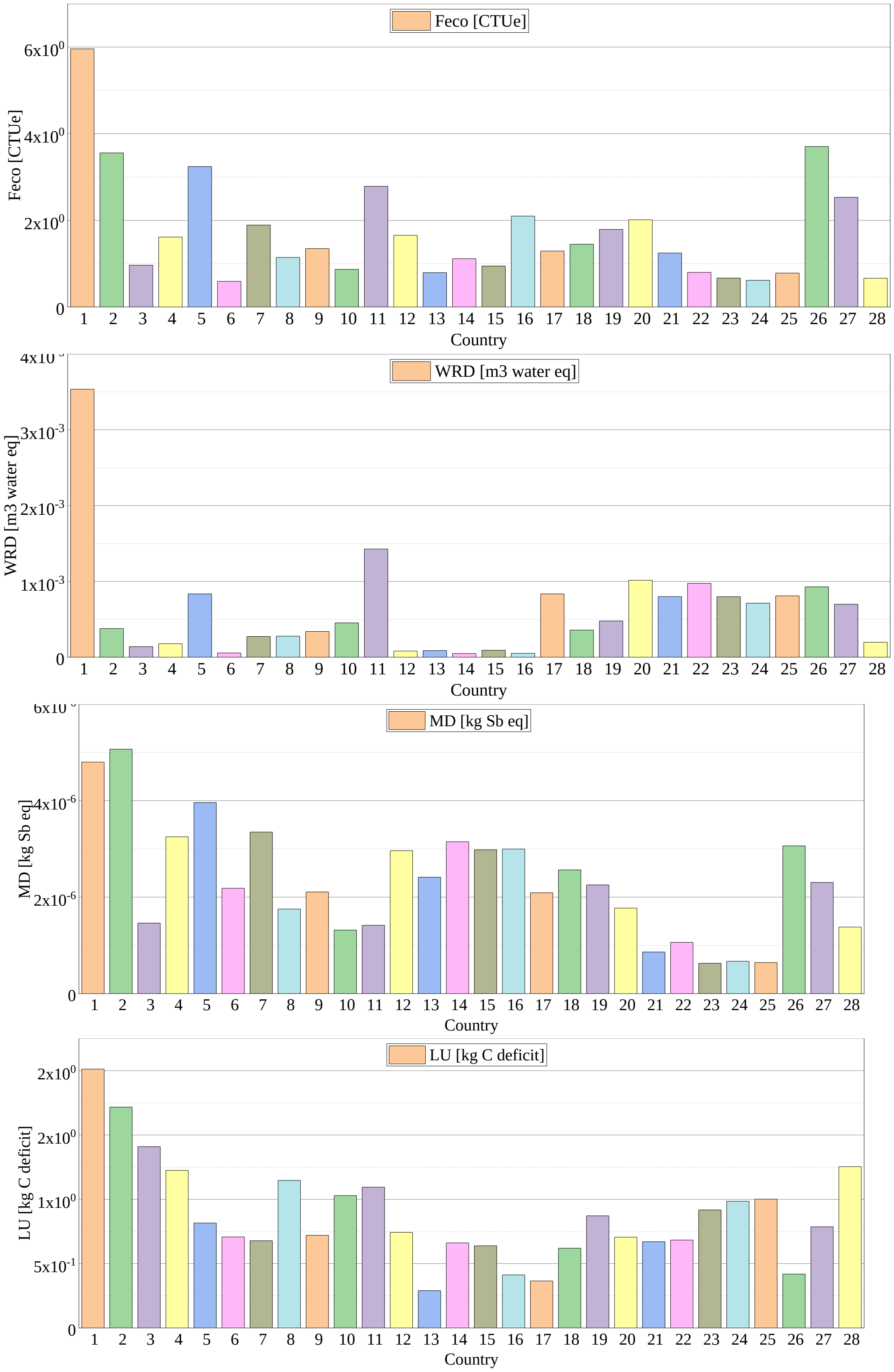
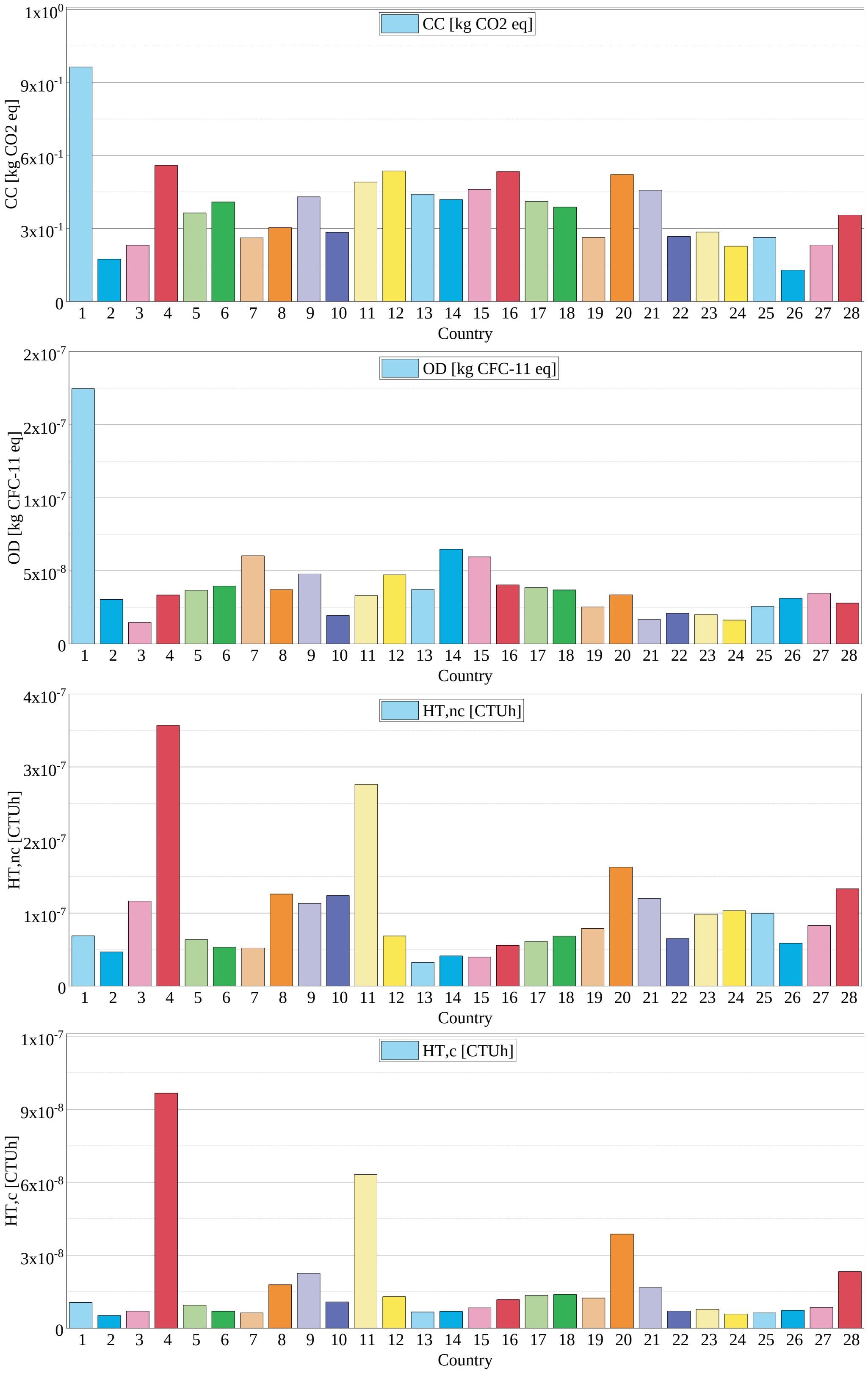


**Figure 4.1 Environmental impacts of 1kWh of thermal energy for heating for country (number for 1 to 28 represent the country as reported in nomenclature table)**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Country
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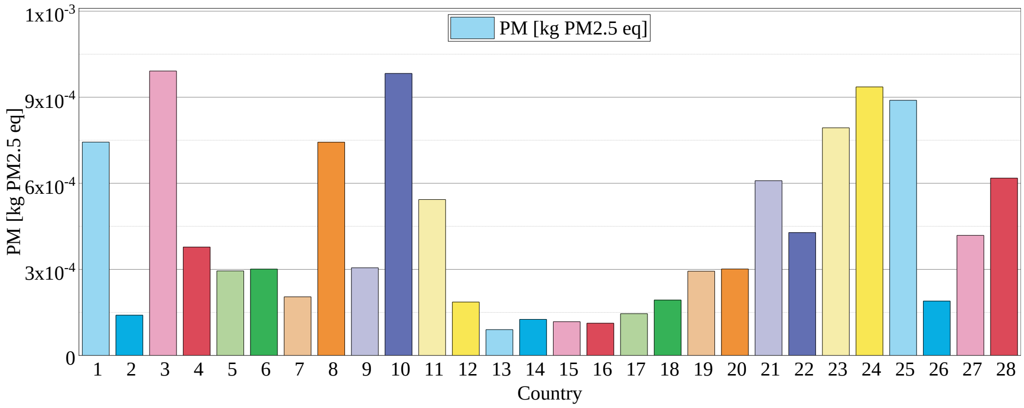
Country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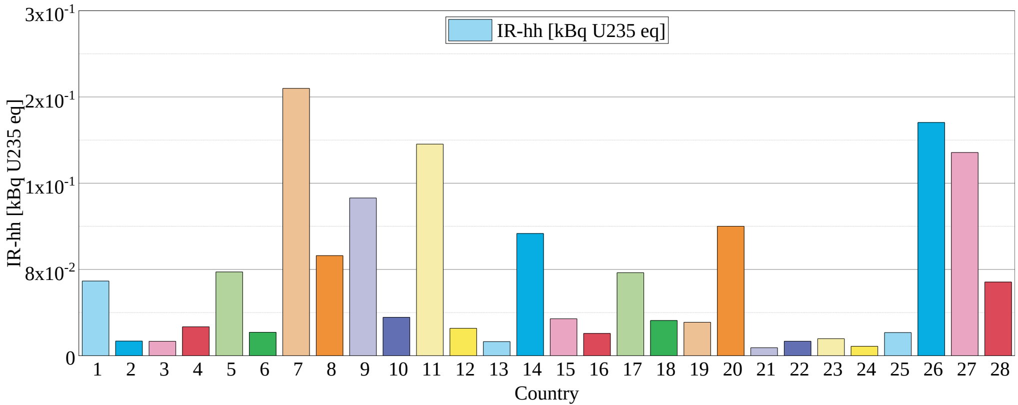
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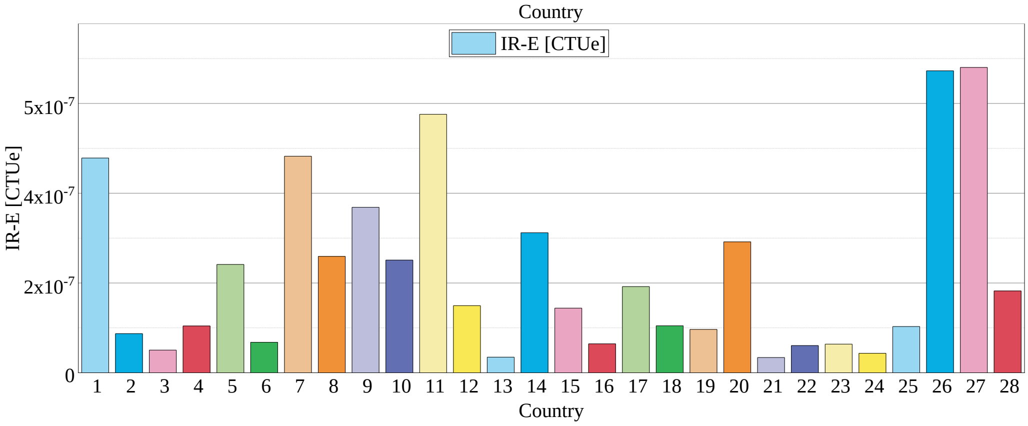
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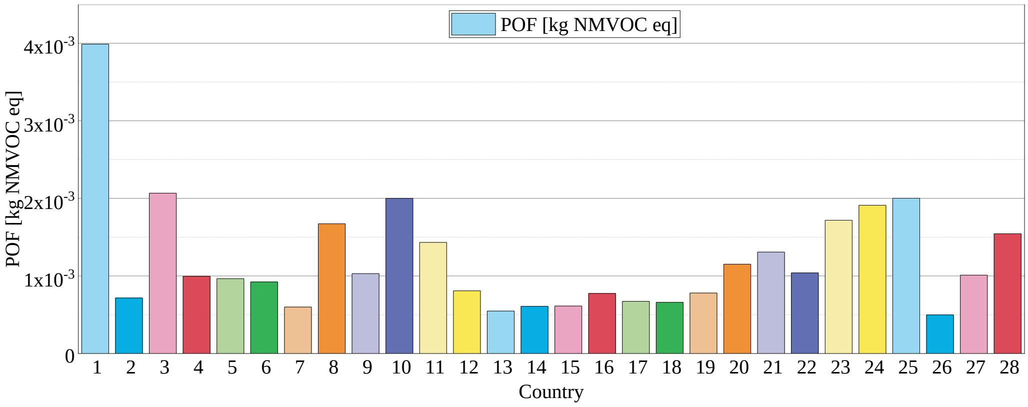
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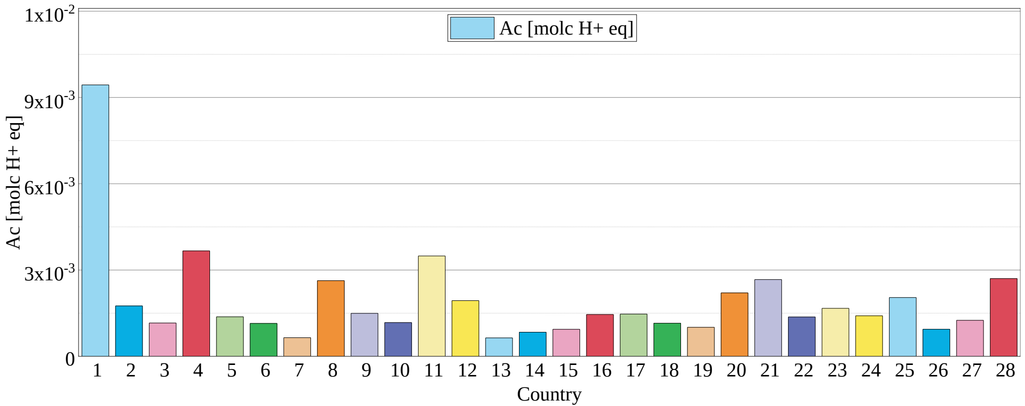
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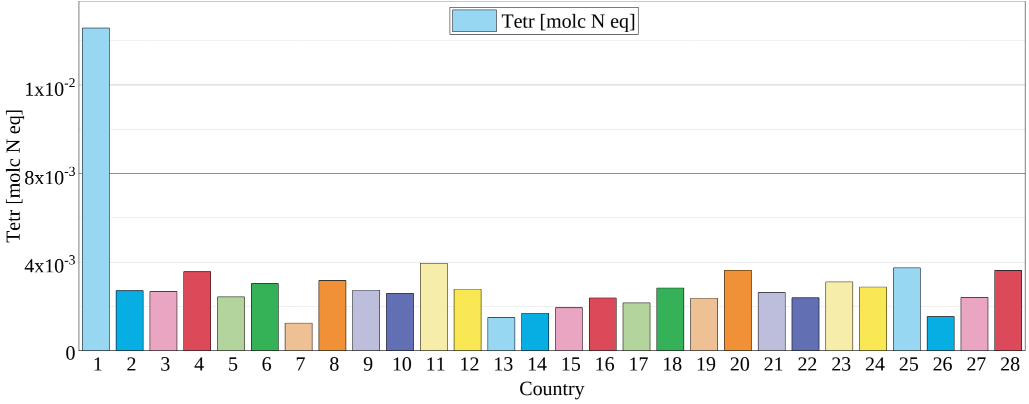
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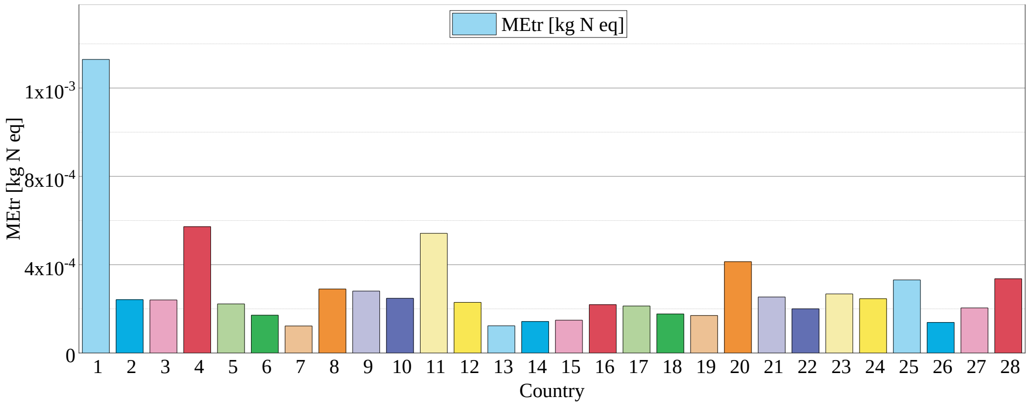
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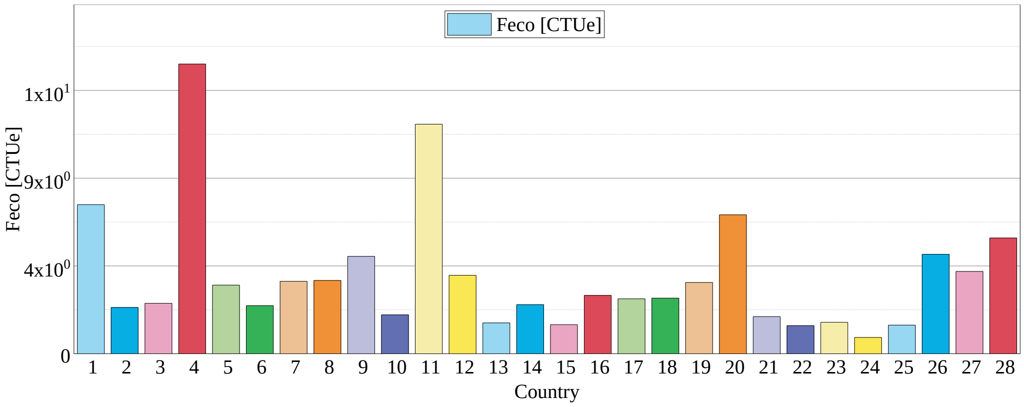
Country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Country

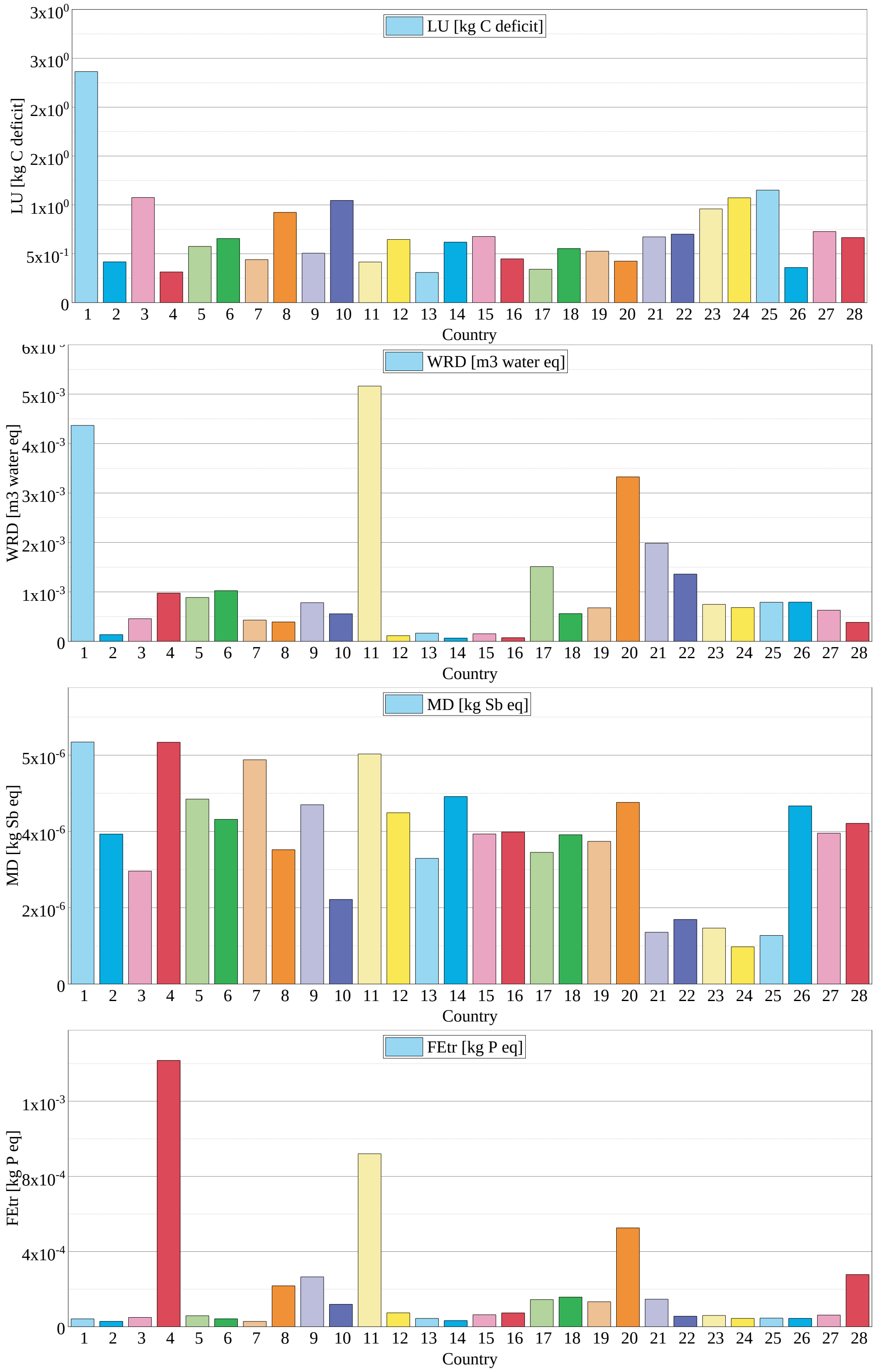
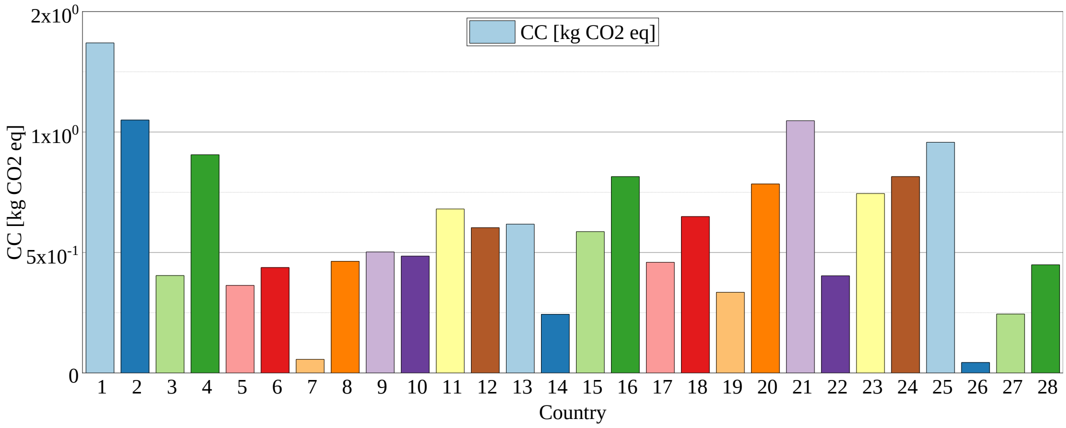
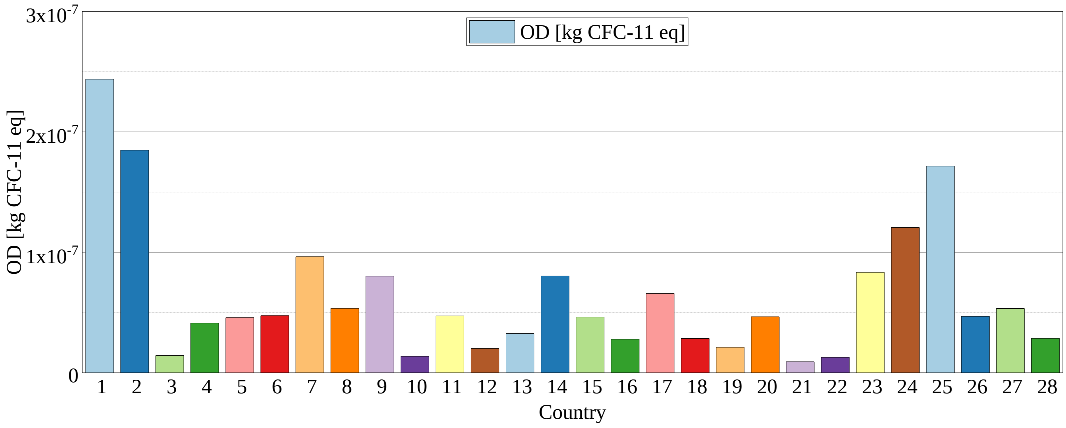
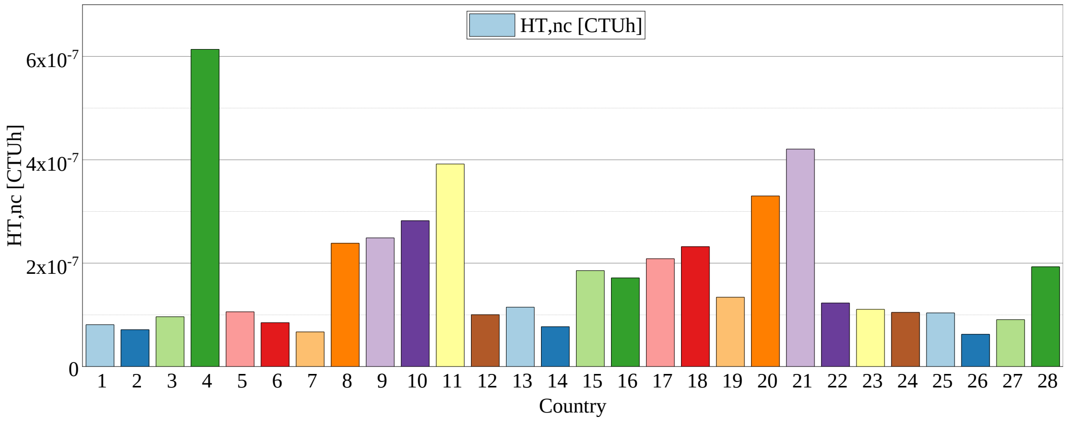
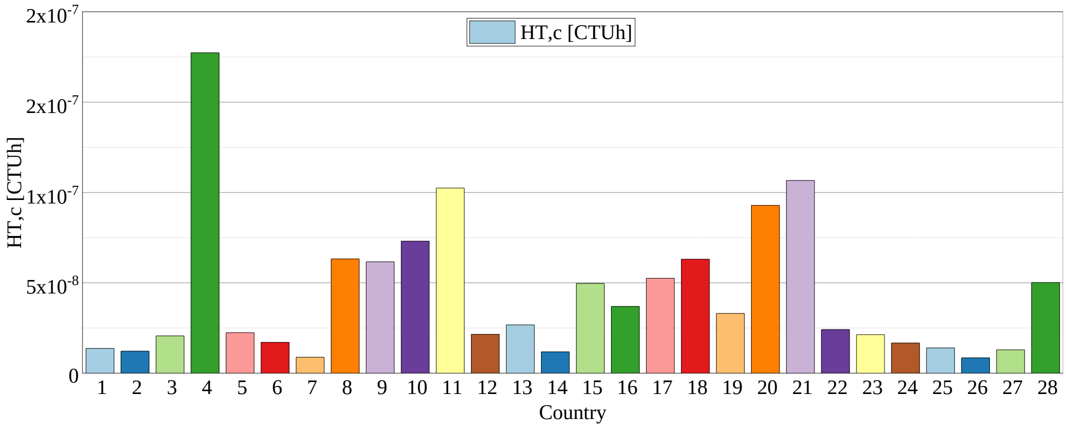


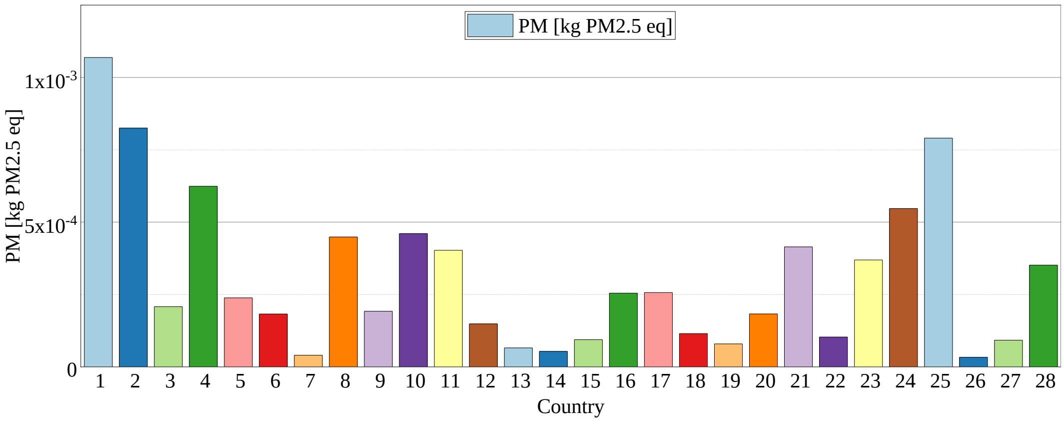
**Figure 4.2 Environmental impacts of 1kWh of thermal energy for DHW for country (numbers represent the country)**

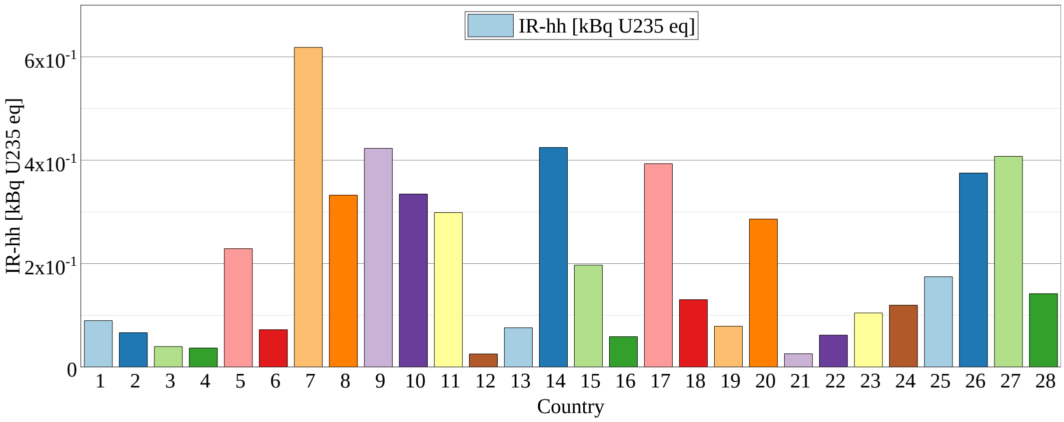

CC [kg CO2 eq]
CC [kg CO2 eq]
2x10^0
1x10^0
5x10^-1
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country

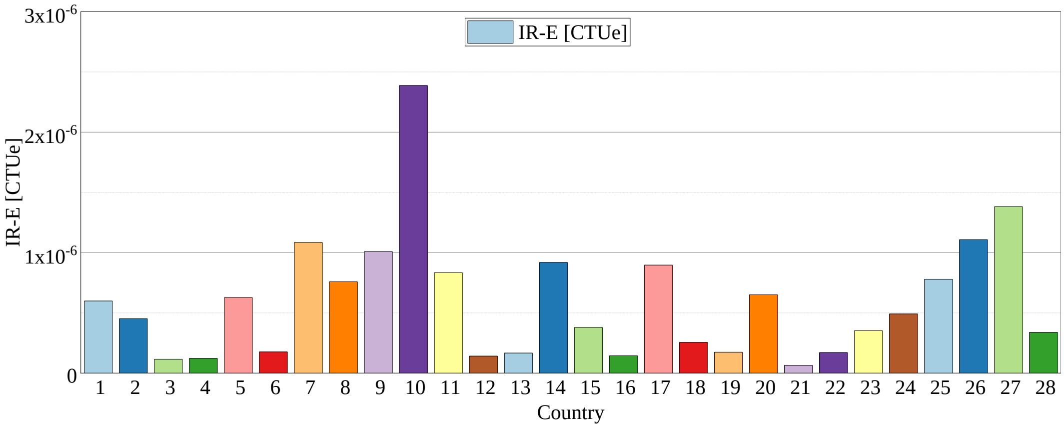

OD [kg CFC-11 eq]
OD [kg CFC-11 eq]
3x10^-7
2x10^-7
1x10^-7
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country

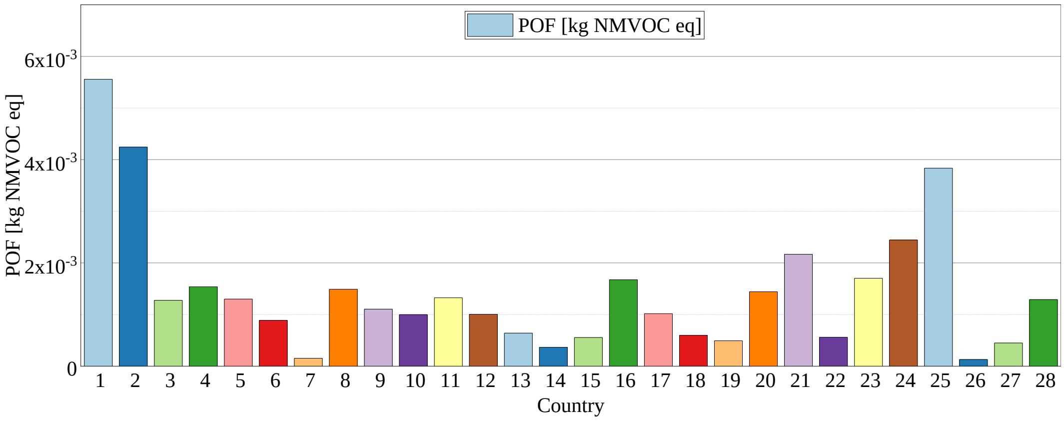

HT,nc [CTUh]
HT,nc [CTUh]
6x10^-7
4x10^-7
2x10^-7
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country

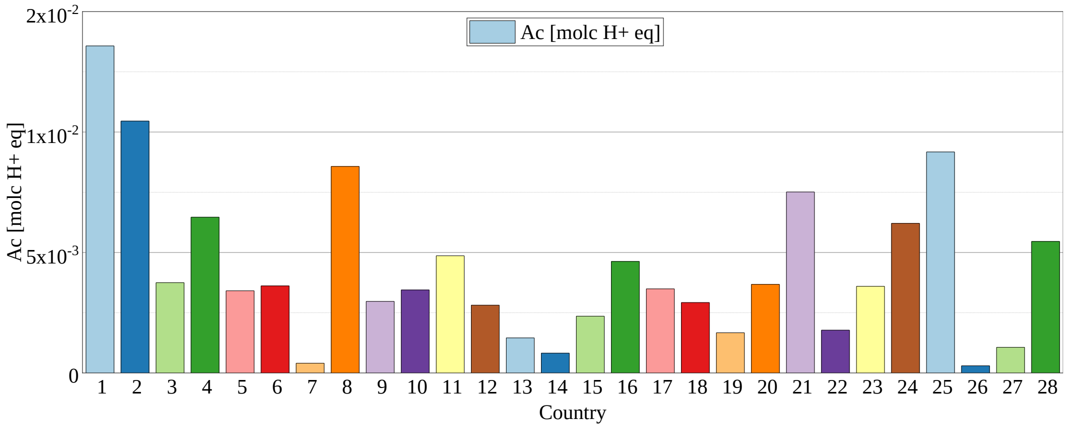

HT,c [CTUh]
HT,c [CTUh]
2x10^-7
2x10^-7
1x10^-7
5x10^-8
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country


PM [kg PM2.5 eq]
PM [kg PM2.5 eq]
1x10-3
5x10-4
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country

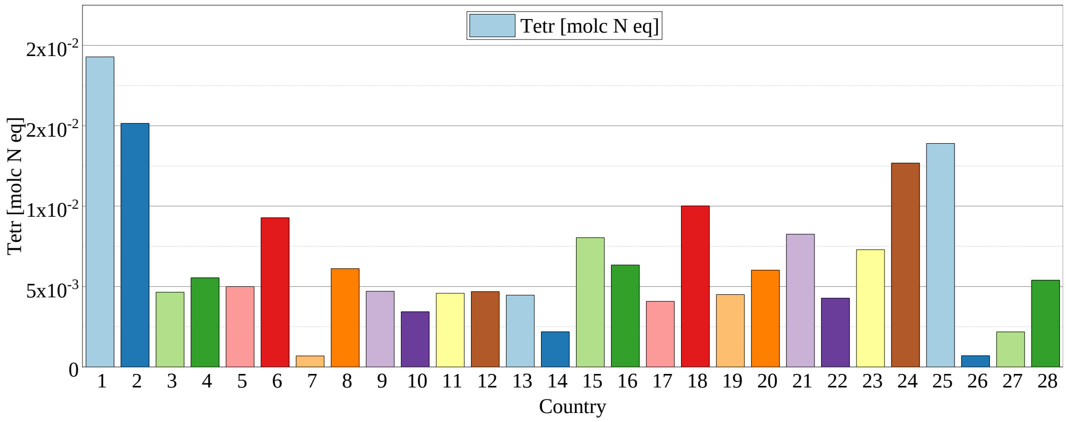

IR-hh [kBq U235 eq]
IR-hh [kBq U235 eq]
6x10-1
4x10-1
2x10-1
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country


IR-E [CTUe]
IR-E [CTUe]
3x10-6
2x10-6
1x10-6
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country

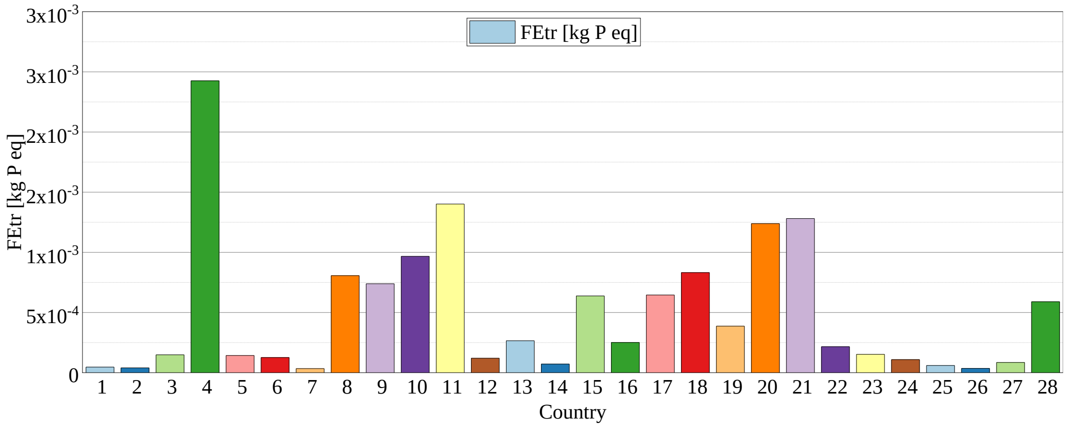

POF [kg NMVOC eq]
POF [kg NMVOC eq]
6x10-3
4x10-3
2x10-3
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country



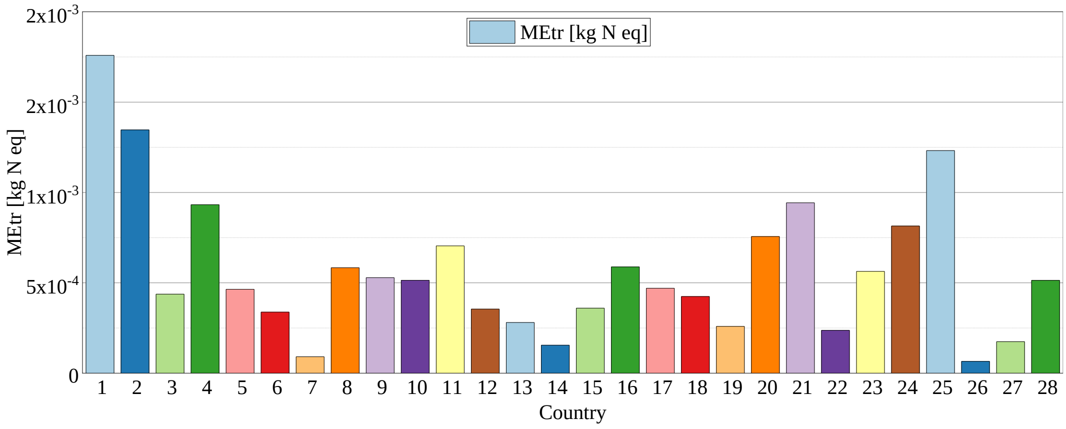
Ac [molc H+ eq]
2x10^-2
1x10^-2
5x10^-3
0
Ac [molc H+ eq]
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country



Tetr [molc N eq]
2x10^-2
2x10^-2
1x10^-2
5x10^-3
0
Tetr [molc N eq]
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country



FEtr [kg P eq]
3x10^-3
3x10^-3
2x10^-3
2x10^-3
1x10^-3
5x10^-4
0
FEtr [kg P eq]
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country



MEtr [kg N eq]
2x10^-3
2x10^-3
1x10^-3
5x10^-4
0
MEtr [kg N eq]
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
Country

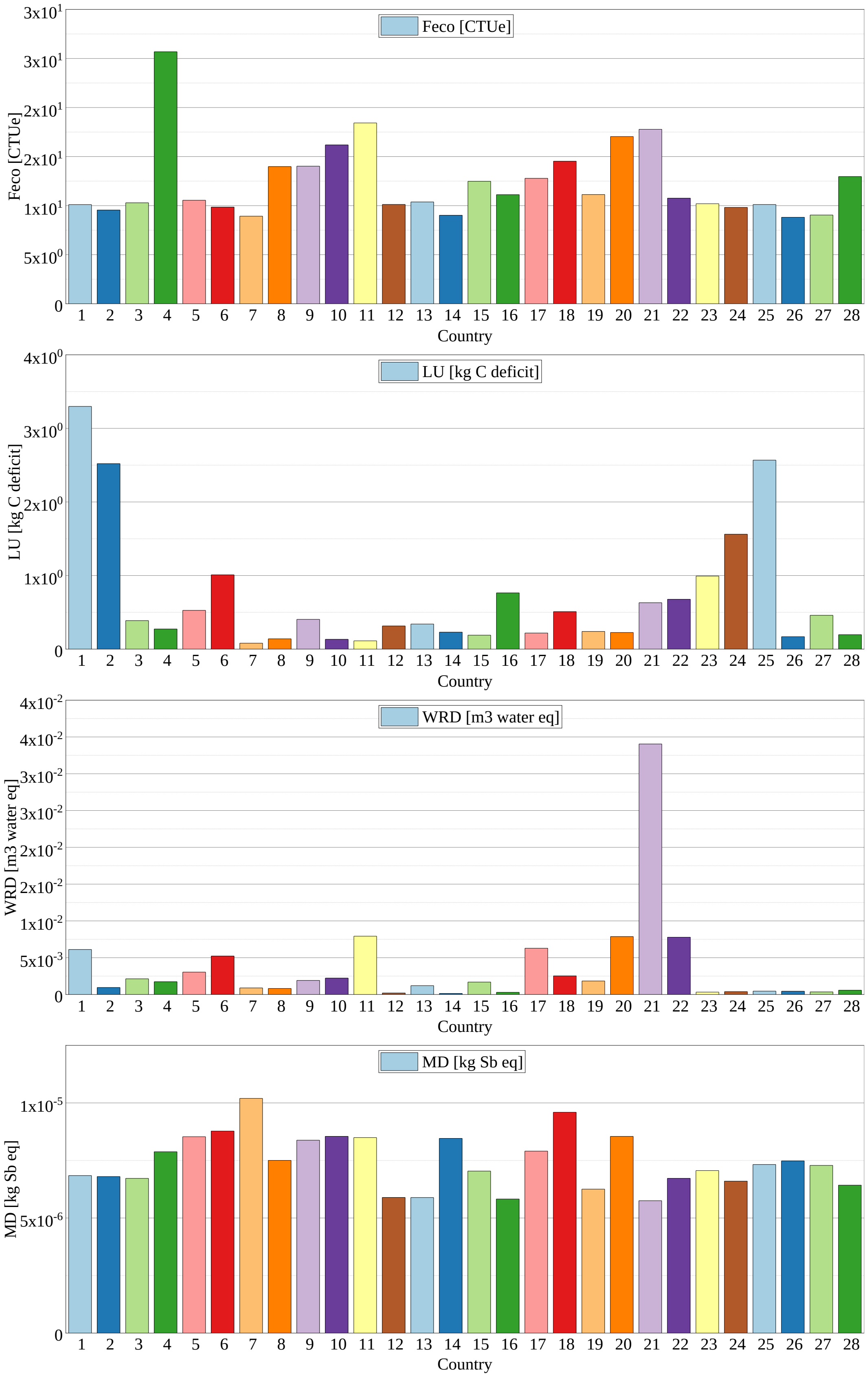


**Figure 4.3 Environmental impacts of 1kWh of electricity for country (numbers represent the country)**

The impact profile elaborated have great effects on the calculation of avoided impacts and on the calculation of the payback time.

### 4.1.2 Life cycle impacts of material and technologies

This section reports the environmental impacts connect to the materials and technologies used for a refurbishment toward nZEB. Table reports the environmental impacts connect to all the life cycle stage (production, transport, installation and end-of-life) accounted for 1kg of insulation materials.

**Table 4.1 Environmental impacts of 1 kg of insulation materials**

| Impact category | Unit | Wood wool, cement board | Cellulose fiber | Cork slab | Stone wool |
|---|---|---|---|---|---|
| **CC** | kg CO2 eq | 7.42E-01 | 7.40E-01 | 1.69E+00 | 1.33E+00 |
| **OD** | kg CFC-11 eq | 5.01E-08 | 6.94E-08 | 1.64E-07 | 1.08E-07 |
| **HT_CE** | CTUh | 1.26E-07 | 3.68E-07 | 4.18E-07 | 3.35E-07 |
| **HT_nCE** | CTUh | 2.57E-08 | 5.31E-08 | 9.07E-08 | 6.56E-08 |
| **PM** | kg PM$^{2}$.5 eq | 2.43E-04 | 7.60E-04 | 1.33E-03 | 1.10E-03 |
| **IR_hh** | kBq U235 eq | 6.90E-02 | 1.07E-01 | 3.14E-01 | 1.61E-01 |
| **POF** | kg NMVOC eq | 2.28E-03 | 3.23E-03 | 5.38E-03 | 6.20E-03 |
| **AC** | molc H+ eq | 2.61E-03 | 4.87E-03 | 1.06E-02 | 1.21E-02 |
| **ET** | molc N eq | 7.98E-03 | 1.13E-02 | 2.31E-02 | 2.20E-02 |
| **EuF** | kg P eq | 1.17E-04 | 2.58E-04 | 6.85E-04 | 4.28E-04 |
| **EuM** | kg N eq | 7.02E-04 | 1.01E-03 | 1.59E-03 | 1.30E-03 |
| **Ec_FW** | CTUe | 2.92E+00 | 9.02E+00 | 1.13E+01 | 8.68E+00 |
| **RD_MFR** | kg Sb eq | 1.75E-05 | 1.34E-04 | 5.20E-05 | 2.81E-05 |

**Table 4.2 Environmental impacts of the solar collector plants**

| | | MFH_C_ | MFH_M_ | MFH_W_ | SFH_C_ | SFH_M_ | SFH_W_ |
|---|---|---|---|---|---|---|---|
| **CC** | kg CO2 eq | 7.45E+03 | 8.63E+03 | 8.99E+03 | 9.56E+02 | 8.94E+02 | 1.48E+03 |
| **OD** | kg CFC-11 eq | 7.16E-04 | 7.83E-04 | 8.05E-04 | 7.56E-05 | 6.85E-05 | 8.00E+02 |
| **HT_CE** | CTUh | 3.21E-02 | 3.59E-02 | 3.63E-02 | 3.40E-03 | 3.31E-03 | 1.20E+03 |
| **HT_nCE** | CTUh | 2.69E-03 | 3.22E-03 | 3.65E-03 | 4.68E-04 | 4.58E-04 | 1.60E+03 |
| **PM** | kg PM$^{2}$.5 eq | 1.11E+01 | 1.29E+01 | 1.33E+01 | 1.40E+00 | 1.34E+00 | 2.00E+03 |
| **IR_hh** | kBq U235 eq | 5.55E+02 | 6.14E+02 | 6.47E+02 | 6.46E+01 | 5.48E+01 | 2.46E+03 |
| **POF** | kg NMVOC eq | 1.87E-03 | 2.08E-03 | 2.19E-03 | 2.24E-04 | 1.93E-04 | 2.80E+03 |
| **AC** | molc H+ eq | 3.52E+01 | 4.02E+01 | 4.17E+01 | 4.29E+00 | 3.96E+00 | 3.20E+03 |
| **ET** | molc N eq | 1.22E+02 | 1.38E+02 | 1.40E+02 | 1.35E+01 | 1.30E+01 | 3.62E+03 |
| **EuF** | kg P eq | 1.22E+02 | 1.39E+02 | 1.44E+02 | 1.47E+01 | 1.36E+01 | 4.02E+03 |
| **EuM** | kg N eq | 1.80E+01 | 2.02E+01 | 2.04E+01 | 1.92E+00 | 1.87E+00 | 4.40E+03 |
| **Ec_FW** | CTUe | 1.29E+01 | 1.47E+01 | 1.51E+01 | 1.50E+00 | 1.40E+00 | 4.80E+03 |
| **RD_MFR** | kg Sb eq | 7.05E+05 | 7.93E+05 | 8.04E+05 | 7.63E+04 | 7.43E+04 | 9.13E+04 |

Instead, the other table shows the environmental impacts of the solar system modelled in order to accounts the real dimension of the solar collector and of the storage for each archetype.

Table 4.3 reports the environmental impacts of the PV plant.

**Table 4.3 Environmental impacts of 3kWp PV on roof**

| Category | Unit | Pinched | Flat |
|---|---|---|---|
| **CC** | kg CO2 eq | 7.16E+03 | 7.05E+03 |
| **OD** | kg CFC-11 eq | 6.70E-04 | 6.62E-04 |
| **HT_CE** | CTUh | 8.92E-03 | 8.83E-03 |
| **HT_nCE** | CTUh | 1.06E-03 | 9.65E-04 |
| **PM** | kg $PM^2.5$ eq | 6.92E+00 | 6.74E+00 |
| **IR_hh** | kBq U235 eq | 6.25E+02 | 6.17E+02 |
| **POF** | kg NMVOC eq | 2.55E+01 | 2.53E+01 |
| **AC** | molc H+ eq | 5.36E+01 | 5.27E+01 |
| **ET** | molc N eq | 7.91E+01 | 7.77E+01 |
| **EuF** | kg P eq | 6.80E+00 | 6.70E+00 |
| **EuM** | kg N eq | 8.12E+00 | 8.01E+00 |
| **Ec_FW** | CTUe | 7.29E+05 | 7.29E+05 |
| **RD_MFR** | kg Sb eq | 4.26E+01 | 4.26E+01 |

## 4.2 LIFE CYCLE IMPACTS FOR SCENARIOS AND ENVIRONMENTAL PBT

Fistful, the results are grouped for paid and avoided impacts. The environmental impacts are shown aggregating the results for the 24 archetypes showing the standard deviation and average value for squared meter. Then, the results have been analyzed with the application of the environmental PBt, in order to observe which scenario requires the minor time for repaid the retrofit actions.

### 4.2.1 Scenario I: Insulation of the wall

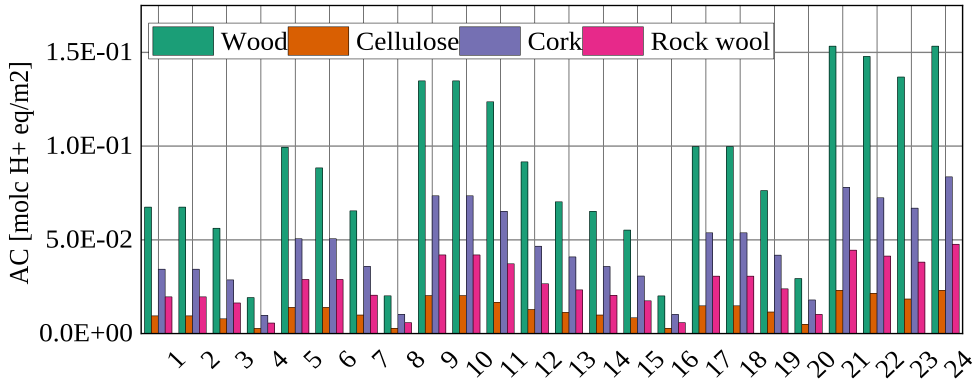
The first scenario focus on the analysis of the environmental impacts connect to the installation of four types of insulation materials as indicated into the methodological approach chapter.

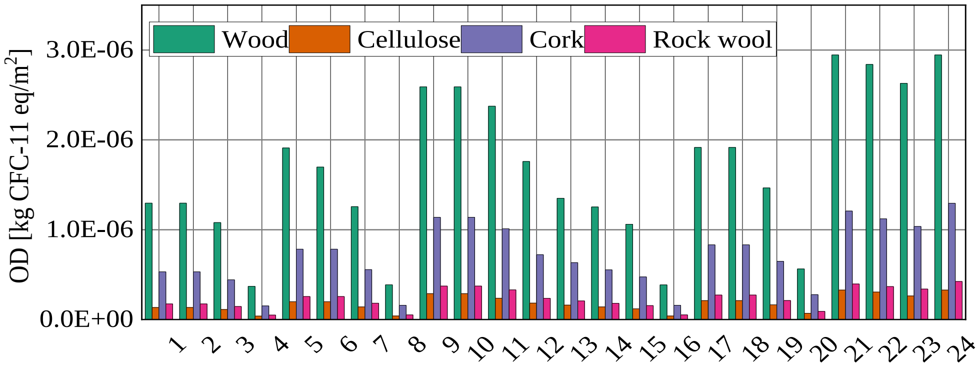
Although, the environmental impacts connect to the insulation materials are the same for the 24 archetypes identified for the three climatic zones, the effects connect to variation of heating and cooling load impacts depend on the heating and cooling profile of each country. These great effects could be underlined with application of the PBt indices.

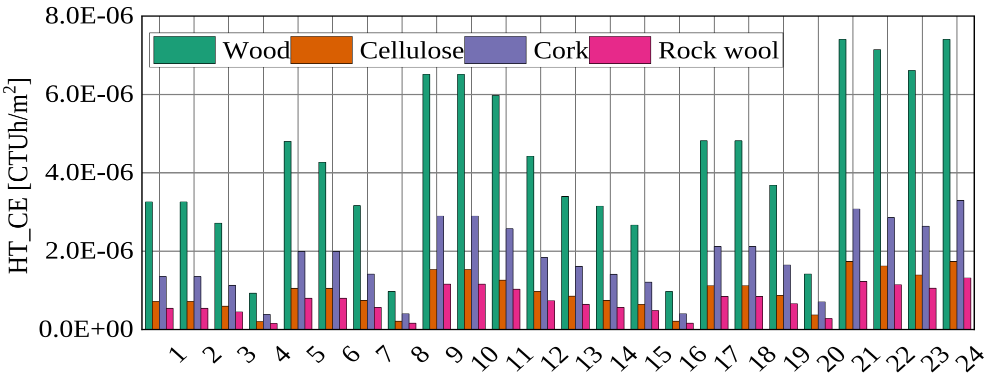
The environmental impacts of the insulation materials for squared meter in a year are shown in Figure 4.4.

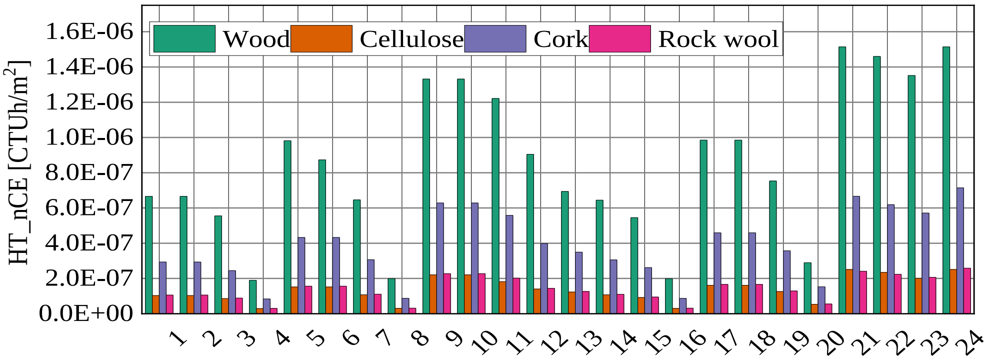
It shows that the environmental impacts of the insulation materials are direct linked to thickness of the materials and also to the environmental impacts for 1kg of materials (Table 4.1), where it is possible observe that although, the cork slab is accounted as bio-based materials is characterized by the greater $CO_2$ emissions than the other materials, this effect is connect to choose of the authors to set the parameter “Carbon emissions in air” equal to “0” into all the project. This decision affects the CC impacts of cork slab that changes from -10kg of $CO_2$ to 1.4 for kg.

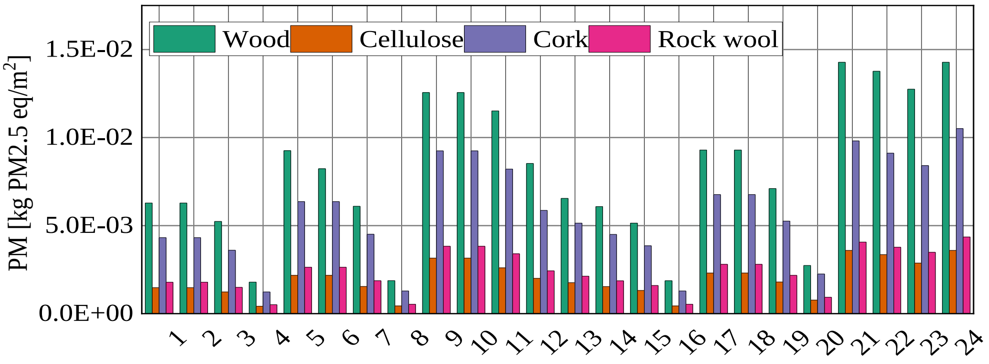
The older households impact more than newer archetypes, because for obtaining the same U-value for all the archetypes into the same climatic zone more quantities of materials are required. This affects the environmental impacts for useful net floor area.

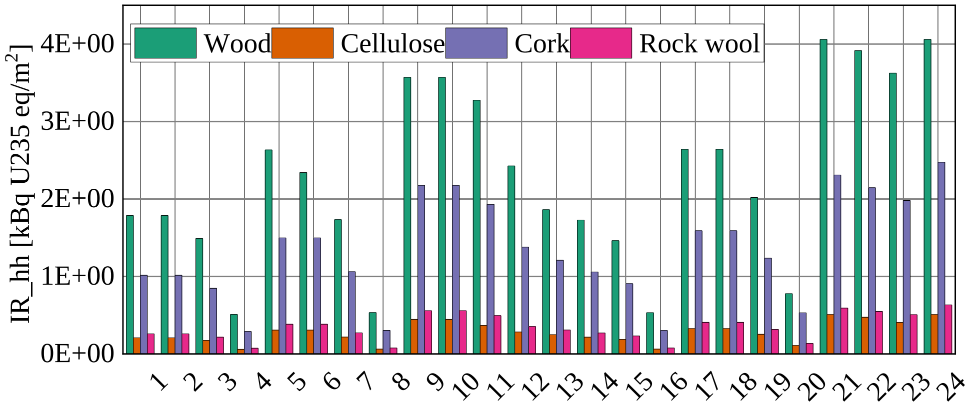


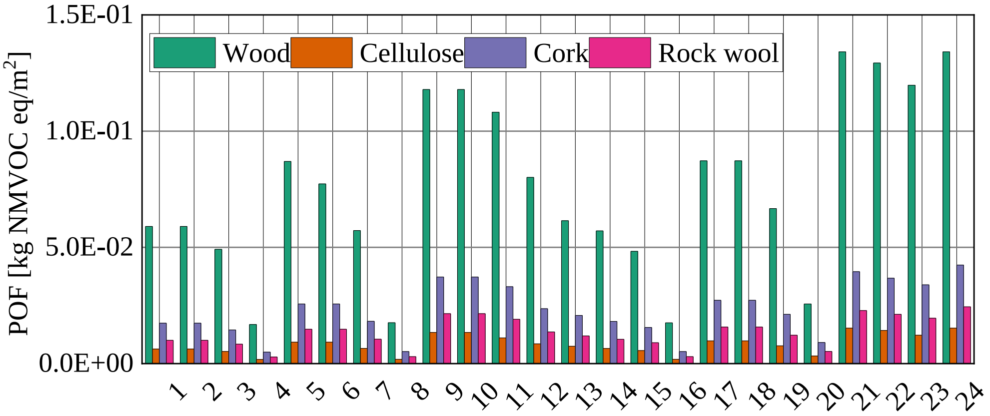


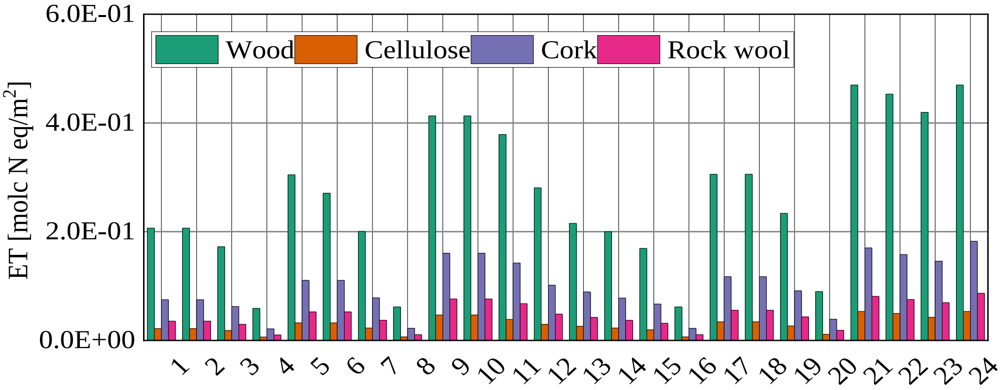

Wood
Cellulose
Cork
Rock wool
HT_CE [CTUh/m$^2$]
8.0E-06
6.0E-06
4.0E-06
2.0E-06
0.0E+00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

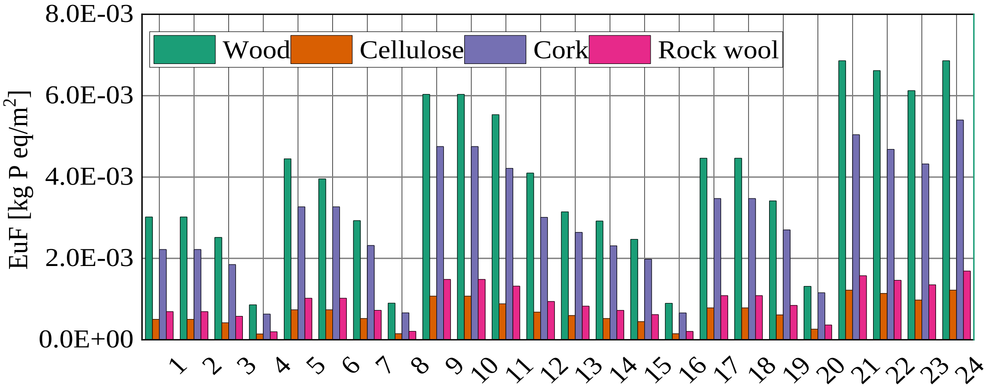

Wood
Cellulose
Cork
Rock wool
HT_nCE [CTUh/m$^2$]
1.6E-06
1.4E-06
1.2E-06
1.0E-06
8.0E-07
6.0E-07
4.0E-07
2.0E-07
0.0E+00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

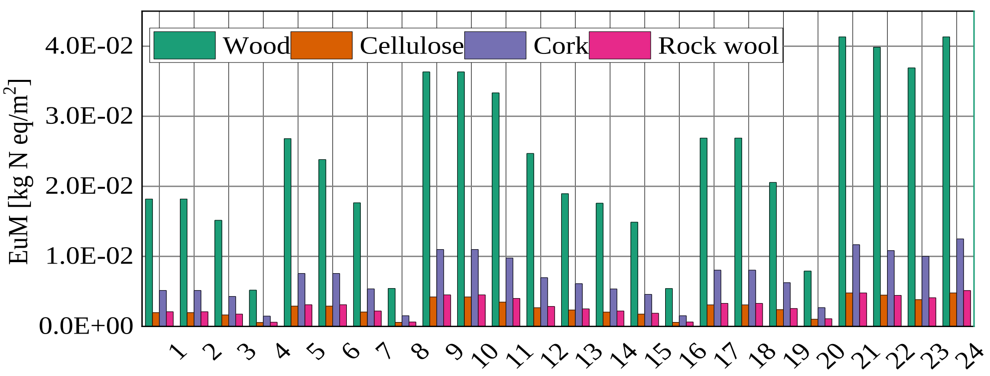

Wood
Cellulose
Cork
Rock wool
PM [kg PM2.5 eq/m$^2$]
1.5E-02
1.0E-02
5.0E-03
0.0E+00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24


Wood
Cellulose
Cork
Rock wool
IR_hh [kBq U235 eq/m$^2$]
4E+00
3E+00
2E+00
1E+00
0E+00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24


POF [kg NMVOC eq/m$^2$]
1.5E-01
1.0E-01
5.0E-02
0.0E+00
Wood
Cellulose
Cork
Rock wool
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24


ET [molc N eq/m$^2$]
6.0E-01
4.0E-01
2.0E-01
0.0E+00
Wood
Cellulose
Cork
Rock wool
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24


EuF [kg P eq/m$^2$]
8.0E-03
6.0E-03
4.0E-03
2.0E-03
0.0E+00
Wood
Cellulose
Cork
Rock wool
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24


EuM [kg N eq/m$^2$]
4.0E-02
3.0E-02
2.0E-02
1.0E-02
0.0E+00
Wood
Cellulose
Cork
Rock wool
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

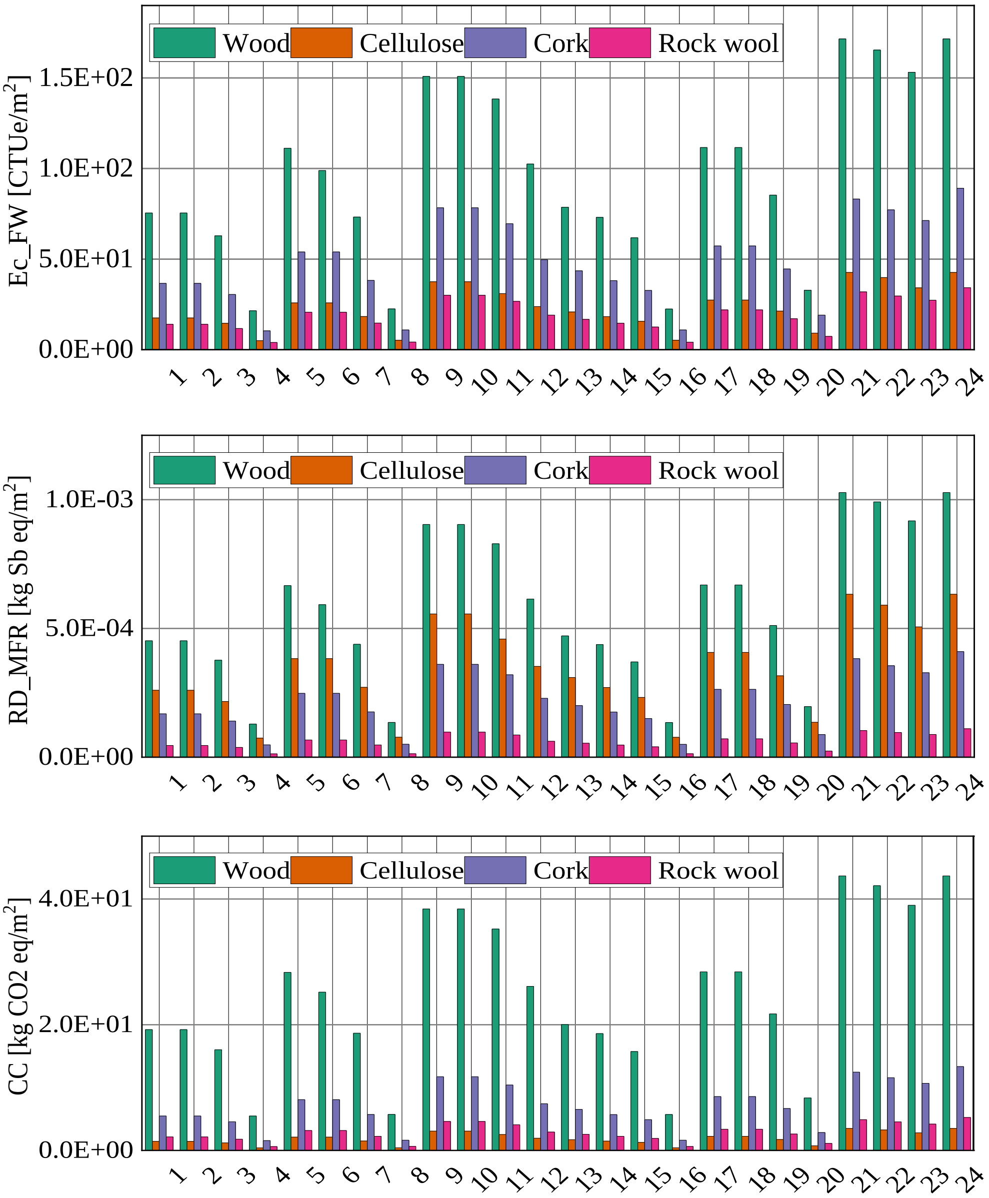


**Figure 4.4 Environmental impacts of insulation materials for archetypes**

The wood wool board is the most impactful material but it is due to the fact that is also characterized by a conductivity that is double of the stone wool insulation.  Respect to the traditional insulation materials, wood impacts at least 8 times more.

While the cellulose is characterized by the same thermophysical property except for the density, it has a similar impact trend to the stone wool in all the impacts categories, except for the Mineral, fossil & ren resource depletion where the cellulose fiber impacts 4 time more than traditional materials due to the boric and sulfuric acid used for produce the materials (73% of the global impact) and for the 16%

is connect to the use of wood pellets.

The impact categories of 1kg of cork slab are always greater than the traditional insulation materials, except for POF and AC categories. However, its thermal property is worse than cellulose fiber and stone wool and for obtaining the same U-value, more materials is required. It impacts always less than half respect to the wood cement board, except into EuF, where it is about 80% of the wood EuF. Moreover, the quantity of materials affects the impacts connect to their transport to the site of construction and to the landfill of about 26%-53% the impacts of the wood wool, of 4%-36% for the cellulose fiber and for 8-20% of the cork impacts. Instead, the transport is responsible of about the 8-25% of the stone wool impacts.

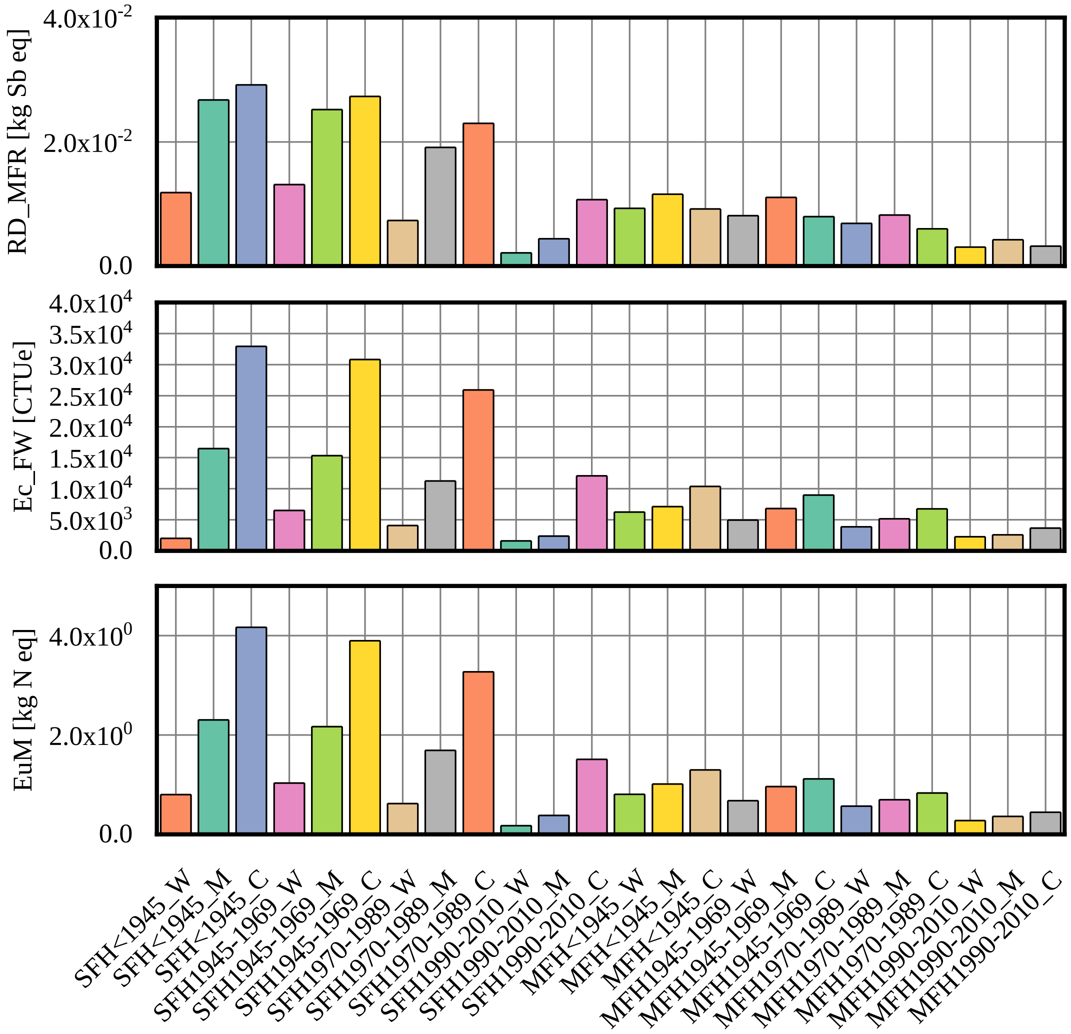
In conclusion, the choose of the insulation materials depends from many factors and scope of the refurbishment. Also, the analysis could be performed in order to account environmental strategies and the “zero emission materials”.

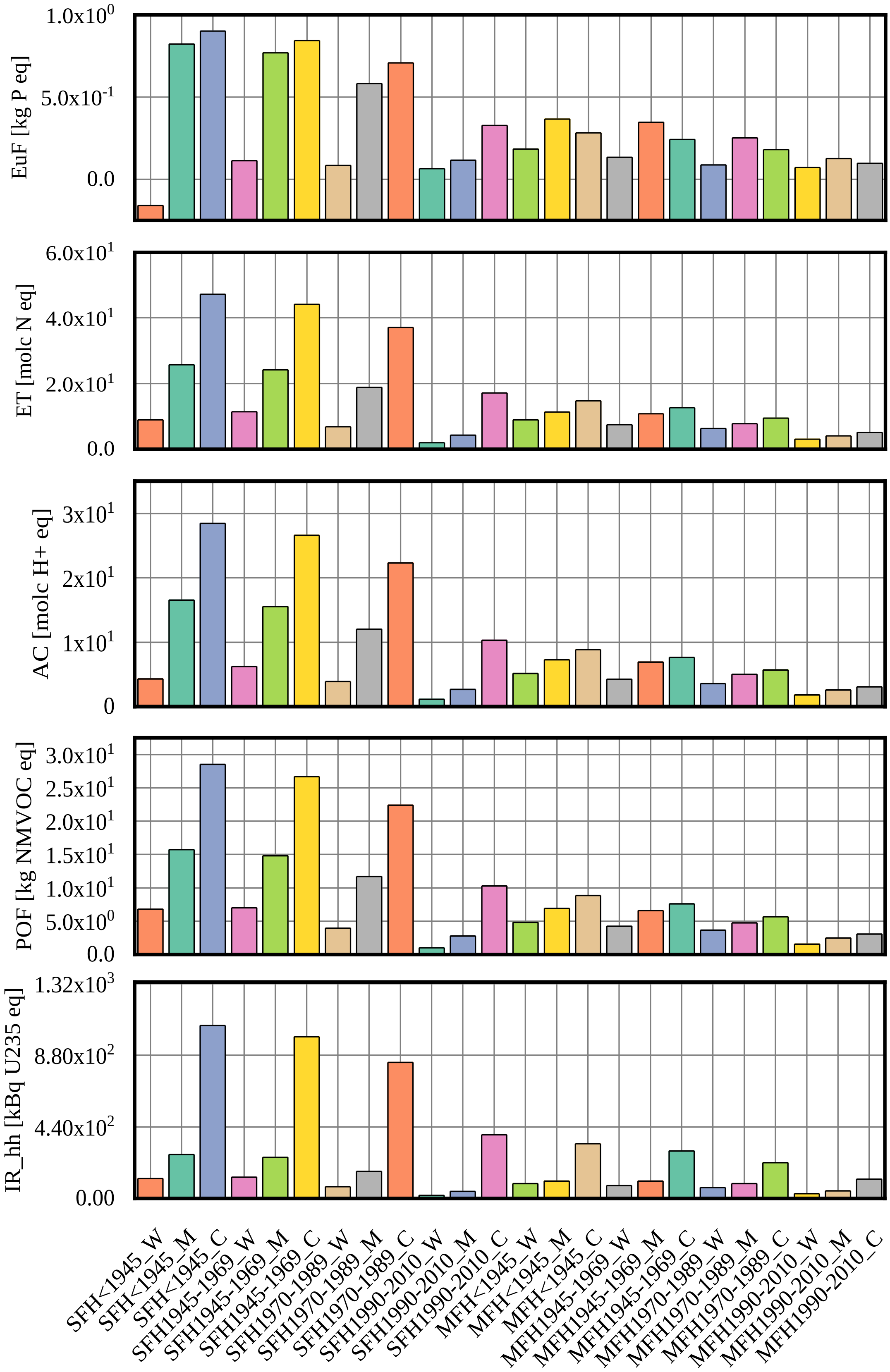
Although, the refurbishments of the archetypes are elaborated to account the same materials quantity for period of construction and climatic zone, the potential benefits depend on the climatic condition of the site, where the archetype runs. In fact, as shown into the above chapter, the results of the potential energy saving for heating and cooling vary more from country to country. Converting into environmental impacts, many other factors could affect the potential benefits/impacts of the reduction of the thermal energy for heating, increasing in many cases that required for cooling.

The results are aggregated for archetypes, showing the average value for all the impacts categories and the standard deviation for all the climatic zones. The results represented in Figure allow to better identified the main hot spot of an environmental analysis linked to the energy dynamic simulation with a bottom up approach. Also, it is important remember that the heating and cooling environmental profiles have been calculated in order to account the real sources consumed by each country for the production of the thermal energy for heating and cooling and the average efficiencies of the technologies used. These profiles, as it is possible observe into Figure 4.1 and Figure 4.3, change in each country. For example, it is possible observe that:

- Into CC category, MT represents the country with higher emissions of $CO_{2\ eq.}$ (≈9 kg of $CO_{2\ eq}$) respect to other countries (around 2-5 kg of $CO_2$) for the production of 1kWh of thermal energy for heating, followed by CY with about 7kg of $CO_{2\ eq.}$ It was notice that about the 80 % of thermal energy is produced in MT from electric boiler; the heating impacts is fistful affected by the national grid, impacting also on the categories AC, POD, ect. Greater impact allows to have a minor payback time if the same potential energy saving is the same;

- Into HT_c, HT_nc and EuF categories, BG represents the country with higher impacts respect to other countries for the production of 1kWh of thermal energy for heating;
- While, SE have the higher impacts into the category IR_hh;
- The other countries have a more variegated type of fuels used for the heating demand affecting in different way the impacts category.




1.0x10^0
5.0x10^-1
0.0
EuF [kg P eq]
6.0x10^1
4.0x10^1
2.0x10^1
0.0
ET [molc N eq]
3x10^1
2x10^1
1x10^1
0
AC [molc H+ eq]
3.0x10^1
2.5x10^1
2.0x10^1
1.5x10^1
1.0x10^1
5.0x10^0
0.0
POF [kg NMVOC eq]
1.32x10^3
8.80x10^2
4.40x10^2
0.00
IR_hh [kBq U235 eq]
SFH<1945_W
SFH<1945_M
SFH<1945_C
SFH1945-1969_W
SFH1945-1969_M
SFH1945-1969_C
SFH1970-1989_W
SFH1970-1989_M
SFH1970-1989_C
SFH1990-2010_W
SFH1990-2010_M
SFH1990-2010_C
MFH<1945_W
MFH<1945_M
MFH<1945_C
MFH1945-1969_W
MFH1945-1969_M
MFH1945-1969_C
MFH1970-1989_W
MFH1970-1989_M
MFH1970-1989_C
MFH1990-2010_W
MFH1990-2010_M
MFH1990-2010_C

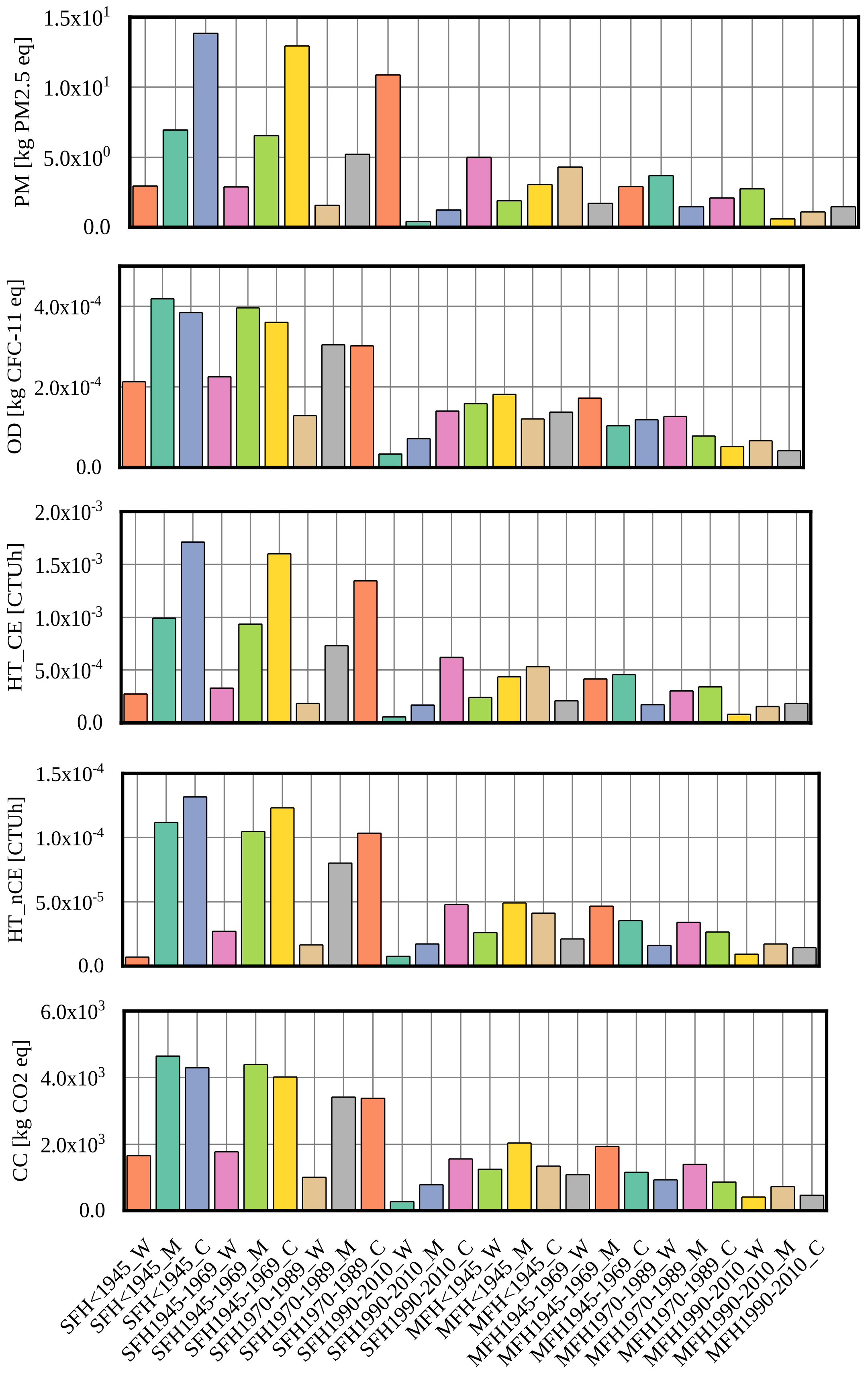


**Figure 4.5 Average net avoided impacts for archetypes (Scenario I)**

The Figure 4.5 shows that the greater benefits are generated into older households proportional to the quantity of materials. Also, the archetypes into the warm climatic zone are characterized by less environmental net benefits in a year compared with the archetypes into the other climatic zones.

The SFH of the cold and moderate climatic zones generate higher environmental benefits than the MFH, while in the warm climatic zone, both SFH and MFH generate similar environmental saving in a year. However, dividing the potential benefits of each archetype for their net floor area, SFH (≈110 $m^2$) in warm climatic zone generate less benefits than MFH ($90m^2$).

Analyzing the behavior of each impact categories for archetypes, it is possible observe that the environmental trend is no always the same due to the environmental effects connect to different heating and cooling datasets for country. In fact, Table 4.4 reports the standard deviation for archetypes, where it is possible to underline that:

- The archetypes into the warm climatic zone have the worst potential environmental benefits;
- The average greater benefits for CC, OD, HT, POF, AC, EuF and RD_MFR are reported for the moderate climatic zone, where in some cases are double than into the other climatic zone;
- While the cold climatic zone is characterized by greater benefits into the saving of IR_hh and into the production of the PM impacts (similar to the moderate climatic zone).

Although, the representation of the results as arithmetic average value for archetypes allows to underline a common trend for the impact categories, it is important understand the great variation that is generated between all the buildings grouped into climatic zone. Table reports the percentage standard deviation that is generated for the different countries involved into climatic zone group.

Some of the standard deviation calculated show that greater variation could be generated into the country of some climatic zone. For example, the CC for the archetypes of the warm climatic zone vary between 41% and 63% (MFH_1990-2010_W); while for the other indicators could be also more than 100%, as the EuF, where the standard deviation respect to average value reported into the above figures arrive to 129%. Calculating the standard deviation allows to understand how big could be the different between the same archetypes of the same climatic zones, also the benefits calculated for the GR could be not the same of the avoided impacts in IT.

The same trends are observable into the other climatic zones for all the impact categories, except for the cold climatic zone where many impacts categories differ at least of 22%, due to the similar energy demand profile reported above and the potential energy saving.

Some archetypes have not generated benefits, but only impacts due to the increased cooling demand.

Table from 4.4 to 4.8 show the environmental payback times, calculated summing the impacts connect to insulation materials for archetypes and their potential environmental benefits. The results show that the proposed solutions, except for RD_MRF indicator for some archetypes in wood wool scenario and the MFH1990-2010_M into the cellulose scenario (35 years), is able to repay the environmental impacts produced during the useful life of the insulation material (30 years) before to be substituted. The PBT of wood wool scenario differs of about 4 - 10 times more than the standard insulation materials for CC, and similar variations could be notice into the other environmental indicators.

**Table 4.4 Standard deviation calculated for the avoided benefits during the operation use of archetypes for impact category**

| | CC [kg CO2 eq] | OD [kg CFC-11 eq] | HT_CE [CTUh] | HT_nCE [CTUh] | PM [kg PM$^{2}$.5 eq] | IR_hh [kBq U235 eq] | POF [kg NMVOC eq] | AC [molc H+ eq] | ET [molc N eq] | EuF [kg P eq] | EuM [kg N eq] | Ec_FW [CTUe] | RD_MFR [kg Sb eq] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 41% | 42% | 52% | 51% | 55% | 86% | 32% | 55% | 34% | 98% | 35% | 76% | 43% |
| **SFH<1945_M** | 37% | 51% | 52% | 53% | 67% | 83% | 49% | 53% | 33% | 75% | 35% | 51% | 44% |
| **SFH<1945_C** | 25% | 46% | 27% | 23% | 42% | 112% | 38% | 21% | 26% | 22% | 26% | 76% | 73% |
| **SFH1945-1969_W** | 41% | 41% | 53% | 52% | 56% | 87% | 32% | 56% | 35% | 109% | 36% | 78% | 43% |
| **SFH1945-1969_M** | 37% | 51% | 52% | 54% | 67% | 82% | 49% | 54% | 34% | 75% | 35% | 51% | 44% |
| **SFH1945-1969_C** | 25% | 46% | 27% | 23% | 42% | 112% | 38% | 21% | 27% | 22% | 26% | 76% | 73% |
| **SFH1970-1989_W** | 40% | 42% | 48% | 44% | 52% | 81% | 28% | 62% | 42% | 65% | 42% | 65% | 40% |
| **SFH1970-1989_M** | 36% | 50% | 51% | 51% | 66% | 87% | 48% | 52% | 32% | 72% | 34% | 47% | 43% |
| **SFH1970-1989_C** | 25% | 47% | 27% | 23% | 42% | 112% | 38% | 21% | 26% | 23% | 26% | 76% | 73% |
| **SFH1990-2010_W** | 50% | 46% | 55% | 52% | 57% | 80% | 37% | 53% | 34% | 86% | 35% | 69% | 47% |
| **SFH1990-2010_M** | 42% | 56% | 53% | 64% | 66% | 90% | 48% | 62% | 38% | 91% | 39% | 72% | 52% |
| **SFH1990-2010_C** | 24% | 47% | 26% | 23% | 41% | 112% | 37% | 21% | 26% | 22% | 25% | 77% | 74% |
| **MFH<1945_W** | 40% | 41% | 50% | 58% | 54% | 81% | 28% | 52% | 32% | 96% | 32% | 52% | 42% |
| **MFH<1945_M** | 35% | 49% | 52% | 52% | 67% | 83% | 48% | 52% | 33% | 74% | 35% | 47% | 42% |
| **MFH<1945_C** | 24% | 47% | 26% | 23% | 41% | 112% | 37% | 20% | 26% | 22% | 25% | 78% | 74% |
| **MFH1945-1969_W** | 41% | 42% | 50% | 58% | 54% | 82% | 29% | 51% | 31% | 95% | 32% | 52% | 43% |
| **MFH1945-1969_M** | 35% | 49% | 52% | 52% | 67% | 82% | 48% | 52% | 33% | 74% | 35% | 47% | 42% |
| **MFH1945-1969_C** | 24% | 47% | 26% | 23% | 41% | 112% | 37% | 20% | 26% | 22% | 25% | 78% | 75% |
| **MFH1970-1989_W** | 41% | 42% | 50% | 58% | 54% | 80% | 28% | 53% | 33% | 97% | 34% | 51% | 42% |
| **MFH1970-1989_M** | 35% | 48% | 52% | 54% | 67% | 85% | 49% | 53% | 34% | 76% | 36% | 51% | 43% |
| **MFH1970-1989_C** | 23% | 48% | 25% | 23% | 40% | 113% | 36% | 20% | 25% | 22% | 24% | 79% | 76% |
| **MFH1990-2010_W** | 63% | 54% | 67% | 72% | 68% | 96% | 53% | 44% | 33% | 164% | 35% | 93% | 61% |
| **MFH1990-2010_M** | 36% | 48% | 56% | 61% | 69% | 75% | 52% | 59% | 38% | 87% | 40% | 62% | 43% |
| **MFH1990-2010_C** | 23% | 48% | 25% | 24% | 40% | 113% | 36% | 20% | 25% | 22% | 24% | 80% | 77% |

Table 4.5 Average Environmental PBt [years] for archetypes (Scenario I – Wood wool)

| | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 4.85 | 3.26 | 4.15 | 10.80 | 0.93 | 7.35 | 3.84 | 7.48 | 10.53 | 10.84 | 10.00 | 6.18 | 15.69 |
| **SFH<1945_M** | 3.53 | 2.61 | 3.96 | 5.54 | 1.41 | 4.41 | 4.73 | 4.15 | 8.15 | 3.78 | 8.11 | 3.27 | 12.59 |
| **SFH<1945_C** | 14.31 | 8.31 | 6.55 | 14.12 | 1.87 | 2.75 | 8.14 | 7.54 | 14.62 | 9.77 | 14.54 | 4.35 | 30.32 |
| **SFH1945-1969_W** | 5.11 | 3.18 | 4.42 | 11.77 | 0.98 | 7.10 | 4.05 | 7.47 | 10.80 | 13.54 | 10.38 | 6.67 | 16.22 |
| **SFH1945-1969_M** | 3.26 | 2.43 | 3.17 | 4.89 | 1.01 | 4.15 | 3.75 | 3.61 | 6.95 | 3.13 | 6.99 | 3.10 | 11.94 |
| **SFH1945-1969_C** | 13.38 | 7.75 | 6.21 | 13.45 | 1.77 | 2.63 | 7.70 | 7.26 | 13.89 | 9.25 | 13.87 | 4.22 | 29.04 |
| **SFH1970-1989_W** | 5.18 | 3.16 | 4.27 | 10.70 | 0.97 | 6.68 | 4.00 | 6.98 | 10.30 | 10.17 | 9.98 | 5.85 | 15.99 |
| **SFH1970-1989_M** | 4.54 | 3.09 | 4.18 | 6.93 | 1.26 | 3.80 | 4.86 | 5.11 | 9.55 | 4.57 | 9.54 | 4.07 | 15.16 |
| **SFH1970-1989_C** | 16.60 | 9.47 | 7.78 | 16.69 | 2.25 | 3.20 | 9.73 | 9.10 | 17.38 | 11.48 | 17.38 | 5.17 | 35.51 |
| **SFH1990-2010_W** | 9.59 | 5.75 | 7.74 | 18.27 | 1.82 | 9.17 | 7.35 | 11.38 | 17.70 | 17.76 | 17.13 | 8.38 | 27.26 |
| **SFH1990-2010_M** | 9.31 | 6.77 | 9.14 | 14.27 | 2.92 | 10.56 | 11.04 | 9.90 | 20.61 | 9.59 | 20.61 | 9.52 | 34.74 |
| **SFH1990-2010_C** | 20.22 | 11.67 | 9.57 | 21.04 | 2.71 | 4.17 | 11.75 | 11.41 | 21.37 | 14.30 | 21.46 | 6.81 | 46.06 |
| **MFH<1945_W** | 5.15 | 3.55 | 4.71 | 11.65 | 1.07 | 10.09 | 4.38 | 8.61 | 11.65 | 10.67 | 11.48 | 7.20 | 17.17 |
| **MFH<1945_M** | 4.30 | 2.98 | 3.88 | 6.20 | 1.21 | 3.64 | 4.73 | 4.42 | 8.82 | 3.93 | 8.95 | 3.90 | 14.94 |
| **MFH<1945_C** | 18.33 | 10.12 | 8.46 | 17.09 | 2.59 | 3.06 | 11.04 | 9.32 | 18.69 | 12.03 | 18.47 | 4.86 | 34.44 |
| **MFH1945-1969_W** | 5.11 | 3.42 | 4.61 | 10.69 | 1.08 | 8.26 | 4.37 | 7.92 | 11.22 | 9.16 | 10.99 | 6.22 | 16.44 |
| **MFH1945-1969_M** | 4.25 | 3.14 | 3.78 | 5.79 | 1.20 | 5.09 | 4.68 | 4.32 | 8.42 | 3.34 | 8.73 | 3.99 | 15.80 |
| **MFH1945-1969_C** | 16.66 | 9.71 | 7.62 | 16.38 | 2.18 | 3.21 | 9.46 | 8.68 | 16.93 | 11.34 | 16.81 | 5.05 | 35.36 |
| **MFH1970-1989_W** | 6.00 | 3.91 | 5.21 | 11.61 | 1.24 | 8.21 | 5.03 | 8.56 | 12.52 | 9.46 | 12.24 | 6.33 | 18.53 |
| **MFH1970-1989_M** | 6.89 | 5.06 | 5.56 | 9.43 | 1.64 | 6.87 | 6.71 | 6.73 | 13.26 | 5.64 | 13.46 | 6.46 | 25.44 |
| **MFH1970-1989_C** | 19.86 | 12.60 | 8.94 | 20.72 | 2.38 | 4.72 | 10.52 | 10.56 | 20.09 | 14.07 | 20.01 | 7.23 | 49.87 |
| **MFH1990-2010_W** | 13.37 | 8.34 | 11.22 | 24.41 | 2.75 | 11.93 | 10.89 | 16.22 | 25.59 | 22.68 | 24.61 | 10.83 | 37.13 |
| **MFH1990-2010_M** | 12.27 | 9.97 | 10.22 | 16.50 | 3.18 | 15.46 | 13.00 | 11.05 | 25.04 | 10.24 | 24.86 | 12.41 | 51.51 |
| **MFH1990-2010_C** | 21.49 | 12.20 | 10.07 | 21.41 | 2.93 | 4.08 | 12.61 | 11.56 | 22.28 | 14.76 | 22.22 | 6.56 | 45.38 |

**Table 4.6 Average Environmental PBt [years] for archetypes (Scenario I – Cellulose insulation)**

| | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 0.36 | 0.34 | 0.91 | 1.67 | 0.22 | 0.86 | 0.41 | 1.05 | 1.11 | 1.80 | 1.08 | 1.43 | 9.01 |
| **SFH<1945_M** | 0.26 | 0.27 | 0.87 | 0.86 | 0.33 | 0.52 | 0.50 | 0.58 | 0.86 | 0.63 | 0.88 | 0.76 | 7.23 |
| **SFH<1945_C** | 1.15 | 0.93 | 1.54 | 2.34 | 0.47 | 0.34 | 0.93 | 1.13 | 1.66 | 1.74 | 1.68 | 1.08 | 18.66 |
| **SFH1945-1969_W** | 0.38 | 0.33 | 0.97 | 1.82 | 0.23 | 0.83 | 0.43 | 1.05 | 1.14 | 2.25 | 1.12 | 1.55 | 9.32 |
| **SFH1945-1969_M** | 0.27 | 0.28 | 0.78 | 0.85 | 0.27 | 0.54 | 0.45 | 0.57 | 0.83 | 0.58 | 0.85 | 0.81 | 7.72 |
| **SFH1945-1969_C** | 1.07 | 0.86 | 1.46 | 2.23 | 0.45 | 0.33 | 0.88 | 1.09 | 1.58 | 1.65 | 1.61 | 1.05 | 17.87 |
| **SFH1970-1989_W** | 0.39 | 0.33 | 0.94 | 1.66 | 0.23 | 0.78 | 0.42 | 0.98 | 1.09 | 1.69 | 1.08 | 1.36 | 9.19 |
| **SFH1970-1989_M** | 0.37 | 0.35 | 0.99 | 1.16 | 0.32 | 0.48 | 0.56 | 0.77 | 1.09 | 0.82 | 1.11 | 1.02 | 9.38 |
| **SFH1970-1989_C** | 1.20 | 0.95 | 1.64 | 2.49 | 0.51 | 0.36 | 1.00 | 1.23 | 1.77 | 1.84 | 1.81 | 1.16 | 19.64 |
| **SFH1990-2010_W** | 0.72 | 0.60 | 1.70 | 2.83 | 0.43 | 1.07 | 0.78 | 1.59 | 1.87 | 2.95 | 1.85 | 1.95 | 15.66 |
| **SFH1990-2010_M** | 0.70 | 0.70 | 2.00 | 2.21 | 0.68 | 1.23 | 1.17 | 1.39 | 2.18 | 1.59 | 2.23 | 2.21 | 19.95 |
| **SFH1990-2010_C** | 1.51 | 1.21 | 2.10 | 3.26 | 0.64 | 0.49 | 1.25 | 1.60 | 2.26 | 2.37 | 2.32 | 1.58 | 26.46 |
| **MFH<1945_W** | 0.44 | 0.42 | 1.18 | 2.06 | 0.29 | 1.35 | 0.53 | 1.38 | 1.41 | 2.02 | 1.42 | 1.91 | 11.27 |
| **MFH<1945_M** | 0.34 | 0.33 | 0.90 | 1.02 | 0.30 | 0.45 | 0.53 | 0.66 | 0.99 | 0.69 | 1.02 | 0.96 | 9.09 |
| **MFH<1945_C** | 1.47 | 1.13 | 1.99 | 2.84 | 0.65 | 0.38 | 1.26 | 1.40 | 2.12 | 2.14 | 2.14 | 1.21 | 21.20 |
| **MFH1945-1969_W** | 0.41 | 0.38 | 1.09 | 1.78 | 0.27 | 1.04 | 0.50 | 1.20 | 1.28 | 1.64 | 1.28 | 1.55 | 10.17 |
| **MFH1945-1969_M** | 0.34 | 0.35 | 0.88 | 0.95 | 0.30 | 0.63 | 0.53 | 0.64 | 0.94 | 0.59 | 1.00 | 0.98 | 9.61 |
| **MFH1945-1969_C** | 1.29 | 1.05 | 1.73 | 2.63 | 0.53 | 0.39 | 1.04 | 1.26 | 1.86 | 1.95 | 1.88 | 1.21 | 21.06 |
| **MFH1970-1989_W** | 0.49 | 0.44 | 1.25 | 1.96 | 0.32 | 1.05 | 0.58 | 1.31 | 1.44 | 1.71 | 1.44 | 1.60 | 11.61 |
| **MFH1970-1989_M** | 0.55 | 0.57 | 1.31 | 1.57 | 0.41 | 0.86 | 0.77 | 1.02 | 1.51 | 1.01 | 1.57 | 1.62 | 15.74 |
| **MFH1970-1989_C** | 1.43 | 1.26 | 1.88 | 3.08 | 0.54 | 0.53 | 1.07 | 1.42 | 2.04 | 2.24 | 2.08 | 1.61 | 27.50 |
| **MFH1990-2010_W** | 1.00 | 0.87 | 2.46 | 3.78 | 0.65 | 1.39 | 1.16 | 2.27 | 2.71 | 3.77 | 2.66 | 2.51 | 21.33 |
| **MFH1990-2010_M** | 1.10 | 1.24 | 2.69 | 3.07 | 0.90 | 2.17 | 1.66 | 1.86 | 3.18 | 2.04 | 3.22 | 3.46 | 35.51 |
| **MFH1990-2010_C** | 1.72 | 1.36 | 2.37 | 3.55 | 0.74 | 0.51 | 1.44 | 1.74 | 2.53 | 2.63 | 2.57 | 1.63 | 27.93 |

### Table 4.7 Average Environmental PBt [years] for archetypes (Scenario I – Cork)

| | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 1.38 | 1.34 | 1.73 | 4.76 | 0.64 | 4.18 | 1.13 | 3.81 | 3.82 | 7.96 | 2.82 | 2.99 | 5.84 |
| **SFH<1945_M** | 1.00 | 1.07 | 1.65 | 2.44 | 0.97 | 2.51 | 1.40 | 2.11 | 2.95 | 2.78 | 2.29 | 1.59 | 4.69 |
| **SFH<1945_C** | 4.37 | 3.65 | 2.92 | 6.66 | 1.38 | 1.68 | 2.57 | 4.11 | 5.68 | 7.69 | 4.40 | 2.26 | 12.10 |
| **SFH1945-1969_W** | 1.46 | 1.30 | 1.84 | 5.18 | 0.68 | 4.04 | 1.19 | 3.80 | 3.91 | 9.95 | 2.93 | 3.24 | 6.04 |
| **SFH1945-1969_M** | 1.05 | 1.12 | 1.48 | 2.42 | 0.78 | 2.65 | 1.25 | 2.07 | 2.83 | 2.58 | 2.22 | 1.69 | 5.00 |
| **SFH1945-1969_C** | 4.09 | 3.40 | 2.76 | 6.35 | 1.31 | 1.60 | 2.43 | 3.96 | 5.39 | 7.28 | 4.19 | 2.19 | 11.58 |
| **SFH1970-1989_W** | 1.48 | 1.30 | 1.77 | 4.71 | 0.67 | 3.80 | 1.18 | 3.55 | 3.73 | 7.48 | 2.82 | 2.83 | 5.95 |
| **SFH1970-1989_M** | 1.40 | 1.37 | 1.87 | 3.29 | 0.93 | 2.33 | 1.54 | 2.80 | 3.73 | 3.62 | 2.90 | 2.12 | 6.08 |
| **SFH1970-1989_C** | 4.91 | 4.03 | 3.35 | 7.62 | 1.61 | 1.89 | 2.98 | 4.80 | 6.53 | 8.75 | 5.09 | 2.60 | 13.71 |
| **SFH1990-2010_W** | 2.73 | 2.36 | 3.22 | 8.05 | 1.25 | 5.22 | 2.17 | 5.79 | 6.41 | 13.05 | 4.83 | 4.06 | 10.15 |
| **SFH1990-2010_M** | 2.65 | 2.78 | 3.80 | 6.28 | 2.00 | 6.01 | 3.26 | 5.04 | 7.47 | 7.05 | 5.82 | 4.61 | 12.93 |
| **SFH1990-2010_C** | 5.76 | 4.79 | 3.98 | 9.27 | 1.86 | 2.37 | 3.47 | 5.81 | 7.74 | 10.51 | 6.06 | 3.30 | 17.15 |
| **MFH<1945_W** | 1.68 | 1.66 | 2.24 | 5.86 | 0.84 | 6.56 | 1.48 | 5.01 | 4.83 | 8.96 | 3.70 | 3.99 | 7.30 |
| **MFH<1945_M** | 1.30 | 1.29 | 1.71 | 2.89 | 0.88 | 2.19 | 1.48 | 2.38 | 3.38 | 3.05 | 2.68 | 2.00 | 5.89 |
| **MFH<1945_C** | 5.23 | 4.15 | 3.52 | 7.53 | 1.78 | 1.74 | 3.26 | 4.74 | 6.77 | 8.84 | 5.21 | 2.35 | 12.82 |
| **MFH1945-1969_W** | 1.57 | 1.51 | 2.06 | 5.07 | 0.80 | 5.06 | 1.39 | 4.34 | 4.38 | 7.24 | 3.34 | 3.25 | 6.59 |
| **MFH1945-1969_M** | 1.28 | 1.37 | 1.66 | 2.70 | 0.87 | 3.07 | 1.46 | 2.33 | 3.23 | 2.60 | 2.61 | 2.05 | 6.23 |
| **MFH1945-1969_C** | 4.57 | 3.84 | 3.05 | 6.94 | 1.44 | 1.76 | 2.69 | 4.25 | 5.91 | 8.02 | 4.57 | 2.36 | 12.67 |
| **MFH1970-1989_W** | 1.87 | 1.75 | 2.36 | 5.58 | 0.93 | 5.09 | 1.62 | 4.75 | 4.95 | 7.58 | 3.77 | 3.35 | 7.52 |
| **MFH1970-1989_M** | 2.11 | 2.24 | 2.49 | 4.47 | 1.21 | 4.21 | 2.13 | 3.69 | 5.18 | 4.46 | 4.09 | 3.37 | 10.20 |
| **MFH1970-1989_C** | 5.43 | 4.96 | 3.57 | 8.76 | 1.57 | 2.58 | 2.98 | 5.16 | 6.99 | 9.92 | 5.42 | 3.36 | 17.82 |
| **MFH1990-2010_W** | 3.81 | 3.42 | 4.66 | 10.75 | 1.89 | 6.78 | 3.21 | 8.25 | 9.28 | 16.67 | 6.94 | 5.25 | 13.82 |
| **MFH1990-2010_M** | 4.20 | 4.91 | 5.10 | 8.72 | 2.62 | 10.56 | 4.60 | 6.75 | 10.89 | 9.03 | 8.42 | 7.22 | 23.01 |
| **MFH1990-2010_C** | 6.56 | 5.36 | 4.48 | 10.10 | 2.16 | 2.48 | 3.99 | 6.30 | 8.65 | 11.62 | 6.72 | 3.41 | 18.10 |

**Table 4.8 Average Environmental PBt [years] for archetypes (Scenario I – Stone wool)**

| | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 0.66 | 0.54 | 0.89 | 2.12 | 0.35 | 1.68 | 0.85 | 2.86 | 2.30 | 2.80 | 1.52 | 1.53 | 1.97 |
| **SFH<1945_M** | 0.51 | 0.42 | 0.68 | 1.05 | 0.37 | 0.56 | 0.85 | 1.36 | 1.61 | 0.95 | 1.10 | 0.77 | 1.59 |
| **SFH<1945_C** | 2.05 | 1.36 | 1.41 | 2.72 | 0.74 | 0.45 | 1.88 | 2.70 | 3.22 | 2.76 | 2.14 | 0.90 | 3.46 |
| **SFH1945-1969_W** | 0.62 | 0.49 | 0.83 | 1.83 | 0.33 | 1.30 | 0.80 | 2.48 | 2.08 | 2.27 | 1.37 | 1.25 | 1.78 |
| **SFH1945-1969_M** | 0.50 | 0.45 | 0.67 | 0.98 | 0.36 | 0.79 | 0.84 | 1.33 | 1.54 | 0.81 | 1.07 | 0.79 | 1.68 |
| **SFH1945-1969_C** | 1.80 | 1.26 | 1.22 | 2.51 | 0.60 | 0.45 | 1.55 | 2.42 | 2.81 | 2.51 | 1.87 | 0.90 | 3.42 |
| **SFH1970-1989_W** | 0.73 | 0.57 | 0.94 | 2.02 | 0.39 | 1.30 | 0.93 | 2.71 | 2.35 | 2.37 | 1.54 | 1.28 | 2.03 |
| **SFH1970-1989_M** | 0.83 | 0.73 | 1.00 | 1.62 | 0.50 | 1.08 | 1.23 | 2.10 | 2.46 | 1.40 | 1.68 | 1.29 | 2.75 |
| **SFH1970-1989_C** | 2.14 | 1.62 | 1.43 | 3.17 | 0.65 | 0.66 | 1.72 | 2.94 | 3.33 | 3.10 | 2.22 | 1.29 | 4.81 |
| **SFH1990-2010_W** | 1.50 | 1.12 | 1.86 | 3.89 | 0.78 | 1.74 | 1.85 | 4.71 | 4.41 | 5.21 | 2.85 | 2.01 | 3.73 |
| **SFH1990-2010_M** | 1.65 | 1.61 | 2.04 | 3.16 | 1.09 | 2.70 | 2.65 | 3.85 | 5.18 | 2.82 | 3.45 | 2.77 | 6.21 |
| **SFH1990-2010_C** | 2.58 | 1.76 | 1.79 | 3.66 | 0.89 | 0.64 | 2.30 | 3.59 | 4.12 | 3.63 | 2.75 | 1.31 | 4.88 |
| **MFH<1945_W** | 0.54 | 0.44 | 0.69 | 1.72 | 0.26 | 1.07 | 0.65 | 2.17 | 1.82 | 2.49 | 1.16 | 1.15 | 1.58 |
| **MFH<1945_M** | 0.39 | 0.35 | 0.66 | 0.88 | 0.40 | 0.64 | 0.81 | 1.21 | 1.40 | 0.87 | 0.94 | 0.61 | 1.26 |
| **MFH<1945_C** | 1.72 | 1.20 | 1.17 | 2.41 | 0.57 | 0.43 | 1.48 | 2.34 | 2.70 | 2.40 | 1.80 | 0.87 | 3.26 |
| **MFH1945-1969_W** | 0.57 | 0.43 | 0.73 | 1.88 | 0.28 | 1.03 | 0.69 | 2.17 | 1.86 | 3.11 | 1.20 | 1.24 | 1.63 |
| **MFH1945-1969_M** | 0.41 | 0.37 | 0.59 | 0.88 | 0.32 | 0.68 | 0.72 | 1.18 | 1.35 | 0.81 | 0.91 | 0.65 | 1.35 |
| **MFH1945-1969_C** | 1.61 | 1.11 | 1.11 | 2.30 | 0.54 | 0.41 | 1.40 | 2.26 | 2.57 | 2.28 | 1.72 | 0.84 | 3.13 |
| **MFH1970-1989_W** | 0.58 | 0.42 | 0.71 | 1.71 | 0.28 | 0.97 | 0.68 | 2.03 | 1.78 | 2.34 | 1.15 | 1.09 | 1.61 |
| **MFH1970-1989_M** | 0.55 | 0.45 | 0.75 | 1.19 | 0.39 | 0.60 | 0.89 | 1.60 | 1.77 | 1.13 | 1.19 | 0.81 | 1.64 |
| **MFH1970-1989_C** | 1.93 | 1.32 | 1.34 | 2.76 | 0.66 | 0.48 | 1.72 | 2.74 | 3.11 | 2.73 | 2.08 | 1.00 | 3.70 |
| **MFH1990-2010_W** | 1.07 | 0.77 | 1.29 | 2.91 | 0.52 | 1.34 | 1.25 | 3.30 | 3.05 | 4.08 | 1.98 | 1.56 | 2.74 |
| **MFH1990-2010_M** | 1.04 | 0.91 | 1.52 | 2.27 | 0.83 | 1.54 | 1.88 | 2.87 | 3.55 | 2.20 | 2.38 | 1.77 | 3.49 |
| **MFH1990-2010_C** | 2.27 | 1.57 | 1.59 | 3.35 | 0.77 | 0.61 | 2.00 | 3.31 | 3.69 | 3.29 | 2.48 | 1.27 | 4.63 |

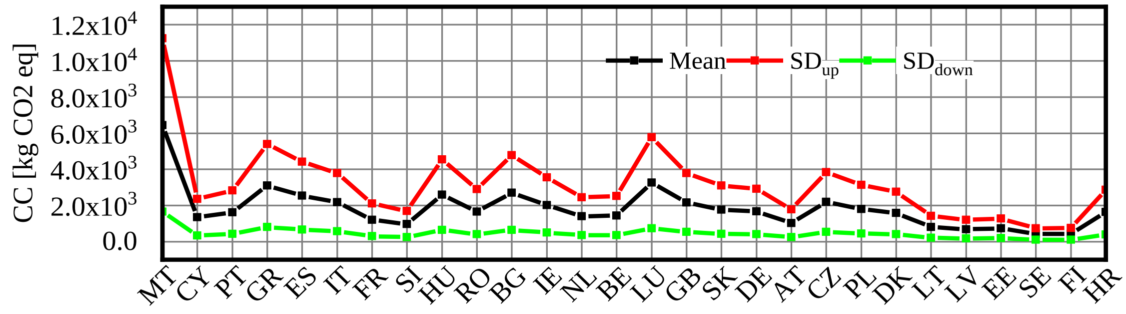
While, the differences between the cellulose scenario and the traditional one are less significant: the percentage variations between the payback time of the proposed solution and the base case for all the archetypes are between -50% ($PBT_{POF}$) and +36% ($PBT_{HT\_CE}$), except for the RD_MFR indicator where the PBT is about 5 times more.

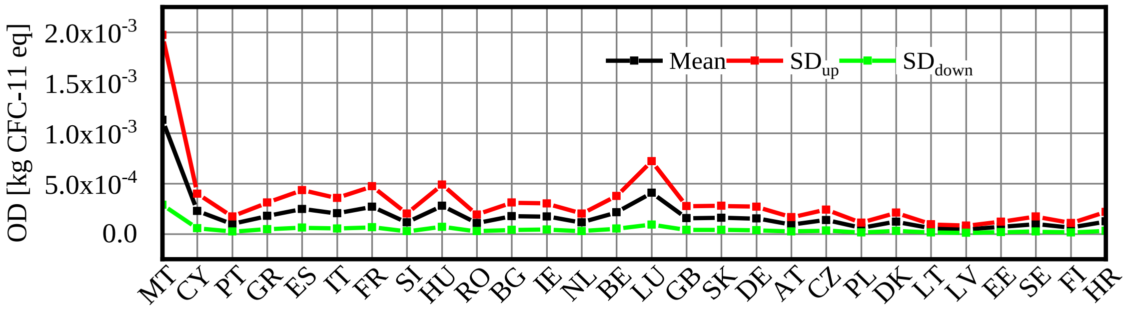
### 4.2.2 Scenario II: Renewable system

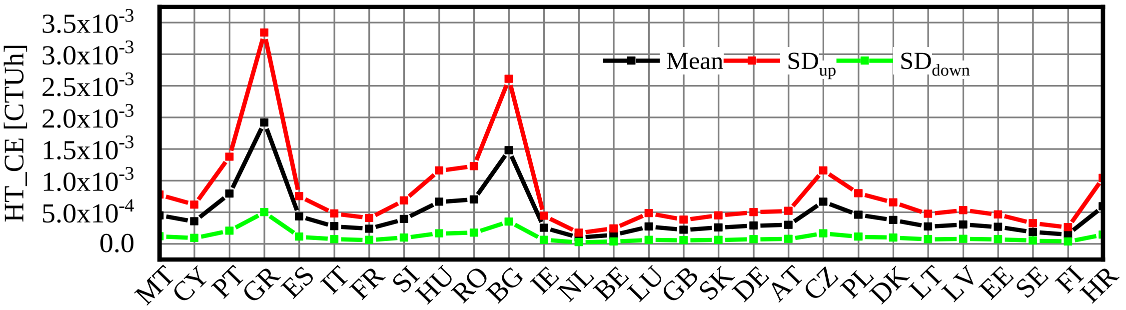
The second scenario focus on the analysis of the environmental impacts connect to the installation of two types of renewable plants as indicated into the methodological approach chapter.

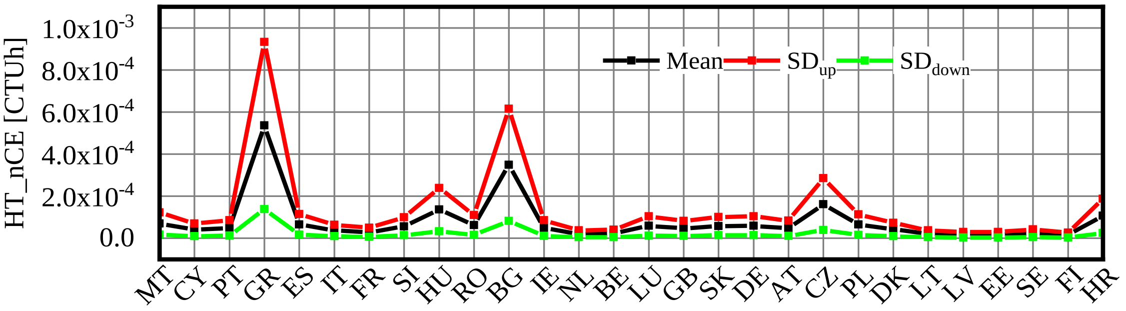
Although, the environmental impacts connect to the solar thermal system and to PV system are proportional to the number of inhabitants for the 24 archetypes identified, the effects connect to variation of DHW impacts and to electricity required for the equipment depend, respectively, on the DHW profile and the electricity profile of each country. These great effects could be underlined with application of the PBt indices.

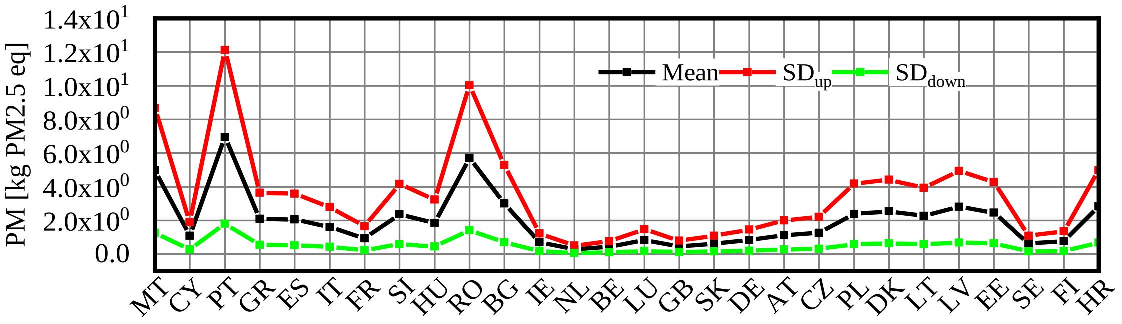
The environmental impacts connect to the production of the solar systems are reported into the above section for type of plant. While the results of the possible environmental benefits for archetypes and for plant are reported in Figure 4.6 and

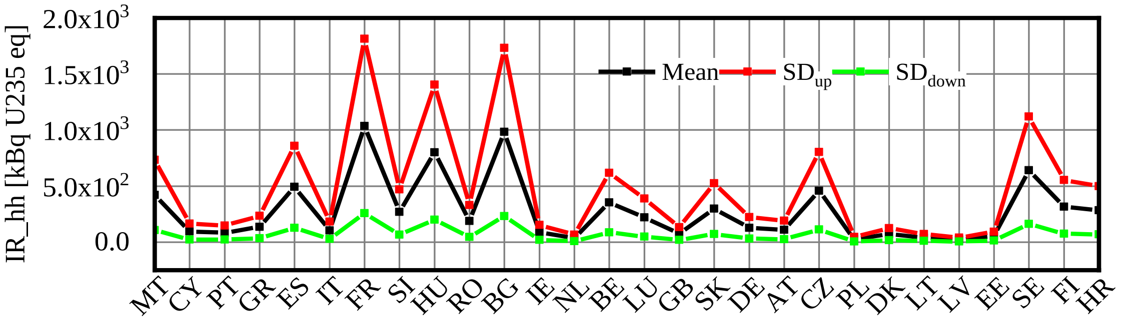


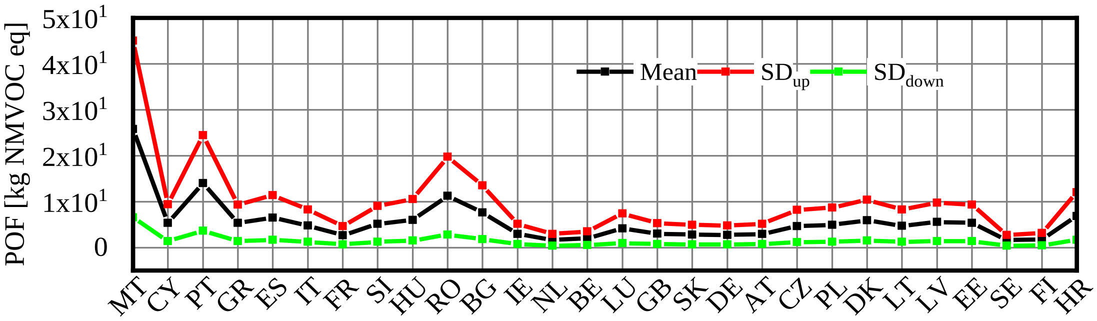



HT_CE [CTUh]
3.5x10^-3
3.0x10^-3
2.5x10^-3
2.0x10^-3
1.5x10^-3
1.0x10^-3
5.0x10^-4
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR

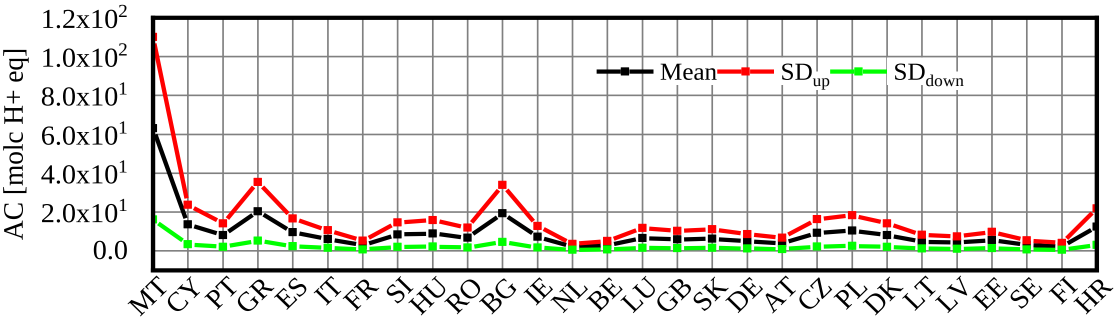

HT_nCE [CTUh]
1.0x10^-3
8.0x10^-4
6.0x10^-4
4.0x10^-4
2.0x10^-4
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR


PM [kg PM2.5 eq]
1.4x10^1
1.2x10^1
1.0x10^1
8.0x10^0
6.0x10^0
4.0x10^0
2.0x10^0
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR

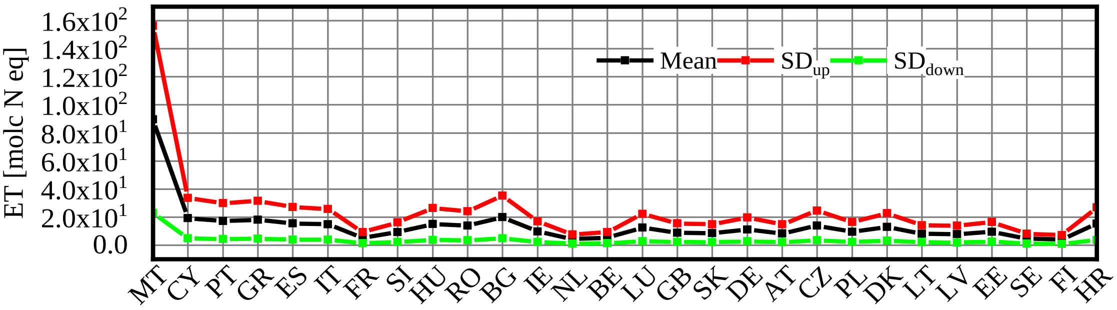

IR_hh [kBq U235 eq]
2.0x10^3
1.5x10^3
1.0x10^3
5.0x10^2
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR



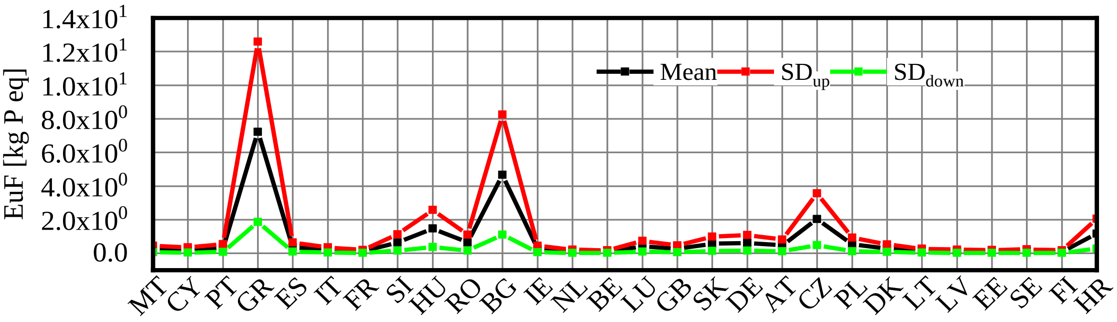
POF [kg NMVOC eq]
5x10¹
4x10¹
3x10¹
2x10¹
1x10¹
0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR



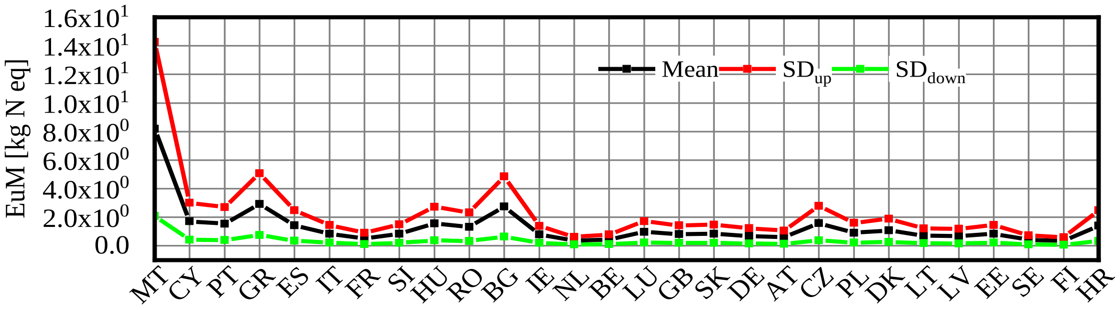
AC [molc H+ eq]
1.2x10²
1.0x10²
8.0x10¹
6.0x10¹
4.0x10¹
2.0x10¹
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR

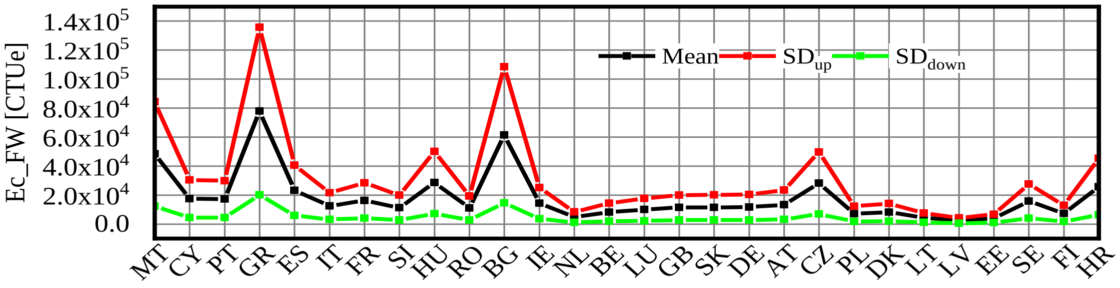


ET [molc N eq]
1.6x10²
1.4x10²
1.2x10²
1.0x10²
8.0x10¹
6.0x10¹
4.0x10¹
2.0x10¹
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR



EuF [kg P eq]
1.4x10¹
1.2x10¹
1.0x10¹
8.0x10⁰
6.0x10⁰
4.0x10⁰
2.0x10⁰
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR





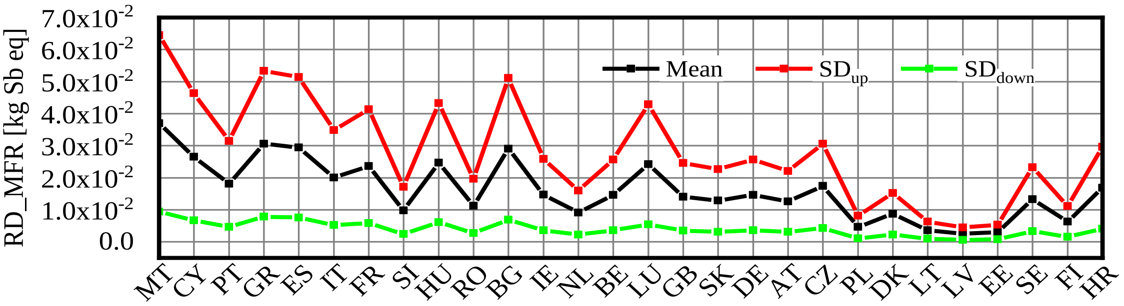


Figure 4.7, respectively for Thermal solar collector (in term of potential heating for DHW saved) and for PV systems (in terms of reduced electricity used from grid). In order to account that the benefits of energy are directly connect to the incident solar irradiation, the results are summarized for country as average value and standard deviation.

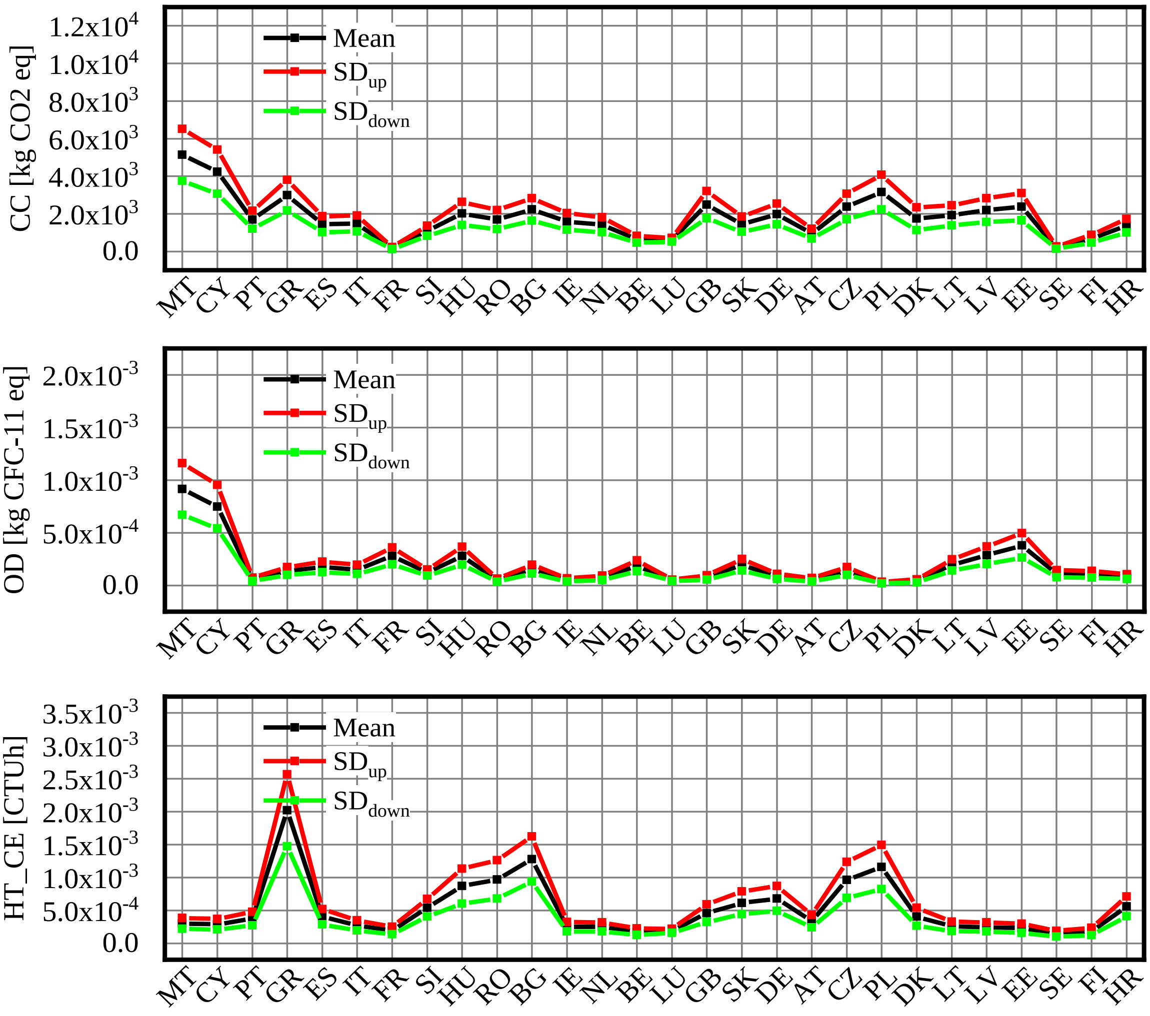
In black, the average value is shown; instead in green and in red, the standard deviation (SD).

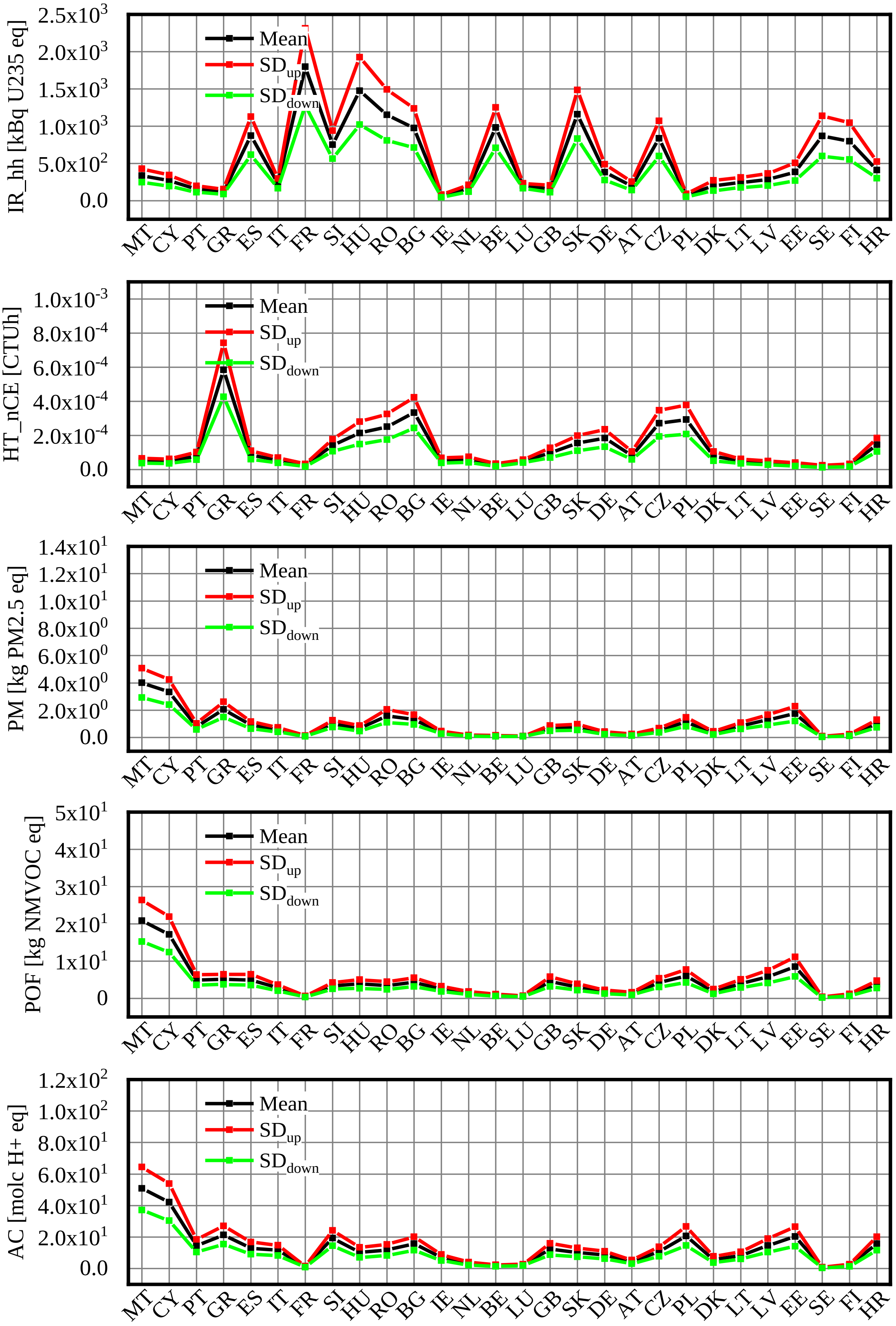
Although, the energy results show that the large energy produced and auto-consumed is into the warm climatic zone, the environmental impacts categories show variegated avoided impacts into all the categories.

In particular, it is possible observe that:

- With the use of both PV and solar thermal systems, MT could reduce the use of electricity from the national grid, reducing the impacts connect to its inefficiency. In particular, greater benefits could be generated for the CC, OD, PM, AC, EuM and ET if compared with the other countries as average value of the benefits that could be obtained for archetypes;

- For the IR_hh, the countries that could have greater benefits from the use of PV and Solar systems are some countries of the moderate climatic zone (as FR, HU, RO, BE, SK) where the use of the nuclear energy is prevalent into the national electricity mix), but also FI and ES;
- For the EuF, the countries that could have greater benefits from the use of renewable systems are GR and UK




IR_hh [kBq U235 eq]
2.5x10^3
2.0x10^3
1.5x10^3
1.0x10^3
5.0x10^2
0.0
HT_nCE [CTUh]
1.0x10^-3
8.0x10^-4
6.0x10^-4
4.0x10^-4
2.0x10^-4
0.0
PM [kg PM2.5 eq]
1.4x10^1
1.2x10^1
1.0x10^1
8.0x10^0
6.0x10^0
4.0x10^0
2.0x10^0
0.0
POF [kg NMVOC eq]
5x10^1
4x10^1
3x10^1
2x10^1
1x10^1
0
AC [molc H+ eq]
1.2x10^2
1.0x10^2
8.0x10^1
6.0x10^1
4.0x10^1
2.0x10^1
0.0
Mean
SD up
SD down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR

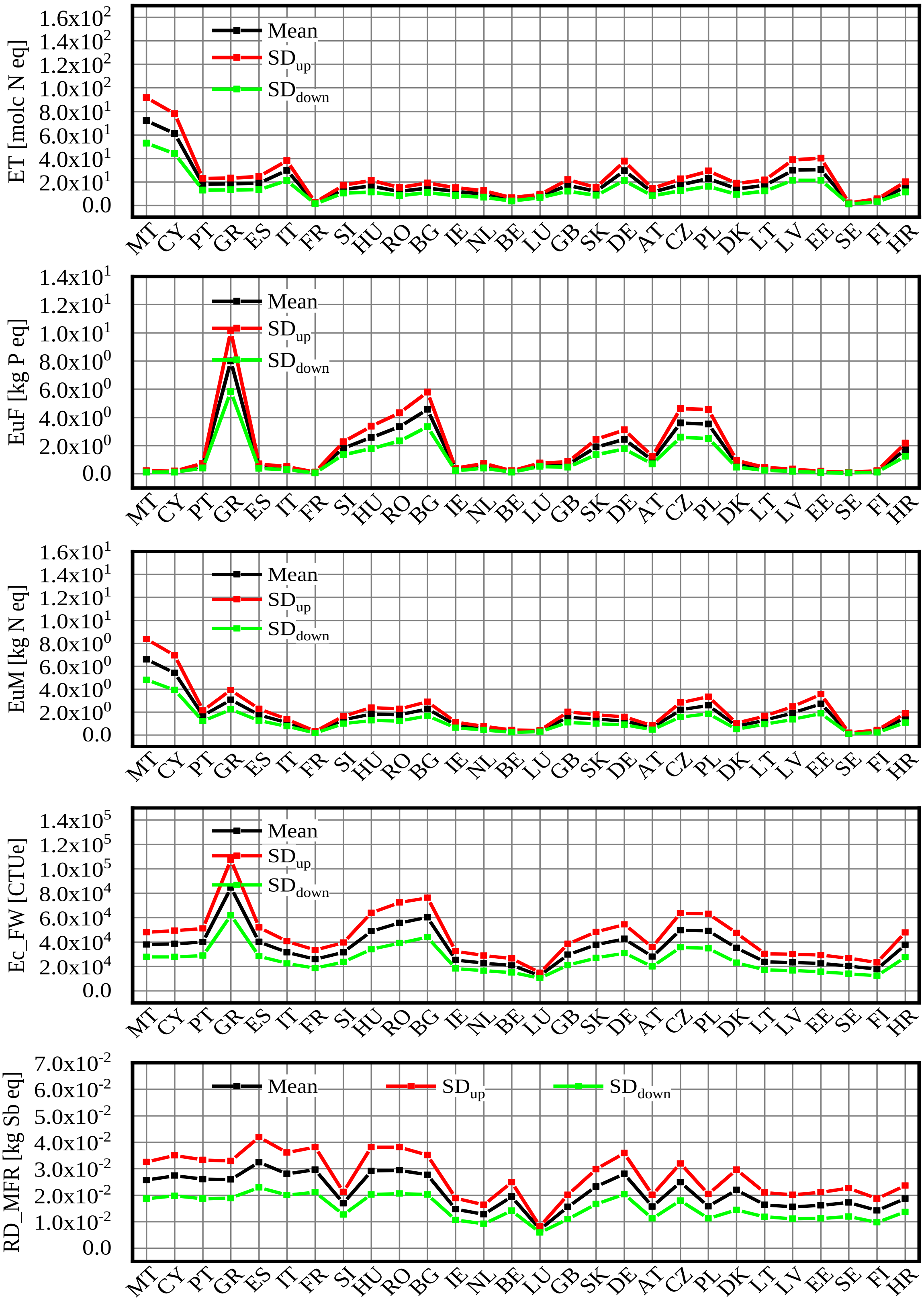
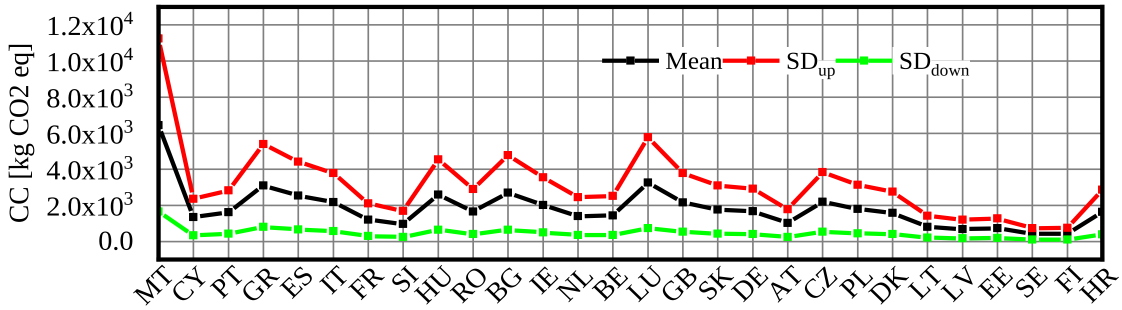
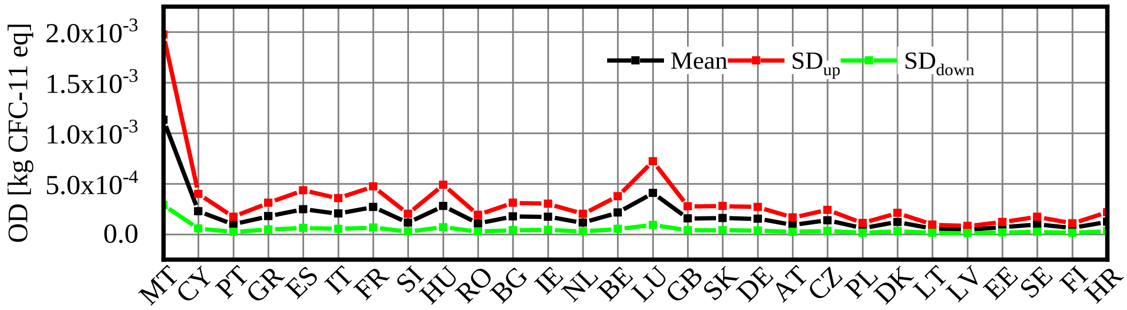
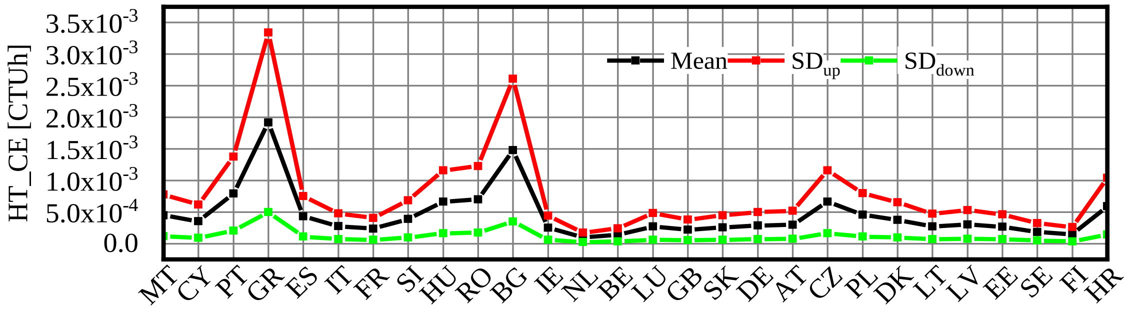
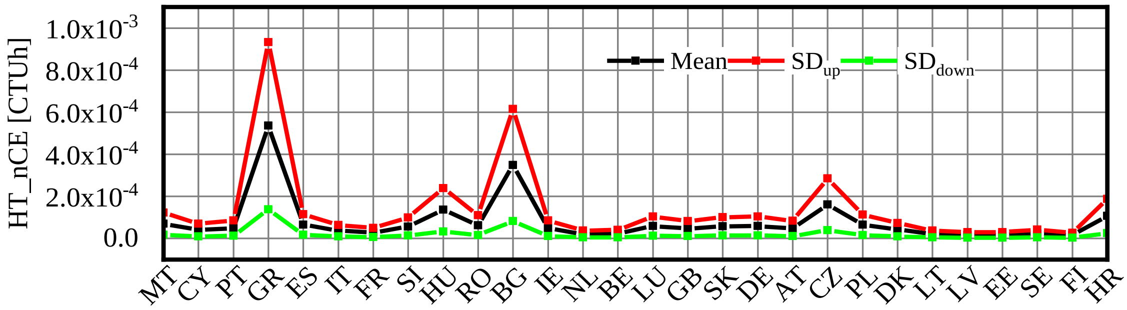


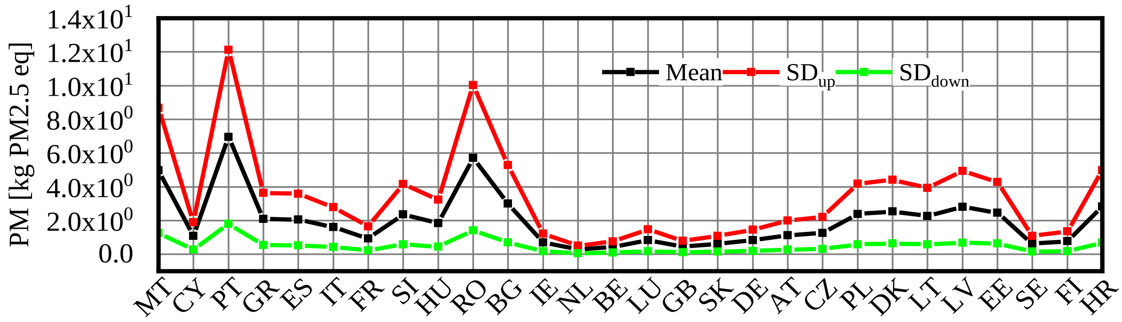
**Figure 4.6 Mean and standard deviation of avoided DHW demand for country**

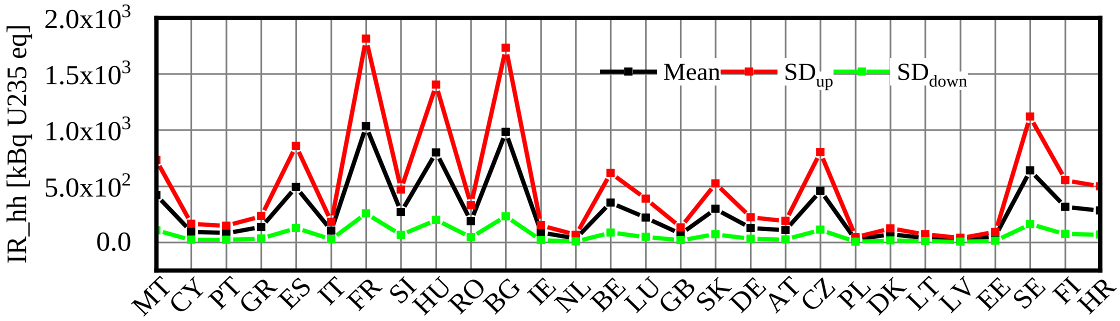

CC [kg CO2 eq]
1.2x10^4
1.0x10^4
8.0x10^3
6.0x10^3
4.0x10^3
2.0x10^3
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR

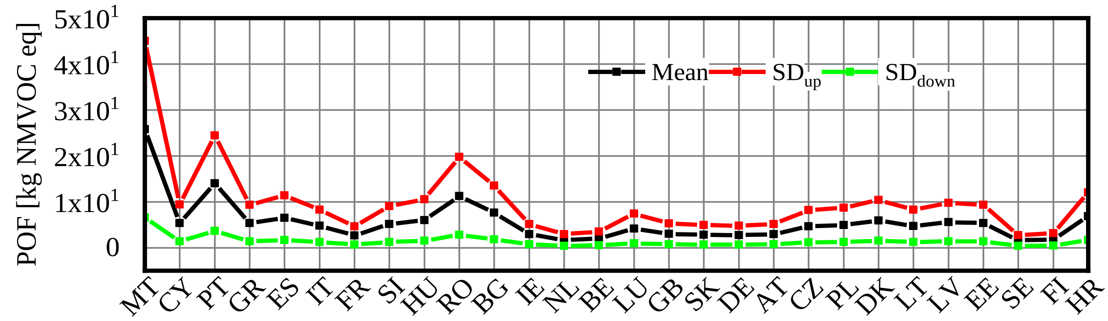

OD [kg CFC-11 eq]
2.0x10^-3
1.5x10^-3
1.0x10^-3
5.0x10^-4
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR

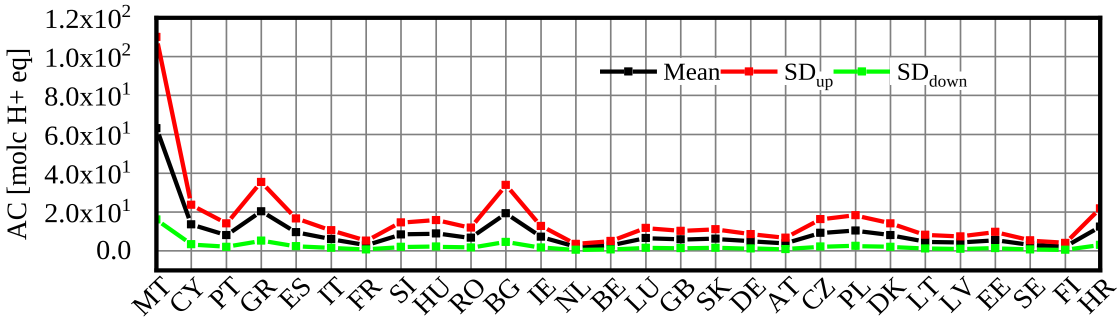

HT_CE [CTUh]
3.5x10^-3
3.0x10^-3
2.5x10^-3
2.0x10^-3
1.5x10^-3
1.0x10^-3
5.0x10^-4
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR

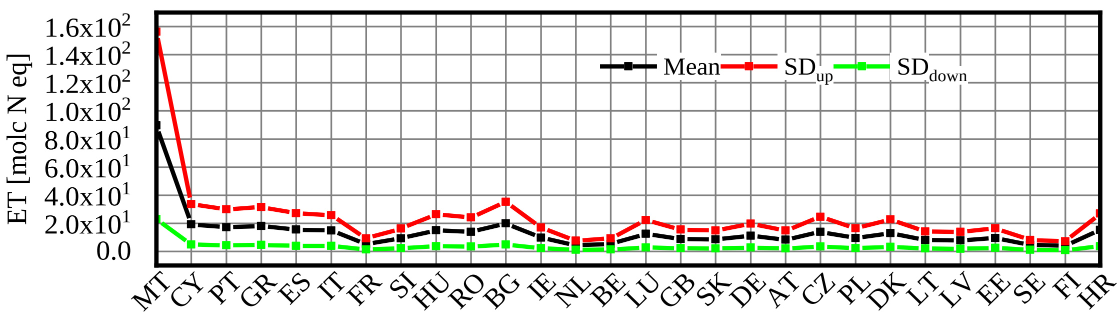

HT_nCE [CTUh]
1.0x10^-3
8.0x10^-4
6.0x10^-4
4.0x10^-4
2.0x10^-4
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR

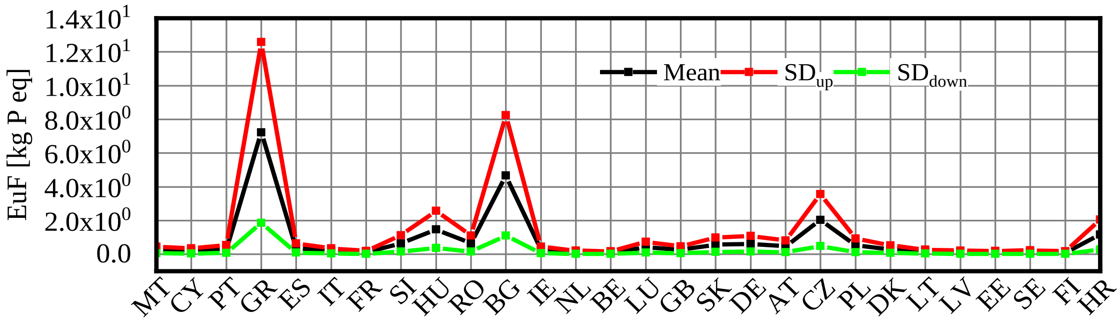

PM [kg PM2.5 eq]
1.4x10^1
1.2x10^1
1.0x10^1
8.0x10^0
6.0x10^0
4.0x10^0
2.0x10^0
0.0
Mean
SD_up
SD_down
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR


IR_hh [kBq U235 eq]
2.0x10$^3$
1.5x10$^3$
1.0x10$^3$
5.0x10$^2$
0.0
Mean
SD$_{up}$
SD$_{down}$
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR


POF [kg NMVOC eq]
5x10$^1$
4x10$^1$
3x10$^1$
2x10$^1$
1x10$^1$
0
Mean
SD$_{up}$
SD$_{down}$
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR


AC [molc H+ eq]
1.2x10$^2$
1.0x10$^2$
8.0x10$^1$
6.0x10$^1$
4.0x10$^1$
2.0x10$^1$
0.0
Mean
SD$_{up}$
SD$_{down}$
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR


ET [molc N eq]
1.6x10$^2$
1.4x10$^2$
1.2x10$^2$
1.0x10$^2$
8.0x10$^1$
6.0x10$^1$
4.0x10$^1$
2.0x10$^1$
0.0
Mean
SD$_{up}$
SD$_{down}$
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR


EuF [kg P eq]
1.4x10$^1$
1.2x10$^1$
1.0x10$^1$
8.0x10$^0$
6.0x10$^0$
4.0x10$^0$
2.0x10$^0$
0.0
Mean
SD$_{up}$
SD$_{down}$
MT CY PT GR ES IT FR SI HU RO BG IE NL BE LU GB SK DE AT CZ PL DK LT LV EE SE FI HR

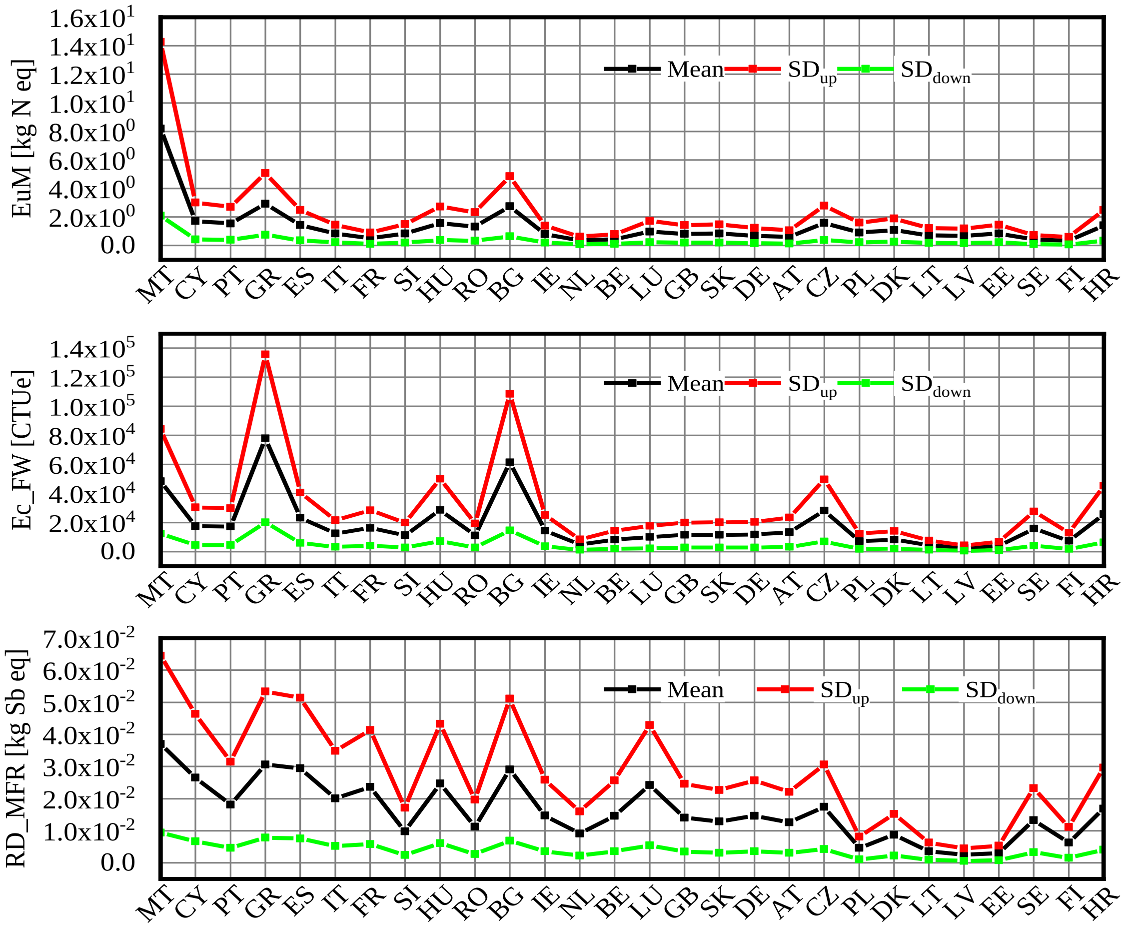


**Figure 4.7 Mean and standard deviation of avoided electricity demand from grid for country**

Table 4.9 shows the environmental payback times, calculated summing the impacts connect to the LCA of the solar collector system for all the archetypes and their potential environmental benefits. The results show that the proposed solutions, except for RD_MRF, HT_CE and nCE indicators, is able to repay the environmental impacts produced during the useful life of the solar systems (30 years) before to be changed. The PBT of the archetypes into the warm climatic zone is less than that into the other climatic zone due to the major thermal energy produced and to the worst environmental impacts of 1kWh thermal energy used for DHW at national level.

In addition, the RD_MFR impacts for solar collector is not repaid for no one archetypes due to the less impact generated by the DHW technology's operation use at 2010 by each country and to the large impacts in that category connect to the realization of the plant.

Instead, Table 4.10 shows the environmental payback times, calculated summing the impacts connect to the LCA of the PV system for all the archetypes and their potential environmental benefits. The results show that the proposed solutions, except for many indicators for the cold climatic zone, is able to repay the environmental impacts produced during the useful life of the PV systems (30 years) before to be changed. The PBT of the archetypes into the warm and moderate climatic zones are similar in all the archetypes.

### Table 4.9 Average Environmental PBt for archetypes (Scenario II – Solar system)

| | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 1.86 | 1.42 | 32.20 | 30.78 | 2.58 | 1.12 | 2.81 | 6.86 | 3.88 | 14.49 | 5.18 | 16.85 | 44.17 |
| **SFH<1945_M** | 2.02 | 1.60 | 44.19 | 32.60 | 5.34 | 0.80 | 4.64 | 8.97 | 5.96 | 15.97 | 6.96 | 22.24 | 59.65 |
| **SFH<1945_C** | 6.67 | 3.21 | 58.61 | 78.67 | 4.14 | 0.50 | 5.59 | 13.98 | 9.12 | 52.83 | 10.66 | 25.38 | 94.45 |
| **SFH1945-1969_W** | 1.74 | 1.41 | 22.20 | 16.85 | 2.37 | 1.11 | 2.65 | 5.65 | 3.67 | 6.05 | 4.25 | 12.03 | 41.04 |
| **SFH1945-1969_M** | 2.06 | 1.66 | 37.69 | 28.96 | 4.00 | 0.77 | 4.07 | 8.49 | 5.56 | 12.76 | 6.52 | 21.04 | 60.08 |
| **SFH1945-1969_C** | 6.81 | 3.33 | 60.71 | 81.48 | 4.30 | 0.52 | 5.81 | 14.69 | 9.48 | 54.02 | 11.13 | 26.74 | 99.29 |
| **SFH1970-1989_W** | 1.75 | 1.44 | 20.66 | 15.92 | 2.14 | 1.10 | 2.47 | 5.43 | 3.62 | 5.64 | 4.04 | 11.51 | 40.80 |
| **SFH1970-1989_M** | 2.13 | 1.48 | 37.37 | 30.10 | 3.81 | 0.53 | 4.02 | 8.89 | 5.76 | 13.61 | 6.66 | 19.78 | 54.16 |
| **SFH1970-1989_C** | 7.85 | 3.76 | 70.06 | 92.49 | 5.11 | 0.58 | 6.86 | 17.05 | 11.02 | 61.45 | 12.94 | 29.83 | 110.72 |
| **SFH1990-2010_W** | 1.76 | 1.39 | 22.57 | 19.44 | 2.05 | 0.84 | 2.34 | 5.48 | 3.62 | 7.67 | 4.03 | 12.27 | 38.91 |
| **SFH1990-2010_M** | 2.08 | 1.55 | 39.57 | 30.67 | 4.38 | 0.62 | 4.37 | 8.55 | 5.80 | 14.28 | 6.85 | 20.94 | 57.23 |
| **SFH1990-2010_C** | 8.19 | 4.13 | 75.67 | 101.93 | 5.37 | 0.66 | 7.20 | 18.41 | 11.68 | 66.04 | 13.81 | 34.50 | 127.69 |
| **MFH<1945_W** | 2.26 | 2.02 | 53.31 | 32.22 | 4.04 | 1.62 | 4.18 | 10.59 | 5.19 | 21.54 | 7.71 | 26.11 | 62.17 |
| **MFH<1945_M** | 3.01 | 2.32 | 65.41 | 33.18 | 6.21 | 0.71 | 6.38 | 14.13 | 8.35 | 23.34 | 10.54 | 33.94 | 86.48 |
| **MFH<1945_C** | 8.12 | 4.41 | 89.15 | 69.48 | 5.59 | 0.55 | 7.45 | 20.02 | 11.84 | 77.65 | 14.33 | 34.34 | 120.71 |
| **MFH1945-1969_W** | 2.21 | 2.00 | 45.67 | 24.90 | 3.97 | 1.43 | 4.09 | 9.66 | 5.13 | 14.70 | 7.00 | 22.38 | 59.57 |
| **MFH1945-1969_M** | 2.87 | 2.59 | 57.92 | 27.81 | 5.54 | 1.00 | 5.87 | 13.06 | 7.38 | 17.37 | 9.58 | 33.06 | 92.09 |
| **MFH1945-1969_C** | 7.93 | 4.66 | 89.40 | 72.94 | 5.19 | 0.62 | 6.98 | 19.80 | 11.52 | 79.79 | 14.00 | 38.38 | 134.81 |
| **MFH1970-1989_W** | 2.19 | 2.01 | 40.88 | 22.06 | 3.60 | 1.30 | 3.82 | 9.08 | 5.06 | 12.53 | 6.49 | 20.49 | 57.96 |
| **MFH1970-1989_M** | 2.95 | 2.53 | 53.62 | 28.37 | 4.33 | 0.82 | 5.08 | 12.90 | 7.54 | 17.99 | 9.29 | 32.47 | 90.28 |
| **MFH1970-1989_C** | 7.46 | 5.06 | 86.71 | 76.61 | 4.48 | 0.78 | 6.13 | 19.00 | 10.82 | 80.95 | 13.22 | 46.02 | 161.17 |
| **MFH1990-2010_W** | 2.13 | 1.91 | 39.42 | 22.49 | 3.27 | 0.93 | 3.44 | 8.34 | 4.96 | 13.80 | 5.85 | 19.10 | 53.16 |
| **MFH1990-2010_M** | 2.87 | 2.53 | 56.14 | 27.83 | 5.31 | 0.80 | 5.78 | 11.97 | 7.98 | 18.26 | 9.46 | 31.83 | 91.62 |
| **MFH1990-2010_C** | 8.29 | 4.81 | 94.97 | 76.26 | 5.70 | 0.63 | 7.59 | 21.30 | 12.30 | 82.64 | 15.00 | 39.92 | 139.90 |

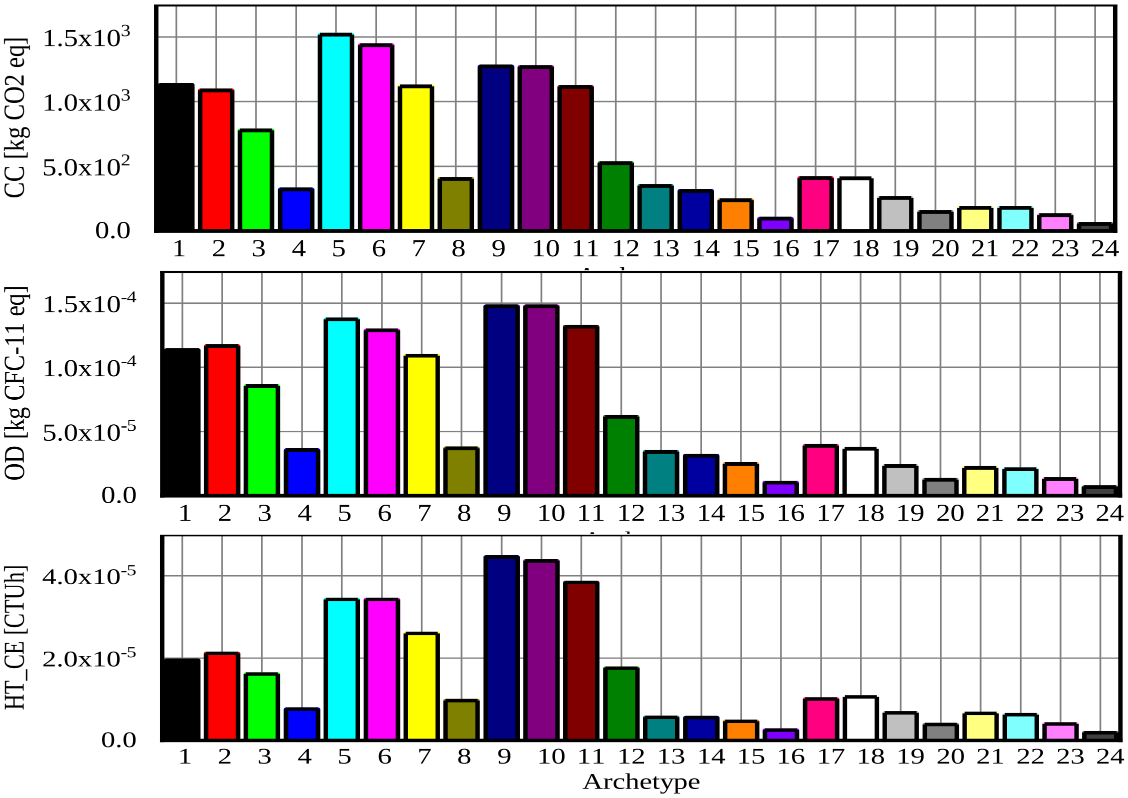
**Table 4.10 Average Environmental PBt for archetypes (Scenario II – PV system)**

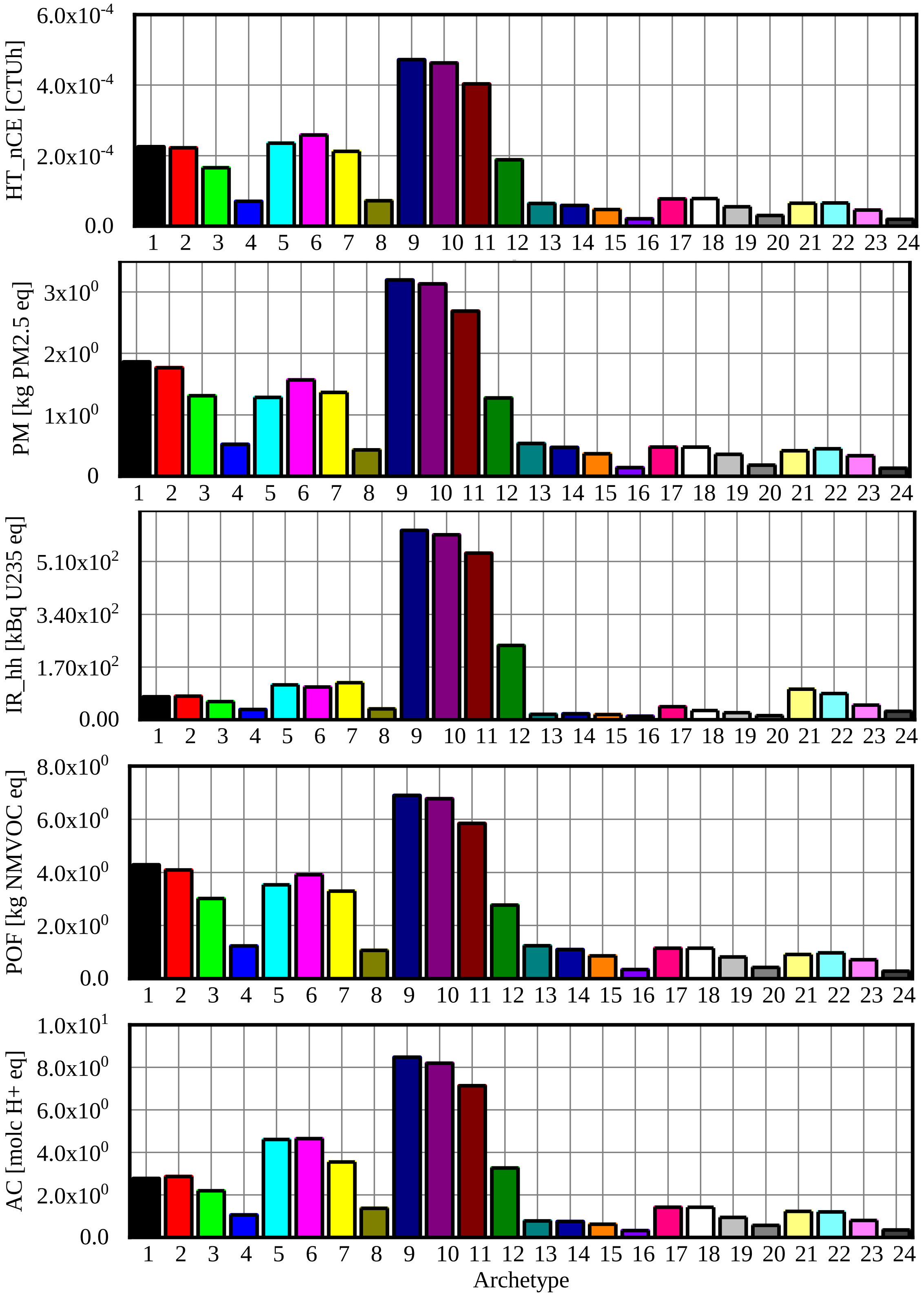
| | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 3.53 | 3.38 | 17.77 | 9.44 | 6.80 | 1.19 | 5.06 | 3.21 | 2.45 | 6.92 | 4.29 | 15.32 | 1,144.00 |
| **SFH<1945_M** | 3.03 | 4.60 | 13.69 | 6.89 | 10.31 | 0.87 | 6.75 | 4.56 | 3.89 | 4.24 | 5.04 | 16.92 | 1,575.73 |
| **SFH<1945_C** | 6.70 | 3.41 | 38.31 | 30.40 | 13.06 | 0.69 | 10.53 | 9.35 | 7.17 | 34.59 | 9.59 | 27.26 | 2,009.32 |
| **SFH1945-1969_W** | 3.18 | 3.42 | 12.13 | 5.79 | 5.65 | 1.27 | 4.73 | 2.95 | 2.56 | 3.40 | 3.73 | 13.33 | 1,158.86 |
| **SFH1945-1969_M** | 3.07 | 4.70 | 12.14 | 5.90 | 9.54 | 0.81 | 7.05 | 4.51 | 3.70 | 3.32 | 4.89 | 15.59 | 1,481.50 |
| **SFH1945-1969_C** | 6.82 | 3.61 | 38.12 | 30.21 | 14.35 | 0.68 | 11.59 | 10.29 | 7.70 | 33.19 | 10.43 | 27.75 | 2,046.49 |
| **SFH1970-1989_W** | 3.10 | 3.42 | 11.57 | 5.48 | 5.36 | 1.27 | 4.47 | 2.85 | 2.62 | 3.19 | 3.54 | 12.98 | 1,163.49 |
| **SFH1970-1989_M** | 3.63 | 3.78 | 13.27 | 6.57 | 10.75 | 0.61 | 8.26 | 5.28 | 4.33 | 3.72 | 5.59 | 16.11 | 1,404.51 |
| **SFH1970-1989_C** | 7.24 | 3.78 | 38.53 | 30.69 | 16.04 | 0.67 | 12.97 | 11.53 | 8.48 | 33.54 | 11.53 | 28.02 | 2,057.00 |
| **SFH1990-2010_W** | 3.12 | 3.10 | 13.08 | 5.96 | 5.12 | 0.96 | 3.97 | 2.75 | 2.67 | 4.18 | 3.32 | 13.36 | 1,127.83 |
| **SFH1990-2010_M** | 3.29 | 4.22 | 12.84 | 6.31 | 10.87 | 0.73 | 7.57 | 4.81 | 3.93 | 3.60 | 5.22 | 16.18 | 1,476.99 |
| **SFH1990-2010_C** | 6.89 | 3.84 | 37.94 | 30.53 | 15.99 | 0.66 | 12.70 | 11.27 | 8.50 | 32.27 | 11.32 | 28.84 | 2,122.37 |
| **MFH<1945_W** | 4.22 | 3.99 | 21.56 | 10.51 | 8.59 | 1.58 | 6.76 | 3.93 | 2.71 | 8.06 | 5.54 | 18.78 | 1,365.63 |
| **MFH<1945_M** | 4.14 | 4.41 | 14.82 | 6.63 | 14.38 | 0.74 | 10.11 | 6.00 | 4.45 | 3.94 | 6.44 | 18.76 | 1,631.01 |
| **MFH<1945_C** | 9.09 | 4.39 | 48.14 | 37.63 | 18.03 | 0.85 | 14.69 | 13.30 | 9.98 | 43.55 | 13.25 | 33.11 | 2,424.98 |
| **MFH1945-1969_W** | 4.08 | 3.95 | 18.19 | 8.45 | 7.80 | 1.43 | 6.36 | 3.80 | 2.82 | 5.92 | 5.10 | 17.59 | 1,355.57 |
| **MFH1945-1969_M** | 3.55 | 5.55 | 12.48 | 5.31 | 12.23 | 0.93 | 9.29 | 5.25 | 3.57 | 2.98 | 5.55 | 16.90 | 1,591.39 |
| **MFH1945-1969_C** | 7.73 | 4.06 | 46.52 | 36.55 | 14.73 | 0.88 | 11.77 | 10.57 | 8.36 | 41.46 | 10.84 | 33.39 | 2,472.00 |
| **MFH1970-1989_W** | 3.98 | 3.97 | 16.63 | 7.58 | 7.28 | 1.33 | 5.96 | 3.68 | 2.94 | 5.18 | 4.77 | 16.84 | 1,349.18 |
| **MFH1970-1989_M** | 3.84 | 5.13 | 12.53 | 5.41 | 10.66 | 0.76 | 9.26 | 5.32 | 4.11 | 3.05 | 5.66 | 16.88 | 1,570.53 |
| **MFH1970-1989_C** | 6.13 | 3.63 | 43.50 | 33.54 | 11.36 | 0.96 | 8.99 | 8.06 | 6.50 | 36.36 | 8.44 | 33.14 | 2,511.65 |
| **MFH1990-2010_W** | 4.00 | 3.75 | 16.61 | 7.73 | 6.67 | 0.97 | 5.13 | 3.55 | 3.26 | 5.70 | 4.28 | 16.33 | 1,304.11 |
| **MFH1990-2010_M** | 3.63 | 5.03 | 12.83 | 5.67 | 11.09 | 0.85 | 8.17 | 4.91 | 4.30 | 3.34 | 5.44 | 17.77 | 1,718.43 |
| **MFH1990-2010_C** | 8.40 | 4.41 | 47.24 | 37.65 | 17.39 | 0.84 | 13.85 | 12.42 | 9.70 | 41.76 | 12.56 | 34.47 | 2,534.93 |

Moreover, the PBT calculation allow to observe that the impacts connect to LCA of the PV systems cannot repay the impacts connect to the RD_MFR, requiring more than 1000 years. In fact, as demonstrated into [13], the PV system solution could increase the RD_MRF if compared with the baseline scenario proposed for studying the housing product at European level.

### 4.2.3 **Scenario III: Night setpoint temperatures**

The third scenario focus on the potential environmental benefits that could be obtained from the regulation of the temperature set point with a different value or turning off the HVAC plant. This scenario is only indicative of the environmental potential benefits that could be obtained with some behavior strategy or change style life of inhabitants. No PBT has been calculated because no materials or energy is spent for this intervention. The results for country are reported in Table 4.11 as environmental impacts avoided for dwelling in each country




HT_nCE [CTUh]
6.0x10-4
4.0x10-4
2.0x10-4
0.0
PM [kg PM2.5 eq]
3x100
2x100
1x100
0
IR_hh [kBq U235 eq]
5.10x102
3.40x102
1.70x102
0.00
POF [kg NMVOC eq]
8.0x100
6.0x100
4.0x100
2.0x100
0.0
AC [molc H+ eq]
1.0x101
8.0x100
6.0x100
4.0x100
2.0x100
0.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Archetype

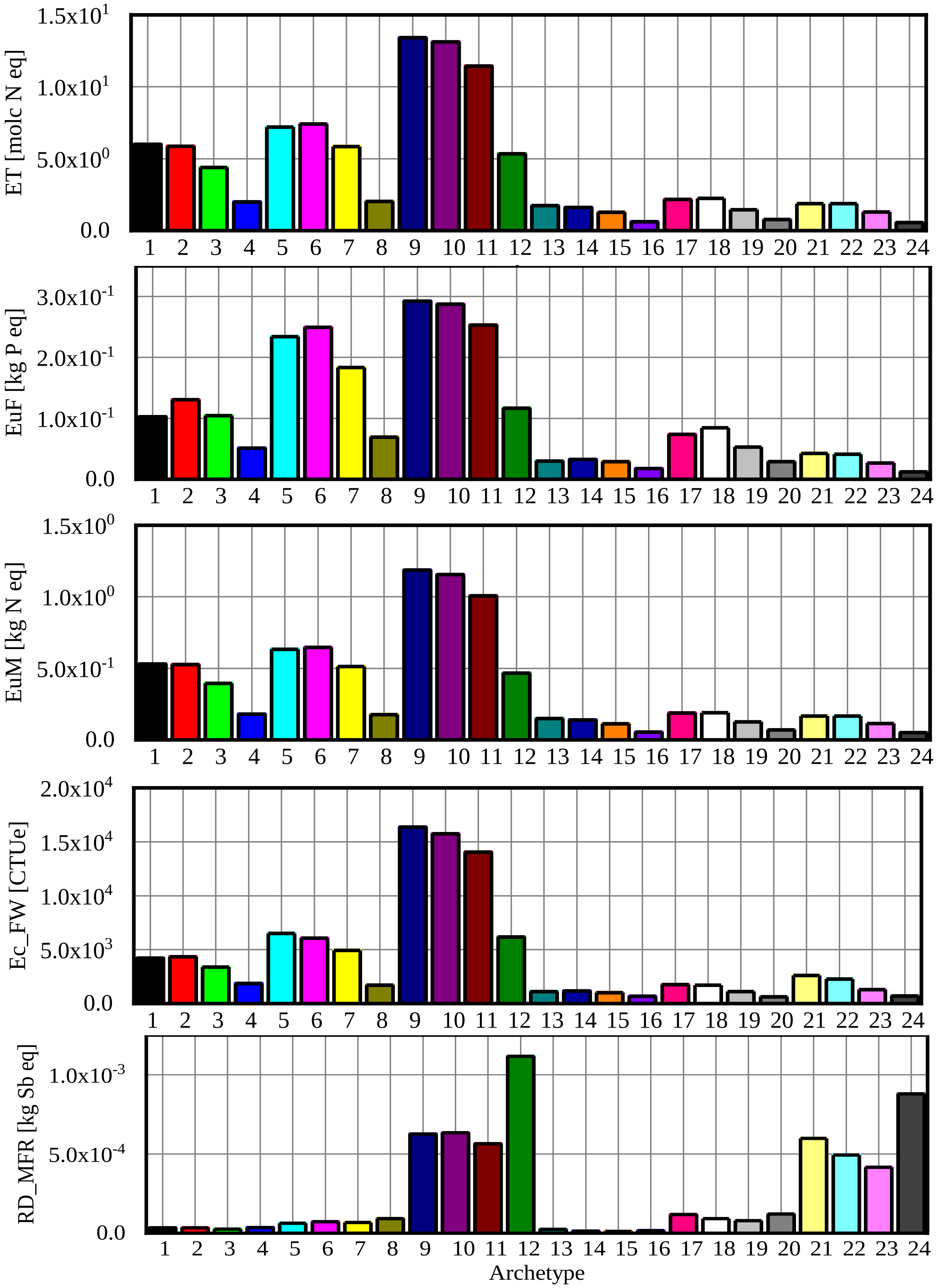


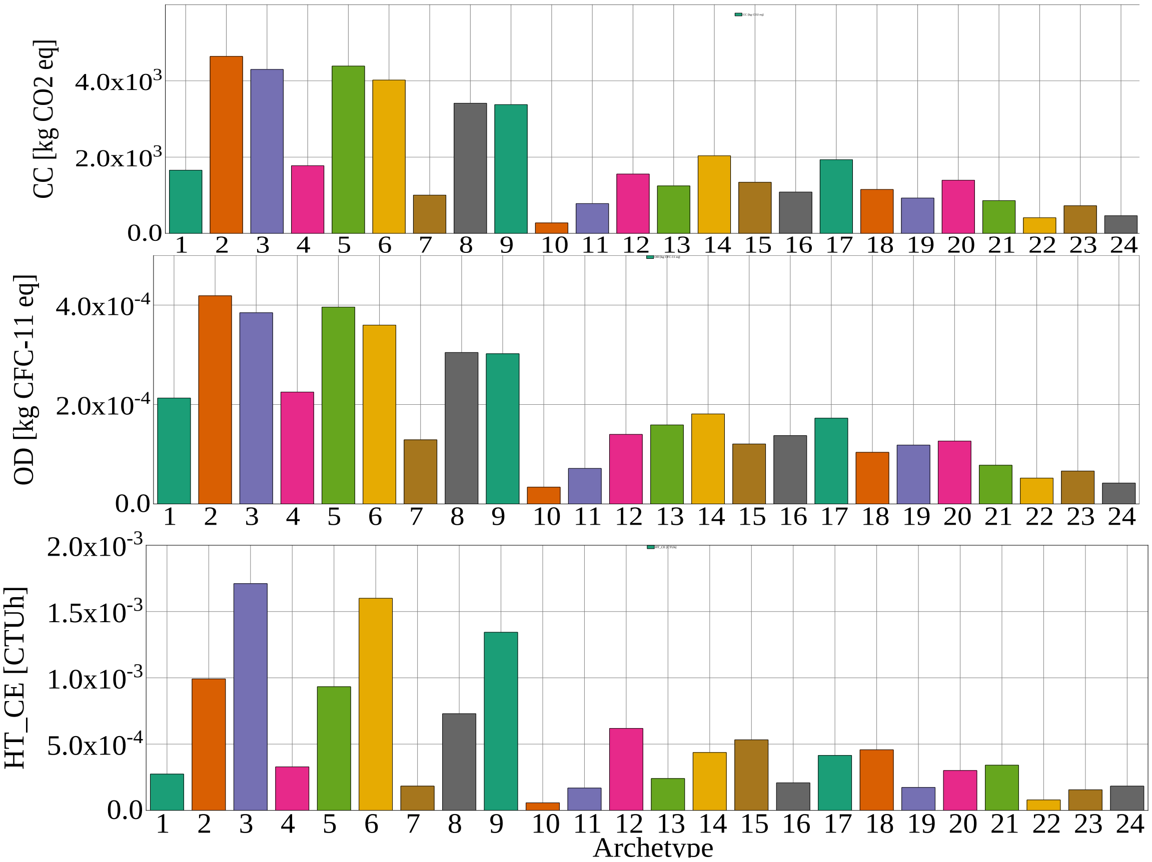
Figure 4.8 Breakdown of the average environmental impacts for archetypes (Scenario III).

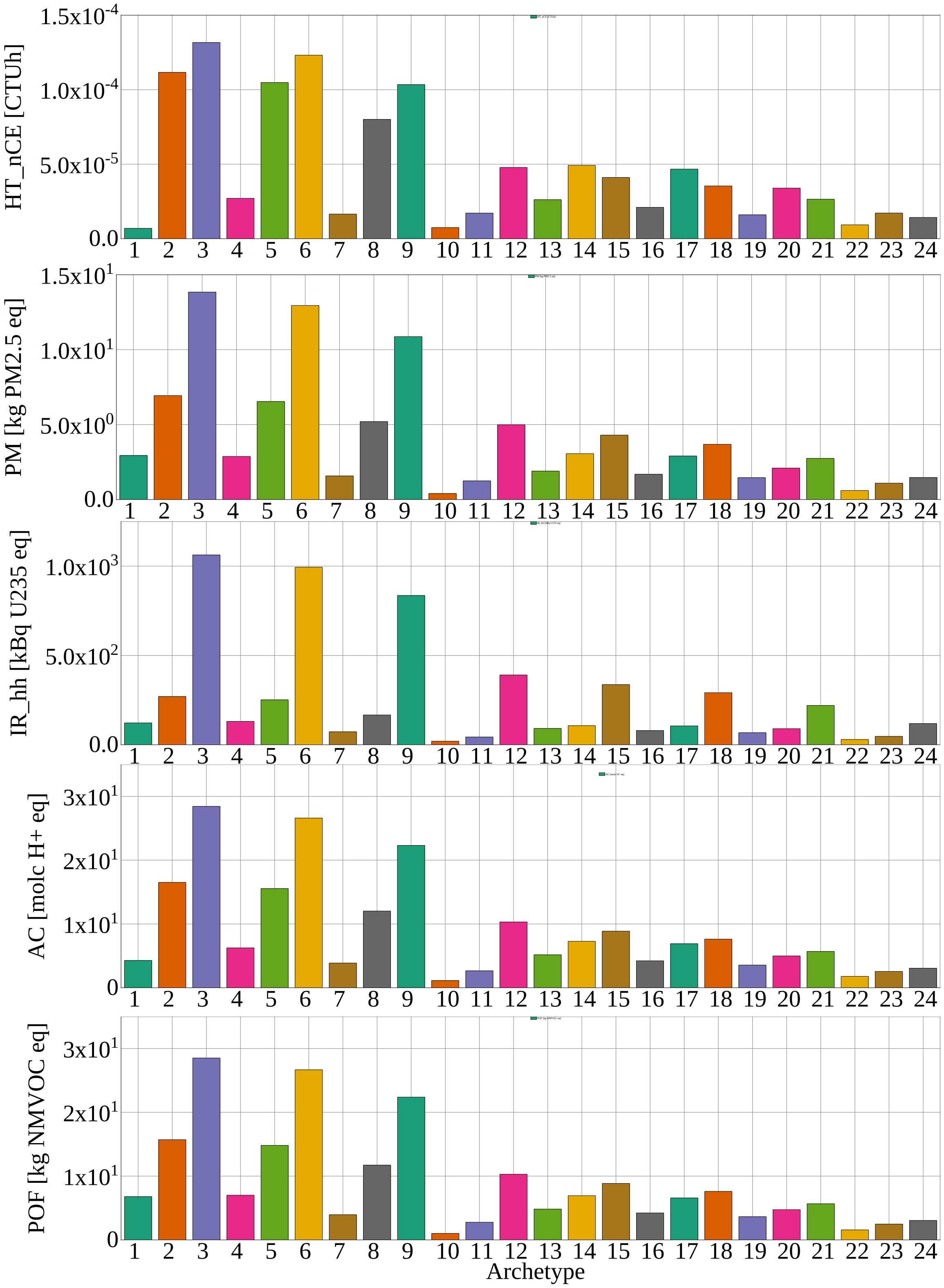
**Table 4.11 Potential avoided environmental impacts for dwelling (Scenario III)**

| | CC [kg CO2 eq] | OD [kg CFC-11 eq] | HT_CE [CTUh] | HT_nCE [CTUh] | PM [kg $PM^2$.5 eq] | IR_hh [kBq U235 eq] | POF [kg NMVOC eq] | AC [molc H+ eq] | ET [molc N eq] | EuF [kg P eq] | EuM [kg N eq] | Ec_FW [CTUe] | RD_MFR [kg Sb eq] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AT** | 4.74E+02 | 5.09E-05 | 1.27E-04 | 1.34E-05 | 9.31E-01 | 3.21E+01 | 2.04E+00 | 1.72E+00 | 3.48E+00 | 1.10E-01 | 2.83E-01 | 4.74E+02 | 5.09E-05 |
| **BE** | 4.11E+02 | 5.45E-05 | 3.63E-05 | 5.79E-06 | 1.81E-01 | 4.23E+01 | 6.60E-01 | 8.49E-01 | 1.40E+00 | 2.30E-02 | 1.23E-01 | 4.11E+02 | 5.45E-05 |
| **BG** | 2.88E+02 | 1.31E-05 | 1.63E-04 | 1.87E-05 | 1.12E+00 | 3.74E+01 | 2.13E+00 | 2.06E+00 | 2.84E+00 | 2.09E-01 | 2.88E-01 | 2.88E+02 | 1.31E-05 |
| **CY** | 1.90E+02 | 3.26E-05 | 1.35E-05 | 2.34E-06 | 1.15E-01 | 1.30E+01 | 5.46E-01 | 1.24E+00 | 1.80E+00 | 7.60E-03 | 1.60E-01 | 1.90E+02 | 3.26E-05 |
| **CZ** | 5.84E+02 | 3.32E-05 | 1.61E-04 | 2.23E-05 | 9.58E-01 | 3.93E+01 | 2.10E+00 | 2.68E+00 | 3.55E+00 | 2.15E-01 | 3.47E-01 | 5.84E+02 | 3.32E-05 |
| **DE** | 3.88E+02 | 4.02E-05 | 5.57E-05 | 9.32E-06 | 2.82E-01 | 2.13E+01 | 8.08E-01 | 1.08E+00 | 2.09E+00 | 7.99E-02 | 1.55E-01 | 3.88E+02 | 4.02E-05 |
| **DK** | 3.44E+02 | 2.71E-05 | 7.90E-05 | 8.09E-06 | 6.02E-01 | 1.22E+01 | 1.39E+00 | 1.84E+00 | 2.81E+00 | 5.63E-02 | 2.46E-01 | 3.44E+02 | 2.71E-05 |
| **EE** | 2.57E+02 | 1.73E-05 | 1.14E-04 | 6.99E-06 | 1.06E+00 | 1.04E+01 | 2.13E+00 | 1.89E+00 | 3.25E+00 | 5.02E-02 | 2.88E-01 | 2.57E+02 | 1.73E-05 |
| **ES** | 1.50E+02 | 1.69E-05 | 3.36E-05 | 4.11E-06 | 2.17E-01 | 2.98E+01 | 5.62E-01 | 6.29E-01 | 1.07E+00 | 2.31E-02 | 9.79E-02 | 1.50E+02 | 1.69E-05 |
| **FI** | 4.49E+02 | 5.40E-05 | 1.55E-04 | 1.44E-05 | 1.04E+00 | 2.01E+02 | 2.28E+00 | 2.61E+00 | 4.41E+00 | 9.74E-02 | 3.83E-01 | 4.49E+02 | 5.40E-05 |
| **FR** | 2.41E+02 | 3.87E-05 | 5.07E-05 | 4.59E-06 | 3.62E-01 | 9.28E+01 | 8.37E-01 | 6.26E-01 | 1.22E+00 | 2.00E-02 | 1.13E-01 | 2.41E+02 | 3.87E-05 |
| **GB** | 5.65E+02 | 4.42E-05 | 5.46E-05 | 1.12E-05 | 1.51E-01 | 1.77E+01 | 8.19E-01 | 1.42E+00 | 2.15E+00 | 6.20E-02 | 1.98E-01 | 5.65E+02 | 4.42E-05 |
| **GR** | 2.54E+02 | 3.84E-05 | 5.42E-05 | 9.51E-06 | 2.83E-01 | 1.73E+01 | 7.01E-01 | 8.47E-01 | 1.25E+00 | 9.74E-02 | 1.26E-01 | 2.54E+02 | 3.84E-05 |
| **HR** | 2.65E+02 | 2.31E-05 | 1.36E-04 | 6.13E-06 | 1.35E+00 | 9.90E+00 | 2.57E+00 | 1.02E+00 | 2.63E+00 | 4.20E-02 | 2.32E-01 | 2.65E+02 | 2.31E-05 |
| **HU** | 5.42E+02 | 4.46E-05 | 1.29E-04 | 1.33E-05 | 9.56E-01 | 4.37E+01 | 2.13E+00 | 1.59E+00 | 3.03E+00 | 1.08E-01 | 2.80E-01 | 5.42E+02 | 4.46E-05 |
| **IE** | 7.35E+02 | 7.75E-05 | 8.63E-05 | 1.53E-05 | 3.35E-01 | 3.25E+01 | 1.08E+00 | 2.57E+00 | 2.70E+00 | 7.87E-02 | 2.41E-01 | 7.35E+02 | 7.75E-05 |
| **IT** | 2.78E+02 | 2.58E-05 | 4.85E-05 | 3.57E-06 | 4.30E-01 | 6.10E+00 | 9.79E-01 | 4.89E-01 | 1.25E+00 | 1.54E-02 | 1.06E-01 | 2.78E+02 | 2.58E-05 |
| **LT** | 2.18E+02 | 1.18E-05 | 8.64E-05 | 6.05E-06 | 7.64E-01 | 4.88E+00 | 1.52E+00 | 1.41E+00 | 2.25E+00 | 4.33E-02 | 2.00E-01 | 2.18E+02 | 1.18E-05 |
| **LU** | 7.06E+02 | 9.02E-05 | 5.24E-05 | 1.07E-05 | 2.05E-01 | 3.99E+01 | 9.56E-01 | 1.39E+00 | 2.47E+00 | 6.07E-02 | 2.03E-01 | 7.06E+02 | 9.02E-05 |
| **LV** | 3.54E+02 | 2.23E-05 | 1.59E-04 | 9.49E-06 | 1.48E+00 | 9.54E+00 | 2.91E+00 | 2.26E+00 | 4.04E+00 | 6.72E-02 | 3.55E-01 | 3.54E+02 | 2.23E-05 |
| **MT** | 2.38E+02 | 3.70E-05 | 1.52E-05 | 2.28E-06 | 1.86E-01 | 1.39E+01 | 8.87E-01 | 2.06E+00 | 2.96E+00 | 8.19E-03 | 2.70E-01 | 2.38E+02 | 3.70E-05 |
| **NL** | 3.69E+02 | 3.13E-05 | 2.28E-05 | 4.50E-06 | 9.37E-02 | 6.27E+00 | 4.77E-01 | 5.14E-01 | 1.02E+00 | 2.13E-02 | 8.98E-02 | 3.69E+02 | 3.13E-05 |
| **PL** | 4.33E+02 | 1.62E-05 | 1.10E-04 | 1.39E-05 | 6.43E-01 | 5.93E+00 | 1.28E+00 | 2.63E+00 | 2.29E+00 | 9.78E-02 | 2.16E-01 | 4.33E+02 | 1.62E-05 |
| **PT** | 6.13E+01 | 5.03E-06 | 4.48E-05 | 1.53E-06 | 4.61E-01 | 2.44E+00 | 8.57E-01 | 2.57E-01 | 7.97E-01 | 9.22E-03 | 7.04E-02 | 6.13E+01 | 5.03E-06 |
| **RO** | 3.13E+02 | 2.18E-05 | 1.30E-04 | 7.94E-06 | 1.21E+00 | 1.40E+01 | 2.38E+00 | 1.28E+00 | 2.80E+00 | 6.31E-02 | 2.53E-01 | 3.13E+02 | 2.18E-05 |
| **SE** | 1.99E+02 | 3.14E-05 | 6.88E-05 | 8.80E-06 | 2.97E-01 | 1.76E+02 | 7.46E-01 | 1.47E+00 | 2.09E+00 | 5.39E-02 | 1.88E-01 | 1.99E+02 | 3.14E-05 |
| **SI** | 2.51E+02 | 3.06E-05 | 1.05E-04 | 7.61E-06 | 9.43E-01 | 2.82E+01 | 1.87E+00 | 1.32E+00 | 2.33E+00 | 6.44E-02 | 2.07E-01 | 2.51E+02 | 3.06E-05 |
| **SK** | 2.77E+02 | 2.18E-05 | 3.10E-05 | 6.09E-06 | 1.20E-01 | 1.82E+01 | 4.55E-01 | 9.30E-01 | 1.23E+00 | 4.75E-02 | 1.15E-01 | 2.77E+02 | 2.18E-05 |

### 4.2.4 Scenario IV: Refurbishement nZEB oriented

The fourth scenario focus on the analysis of the environmental impacts connect to the installation of insulation materials on the opaque surfaces and the windows as indicated into the methodological approach chapter. Although, the environmental impacts connect to the insulation materials are the same for the 24 archetypes identified for the three climatic zones, the effects connect to variation of heating and cooling load impacts depend on the heating and cooling profile of each country. These great effects could be underlined with application of the PBt indicators. The heating and cooling impacts/benefits are shown in Figure 4.9. The results are presented as average value for archetypes, where it is possible observe that the environmental impacts connect to the potential impacts/benefits for the heating and cooling demand are greater into the archetypes of the cold climatic zone and the into older SFH of each climatic zone.




HT_nCE [CTUh]
1.5x10^-4
1.0x10^-4
5.0x10^-5
0.0
PM [kg PM2.5 eq]
1.5x10^1
1.0x10^1
5.0x10^0
0.0
IR_hh [kBq U235 eq]
1.0x10^3
5.0x10^2
0.0
AC [molc H+ eq]
3x10^1
2x10^1
1x10^1
0
POF [kg NMVOC eq]
3x10^1
2x10^1
1x10^1
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Archetype

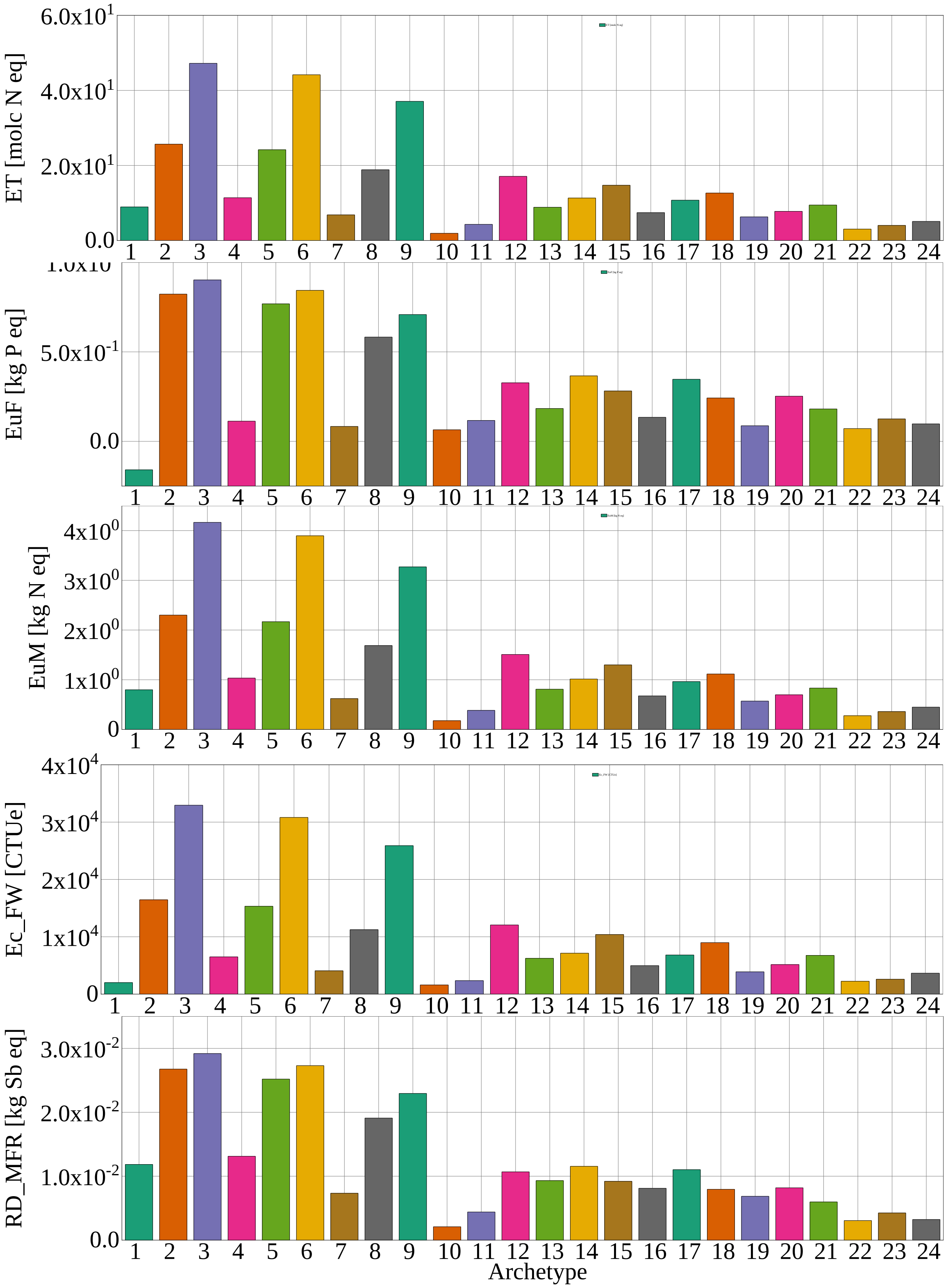


**Figure 4.9 Breakdown of the average environmental impacts for archetypes (Scenario IV)**

However, Table 4.12 shows the standard deviation respect to average value in percentage. The greater standard deviation is in the archetypes of the warm climatic zone, where, as mentioned above, the heating and cooling datasets elaborated are different. Also, the U-value, sometimes, is less than indicated into country' standard, increasing the energy demand required for cooling and minimizing the benefits of the heating reduction.

Analyzing the behavior of each impact categories for archetypes, it is possible observe that the environmental trend is no always the same due to the environmental effects connect to different heating and cooling datasets for country. In fact, Table 4.12 reports the standard deviation for archetypes, where it is possible to underline that:

- The archetypes into the warm climatic zone have the worst potential environmental benefits;
- The average greater benefits in most of the impact categories are calculated for the cold climatic zone, where in some cases are double or triple than the other climatic zone results;
- While the moderate climatic zone could have large benefits into the saving of CC and OD.

Although, the representation of the results as arithmetic average value for archetypes allows to underline a common trend for the impact categories, it is important understand the great variation that is generated between all the buildings grouped into climatic zone. Table 4.12 reports the percentage standard deviation that is generated for the different countries involved into climatic zone group.

Some of the standard deviation calculated show that larger variation could be generated for some archetypes, due to the combination between heating energy saving and the increased cooling demand. For example, the CC for the archetypes of the warm climatic zone vary between 41% and 68% (SFH_1990-2010_W); while for the other indicators could be also more than 100%, as the IR_hh, where the standard deviation respect to average value is at least 112%. Calculating the standard deviation allows to understand how big could be the different between the same archetypes of the same climatic zones, the benefits calculated for the GR could be not the same of the avoided impacts in IT, as for the EuF, where the standard deviation is negative due to the fact that the benefits connect to the heating demand are not superior of that generated by the cooling demand.

The same trends are observable into the other climatic zones for all the impact categories, except for HR, where the retrofit actions on the archetypes don't generate positive effects on EuF and IR_hh categories.

Table 4.13 shows the environmental payback times, calculated summing the impacts connect to the LCA of the stone wool used for improving the envelope performances of all the archetypes and their net potential environmental benefits. The results show that the proposed solution is able to repay the environmental impacts produced during the useful life of the insulation materials (30 years) before to be changed. This solution also allows to repay the environmental impacts of less than 6 times the years required by the first scenario, except for the MFH1990-2010 of the cold climatic zone, where the PBT is about 3times less than the Scenario 1.

This analysis allows to identify the need of elaborate the right quantity of materials insulation at national level with particular attention to the real climatic condition of the site of building.

The other PBT indicators calculated for the other insulation materials are reported in Appendix (Table A 18, Table A 19 and Table A 20).

**Table 4.12 Standard deviation calculated for the avoided benefits during the operation use of archetypes for impact category (IV scenario)**

| | CC [kg CO2 eq] | OD [kg CFC-11 eq] | HT_CE [CTUh] | HT_nCE [CTUh] | PM [kg PM$^{2}$.5 eq] | IR_hh [kBq U235 eq] | POF [kg NMVOC eq] | AC [molc H+ eq] | ET [molc N eq] | EuF [kg P eq] | EuM [kg N eq] | Ec_FW [CTUe] | RD_MFR [kg Sb eq] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 62% | 60% | 93% | 654% | 71% | 117% | 59% | 65% | 46% | 402% | 53% | 494% | 64% |
| **SFH<1945_M** | 38% | 51% | 54% | 61% | 67% | 67% | 49% | 58% | 36% | 87% | 38% | 66% | 47% |
| **SFH<1945_C** | 26% | 45% | 29% | 23% | 43% | 111% | 40% | 23% | 29% | 23% | 28% | 75% | 72% |
| **SFH1945-1969_W** | 55% | 51% | 61% | 62% | 63% | 101% | 45% | 40% | 25% | 90% | 27% | 88% | 57% |
| **SFH1945-1969_M** | 39% | 52% | 54% | 63% | 67% | 68% | 49% | 59% | 37% | 90% | 39% | 70% | 48% |
| **SFH1945-1969_C** | 26% | 45% | 29% | 23% | 43% | 111% | 40% | 23% | 28% | 23% | 28% | 75% | 72% |
| **SFH1970-1989_W** | 51% | 49% | 58% | 57% | 61% | 92% | 41% | 53% | 35% | 70% | 36% | 71% | 52% |
| **SFH1970-1989_M** | 36% | 50% | 54% | 65% | 68% | 83% | 50% | 59% | 36% | 95% | 39% | 81% | 48% |
| **SFH1970-1989_C** | 25% | 45% | 28% | 22% | 43% | 111% | 39% | 23% | 28% | 22% | 27% | 75% | 72% |
| **SFH1990-2010_W** | 68% | 61% | 76% | 115% | 69% | 89% | 52% | 43% | 33% | 165% | 36% | 66% | 66% |
| **SFH1990-2010_M** | 39% | 51% | 58% | 85% | 71% | 114% | 54% | 71% | 44% | 135% | 45% | 125% | 56% |
| **SFH1990-2010_C** | 25% | 46% | 27% | 22% | 43% | 111% | 39% | 22% | 27% | 22% | 27% | 76% | 73% |
| **MFH<1945_W** | 48% | 46% | 56% | 78% | 56% | 87% | 33% | 43% | 25% | 125% | 25% | 52% | 50% |
| **MFH<1945_M** | 35% | 49% | 54% | 60% | 67% | 89% | 50% | 57% | 35% | 85% | 38% | 66% | 45% |
| **MFH<1945_C** | 26% | 47% | 29% | 24% | 43% | 111% | 40% | 24% | 29% | 24% | 28% | 76% | 73% |
| **MFH1945-1969_W** | 51% | 48% | 57% | 70% | 59% | 91% | 38% | 38% | 21% | 107% | 21% | 57% | 53% |
| **MFH1945-1969_M** | 35% | 48% | 54% | 60% | 67% | 75% | 49% | 57% | 35% | 85% | 38% | 65% | 44% |
| **MFH1945-1969_C** | 25% | 46% | 28% | 23% | 43% | 112% | 39% | 23% | 28% | 23% | 27% | 76% | 73% |
| **MFH1970-1989_W** | 49% | 47% | 56% | 59% | 60% | 91% | 38% | 42% | 24% | 83% | 24% | 64% | 51% |
| **MFH1970-1989_M** | 35% | 47% | 53% | 58% | 67% | 80% | 49% | 56% | 35% | 83% | 37% | 58% | 43% |
| **MFH1970-1989_C** | 25% | 47% | 28% | 24% | 43% | 112% | 39% | 23% | 28% | 23% | 27% | 77% | 74% |
| **MFH1990-2010_W** | 49% | 44% | 58% | 85% | 57% | 79% | 35% | 46% | 31% | 139% | 30% | 45% | 48% |
| **MFH1990-2010_M** | 35% | 48% | 52% | 62% | 67% | 95% | 49% | 58% | 35% | 91% | 37% | 69% | 45% |
| **MFH1990-2010_C** | 25% | 47% | 27% | 24% | 42% | 112% | 38% | 22% | 27% | 23% | 26% | 78% | 75% |

**Table 4.13 Average Environmental PBt for archetypes (Scenario IV – partial nZEB with stone wool)**

| | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 0.15 | 0.12 | 0.19 | 0.44 | 0.07 | 0.29 | 0.18 | 0.57 | 0.48 | 0.56 | 0.32 | 0.28 | 0.42 |
| **SFH<1945_M** | 0.12 | 0.11 | 0.20 | 0.27 | 0.12 | 0.20 | 0.25 | 0.37 | 0.44 | 0.27 | 0.29 | 0.19 | 0.40 |
| **SFH<1945_C** | 0.26 | 0.18 | 0.17 | 0.36 | 0.08 | 0.06 | 0.22 | 0.35 | 0.40 | 0.36 | 0.27 | 0.13 | 0.49 |
| **SFH1945-1969_W** | 0.17 | 0.13 | 0.21 | 0.46 | 0.08 | 0.31 | 0.21 | 0.63 | 0.56 | 0.52 | 0.35 | 0.33 | 0.48 |
| **SFH1945-1969_M** | 0.13 | 0.12 | 0.19 | 0.28 | 0.10 | 0.22 | 0.23 | 0.37 | 0.43 | 0.25 | 0.29 | 0.20 | 0.43 |
| **SFH1945-1969_C** | 0.26 | 0.18 | 0.18 | 0.37 | 0.09 | 0.07 | 0.22 | 0.36 | 0.41 | 0.36 | 0.27 | 0.13 | 0.50 |
| **SFH1970-1989_W** | 0.28 | 0.21 | 0.34 | 0.81 | 0.14 | 0.48 | 0.34 | 1.04 | 0.91 | 1.05 | 0.58 | 0.55 | 0.79 |
| **SFH1970-1989_M** | 0.14 | 0.11 | 0.18 | 0.29 | 0.09 | 0.15 | 0.22 | 0.40 | 0.44 | 0.28 | 0.29 | 0.20 | 0.41 |
| **SFH1970-1989_C** | 0.32 | 0.22 | 0.22 | 0.46 | 0.11 | 0.08 | 0.28 | 0.45 | 0.51 | 0.45 | 0.35 | 0.17 | 0.61 |
| **SFH1990-2010_W** | 0.51 | 0.38 | 0.57 | 0.99 | 0.26 | 0.60 | 0.62 | 1.41 | 1.37 | 0.89 | 0.89 | 0.55 | 1.24 |
| **SFH1990-2010_M** | 0.16 | 0.14 | 0.23 | 0.33 | 0.12 | 0.22 | 0.28 | 0.44 | 0.53 | 0.31 | 0.36 | 0.25 | 0.52 |
| **SFH1990-2010_C** | 0.44 | 0.31 | 0.31 | 0.65 | 0.15 | 0.12 | 0.39 | 0.64 | 0.71 | 0.64 | 0.48 | 0.25 | 0.91 |
| **MFH<1945_W** | 0.26 | 0.22 | 0.36 | 0.83 | 0.14 | 0.67 | 0.34 | 1.12 | 0.91 | 1.04 | 0.61 | 0.58 | 0.78 |
| **MFH<1945_M** | 0.21 | 0.18 | 0.28 | 0.43 | 0.15 | 0.24 | 0.35 | 0.55 | 0.66 | 0.39 | 0.45 | 0.32 | 0.66 |
| **MFH<1945_C** | 0.59 | 0.39 | 0.41 | 0.79 | 0.21 | 0.13 | 0.54 | 0.78 | 0.93 | 0.80 | 0.62 | 0.26 | 1.01 |
| **MFH1945-1969_W** | 0.27 | 0.21 | 0.36 | 0.79 | 0.14 | 0.56 | 0.35 | 1.07 | 0.90 | 0.96 | 0.59 | 0.54 | 0.77 |
| **MFH1945-1969_M** | 0.21 | 0.19 | 0.28 | 0.41 | 0.15 | 0.34 | 0.36 | 0.56 | 0.65 | 0.34 | 0.45 | 0.33 | 0.72 |
| **MFH1945-1969_C** | 0.57 | 0.40 | 0.39 | 0.81 | 0.19 | 0.15 | 0.49 | 0.78 | 0.90 | 0.80 | 0.60 | 0.29 | 1.11 |
| **MFH1970-1989_W** | 0.29 | 0.22 | 0.37 | 0.83 | 0.15 | 0.52 | 0.36 | 1.09 | 0.94 | 1.04 | 0.61 | 0.54 | 0.80 |
| **MFH1970-1989_M** | 0.24 | 0.21 | 0.29 | 0.47 | 0.14 | 0.32 | 0.35 | 0.61 | 0.71 | 0.40 | 0.48 | 0.37 | 0.80 |
| **MFH1970-1989_C** | 0.65 | 0.50 | 0.43 | 0.97 | 0.20 | 0.21 | 0.52 | 0.90 | 1.01 | 0.95 | 0.68 | 0.40 | 1.49 |
| **MFH1990-2010_W** | 0.27 | 0.20 | 0.32 | 0.57 | 0.15 | 0.29 | 0.34 | 0.77 | 0.74 | 0.59 | 0.49 | 0.29 | 0.64 |
| **MFH1990-2010_M** | 0.19 | 0.17 | 0.23 | 0.36 | 0.12 | 0.25 | 0.30 | 0.44 | 0.59 | 0.32 | 0.39 | 0.29 | 0.65 |
| **MFH1990-2010_C** | 1.49 | 1.02 | 1.03 | 2.12 | 0.51 | 0.38 | 1.31 | 2.07 | 2.37 | 2.10 | 1.58 | 0.77 | 2.88 |

## 4.3 RESULTS: DISCUSSION AND FINAL REMARKS

The building stock energy analysis reveals that the retrofit scenarios can reduce the energy demand at global level in different country and in all the building stocks. However, introducing the LCA for studying the environmental effects connect to energy saving, it is possible observe how in some cases the benefits don't repay the environmental impacts before the useful life. Several papers [11, 12, 118] and European standards [4] on the performance of the buildings, in fact, established the need to accomplish the energy dynamic simulation with LCA. Although, the energy dynamic simulation results could underline the potential energy saving, the LCA or an environmental assessment could highlight the direct and indirect environmental benefits and impacts connect to some alternative scenarios. In order to account the different energy source used for the production of electricity and thermal energy at country level for analyzing how the same actions on the existing building stocks could be generate totally different benefits and in same country only impacts.

The application of the LCA on the proposed retrofit actions shows that:

- The use of different insulation materials for upgrade the thermal performance of the wall U-value limits could generate 84 Mtons of CO2 eq for the production, transport and End-of -life of the stone wool. Using the cellulose fiber could reduce the CO2 emissions of about 33% in comparison with the traditional insulation materials. While the use of wood wool cement board due to worst thermal properties and the large density could produce about 7 times more CO2 than that produced by the stone wool. Although, all of the materials produce the same energy benefits on the existing building stocks, the LCA results shows how choosing the insulation material that could generate minor environmental impacts is the best retrofit solution at European level and at country level. Moreover, as demonstrated in literature, incentivize the use of closed material production could reduce the impacts connect to their transportation to the site of construction or to the landfill as for the wood wool, where the transport increases the its environmental impacts of about 26%-53% in all the indicators;
- The installation of renewable plant for the production of electric and thermal energy could reduce the environmental impacts connect to the use of fossil fuels or biomass for the generation of DHW or heating at building level and the electricity from grid at macro level. However, the environmental analysis

performed shows that the production, installation, transport and End-of-life of the renewable plant could produce about 159 Mtons of CO2 and 1245Mtons respectively for the solar collector systems and PV systems. These solutions generated about 2 and 14 times more CO2 that that produced by the scenario I (stone wool). However, the solar collector could produce less benefits than the first scenario, instead the PV could generate about 2 times benefits of the stone wool.

- Finally, the fourth scenario could produce about 302Mtonn of $CO_{2eq}$ for the stone wool materials and the windows, that could be reduce of about 33% using the cellulose fiber at EU-28 level, allowing to avoid about 476Mton of CO2 eq, repaying the impacts produced in less than 1year.

Moreover, in order to evaluate the time required from the retrofit actions for repaying the environmental impacts spent for their whole life, the Environmental payback times has been calculated for comparing all the environmental impacts due to the entire refurbishment scenarios of the archetypes to the environmental impacts potentially avoided thanks to the renewable energy produced during the use stage, or the avoided thermal energy required for heating and cooling demand with the installation of insulation materials. Figure 4.10, Figure 4.11 and Figure 4.12 show, respectively, the environmental payback times, calculated without considering Module D (benefits and loads beyond the system boundaries) for Scenario I, II and IV. In particular, at European level, they are between 0.39 years ($PBT_{PM}$) and 1.73 years ($PBT_{MRF}$) for stone wool scenario and between 3.35years ($PBT_{OD}$) and 16.29years for wood wool scenario. The $PBT_{CC}$ of the cellulose fiber is around 0.37years which are shorter than the hypothesized lifespan of building (30 years).

Instead, the solar collector system PBT is between 0.77years ($PBT_{IR\_hh}$) and 28.10 ($PBT_{HT\_nCE}$). However, the payback time for the HT_CE and RD_MFR (>61 years) indicators estimated to be greater than the solar collector useful life, while for all the others environmental impact categories the payback times are less than 30 years. Instead, the PV system PBT are always to be smaller than the PV useful life, except for the RD_MFR that is estimated to be greater than 1000years. These indicators shows how the scenarios proposed, except for RD_MRF and HT_CE indicators, are able to repay the environmental impacts produced during the entire useful life of the refurbishment actions, from its production to its demolition, thanks to the potential environmental benefits due to the renewable energy produced and the net reduction of thermal energy during the use stage.

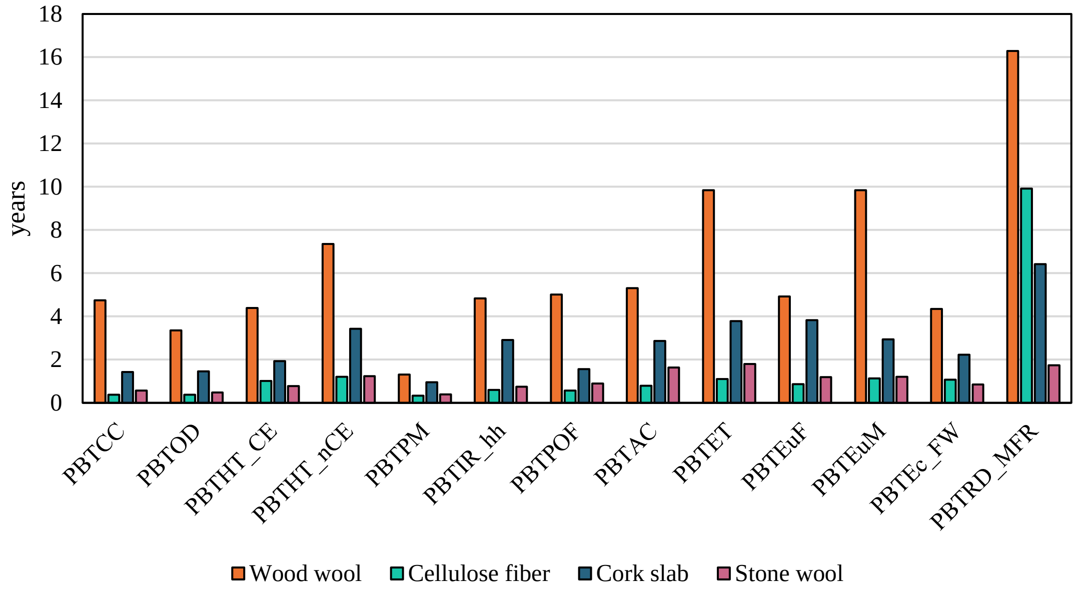


**Figure 4.10 Environmental pay-back times of Scenario I**

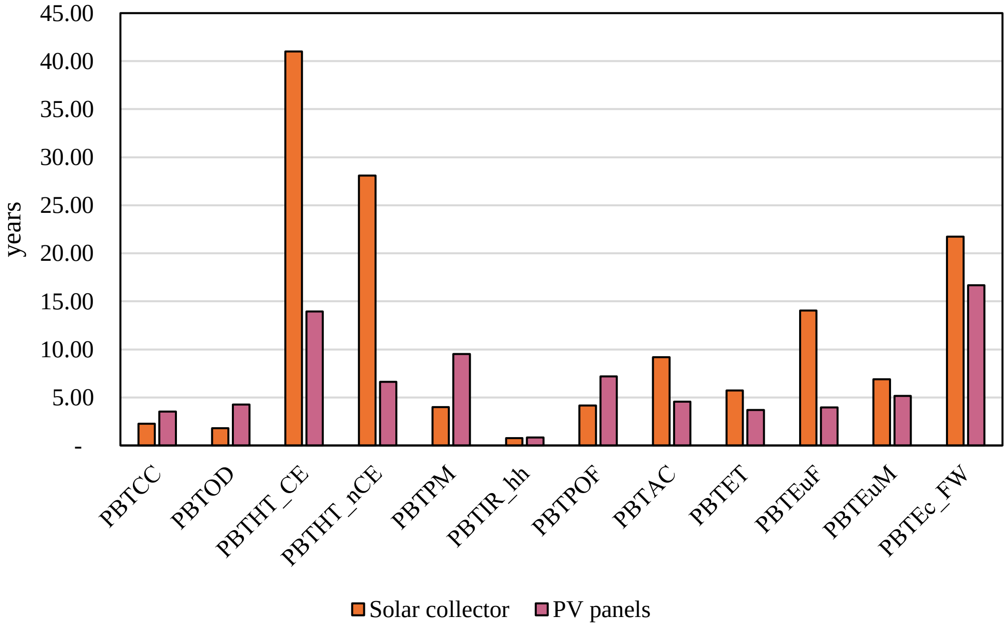


**Figure 4.11 Environmental pay-back times of Scenario II**

In order to account which could be the potential environmental benefits that each proposed scenario could generated, the environmental results for archetypes are multiplied for the number of building that represents and compared with the environmental impacts generate of baseline scenario.

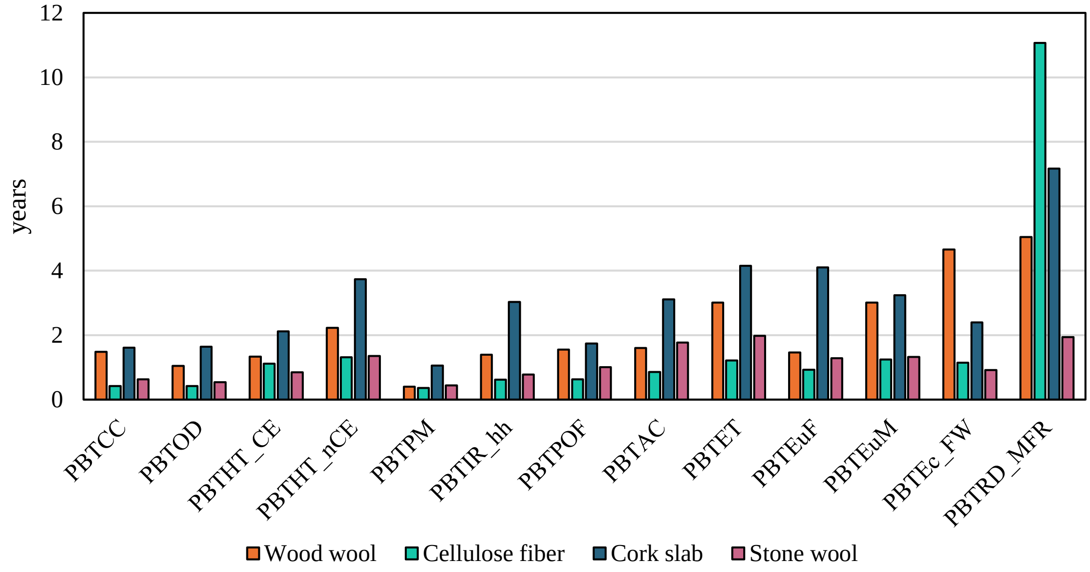


**Figure 4.12 Environmental pay-back times of Scenario IV**

The results for the first and four scenarios are compared in Table 4.14, showing that the improvement of the whole buildings envelope (both windows and wall) could be generate about 4 times more benefits that that generate from the only improvement of the external walls.

**Table 4.14 Potential environmental benefits of Scenario I, III and IV in comparison with baseline**

| Impact category | Unit | Baseline<br>2010 | Insulation wall<br>Scenario I | Night temperature setpoint<br>Scenario III | Partial refurbishment towards nZEB<br>Scenario IV |
|---|---|---|---|---|---|
| **CC** | kg CO2 eq | 6.12E+11 | -21% | -24% | -75% |
| **OD** | kg CFC-11 eq | 5.78E+04 | -22% | -24% | -76% |
| **HT_CE** | CTUh | 1.16E+05 | -20% | -24% | -74% |
| **HT_nCE** | CTUh | 1.48E+04 | -17% | -23% | -69% |
| **PM** | kg PM$^2$.5 eq | 7.28E+08 | -23% | -24% | -78% |
| **IR_hh** | kBq U235 eq | 5.98E+10 | -19% | -24% | -75% |
| **POF** | kg NMVOC eq | 1.78E+09 | -20% | -24% | -75% |
| **AC** | molc H+ eq | 2.03E+09 | -19% | -24% | -72% |
| **ET** | molc N eq | 3.31E+09 | -16% | -24% | -69% |
| **EuF** | kg P eq | 1.06E+08 | -18% | -23% | -68% |
| **EuM** | kg N eq | 2.88E+08 | -16% | -24% | -70% |
| **Ec_FW** | CTUe | 2.90E+12 | -19% | -23% | -63% |
| **RD_MFR** | kg Sb eq | 4.26E+06 | -11% | -24% | -65% |

The result in Table 4.14 are evaluated for the wood wool cements board scenario, that represents the insulation materials that could generate the greater quantity of environmental impacts during its life cycle.

The third scenario shows the great potential that are obtainable only on the regulation of the temperature setpoint or hours of use of the HVAC system.

Table 4.15 reports the potential environmental savings of the Scenario II, where it is possible observe that, although, the RES system could reduce the energy and environmental impacts direct connect the operation use and auto consume, at the same particular attention could be done to the RD_MFR, creating an issue relative to the critical raw materials and ecotoxicity into the case of the solar collector. This aspect should be analyzed with more detailed.

**Table 4.15 Potential environmental benefits of Scenario II in comparison with baseline**

| Impact category | Unit | Baseline DHW | Solar system | Baseline Electricity for equipment | PV systems |
|---|---|---|---|---|---|
| | | 2010 | Scenario II.a | 2010 | Scenario II.b |
| **CC** | kg CO2 eq | 1.61E+11 | -41% | 7.22E+11 | -43% |
| **OD** | kg CFC-11 eq | 1.55E+04 | -41% | 5.67E+04 | -42% |
| **HT_CE** | CTUh | 3.21E+04 | 16% | 2.24E+05 | -27% |
| **HT_nCE** | CTUh | 5.71E+03 | -3% | 5.37E+04 | -39% |
| **PM** | kg $PM^2.5$ eq | 1.26E+08 | -40% | 2.51E+08 | -34% |
| **IR_hh** | kBq U235 eq | 2.81E+10 | -43% | 2.66E+11 | -48% |
| **POF** | kg NMVOC eq | 3.64E+08 | -39% | 1.26E+09 | -38% |
| **AC** | molc H+ eq | 5.67E+08 | -31% | 4.11E+09 | -42% |
| **ET** | molc N eq | 9.34E+08 | -36% | 7.52E+09 | -43% |
| **EuF** | kg P eq | 5.25E+07 | -24% | 5.92E+08 | -44% |
| **EuM** | kg N eq | 8.00E+07 | -34% | 5.50E+08 | -41% |
| **Ec_FW** | CTUe | 1.35E+12 | -12% | 1.55E+13 | -22% |
| **RD_MFR** | kg Sb eq | 1.50E+06 | 47% | 1.02E+07 | 2379% |

# CHAPTER 5. CONCLUSION

The residential building sector represents a challenge for the future: already existing energy efficiency measures may allow it to be more energy efficient and sustainable. Unlocking the potential of energy efficiency, in particular in the existing residential buildings sector through renovation strategies, should be a priority for all countries.

The transformation of the buildings sector will have positive benefits for other sectors, most notably the power sector, as over half of all electricity consumed today is used in buildings or resources used for heat production. In fact, also a simpler retrofitting could largely reduce their energy demands as far as it is technically and economically feasible. The renovation of the existing building stock and the improvement of the energy performances are expected to have a key role in the reduction of the residential energy demand.

However, planning and monitoring of the impacts of a variety of policies and measures in the building sector has become a complex task, in particular due to the fragmentation of the building stock (in terms of shape, age, renovation status, ownership, and intended use) and several data gaps.

The term “renovation” has been used to describe a wide variety of improvements to an existing building or group of buildings. Different levels of renovation can be distinguished depending on the type of intervention and savings obtained. Renovation can involve the installation of renewable energy sources (RES) as well as the replacement or upgrade of all building elements to reduce energy consumption towards zero levels. The refurbishment of a building façade (i.e. walls and windows) provides a different energy saving level compared to the retrofit of the overall building envelope and systems (heating, ventilation and air conditioning - HVAC, lighting, etc.).

In order to implement effective policies for the transition to nZEB (for all buildings) or to adopt the best retrofit solutions at global level, there is a crucial need to have reliable and comprehensive information and data on the composition of the existing building stocks, verifying that regulations and programs have the intended effects. As imposed in the last upgrade of the EPBD in 2018, the redesign of existing building stocks should be implemented using a multidisciplinary approach that allows to calculate the energy saving and the environmental impacts/benefits of each energy efficiency measure proposed.

In order to find renovation solutions oriented towards the decarbonization of the EU building stocks, the energy and environmental models developed into this thesis allows to analyzing with great details the several energy saving measures into the residential building stocks.

By means of dynamic simulations carried out with EnergyPlus, 672 archetypes have been created according both to the building envelopes, to the thermal system and the climatic condition, in order to evaluate the energy and environmental effects related to their potential renovation. The analysis carried out proves that it is possible to highly reduce the energy demand of European building stock by the means of simple actions applied on the envelope. However, the energy model allows to identified the effects on the single archetypes and on the global European residential energy demand, underlining the great diversification of potential energy and environmental impacts/benefits that could be generated for the different countries and archetypes. The analysis, in particular, highlights how the first step in the retrofit on a residential building should always be an opportune refurbishment of the envelope, through the improvement of the thermal insulation of the external envelope and the substitution of windows with ones with better thermal performance.

The replacement of windows and the installation of insulation materials on the whole envelope allows an energy saving of 64% in comparison with the ante-opera state at EU level. While, the improvement of the thermal insulation of the external walls could be reduce the thermal energy demand at lest of about 16%.

The actual value depends from several parameters, such as the climate and the kind of building, but it represents a consistent rate of energy reduction, and it is important to notice that it is feasible with a not invasive action. The insulation of the envelope could achieve a consistently decrease in the energy demand for heating and an increase of cooling demand. The combination of the two actions, insulation of the envelope and windows replacement, has proved to be the most performing solution, allowing a decrease of the thermal energy demands, affecting in different way the sustainability of the energy efficient measures.

The application of LCA methodologies allows to observe that the improvement of the thermal insulation on the walls allows an environmental saving could vary between 11% to 23% respect to the 2010 in all the environmental impacts categories, while the partial nZEB renovation could be reduce the impacts connect to the heat and cool produced of about 63-78%. It depends on the greater number of parameters involved into the sustainable analysis as number of buildings, type of resources and technologies used at national level for the heat production and from the Ecoinvent datasets selected.

Resuming very generally what the various analyses have shown it is possible to conclude that renovation energy measures can always guarantee an energy saving. However, e.g. the replacement of the existing HVAC systems with system that integrate the use of solar thermal collector could reduce the environmental impacts between 12% to 43% respect to DHW ante opera, except for the RD_MRF and HT_ce, characterized by a PBT indicators superior to its useful lifetime. While, the PV panels could generate a net potential environmental impacts avoided variable between 22% to 48% in comparison with the total electricity required for equipment from grid.

In particular, it is possible summarized that:

- The analysis has proposed an alternative path towards the decarbonization of the residential building sector of the EU, providing a useful tool on building archetypes disaggregated for age, shape, energy carriers and etc.;
- The approach, based on bottom-up modeling, allows for a deeper insight into each archetype and its thermo-physical modeling and simulation issues;
- The calibration and validation procedure give insight into the development of more realistic archetypes, through a deeper modeling and combination of statistical and technical data for occupant habits, thermal properties, air-tightness features;
- Future work will include the finalization of the retrofit modeling and results analysis, as well as the development of a Life Cycle based study to quantify energy and environmental potential impacts on a

deeper perspective than the mere use stage, combining all the proposed scenarios in a pure interaction between all the buildings systems for creating nZEBs. This thesis work represents a complete energy and environmental models that could be included in a more complex multidisciplinary approach with the use of cost analysis;

- Also, the energy model shows that the applications of this retrofit scenario could generate a positive effect in many Member State. The life cycle assessment could be identified different potential environmental benefits and permits to identified that environmental PBT is less in countries with inefficient electric power plant;
- In addition, the proposed renovation scenarios are only indicative of the potential benefits of the use of an integrated approach of hybrid bottom up and Life Cycle assessment, identifying some aspect (as the issue of the critical raw materials of the PV scenarios in comparison to the national electricity mix or the ecotoxicity associated to the solar collectors).

The methodological approach proposed try to develop the foundation for creating a flexible tool for studying the standard buildings at European level and defining standard for the renovation of the building stocks with a long-term vision, implementing probably future scenarios.

In describing and modeling energy use in building stocks, the challenge is to find a limited number of building parameters, guarantee their availability and maintain a reduced computational time, while still allowing a fair estimate of buildings' energy use. From the validation of the building stock description of the aggregated data, collected at national or EU levels, the level of detail required is sufficient for the assessment of the energy use of the entire building stock at 2010. Therefore, the modeling procedure with the aggregated description can provide a basis for the investigation of the opportunities and $CO_2$ emission and environmental impacts reductions in an optical of LC, underlines the possible effects of critical raw materials as resulted from the data analysis proposed. The energy model allows to identified the main energy hotspots for climatic zone, for Member States and for type of buildings, that represent the most inefficient existing residential building stock at 2010 if compared with that built after the introduction of the EPBD recast. In addition, in order to account that in moderate and warm climates nevertheless very often is needed to cool the building, hence it possible introducing different alternative renovation strategies to reduce the energy demand using the most efficient technologies that respond to the needs of the different climatic zone: as the installation of heat pump.

In addition, integrating the dynamic energy models with the LCA allows to observe which energy efficient measure is the most sustainable and the same time which could generate the most energy saving. In addition, the peculiarity of the LCA model is associated to capability of taken into account the national environmental performance of the electricity, heat and cool produced, introducing the average national efficiency of the energy system and the penetration rate of different technologies for Member State.

# REFERENCE

1. International Organization for Standardization: ISO 14040-Environmental management - Life Cycle Assessment - Principles and Framework. (2006)
2. International Standards Organisation: ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines. Environ. Manag. - Life cycle Assess. - Princ. Framew. 46 (2006). doi:10.1136/bmj.332.7550.1107
3. IPCC: Climate Change 2014 Mitigation of Climate Change. Cambridge University Press, Cambridge (2014)
4. EPBD Recast: Directive 2018/844/UE of the European Parliament and of Council, 30 May 2018 on the energy performance of buildings (recast) Official Journal of the European Union., (2018)
5. EPBD, D.: 20 02/91. EC Eur. Parliam. Counc. 16, (2002)
6. Recast, E.: Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (recast). Off. J. Eur. Union. 18, 2010 (2010)
7. Lowe, R.: Technical options and strategies for decarbonizing UK housing. Build. Res. Inf. 35, 412–425

(2007). doi:10.1080/09613210701238268

8. Lowe, R.: Policy and strategy challenges for climate change and building stocks, (2009)
9. Kavgic, M., Mavrogianni, A., Mumovic, D., Summerfield, A., Stevanovic, Z., Djurovic-Petrovic, M.: A review of bottom-up building stock models for energy consumption in the residential sector. Build. Environ. 45, 1683–1697 (2010). doi:10.1016/j.buildenv.2010.01.021
10. Deng, S., Wang, R.Z., Dai, Y.J.: How to evaluate performance of net zero energy building – A literature research. Energy. 71, 1–16 (2014). doi:http://dx.doi.org/10.1016/j.energy.2014.05.007
11. Beccali, M., Cellura, M., Fontana, M., Longo, S., Mistretta, M.: Energy retrofit of a single-family house: Life cycle net energy saving and environmental benefits. Renew. Sustain. Energy Rev. 27, 283–293 (2013). doi:10.1016/j.rser.2013.05.040
12. Guarino, F., Cellura, M., Longo, S., Gulotta, T., Mistretta, M., Tumminia, G., Ferraro, M., Antonucci, V.: Integration of Building Simulation and Life Cycle Assessment: A TRNSYS Application. In: Energy Procedia. pp. 360–367. Elsevier (2016)
13. Baldassarri, C., Allacker, K., Reale, F., Castellani, V., Sala, S.: Consumer Footprint: Basket of Products indicator on Housing. (2017)
14. Mantzos, L., Wiesenthal, T., Matei, N.-A., Tchung-Ming, S., Rozsai, M., Russ, H.P., Soria Ramirez, A.: JRC-IDEES: Integrated Database of the European Energy Sector: Methodological note. (2017)
15. Economidou, M., Atanasiu, B., Despret, C., Maio, J., Nolte, I., Rapf, O.: Europe’s buildings under the microscope. A country-by-country review of the energy performance of buildings. Build. Perform. Inst. Eur. 35–36 (2011)
16. ODYSSEE-MURE: Energy Efficiency Trends & Policies | ODYSSEE-MURE, http://www.odyssee-mure.eu/
17. Radermacher, W.J.: Eurostat. In: International Encyclopedia of Statistical Science (2011)
18. Tsemekidi Tzeiranaki, S., Bertoldi, P., Labanca, N., Castellazzi, L., Ribeiro Serrenho, T., Economidou, M., Zangheri, P.: Energy consumption and energy efficiency trends in the EU-28 for the period 2000-2016. (2018)
19. EUROSTAT: Energy statistics - cooling and heating degree days (nrg_chdd),

https://ec.europa.eu/eurostat/cache/metadata/en/nrg_chdd_esms.htm

20. EUROSTAT: Electricity and heat statistics Statistics Explained General overview Production of electricity. (2017)

21. EED: Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, (2012)

22. Artola, I.: DIRECTORATE GENERAL FOR INTERNAL POLICIES POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY Boosting Building Renovation: What potential and value for Europe? (2016)

23. Energy Performance of Buildings Directive. Struct. Surv. 23, ss.2005.11023aab.001 (2005). doi:10.1108/ss.2005.11023aab.001

24. Paleari, M., Lavagna, M., Campioli, A.: The assessment of the relevance of building components and life phases for the environmental profile of nearly zero-energy buildings: life cycle assessment of a multifamily building in Italy. Int. J. Life Cycle Assess. 21, 1667–1690 (2016)

25. Maxoulis, C.N.: The challenges of implementing the EPBD recast (2010/31/EC) effectively, in order to untap its true potential. Adv. Build. Energy Res. 6, 259–271 (2012). doi:10.1080/17512549.2012.740906

26. Burman, E., Mumovic, D., Kimpian, J.: Towards measurement and verification of energy performance under the framework of the European directive for energy performance of buildings. Energy. 77, 153–163 (2014)

27. Action, E.: Implementing the Energy Performance of Buildings Directive (EPBD), Featuring country reports, (2011)

28. D’Agostino, D., Zangheri, P., Cuniberti, B., Paci, D., Bertoldi, P.: Synthesis Report on the National Plans for Nearly Zero Energy Buildings (NZEBs). Jt. Res. Cent. Publ. (2016)

29. Lindkvist, C., Karlsson, A., Sørnes, K., Wyckmans, A.: Barriers and Challenges in nZEB Projects in Sweden and Norway. Energy Procedia. 58, 199–206 (2014). doi:https://doi.org/10.1016/j.egypro.2014.10.429

30. Ries, C., Jenkins, J., Wise, O.: Improving the energy performance of buildings: Learning from the European Union and Australia. Rand Corporation (2009)

31. D'Agostino, D., Zangheri, P., Castellazzi, L.: Towards nearly zero energy buildings in Europe: A focus on retrofit in non-residential buildings. Energies. 10, 117 (2017)
32. Schiavo, G. Lo: The new EU Directive on Energy Efficiency: A critical view. Maastricht J. Eur. Comp. L. 20, 321 (2013)
33. Dawes, R.: Building to improve energy efficiency in England and Wales. Environ. Law Rev. 12, 266–281 (2010)
34. Oberthur, S., Oberthür, S.: The new climate policies of the European Union: internal legislation and climate diplomacy. ASP/VUBPRESS/UPA (2010)
35. Del Río, P.: Analysing the interactions between renewable energy promotion and energy efficiency support schemes: The impact of different instruments and design elements. Energy Policy. 38, 4978–4989 (2010)
36. Prindle, B., Eldridge, M., Eckhardt, M., Frederick, A.: The twin pillars of sustainable energy: synergies between energy efficiency and renewable energy technology and policy. Washington, DC Am. Counc. an Energy-Efficient Econ. (2007)
37. Sajn, N.: Energy efficiency of buildings: A nearly zero-energy future, (2016)
38. Parejo-Navajas, T.: A Legal Approach to the Improvement of Energy Efficiency Measures for the Existing Building Stock in the United States Based on the European. Seattle J. Envtl. L. 5, i (2015)
39. Dalhammar, C.: Promoting energy and resource efficiency through the Ecodesign Directive. Scand Stud Law. 59, 147–179 (2014)
40. de Almeida, A., Fonseca, P., Schlomann, B., Feilberg, N.: Characterization of the household electricity consumption in the EU, potential energy savings and specific policy recommendations. Energy Build. 43, 1884–1894 (2011). doi:10.1016/J.ENBUILD.2011.03.027
41. Lim, H., Zhai, Z.J.: Review on stochastic modeling methods for building stock energy prediction. Build. Simul. 10, 607–624 (2017). doi:10.1007/s12273-017-0383-y
42. Swan, L.G., Ugursal, V.I.: Modeling of end-use energy consumption in the residential sector: A review of modeling techniques, https://karollgomez.files.wordpress.com/2014/10/swan_ugursal_2009.pdf, (2009)
43. Heeren, N., Jakob, M., Martius, G., Gross, N., Wallbaum, H.: A component based bottom-up building stock model for comprehensive environmental impact assessment and target control, (2013)

44. Li, X., Yao, R., Yu, W., Meng, X., Liu, M., Short, A., Li, B.: Low carbon heating and cooling of residential buildings in cities in the hot summer and cold winter zone - A bottom-up engineering stock modeling approach. J. Clean. Prod. 220, 271–288 (2019). doi:10.1016/j.jclepro.2019.02.023
45. Wang, D., Landolt, J., Mavromatidis, G., Orehounig, K., Carmeliet, J.: CESAR: A bottom-up building stock modelling tool for Switzerland to address sustainable energy transformation strategies. Energy Build. 169, 9–26 (2018). doi:10.1016/j.enbuild.2018.03.020
46. Johnston, D.: A physically-based energy and carbon dioxide emissions model of the UK housing stock. 280 (2003)
47. Rivers, N., Jaccard, M.: Combining top-down and bottom-up approaches to energy-economy modeling using discrete choice methods. Energy J. (2005). doi:10.5547/ISSN0195-6574-EJ-Vol26-No1-4
48. Barthelmes, V.M., Li, R., Andersen, R.K., Bahnfleth, W., Corgnati, S.P., Rode, C.: Profiling occupant behaviour in Danish dwellings using time use survey data. Energy Build. (2018). doi:10.1016/j.enbuild.2018.07.044
49. Leroy, Y., Yannou, B.: An activity-based modelling framework for quantifying occupants' energy consumption in residential buildings. Comput. Ind. 103, 1–13 (2018). doi:10.1016/J.COMPIND.2018.08.009
50. Buttitta, G., Turner, W.J.N., Neu, O., Finn, D.P.: Development of occupancy-integrated archetypes: Use of data mining clustering techniques to embed occupant behaviour profiles in archetypes. Energy Build. 198, 84–99 (2019). doi:10.1016/j.enbuild.2019.05.056
51. ASHRAE: ASHRAE HANDBOOK: FUNDAMENTALS. , Atlanta, GA, USA (2017)
52. US DOE: Building Technologies Program. Planned Program Activities for 2008-2012, (2008)
53. International Standards Organisation: ISO 17772-1 : Energy performance of buildings — Indoor environmental quality — Part 1: Indoor environmental input parameters for the design and assessment of energy performance of buildings Performance. (2017)
54. Brøgger, M., Bacher, P., Wittchen, K.B.: A hybrid modelling method for improving estimates of the average energy-saving potential of a building stock. Energy Build. 199, 287–296 (2019). doi:10.1016/j.enbuild.2019.06.054

55. Allacker, K., Castellani, V., Baldinelli, G., Bianchi, F., Baldassarri, C., Sala, S.: Energy simulation and LCA for macro-scale analysis of eco-innovations in the housing stock. Int. J. Life Cycle Assess. 24, 989–1008 (2019). doi:10.1007/s11367-018-1548-3

56. Firth, S.K., Lomas, K.J., Wright, A.J.: Targeting household energy-efficiency measures using sensitivity analysis. Build. Res. Inf. 38, 24–41 (2010). doi:10.1080/09613210903236706

57. Dascalaki, E.G., Balaras, C.A., Kontoyiannidis, S., Droutsa, K.G.: Modeling energy refurbishment scenarios for the Hellenic residential building stock towards the 2020 &amp; 2030 targets. Energy Build. 132, 74–90 (2016). doi:10.1016/J.ENBUILD.2016.06.003

58. Ballarini, I., Corgnati, S.P., Corrado, V.: Use of reference buildings to assess the energy saving potentials of the residential building stock: The experience of TABULA project. Energy Policy. (2014). doi:10.1016/j.enpol.2014.01.027

59. Berkeley, L., Ridge, O.A.K., Ut-battelle, M.B.Y., For, A., Energy, S., Or, D., In, T., Form, A.N.Y., By, O.R., Means, A.N.Y., The, W.: Engineering Reference -EnergyPlus software. (2017)

60. Crawley, D.B., Lawrie, L.K., Pedersen, C.O., Winkelmann, F.C.: Energy plus: energy simulation program. ASHRAE J. 42, 49–56 (2000)

61. Crawley, D.B., Hand, J.W., Kummert, M., Griffith, B.T.: Contrasting the capabilities of building energy performance simulation programs. Build. Environ. 43, 661–673 (2008). doi:http://dx.doi.org/10.1016/j.buildenv.2006.10.027

62. Henninger, R.H., Witte, M.J.: EnergyPlus testing with ANSI/ASHRAE standard 140-2001 (BESTEST). GARD Anal. (2004)

63. Boyano, A., Hernandez, P., Wolf, O.: Energy demands and potential savings in European office buildings: Case studies based on EnergyPlus simulations. Energy Build. 65, 19–28 (2013). doi:10.1016/J.ENBUILD.2013.05.039

64. Tuominen, P., Holopainen, R., Eskola, L., Jokisalo, J., Airaksinen, M.: Calculation method and tool for assessing energy consumption in the building stock. Build. Environ. 75, 153–160 (2014). doi:10.1016/J.BUILDENV.2014.02.001

65. Crawley, D.B., Lawrie, L.K., Pedersen, C.O., Winkelmann, F.C., Witte, M.J., Strand, R.K., Liesen, R.J.,

Buhl, W.F., Huang, Y.J., Henninger, R.H., Glazer, J., Fisher, D.E., Shirey, D.B., Griffith, B.T., Ellis, P.G., Gu, L.: Energyplus: New, capable, and linked. J. Archit. Plann. Res. 21, 292–302 (2004)

66. Lavagna, M., Baldassarri, C., Campioli, A., Giorgi, S., Dalla Valle, A., Castellani, V., Sala, S.: Benchmarks for environmental impact of housing in Europe: Definition of archetypes and LCA of the residential building stock. Build. Environ. 145, 260–275 (2018). doi:10.1016/j.buildenv.2018.09.008
67. European Council: European Council 23/24 October Conclusions, (2014)
68. Entranze: Entranze Forecasts database, http://www.entranze-scenario.enerdata.eu/site/
69. IEE Project TABULA: IEE Project TABULA, http://episcope.eu/iee-project/tabula/
70. ZEBRA: Zebra2020 - Nearly Zero-Energy Building Strategy 2020, https://zebra2020.eu/
71. Kottek, M., Grieser, J., Beck, C., Rudolf, B., Rubel, F.: World map of the Köppen-Geiger climate classification updated. Meteorol. Zeitschrift. 15, 259–263 (2006)
72. Lavagna, M., Giorgi, S., Dalla, A.: Abitare in europa. (2016)
73. Ali, U., Shamsi, M.H., Hoare, C., Mangina, E., O’Donnell, J.: A data-driven approach for multi-scale building archetypes development. Energy Build. 202, 109364 (2019). doi:10.1016/j.enbuild.2019.109364
74. European-Commission: Energy for Europe by European Commission, https://ec.europa.eu/energy/en
75. Kees Dol, Haffner, M.: Housing Statistics in the EU. (2010)
76. WMO Region 6 - Europe, http://climate.onebuilding.org/WMO_Region_6_Europe/default.html
77. EnergyPlus WeatherData: Weather Data by Region | EnergyPlus, https://energyplus.net/weather-region/europe_wmo_region_6, (2018)
78. European-Commission: EU Buildings Database - Energy, https://ec.europa.eu/energy/en/eu-buildings-database
79. Dewulf, J., Manfredi, S., Sala, S., Castellani, V., Góralczyk, M., Notarnicola, B., Tassielli, G., Renzulli, P.A., Ferrão, P., Pina, A., Baptista, P., Deliverable, M.L.: Basket of Products: housing. (2014)
80. NREL: OpenStudio | OpenStudio, https://www.openstudio.net/
81. Grimsrud, D.T., Sherman, M.H., Blomsterberg, A.K., Rosenfeld, A.H.: INFILTRATION AND AIR LEAKAGE COMPARISONS: CONVENTIONAL AND ENERGY-EFFICIENT HOUSING DESIGNS. J. Geophys. Res. (1979)

82. Hubbard, D.: Ventilation, Infiltration and Air Permeability of Traditional UK Dwellings. J. Archit. Conserv. 17, 59–73 (2011). doi:10.1080/13556207.2011.10785097

83. ISO 8990: ISO 8990 Thermal insulation — Determination of steady-state thermal transmission properties — Calibrated and guarded hot box, (1994)

84. Manning, M.M. Swinton, M.C.: Energy Conservation in Buildings and Community Systems Program: European and Canadian non-HVAC electric and DHW load profiles for use in simulating the performance of residential cogeneration systems. (2007)

85. Butcher, K., Craig, B.: Environmental Design: CIBSE Guide A. Chartered Institution of Building Services Engineers (2015)

86. Santin, O.G.: Actual energy consumption in dwellings. The effect of energy performance regulations and occupant behaviour. (2010)

87. Gill, Z.M., Tierney, M.J., Pegg, I.M., Allan, N.: Low-energy dwellings: The contribution of behaviours to actual performance. Build. Res. Inf. (2010). doi:10.1080/09613218.2010.505371

88. Haas, R., Auer, H., Biermayr, P.: The impact of consumer behavior on residential energy demand for space heating. Energy Build. (1998)

89. Zavrl, M.Š., Stegnar, G., Rakušček, A., Gjerkeš, H.: A bottom-up building stock model for tracking regional energy targets-A case study of Kočevje. Sustain. (2016). doi:10.3390/su8101063

90. Heo, Y., Choudhary, R., Augenbroe, G.A.: Calibration of building energy models for retrofit analysis under uncertainty. Energy Build. 47, 550–560 (2012). doi:https://doi.org/10.1016/j.enbuild.2011.12.029

91. Coakley, D., Raftery, P., Keane, M.: A review of methods to match building energy simulation models to measured data. Renew. Sustain. Energy Rev. 37, 123–141 (2014). doi:10.1016/J.RSER.2014.05.007

92. Ruiz, G.R., Bandera, C.F.: Validation of Calibrated Energy Models: Common Errors. Energies. 10, 1587 (2017)

93. Carstens, H., Xia, X., Yadavalli, S.: Low-cost energy meter calibration method for measurement and verification. Appl. Energy. 188, 563–575 (2017)

94. Vogt, M., Remmen, P., Lauster, M., Fuchs, M., Müller, D.: Selecting statistical indices for calibrating building energy models. Build. Environ. 144, 94–107 (2018)

95. ASHRAE, A.G.: Guideline 14-2002: Measurement of Energy and Demand Savings. Am. Soc. Heating, Refrig. Air-Conditioning Eng. Atlanta. (2002)

96. ASHRAE: Guideline 14-2014--Measurement of Energy, Demand, and Water Savings. Am. Soc. Heating, Refrig. Air Cond. Eng. (2014)

97. FEMP, M. V: Guidelines: Measurement and Verification for Federal Energy Projects, Version 3.0. Energy Effic. Renew. Energy. (2008)

98. Committee, I.: International Performance Measurement and Verification Protocol: Concepts and options for determining energy and water savings, Volume I. National Renewable Energy Lab., Golden, CO (US) (2001)

99. Webster, L., Bradford, J., Sartor, D., Shonder, J., Atkin, E., Dunnivant, S., Frank, D., Franconi, E., Jump, D., Schiller, S.: M&V Guidelines: Measurement and Verification for Performance-Based Contracts. Version 4.0, Technical Report (2015)

100. IEA: Building Energy Efficiency Policies, https://www.iea.org/beep/

101. Morris&Chapman: EURIMA - U-values in Europe, https://www.eurima.org/u-values-in-europe

102. Ecoinvent: Ecoinvent Database 3.0, http://www.ecoinvent.org/, (2013)

103. Carattin, E., Franz, M., Luciano, S.: Materiali Isolanti - Nuove tendenze in architettura.

104. DoE, U.S.: Energyplus engineering reference. Ref. to energyplus Calc. (2010)

105. merimp: data sheet mis 240

106. European Committee for Standardization: UNE-EN 15978:2011 Sustainability of construction works - Assessment of environmental performance of buildings - Calculation method, (2011)

107. EN 15804:2013 - Standards Publication Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products. Int. Stand. (2013)

108. Cabeza, L.F., Rincón, L., Vilariño, V., Pérez, G., Castell, A.: Life cycle assessment (LCA) and life cycle energy analysis (LCEA) of buildings and the building sector: A review. Elsevier Ltd (2014)

109. Adalberth, K., Almgren, A., Petersen, E.H.: Life cycle assessment of four multi-family buildings. Int. J. Low Energy Sustain. Build. 2, 1–21 (2001)

110. Sharma, A., Saxena, A., Sethi, M., Shree, V., Varun: Life cycle assessment of buildings: A review. Renew.

Sustain. Energy Rev. 15, 871–875 (2011). doi:https://doi.org/10.1016/j.rser.2010.09.008

111. Frischknecht, R., Jungbluth, N., Althaus, H.-J., Doka, G., Dones, R., Heck, T., Hellweg, S., Hischier, R., Nemecek, T., Rebitzer, G.: The ecoinvent database: overview and methodological framework (7 pp). Int. J. life cycle Assess. 10, 3–9 (2005)

112. Wolf, M.-A., Pant, R., Chomkhamsri, K., Sala, S., Pennington, D.: The International Reference Life Cycle Data System (ILCD) Handbook. (2012)

113. Fieschi, M., Pretato, U.: Role of compostable tableware in food service and waste management. A life cycle assessment study, (2017)

114. European Commission -- Joint Research Centre -- Institute for Environment and Sustainability: International Reference Life Cycle Data System (ILCD) Handbook -- General guide for Life Cycle Assessment -- Detailed guidance. (2010)

115. Bobba, S., Ardente, F., Mathieux, F.: Environmental and economic assessment of durability of energy-using products: Method and application to a case-study vacuum cleaner. J. Clean. Prod. 137, 762–776 (2016). doi:10.1016/j.jclepro.2016.07.093

116. Latunussa, C.E.L., Ardente, F., Blengini, G.A., Mancini, L.: Life Cycle Assessment of an innovative recycling process for crystalline silicon photovoltaic panels. Sol. Energy Mater. Sol. Cells. 156, 101–111 (2016). doi:10.1016/j.solmat.2016.03.020

117. PRè Consultant: Simapro 8. PRè Consult. Amersfoort, Netherlands. (2010)

118. Cellura, M., Guarino, F., Longo, S., Mistretta, M.: Modeling the energy and environmental life cycle of buildings: A co-simulation approach, (2017)

# APPENDIX A: DATA INPUT

This appendix I provided with the thesis work for illustrating some of the available data on European building stock and used for the purpose of the research topics.

**Table A 1 Number of MFH buildings for period of construction as reported on ENTRANZE**

| | **MFH** | | | | | |
|---|---|---|---|---|---|---|
| | **< 1945** | **1945-1969** | **1970-1979** | **1980-1989** | **1990-1999** | **2000-2008** |
| **AT** | 478,000.00 | 520,000.00 | 230,000.00 | 190,000.00 | 252,000.00 | 101,000.00 |
| **BE** | 422,357.14 | 234,642.86 | 152,380.95 | 152,380.95 | 136,738.10 | 94,500.00 |
| **BG** | 69,248.28 | 335,035.49 | 251,937.56 | 273,456.44 | 172,511.08 | 282,776.71 |
| **CY** | 145.88 | 3,471.05 | 10,702.22 | 18,217.77 | 12,923.04 | 38,669.12 |
| **CZ** | 354,194.66 | 873,224.97 | 360,437.90 | 407,622.50 | 148,661.61 | 153,784.99 |
| **DE** | 3,906,371.49 | 7,683,325.35 | 4,034,397.28 | 2,612,558.71 | 2,201,418.36 | 690,700.11 |
| **DK** | 447,538.44 | 260,128.31 | 147,096.72 | 61,404.68 | 62,861.98 | 112,659.99 |
| **EE** | 49,618.01 | 139,119.62 | 125,585.29 | 119,263.21 | 30,555.11 | 25,188.77 |
| **ES** | 1,098,206.74 | 2,846,360.63 | 2,536,088.19 | 1,333,084.54 | 1,368,845.14 | 2,598,077.76 |
| **FI** | 116,891.37 | 275,603.10 | 288,610.97 | 148,404.37 | 133,244.36 | 123,245.84 |
| **FR** | 3,480,062.73 | 2,121,534.00 | 2,419,031.50 | 1,439,262.51 | 976,525.09 | 1,349,884.18 |
| **GB** | 1,201,496.59 | 1,232,382.92 | 653,119.68 | 439,615.70 | 439,615.70 | 813,769.42 |
| **GR** | 187,893.40 | 683,812.43 | 544,872.53 | 417,095.19 | 280,599.66 | 176,479.79 |
| **HR** | 66,584.23 | 132,557.81 | 112,396.42 | 88,235.58 | 43,650.07 | 116,739.45 |
| **HU** | 595,264.54 | 389,987.74 | 179,700.70 | 84,386.80 | 137,558.00 | 162,102.22 |

| | MFH | | | | | |
|---|---|---|---|---|---|---|
| | **< 1945** | **1945-1969** | **1970-1979** | **1980-1989** | **1990-1999** | **2000-2008** |
| **IE** | 23,789.80 | 15,451.51 | 8,990.61 | 12,128.29 | 28,473.14 | 97,122.66 |
| **IT** | 4,137,269.23 | 7,186,276.22 | 4,030,654.55 | 2,785,000.00 | 1,063,300.00 | 842,500.00 |
| **LT** | 229,214.03 | 264,379.82 | 198,255.91 | 198,255.91 | 58,489.11 | 48,773.15 |
| **LU** | 11,614.75 | 18,300.86 | 9,095.61 | 7,802.87 | 7,542.16 | 13,643.75 |
| **LV** | | | | | | |
| **MT** | 3,612.13 | 8,672.49 | 6,522.80 | 4,357.80 | 7,749.80 | 4,461.38 |
| **NL** | 443,659.39 | 587,909.68 | 358,732.03 | 295,729.49 | 273,739.67 | 151,049.91 |
| **PL** | 1,569,000.00 | 1,705,769.23 | 1,121,793.27 | 1,170,625.00 | 1,170,625.00 | 1,256,187.50 |
| **PT** | 136,257.20 | 249,221.43 | 356,752.36 | 282,849.83 | 371,577.11 | 158,767.64 |
| **RO** | 81,740.29 | 752,196.96 | 966,243.59 | 1,215,257.56 | 31,105.80 | 126,717.69 |
| **SE** | 760,573.77 | 731,226.23 | 359,200.00 | 223,600.00 | 259,200.00 | 61,200.00 |
| **SI** | 157,574.83 | 109,265.09 | 95,733.70 | 39,255.97 | 39,255.97 | 46,776.58 |
| **SK** | 135,890.43 | 320,051.99 | 132,048.31 | 150,841.04 | 56,488.47 | 84,679.76 |

**Table A 2 Number of SFH buildings for period of construction as reported on ENTRANZE**

| | SFH | | | | | |
|---|---|---|---|---|---|---|
| | **< 1945** | **1945-1969** | **1970-1979** | **1980-1989** | **1990-1999** | **2000-2008** |
| **AT** | 381,000.00 | 517,000.00 | 303,000.00 | 233,000.00 | 253,000.00 | 105,000.00 |
| **BE** | 1,367,357.14 | 759,642.86 | 385,714.29 | 385,714.29 | 259,633.93 | 171,937.50 |
| **BG** | 366,620.03 | 567,279.02 | 271,215.39 | 219,529.44 | 112,197.11 | 160,193.47 |
| **CY** | 9,962.30 | 28,901.90 | 30,495.48 | 40,045.33 | 38,533.99 | 67,208.15 |
| **CZ** | 579,000.00 | 444,314.29 | 179,714.29 | 213,271.43 | 162,427.27 | 120,995.99 |
| **DE** | 4,574,237.25 | 5,189,432.78 | 2,600,841.31 | 2,012,056.69 | 2,054,903.00 | 1,649,829.39 |
| **DK** | 511,253.41 | 436,091.69 | 282,968.22 | 114,746.52 | 113,428.86 | 120,511.30 |
| **EE** | 72,574.68 | 41,518.83 | 14,727.54 | 12,693.51 | 12,259.07 | 10,096.37 |
| **ES** | 1,087,667.75 | 1,039,325.59 | 672,113.51 | 699,598.13 | 643,850.14 | 818,160.88 |
| **FI** | 235,295.93 | 356,598.47 | 200,094.80 | 254,359.19 | 156,021.93 | 160,629.68 |
| **FR** | 3,519,197.00 | 2,745,414.00 | 3,206,549.00 | 2,577,459.17 | 1,228,800.83 | 1,974,880.00 |
| **GB** | 9,009,311.41 | 5,140,637.37 | 2,134,527.58 | 1,542,221.40 | 1,542,221.40 | 1,368,080.84 |
| **GR** | 132,365.02 | 481,723.18 | 383,845.40 | 293,827.60 | 197,672.60 | 67,087.20 |
| **HR** | 150,022.91 | 268,035.04 | 198,903.58 | 156,564.42 | 88,033.48 | 78,353.18 |
| **HU** | 322,594.75 | 641,359.06 | 411,843.97 | 640,090.23 | 212,454.68 | 250,657.32 |
| **IE** | 254,077.22 | 236,685.14 | 204,083.24 | 173,308.67 | 212,465.32 | 382,832.41 |
| **IT** | 2,354,730.77 | 1,920,087.41 | 1,121,381.82 | 947,200.00 | 317,600.00 | 238,000.00 |
| **LT** | 166,279.75 | 158,273.00 | 79,960.00 | 79,960.00 | 28,027.05 | 27,050.07 |
| **LU** | 41,611.82 | 30,654.37 | 17,341.01 | 12,744.65 | 8,805.83 | 8,842.32 |
| **LV** | | | | | | |
| **MT** | 27,352.67 | 23,791.19 | 14,808.40 | 20,144.40 | 15,979.40 | 4,387.54 |
| **NL** | 1,145,056.16 | 1,200,193.14 | 742,951.24 | 775,845.68 | 671,574.43 | 340,381.91 |

| | SFH | | | | | |
|---|---|---|---|---|---|---|
| | **< 1945** | **1945-1969** | **1970-1979** | **1980-1989** | **1990-1999** | **2000-2008** |
| **PL** | 1,178,000.00 | 1,342,307.69 | 629,973.56 | 640,312.50 | 640,312.50 | 997,093.75 |
| **PT** | 377,999.27 | 446,438.69 | 422,881.70 | 383,499.90 | 354,121.47 | 253,353.13 |
| **RO** | 682,803.41 | 1,463,095.77 | 583,189.89 | 1,009,561.81 | 270,000.00 | 169,234.71 |
| **SE** | 586,454.33 | 490,421.86 | 305,584.76 | 234,356.83 | 115,768.89 | 43,413.33 |
| **SI** | 87,114.49 | 56,857.94 | 48,365.80 | 30,718.06 | 30,718.06 | 22,520.18 |
| **SK** | 281,089.29 | 215,702.92 | 87,246.57 | 103,537.68 | 78,854.18 | 82,569.37 |

**Table A 3 Number of buildings built for period of construction at 2014 (BPIE)**

| Code | < 1945 | 1945-1969 | 1970-1979 | 1980-1989 | 1990-1999 | 2000-2010 | >2010 |
|---|---|---|---|---|---|---|---|
| **AT** | | | | | | | |
| **BE** | 34% | 25% | 12% | 9% | 8% | 9% | 3% |
| **BG** | 19% | 32% | 15% | 12% | 6% | 2% | 14% |
| **CY** | 3% | 10% | 13% | 19% | 17% | 29% | 8% |
| **CZ** | 22% | 22% | 18% | 16% | 10% | 10% | 2% |
| **DE** | 25% | 34% | 15% | 11% | 8% | 5% | 2% |
| **DK** | 32% | 27% | 17% | 9% | 5% | 8% | 1% |
| **EE** | 17% | 27% | 20% | 20% | 6% | 8% | 2% |
| **ES** | 13% | 19% | 17% | 13% | 14% | 17% | 7% |
| **FI** | 12% | 21% | 20% | 18% | 12% | 11% | 5% |
| **FR** | 27% | 18% | 16% | 12% | 10% | 13% | 4% |
| **GB** | 37% | 25% | 13% | 9% | 6% | 6% | 3% |
| **GR** | 7% | 24% | 21% | 17% | 13% | 15% | 4% |
| **HR** | 13% | 27% | 20% | 17% | 9% | 9% | 5% |
| **HU** | 25% | 30% | 12% | 12% | 8% | 9% | 3% |
| **IE** | 19% | 14% | 12% | 10% | 13% | 24% | 8% |
| **IT** | 20% | 31% | 18% | 13% | 8% | 8% | 3% |
| **LT** | 22% | 37% | 17% | 13% | 7% | 3% | 1% |
| **LU** | 19% | 19% | 11% | 9% | 12% | 14% | 15% |
| **LV** | 23% | 25% | 20% | 20% | 6% | 5% | 2% |
| **MT** | 17% | 17% | 14% | 15% | 14% | 12% | 12% |
| **NL** | 19% | 24% | 16% | 14% | 12% | 10% | 4% |
| **PL** | 19% | 23% | 16% | 17% | 12% | 8% | 6% |
| **PT** | 16% | 21% | 14% | 16% | 16% | 16% | 1% |
| **RO** | 11% | 37% | 19% | 15% | 7% | 8% | 3% |
| **SE** | 26% | 34% | 16% | 10% | 6% | 6% | 2% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **SI** | 30% | 21% | 18% | 11% | 10% | 7% | 2% |
| **SK** | 14% | 32% | 23% | 18% | 5% | 6% | 2% |

**Table A 4 Weather files selected for representing the average climatic condition of EU-28 countries [. epw]**

| | IWEC | TMx | TMx2003-17 |
|---|---|---|---|
| **MT** | MT-Luga-Qrendi-(Malta)-165970TM[2] | MLT_SO_Malta.Intl.AP.165970_TMYx | MLT_SO_Malta.Intl.AP.165970_TMYx.2003-2017 |
| **CY** | CYP_Larnaca.176090_IWEC | CYP_KY_Girne.175100_TMYx.2003-2017 | CYP_KY_Girne.175100_TMYx.2003-2017 |
| **PT** | PRT_Evora.085570_IWEC | PRT_AL_Evora.AP.085580_TMYx | PRT_AL_Evora.AP.085580_TMYx.2003-2017 |
| **GR** | GRC_Athens.167160_IWEC | GRC_AT_Elefsis.AP.167180_TMYx.2003-2017 | GRC_AT_Elefsis.AP.167180_TMYx.2003-2017 |
| **ES** | ESP_Madrid.082210_IWEC | ESP_CM_Albacete-Los.Llanos.AFB.082800_TMYx | ESP_NC_Pamplona.AP.080850_TMYx.2003-2017 |
| **IT** | ITA_Venice.161050_IWEC | ITA_FV_Trieste-Friuli.Venezia.Guilia.AP.161080_TMYx.2003-2017 | ITA_FV_Trieste-Friuli.Venezia.Guilia.AP.161080_TMYx.2003-2017 |
| **FR** | FRA_Dijon.072800_IWEC | FRA_BF_Lons-le-Saunier.073900_TMYx.2003-2017 | FRA_BF_Lons-le-Saunier.073900_TMYx.2003-2017 |
| **SI** | SI-Ljubljana-130150TM[2] | SVN_DO_Crnomelj.141200_TMYx.2003-2017 | SVN_DO_Crnomelj.141200_TMYx.2003-2017 |
| **HU** | HUN_Szombathely.128120_IWEC | HUN_WTR_Szentgotthard-Farkasfa.129100_TMYx.2003-2017 | HUN_WTR_Szentgotthard-Farkasfa.129100_TMYx.2003-2017 |
| **RO** | ROU_Bucharest.154200_IWEC | ROU_BC_Targu.Ocna.151940_TMYx | ROU_MS_Targu.Mures-Transilvania.AP.151450_TMYx.2003-2017 |
| **BG** | BGR_Plovdiv.156250_IWEC | BGR_SZ_Chirpan.156350_TMYx.2003-2017 | BGR_SZ_Chirpan.156350_TMYx.2003-2017 |
| **IE** | IRL_Clones.039740_IWEC | IRL_EM_Ballyhaise.039790_TMYx.2003-2017 | IRL_EM_Ballyhaise.039790_TMYx.2003-2017 |
| **NL** | NLD_Groningen.062800_IWEC | NLD_DR_Eelde-Groningen.AP.062800_TMYx | NLD_DR_Eelde-Groningen.AP.062800_TMYx.2003-2017 |
| **BE** | BEL_Brussels.064510_IWEC | BEL_WAL_Florennes.AFB.064560_TMYx | BEL_WAL_Buzenol.064840_TMYx.2003-2017 |
| **LU** | Assumed equal to group 2 | LUX_LU_Luxembourg.Univ.065890_TMYx | LUX_LU_Luxembourg.AP.065900_TMYx.2003-2017 |
| **GB** | GBR_Aberdeen.Dyce.030910_IWEC | GBR_NIR_Lough.Fea.039110_TMYx | GBR_SCT_Kirkwall.AP-Orkney.Islands.030170_TMYx.2003-2017 |
| **SK** | SVK_Kosice.119680_IWEC | SVK_PV_Kamenica.nad.Cirochou.119930_TMYx | SVK_PV_Poprad.Ganovce.119520_TMYx.2003-2017 |
| **DE** | DEU_Munich.108660_IWEC | DEU_SN_Chemnitz-Stelzendorf.105770_TMYx | DEU_NW_Siegerland.AP.106162_TMYx.2003-2017 |
| **AT** | AUT_Innsbruck.111200_IWEC | AUT_TR_Lienz.112040_TMYx | AUT_SZ_Maria.Alm.111370_TMYx.2003-2017 |
| **CZ** | CZE_Prague.115180_IWEC | CZE_KK_Karlovy.Vary.114140_TMYx.2003-2017 | CZE_KK_Karlovy.Vary.114140_TMYx.2003-2017 |
| **PL** | POL_WN_Mikolajki.122800_IWEC | POL_LU_Biala-Podlaska.123950_TMYx | POL_MA_Zakopane.126250_TMYx.2003-2017 |
| **DK** | DNK_Copenhagen.061800_IWEC | DNK_ND_Frederikshavn.060430_TMYx | DNK_MJ_Foulum.060690_TMYx.2003-2017 |
| **LT** | LI-Vaduz-69900TM[2] | LTU_VL_Vilnius.Intl.AP.267300_TMYx | LTU_TA_Laukuva.265180_TMYx.2003-2017 |
| **LV** | LV-RigaTM[2] | LVA_VD_Gulbene.263480_TMYx | LVA_VD_Madona.264470_TMYx.2003-2017 |
| **EE** | EE-Toravere-209550TM[2] | EST_IV_Johvi.AF.260460_TMYx | EST_LV_Valke.Maarja.261410_TMYx.2003-2017 |
| **SE** | SWE_Ostersund.Froson.022260_IWEC | SWE_NB_Lakatrask.021740_TMYx.2003-2017 | SWE_NB_Lakatrask.021740_TMYx.2003-2017 |
| **FI** | FIN_Tampere.029440_IWEC | FIN_KA_Suomussalmi.028790_TMYx | FIN_LA_Savukoski.KK.028150_TMYx.2003-2017 |
| **HR** | Assumed equal to group 2 | HRV_GZ_Zagreb-Tudman.AP.142410_TMYx.2003-2017 | HRV_GZ_Zagreb-Tudman.AP.142410_TMYx.2003-2017 |

### Table A 5 Breakdown of the type of fuels consumed for cooking at 2010 in kToe [JRC-IDEES]

| Code | Solids | Liquified petroleum gas (LPG) | Gases incl. Biogas | Biomass and wastes | Electricity |
|---|---|---|---|---|---|
| W | 14.09 | 1,343.40 | 2,708.61 | 127.27 | 1,985.96 |
| MT | - | 7.86 | - | - | 6.08 |
| CY | - | 24.62 | - | 0.37 | 20.01 |
| PT | - | 450.93 | 164.28 | 8.20 | 368.19 |
| GR | - | 25.85 | 43.42 | 42.20 | 418.97 |
| ES | 14.09 | 310.90 | 644.10 | 26.49 | 723.55 |
| IT | - | 523.24 | 1,856.81 | 50.01 | 449.16 |
| M | 387.54 | 2,067.33 | 6,649.97 | 257.92 | 5,232.17 |
| FR | - | 569.59 | 1,363.25 | - | 1,489.20 |
| SI | - | 19.00 | 9.41 | - | 48.76 |
| HU | 0.80 | 72.22 | 270.39 | - | 137.75 |
| RO | - | 224.12 | 201.64 | 237.00 | 47.94 |
| BG | 9.96 | 13.59 | 9.02 | - | 216.12 |
| IE | - | 17.85 | 44.45 | - | 85.06 |
| NL | - | 24.84 | 659.29 | 6.45 | 84.96 |
| BE | - | 16.29 | 246.75 | 5.61 | 176.63 |
| LU | - | 1.95 | 12.01 | - | 5.02 |
| GB | - | 125.88 | 1,256.66 | - | 243.75 |
| SK | - | 11.72 | 102.63 | - | 43.87 |
| DE | - | 471.89 | 1,777.55 | - | 1,320.07 |
| AT | 0.53 | 15.26 | 80.59 | 5.18 | 183.11 |
| CZ | - | 9.86 | 198.26 | - | 241.86 |
| PL | 376.25 | 410.02 | 293.98 | - | 605.93 |
| DK | - | 10.60 | 50.08 | - | 197.75 |
| HR | - | 52.66 | 74.01 | 3.68 | 104.39 |
| C | - | 61.27 | 39.44 | 1.43 | 801.25 |
| LT | - | 35.48 | 14.88 | - | 59.73 |
| LV | - | 18.70 | 7.80 | 1.43 | 30.04 |
| EE | - | 3.39 | 5.37 | - | 58.99 |
| SE | - | - | 9.34 | - | 424.80 |
| FI | - | 3.71 | 2.05 | - | 227.68 |
| Grand Total | 401.64 | 3,472.00 | 9,398.02 | 386.63 | 8,019.38 |

**Table A 6 Breakdown of the type of fuels consumed for DHW at 2010 in kToe [JRC-IDEES]**

| | Solids | Liquified petroleum gas (LPG) | Gas/Diesel oil incl. biofuels (GDO) | Gases incl. biogas | Biomass and wastes | Derived heat | Electricity | Solar |
|---|---|---|---|---|---|---|---|---|
| W | 40.00 | 1,230.33 | 967.44 | 4,436.91 | 1,517.66 | 28.91 | 1,714.19 | 507.29 |
| MT | - | 1.06 | - | - | - | - | 10.70 | 3.75 |
| CY | - | 0.96 | - | - | - | - | 9.88 | 51.66 |
| PT | - | 75.97 | 34.76 | 65.63 | 307.22 | 0.46 | 71.28 | 28.85 |
| GR | - | 22.49 | 103.23 | 36.44 | 16.58 | 6.97 | 343.74 | 179.68 |
| ES | 40.00 | 755.93 | 454.22 | 965.02 | 399.52 | - | 606.71 | 144.07 |
| IT | - | 373.92 | 375.22 | 3,369.82 | 794.34 | 21.48 | 671.88 | 99.26 |
| M | 1,507.01 | 1,184.94 | 4,019.16 | 14,616.87 | 3,067.75 | 2,511.67 | 4,820.45 | 765.74 |
| FR | 25.00 | 436.15 | 915.49 | 2,049.59 | 593.87 | 264.88 | 1,502.76 | 60.17 |
| SI | - | 10.05 | 59.05 | 24.16 | 93.29 | 21.03 | 38.40 | 8.14 |
| HU | 7.27 | 21.31 | - | 406.19 | 92.78 | 63.69 | 156.18 | 5.09 |
| RO | - | 9.27 | 3.50 | 333.70 | 509.15 | 156.52 | 53.30 | - |
| BG | 14.41 | 3.66 | - | 11.26 | 79.76 | 83.97 | 217.25 | 6.45 |
| IE | 68.42 | 21.00 | 207.21 | 128.46 | 3.27 | - | 117.17 | 7.36 |
| NL | - | 7.54 | 2.30 | 1,572.93 | 56.48 | 44.87 | 111.15 | 18.99 |
| BE | - | 16.78 | 412.50 | 565.52 | 49.97 | 1.47 | 161.28 | 11.23 |
| LU | - | 0.25 | 19.43 | 23.22 | 1.56 | - | 1.89 | 0.91 |
| GB | 59.26 | 229.99 | 434.38 | 4,924.57 | 100.00 | 10.50 | 927.20 | 39.17 |
| SK | - | 1.46 | - | 208.97 | 4.02 | 72.06 | 38.30 | 3.80 |
| DE | 120.00 | 188.88 | 1,724.76 | 3,141.39 | 593.11 | 589.59 | 851.46 | 450.39 |
| AT | 3.40 | 22.73 | 127.52 | 143.50 | 126.85 | 69.00 | 163.67 | 123.87 |
| CZ | 55.10 | 16.32 | - | 309.85 | 80.81 | 148.11 | 241.44 | 6.83 |
| PL | 1,154.14 | 183.27 | 17.39 | 561.01 | 426.20 | 701.01 | 82.62 | 7.64 |
| DK | - | 4.12 | 70.68 | 109.22 | 140.54 | 259.02 | 39.80 | 10.51 |
| HR | - | 12.17 | 24.97 | 103.33 | 116.11 | 25.96 | 116.58 | 5.21 |
| C | 14.55 | 10.23 | 106.49 | 80.52 | 522.93 | 815.92 | 833.35 | 11.25 |
| LT | 9.50 | 4.45 | 1.15 | 24.28 | 88.77 | 76.89 | 14.81 | - |
| LV | 4.00 | 3.06 | 5.56 | 21.28 | 104.23 | 65.30 | 3.53 | - |
| EE | 1.05 | 0.91 | 0.55 | 8.60 | 65.87 | 53.00 | 9.00 | - |
| SE | - | - | 10.36 | 20.55 | 83.99 | 407.77 | 541.84 | 10.32 |
| FI | - | 1.81 | 88.87 | 5.81 | 180.08 | 212.97 | 264.17 | 0.93 |
| Tot | 1,561.56 | 2,425.51 | 5,093.09 | 19,134.29 | 5,108.35 | 3,356.50 | 7,367.99 | 1,284.27 |

## Table A 7 Percentage rate of fuel used for thermal end use for space heating

| | Solids | Liquified petroleum gas (LPG) | Gas/Diesel oil incl. biofuels (GDO) | Gases incl. biogas | Biomass and wastes | Geothermal energy | Derived heat | Advanced electric heating | Conventional Electric Heating |
|---|---|---|---|---|---|---|---|---|---|
| W | 0.52% | 2.51% | 15.07% | 48.84% | 27.78% | 0.03% | 0.42% | 0.82% | 4.01% |
| MT | 0.00% | 50.56% | 0.00% | 0.00% | 6.98% | 0.00% | 0.00% | 6.01% | 36.45% |
| CY | 0.00% | 9.89% | 67.37% | 0.00% | 4.09% | 0.59% | 0.00% | 7.03% | 11.03% |
| PT | 0.00% | 5.04% | 7.78% | 12.46% | 71.50% | 0.00% | 0.10% | 0.25% | 2.87% |
| GR | 0.00% | 0.00% | 68.81% | 6.63% | 20.73% | 0.01% | 1.49% | 0.85% | 1.47% |
| ES | 2.08% | 3.93% | 18.76% | 32.59% | 25.07% | 0.11% | 0.00% | 2.61% | 14.85% |
| IT | 0.02% | 2.15% | 7.16% | 61.12% | 28.67% | 0.01% | 0.46% | 0.13% | 0.29% |
| M | 6.05% | 0.38% | 15.53% | 46.63% | 15.96% | 0.04% | 9.28% | 0.45% | 5.67% |
| FR | 0.71% | 0.96% | 20.22% | 37.48% | 23.78% | 0.05% | 5.50% | 1.05% | 10.24% |
| SI | 0.16% | 0.87% | 25.57% | 9.64% | 49.94% | 1.01% | 9.66% | 0.35% | 2.80% |
| HU | 2.87% | 0.84% | 0.00% | 52.54% | 30.00% | 0.00% | 10.29% | 0.03% | 3.43% |
| RO | 0.18% | 0.00% | 0.34% | 30.14% | 50.16% | 0.27% | 17.65% | 0.04% | 1.22% |
| BG | 14.25% | 0.30% | 0.17% | 2.44% | 52.91% | 0.00% | 22.67% | 0.81% | 6.45% |
| IE | 19.36% | 1.06% | 48.55% | 24.54% | 1.08% | 0.00% | 0.00% | 0.19% | 5.22% |
| NL | 0.02% | 0.00% | 0.15% | 90.89% | 4.20% | 0.00% | 2.99% | 0.38% | 1.37% |
| BE | 1.82% | 0.21% | 38.90% | 47.94% | 6.99% | 0.00% | 0.15% | 0.40% | 3.59% |
| LU | 0.12% | 0.00% | 43.32% | 50.25% | 4.20% | 0.00% | 0.00% | 0.41% | 1.70% |
| GB | 2.15% | 0.24% | 7.60% | 76.70% | 3.11% | 0.00% | 0.13% | 0.32% | 9.74% |
| SK | 3.32% | 0.00% | 0.00% | 64.22% | 2.44% | 0.00% | 26.37% | 0.14% | 3.50% |
| DE | 1.97% | 0.39% | 27.24% | 43.89% | 12.68% | 0.03% | 9.07% | 0.32% | 4.42% |
| AT | 1.20% | 0.21% | 24.84% | 21.80% | 32.02% | 0.00% | 11.77% | 1.30% | 6.86% |
| CZ | 16.07% | 0.00% | 0.00% | 33.73% | 25.71% | 0.00% | 19.60% | 0.26% | 4.63% |
| PL | 41.18% | 0.00% | 0.59% | 17.43% | 14.68% | 0.07% | 25.62% | 0.05% | 0.38% |
| DK | 0.00% | 0.12% | 11.32% | 17.25% | 23.62% | 0.00% | 45.80% | 1.05% | 0.84% |
| HR | 0.33% | 0.89% | 7.22% | 23.65% | 59.98% | 0.00% | 7.19% | 0.31% | 0.42% |
| C | 0.78% | 0.00% | 5.42% | 3.27% | 25.11% | 0.00% | 43.29% | 8.22% | 13.90% |
| LT | 5.36% | 0.00% | 0.54% | 10.61% | 43.14% | 0.00% | 40.07% | 0.00% | 0.28% |
| LV | 2.16% | 0.00% | 2.62% | 9.58% | 49.46% | 0.00% | 35.74% | 0.00% | 0.43% |
| EE | 1.16% | 0.00% | 0.48% | 5.62% | 49.13% | 0.00% | 41.85% | 0.00% | 1.76% |
| SE | 0.00% | 0.00% | 1.10% | 2.17% | 9.73% | 0.00% | 51.50% | 11.83% | 23.68% |
| FI | 0.19% | 0.00% | 13.73% | 0.89% | 30.35% | 0.00% | 35.63% | 9.07% | 10.14% |
| Tot | 4.85% | 0.70% | 14.85% | 44.39% | 18.39% | 0.04% | 9.91% | 0.97% | 5.90% |

## Table A 8 Percentage rate of fuel used for thermal end use for DHW

| | Solids | Liquified petroleum gas (LPG) | Gas/Diesel oil incl. biofuels (GDO) | Gases incl. biogas | Biomass and wastes | Geothermal energy | Derived heat | Electricity | Solar |
|---|---|---|---|---|---|---|---|---|---|
| W | 0.4% | 11.8% | 9.3% | 42.5% | 14.5% | 0.0% | 0.3% | 16.4% | 4.9% |
| MT | 0.0% | 6.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 69.0% | 24.2% |
| CY | 0.0% | 1.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 15.8% | 82.7% |
| PT | 0.0% | 13.0% | 6.0% | 11.2% | 52.6% | 0.0% | 0.1% | 12.2% | 4.9% |
| GR | 0.0% | 3.2% | 14.6% | 5.1% | 2.3% | 0.0% | 1.0% | 48.5% | 25.3% |
| ES | 1.2% | 22.5% | 13.5% | 28.7% | 11.9% | 0.0% | 0.0% | 18.0% | 4.3% |
| IT | 0.0% | 6.6% | 6.6% | 59.1% | 13.9% | 0.0% | 0.4% | 11.8% | 1.7% |
| M | 4.6% | 3.6% | 12.4% | 45.0% | 9.4% | 0.0% | 7.7% | 14.8% | 2.4% |
| FR | 0.4% | 7.5% | 15.7% | 35.0% | 10.2% | 0.0% | 4.5% | 25.7% | 1.0% |
| SI | 0.0% | 4.0% | 23.2% | 9.5% | 36.7% | 0.0% | 8.3% | 15.1% | 3.2% |
| HU | 1.0% | 2.8% | 0.0% | 54.0% | 12.3% | 0.0% | 8.5% | 20.8% | 0.7% |
| RO | 0.0% | 0.9% | 0.3% | 31.3% | 47.8% | 0.0% | 14.7% | 5.0% | 0.0% |
| BG | 3.5% | 0.9% | 0.0% | 2.7% | 19.1% | 0.0% | 20.1% | 52.1% | 1.5% |
| IE | 12.4% | 3.8% | 37.5% | 23.2% | 0.6% | 0.0% | 0.0% | 21.2% | 1.3% |
| NL | 0.0% | 0.4% | 0.1% | 86.7% | 3.1% | 0.0% | 2.5% | 6.1% | 1.0% |
| BE | 0.0% | 1.4% | 33.8% | 46.4% | 4.1% | 0.0% | 0.1% | 13.2% | 0.9% |
| LU | 0.0% | 0.5% | 41.1% | 49.1% | 3.3% | 0.0% | 0.0% | 4.0% | 1.9% |
| GB | 0.9% | 3.4% | 6.5% | 73.2% | 1.5% | 0.0% | 0.2% | 13.8% | 0.6% |
| SK | 0.0% | 0.4% | 0.0% | 63.6% | 1.2% | 0.0% | 21.9% | 11.7% | 1.2% |
| DE | 1.6% | 2.5% | 22.5% | 41.0% | 7.7% | 0.0% | 7.7% | 11.1% | 5.9% |
| AT | 0.4% | 2.9% | 16.3% | 18.4% | 16.3% | 0.0% | 8.8% | 21.0% | 15.9% |
| CZ | 6.4% | 1.9% | 0.0% | 36.1% | 9.4% | 0.0% | 17.3% | 28.1% | 0.8% |
| PL | 36.8% | 5.8% | 0.6% | 17.9% | 13.6% | 0.0% | 22.4% | 2.6% | 0.2% |
| DK | 0.0% | 0.7% | 11.1% | 17.2% | 22.2% | 0.0% | 40.9% | 6.3% | 1.7% |
| HR | 0.0% | 3.0% | 6.2% | 25.6% | 28.7% | 0.0% | 6.4% | 28.8% | 1.3% |
| C | 0.6% | 0.4% | 4.4% | 3.4% | 21.8% | 0.0% | 34.1% | 34.8% | 0.5% |
| LT | 4.3% | 2.0% | 0.5% | 11.0% | 40.4% | 0.0% | 35.0% | 6.7% | 0.0% |
| LV | 1.9% | 1.5% | 2.7% | 10.3% | 50.4% | 0.0% | 31.6% | 1.7% | 0.0% |
| EE | 0.8% | 0.7% | 0.4% | 6.2% | 47.4% | 0.0% | 38.1% | 6.5% | 0.0% |
| SE | 0.0% | 0.0% | 1.0% | 1.9% | 7.8% | 0.0% | 37.9% | 50.4% | 1.0% |
| FI | 0.0% | 0.2% | 11.8% | 0.8% | 23.9% | 0.0% | 28.2% | 35.0% | 0.1% |
| Grand Total | 3.4% | 5.4% | 11.2% | 42.2% | 11.3% | 0.0% | 7.4% | 16.3% | 2.8% |

**Table A 9 Efficiency of Heating system for fuel used per countries**

| Code | Space heating | Solids | Liquified petroleum gas (LPG) | Gas/Diesel oil incl. biofuels (GDO) | Gases incl. biogas | Biomass and wastes | Geothermal energy | Derived heat | Advanced electric heating | Conventional electric heating |
|---|---|---|---|---|---|---|---|---|---|---|
| **AT** | 0.67 | 0.55 | 0.66 | 0.64 | 0.68 | 0.56 | - | 0.84 | 1.70 | 0.82 |
| **BE** | 0.65 | 0.53 | 0.65 | 0.63 | 0.67 | 0.55 | - | 0.79 | 1.65 | 0.80 |
| **BG** | 0.55 | 0.46 | 0.58 | 0.60 | 0.63 | 0.47 | - | 0.69 | 1.55 | 0.73 |
| **CY** | 0.58 | - | 0.49 | 0.47 | - | 0.40 | 0.73 | - | 1.62 | 0.71 |
| **CZ** | 0.60 | 0.48 | - | - | 0.62 | 0.49 | - | 0.72 | 1.44 | 0.71 |
| **DE** | 0.73 | 0.60 | 0.71 | 0.69 | 0.73 | 0.62 | 0.89 | 0.91 | 2.08 | 0.86 |
| **DK** | 0.77 | - | 0.69 | 0.66 | 0.71 | 0.59 | - | 0.87 | 2.07 | 0.80 |
| **EE** | 0.63 | 0.50 | - | 0.65 | 0.66 | 0.51 | - | 0.76 | - | 0.76 |
| **ES** | 0.63 | 0.49 | 0.61 | 0.59 | 0.64 | 0.50 | 0.81 | - | 1.59 | 0.72 |
| **FI** | 0.82 | 0.57 | - | 0.65 | 0.70 | 0.58 | - | 0.87 | 1.72 | 0.82 |
| **FR** | 0.68 | 0.55 | 0.67 | 0.65 | 0.68 | 0.56 | 0.84 | 0.84 | 1.72 | 0.82 |
| **GB** | 0.69 | 0.54 | 0.66 | 0.65 | 0.68 | 0.57 | - | 0.82 | 1.62 | 0.77 |
| **GR** | 0.59 | - | - | 0.58 | 0.66 | 0.49 | 0.80 | 0.73 | 1.49 | 0.72 |
| **HR** | 0.56 | 0.49 | 0.61 | 0.59 | 0.63 | 0.49 | - | 0.74 | 1.71 | 0.71 |
| **HU** | 0.59 | 0.47 | 0.59 | - | 0.61 | 0.50 | - | 0.71 | 1.47 | 0.73 |
| **IE** | 0.64 | 0.52 | 0.65 | 0.64 | 0.68 | 0.53 | - | - | 1.71 | 0.76 |
| **IT** | 0.62 | 0.52 | 0.63 | 0.62 | 0.65 | 0.54 | 0.79 | 0.81 | 1.96 | 0.76 |
| **LT** | 0.60 | 0.49 | - | 0.66 | 0.63 | 0.48 | - | 0.72 | - | 0.73 |
| **LU** | 0.68 | 0.55 | - | 0.65 | 0.69 | 0.55 | - | - | 1.81 | 0.78 |
| **LV** | 0.63 | 0.50 | - | 0.66 | 0.67 | 0.52 | - | 0.76 | - | 0.76 |
| **MT** | 0.65 | - | 0.53 | - | - | 0.68 | - | - | 1.37 | 0.68 |
| **NL** | 0.71 | 0.57 | - | 0.68 | 0.70 | 0.58 | - | 0.86 | 1.91 | 0.82 |
| **PL** | 0.60 | 0.50 | - | 0.64 | 0.66 | 0.51 | 0.81 | 0.76 | 1.80 | 0.78 |
| **PT** | 0.57 | - | 0.65 | 0.65 | 0.67 | 0.52 | - | 0.80 | 1.88 | 0.75 |
| **RO** | 0.56 | 0.47 | - | 0.59 | 0.60 | 0.48 | 0.74 | 0.69 | 1.65 | 0.72 |
| **SE** | 0.82 | - | - | 0.64 | 0.66 | 0.51 | - | 0.76 | 1.56 | 0.73 |
| **SI** | 0.63 | 0.54 | 0.65 | 0.63 | 0.67 | 0.55 | 0.84 | 0.81 | 1.83 | 0.77 |
| **SK** | 0.63 | 0.48 | - | - | 0.60 | 0.48 | - | 0.70 | 1.45 | 0.68 |
| **EU28** | 0.67 | 0.51 | 0.64 | 0.65 | 0.68 | 0.54 | 0.82 | 0.80 | 1.68 | 0.79 |

## Table A 10 Efficiency of Cooling system used

| Code | Sum of 'Air conditioning' |
|---|---|
| **AT** | 2.61 |
| **BE** | 2.66 |
| **BG** | 2.13 |
| **CY** | 2.16 |
| **CZ** | 2.31 |
| **DE** | 2.45 |
| **DK** | 2.52 |
| **EE** | 2.17 |
| **ES** | 2.35 |
| **FI** | 2.48 |
| **FR** | 2.47 |
| **GB** | 2.58 |
| **GR** | 2.24 |
| **HR** | 2.29 |
| **HU** | 2.22 |
| **IE** | 2.49 |
| **IT** | 2.28 |
| **LT** | 2.23 |
| **LU** | 2.41 |
| **LV** | 2.35 |
| **MT** | 2.16 |
| **NL** | 2.69 |
| **PL** | 2.31 |
| **PT** | 2.43 |
| **RO** | 2.12 |
| **SE** | 2.53 |
| **SI** | 2.40 |
| **SK** | 2.37 |
| **EU28** | 2.32 |

## Table A 11 Efficiency of water heating system for fuel used per countries

| Code | Solids | Liquified petroleum gas (LPG) | Gas/Diesel oil incl. biofuels (GDO) | Gases incl. biogas | Biomass and wastes | Geothermal energy | Derived heat | Electricity | Solar |
|---|---|---|---|---|---|---|---|---|---|
| **AT** | 0.49 | 0.61 | 0.56 | 0.60 | 0.50 | - | 0.88 | 0.75 | 1.00 |
| **BE** | - | 0.59 | 0.54 | 0.57 | 0.50 | - | 0.85 | 0.73 | 1.00 |
| **BG** | 0.41 | 0.53 | - | 0.56 | 0.43 | - | 0.77 | 0.68 | 1.00 |
| **CY** | - | 0.44 | - | - | - | - | - | 0.57 | 1.00 |
| **CZ** | 0.42 | 0.57 | - | 0.55 | 0.45 | - | 0.79 | 0.71 | 1.00 |
| **DE** | 0.44 | 0.65 | 0.62 | 0.66 | 0.53 | - | 0.92 | 0.82 | 1.00 |
| **DK** | - | 0.65 | 0.58 | 0.63 | 0.54 | - | 0.90 | 0.80 | 1.00 |
| **EE** | 0.44 | 0.59 | 0.56 | 0.58 | 0.47 | - | 0.82 | 0.76 | - |
| **ES** | 0.42 | 0.56 | 0.52 | 0.55 | 0.46 | - | - | 0.71 | 1.00 |
| **FI** | - | 0.64 | 0.58 | 0.63 | 0.53 | - | 0.90 | 0.79 | 1.00 |
| **FR** | 0.42 | 0.60 | 0.56 | 0.60 | 0.50 | - | 0.88 | 0.75 | 1.00 |
| **GB** | 0.48 | 0.60 | 0.55 | 0.58 | 0.52 | - | 0.63 | 0.74 | 1.00 |
| **GR** | - | 0.56 | 0.52 | 0.57 | 0.44 | - | 0.80 | 0.71 | 1.00 |
| **HR** | - | 0.57 | 0.51 | 0.55 | 0.46 | - | 0.80 | 0.71 | 1.00 |
| **HU** | 0.41 | 0.54 | - | 0.53 | 0.45 | - | 0.78 | 0.70 | 1.00 |
| **IE** | 0.48 | 0.59 | 0.55 | 0.57 | 0.50 | - | - | 0.73 | 1.00 |
| **IT** | - | 0.57 | 0.53 | 0.56 | 0.50 | - | 0.85 | 0.72 | 1.00 |
| **LT** | 0.43 | 0.56 | 0.58 | 0.56 | 0.44 | - | 0.79 | 0.72 | - |
| **LU** | - | 0.59 | 0.56 | 0.60 | 0.50 | - | - | 0.75 | 1.00 |
| **LV** | 0.43 | 0.59 | 0.58 | 0.58 | 0.47 | - | 0.82 | 0.76 | - |
| **MT** | - | 0.49 | - | - | - | - | - | 0.63 | 1.00 |
| **NL** | - | 0.61 | 0.57 | 0.61 | 0.51 | - | 0.89 | 0.77 | 1.00 |
| **PL** | 0.45 | 0.59 | 0.57 | 0.57 | 0.47 | - | 0.82 | 0.77 | 1.00 |
| **PT** | - | 0.57 | 0.55 | 0.56 | 0.47 | - | 0.85 | 0.72 | 1.00 |
| **RO** | - | 0.53 | 0.52 | 0.53 | 0.43 | - | 0.76 | 0.68 | - |
| **SE** | - | - | 0.52 | 0.60 | 0.47 | - | 0.82 | 0.75 | 1.00 |
| **SI** | - | 0.59 | 0.55 | 0.58 | 0.50 | - | 0.86 | 0.74 | 1.00 |
| **SK** | - | 0.53 | - | 0.52 | 0.44 | - | 0.77 | 0.67 | 1.00 |
| **EU28** | 0.45 | 0.58 | 0.57 | 0.59 | 0.48 | - | 0.85 | 0.74 | 1.00 |

Table A 12 Efficiency of Cooking system for fuel used per countries

| Code | Solids | Liquified petroleum gas (LPG) | Gases incl. biogas | Biomass and wastes | Electricity |
|---|---|---|---|---|---|
| **AT** | 0.35 | 0.47 | 0.51 | 0.34 | 0.84 |
| **BE** | - | 0.47 | 0.51 | 0.36 | 0.84 |
| **BG** | 0.34 | 0.46 | 0.49 | - | 0.83 |
| **CY** | - | 0.44 | - | 0.36 | 0.82 |
| **CZ** | - | 0.46 | 0.49 | - | 0.83 |
| **DE** | - | 0.47 | 0.51 | - | 0.84 |
| **DK** | - | 0.47 | 0.51 | - | 0.85 |
| **EE** | - | 0.46 | 0.49 | - | 0.83 |
| **ES** | 0.34 | 0.45 | 0.49 | 0.34 | 0.83 |
| **FI** | - | 0.47 | 0.51 | - | 0.85 |
| **FR** | - | 0.47 | 0.51 | - | 0.85 |
| **GB** | - | 0.47 | 0.50 | - | 0.83 |
| **GR** | - | 0.47 | 0.51 | 0.34 | 0.84 |
| **HR** | - | 0.46 | 0.50 | 0.36 | 0.83 |
| **HU** | 0.34 | 0.46 | 0.50 | - | 0.83 |
| **IE** | - | 0.47 | 0.50 | - | 0.84 |
| **IT** | - | 0.47 | 0.51 | 0.36 | 0.84 |
| **LT** | - | 0.46 | 0.50 | - | 0.83 |
| **LU** | - | 0.47 | 0.51 | - | 0.84 |
| **LV** | - | 0.46 | 0.50 | 0.34 | 0.84 |
| **MT** | - | 0.46 | - | - | 0.83 |
| **NL** | - | 0.46 | 0.50 | 0.36 | 0.84 |
| **PL** | 0.34 | 0.46 | 0.50 | - | 0.83 |
| **PT** | - | 0.45 | 0.49 | 0.33 | 0.82 |
| **RO** | - | 0.45 | 0.50 | 0.33 | 0.82 |
| **SE** | - | - | 0.52 | - | 0.85 |
| **SI** | - | 0.47 | 0.51 | - | 0.85 |
| **SK** | - | 0.46 | 0.50 | - | 0.83 |
| **EU28** | 0.34 | 0.46 | 0.50 | 0.34 | 0.84 |

### Table A 13 Electric energy consumption for climatic zone at 2010

| Values | W | M | C |
|---|---|---|---|
| **Refrigerators and freezers'** | 27,743.40 | 93,437.17 | 6,369.76 |
| **Washing machine'** | 12,157.32 | 33,812.56 | 2,113.99 |
| **Clothes dryer'** | 3,585.44 | 23,014.79 | 2,048.39 |
| **Dishwasher'** | 6,796.07 | 17,473.72 | 1,253.89 |
| **TV and multimedia'** | 32,925.68 | 106,214.19 | 6,715.16 |
| **ICT equipment'** | 8,030.34 | 27,170.72 | 1,740.35 |
| **Lighting '** | 25,727.39 | 80,313.20 | 5,447.65 |
| **Other appliances (vacuum cleaners, irons etc.)'** | 13,329.59 | 40,346.85 | 2,528.41 |

### Table A 14 Electricity for appliances and lighting [kWh/dwelling] SFH

| | SFH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Arc#1 | Arc#2 | Arc#3 | Arc#4 | Arc#5 | Arc#6 | Arc#7 | Arc#8 | Arc#9 | Arc#10 | Arc#11 | Arc#12 |
| **Clothes dryer** | 253.51 | 253.51 | 253.51 | 329.57 | 422.52 | 422.52 | 469.46 | 469.46 | 653.39 | 653.39 | 784.07 | 784.07 |
| **Dishwasher** | 421.10 | 421.10 | 421.10 | 547.43 | 298.94 | 298.94 | 332.16 | 332.16 | 367.26 | 367.26 | 440.71 | 440.71 |
| **ICT equipment** | 511.17 | 511.17 | 511.17 | 664.52 | 482.43 | 482.43 | 536.03 | 536.03 | 529.04 | 529.04 | 634.85 | 634.85 |
| **Lighting** | 1,365.62 | 1,365.62 | 1,365.62 | 1,775.30 | 1,299.12 | 1,299.12 | 1,443.47 | 1,443.47 | 1,467.40 | 1,467.40 | 1,760.88 | 1,760.88 |
| **Other appliances** | 778.42 | 778.42 | 778.42 | 1,011.95 | 655.61 | 655.61 | 728.46 | 728.46 | 730.42 | 730.42 | 876.50 | 876.50 |
| **Refrigerators and freezers** | 1,482.96 | 1,482.96 | 1,482.96 | 1,927.85 | 1,462.79 | 1,462.79 | 1,625.32 | 1,625.32 | 1,692.14 | 1,692.14 | 2,030.57 | 2,030.57 |
| **TV and multimedia** | 2,116.51 | 2,116.51 | 2,116.51 | 2,751.46 | 1,929.43 | 1,929.43 | 2,143.82 | 2,143.82 | 2,167.11 | 2,167.11 | 2,600.53 | 2,600.53 |
| **Washing machine** | 643.22 | 643.22 | 643.22 | 836.18 | 519.42 | 519.42 | 577.13 | 577.13 | 568.63 | 568.63 | 682.35 | 682.35 |
| **Tot** | **7,572.51** | **7,572.51** | **7,572.51** | **9,844.26** | **7,070.26** | **7,070.26** | **7,855.84** | **7,855.84** | **8,175.39** | **8,175.39** | **9,810.47** | **9,810.47** |

## Table A 15 Electricity appliances and lighting [kWh/dwelling] MFH

| | MFH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Arc#13 | Arc#14 | Arc#15 | Arc#16 | Arc#17 | Arc#18 | Arc#19 | Arc#20 | Arc#21 | Arc#22 | Arc#23 | Arc#24 |
| **Clothes dryer** | 135.03 | 135.03 | 135.03 | 135.03 | 213.08 | 213.08 | 213.08 | 213.08 | 231.34 | 231.34 | 231.34 | 231.34 |
| **Dishwasher** | 224.30 | 224.30 | 224.30 | 224.30 | 150.76 | 150.76 | 150.76 | 150.76 | 130.03 | 130.03 | 130.03 | 130.03 |
| **ICT equipment** | 272.27 | 272.27 | 272.27 | 272.27 | 243.29 | 243.29 | 243.29 | 243.29 | 187.31 | 187.31 | 187.31 | 187.31 |
| **Lighting** | 727.40 | 727.40 | 727.40 | 727.40 | 655.15 | 655.15 | 655.15 | 655.15 | 519.55 | 519.55 | 519.55 | 519.55 |
| **Other appliances** | 414.63 | 414.63 | 414.63 | 414.63 | 330.63 | 330.63 | 330.63 | 330.63 | 258.62 | 258.62 | 258.62 | 258.62 |
| **Refrigerators and freezers** | 789.90 | 789.90 | 789.90 | 789.90 | 737.69 | 737.69 | 737.69 | 737.69 | 599.13 | 599.13 | 599.13 | 599.13 |
| **TV and multimedia** | 1,127.36 | 1,127.36 | 1,127.36 | 1,127.36 | 973.02 | 973.02 | 973.02 | 973.02 | 767.29 | 767.29 | 767.29 | 767.29 |
| **Washing machine** | 342.61 | 342.61 | 342.61 | 342.61 | 261.94 | 261.94 | 261.94 | 261.94 | 201.33 | 201.33 | 201.33 | 201.33 |
| **Tot** | **4,033.52** | **4,033.52** | **4,033.52** | **4,033.52** | **3,565.57** | **3,565.57** | **3,565.57** | **3,565.57** | **2,894.61** | **2,894.61** | **2,894.61** | **2,894.61** |

## Table A 16 Electricity for lighting technologies [Wh/dwelling] – SFH (reworked from author)

| | SFH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Arc#1 | Arc#2 | Arc#3 | Arc#4 | Arc#5 | Arc#6 | Arc#7 | Arc#8 | Arc#9 | Arc#10 | Arc#11 | Arc#12 |
| **CFL** | 491.62 | 491.62 | 491.62 | 639.11 | 467.68 | 467.68 | 519.65 | 519.65 | 528.26 | 528.26 | 633.92 | 633.92 |
| **halogen lamps** | 396.03 | 396.03 | 396.03 | 514.84 | 376.75 | 376.75 | 418.61 | 418.61 | 425.55 | 425.55 | 510.66 | 510.66 |
| **incandescent lamps** | 409.69 | 409.69 | 409.69 | 532.59 | 389.74 | 389.74 | 433.04 | 433.04 | 440.22 | 440.22 | 528.26 | 528.26 |
| **LED** | - | - | - | - | - | - | - | - | - | - | - | - |
| **TL** | 68.28 | 68.28 | 68.28 | 88.77 | 64.96 | 64.96 | 72.17 | 72.17 | 73.37 | 73.37 | 88.04 | 88.04 |
| **Tot** | **1,365.62** | **1,365.62** | **1,365.62** | **1,775.30** | **1,299.12** | **1,299.12** | **1,443.47** | **1,443.47** | **1,467.40** | **1,467.40** | **1,760.88** | **1,760.88** |

**Table A 17 Electricity for lighting technologies [Wh/dwelling] – MFH (reworked from author)**

| | MFH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | arc#13 | arc#14 | arc#15 | arc#16 | arc#17 | arc#18 | arc#19 | arc#20 | arc#21 | arc#22 | arc#23 | arc#24 |
| **CFL** | 261.86 | 261.86 | 261.86 | 261.86 | 235.86 | 235.86 | 235.86 | 235.86 | 187.04 | 187.04 | 187.04 | 187.04 |
| **halogen lamps** | 210.95 | 210.95 | 210.95 | 210.95 | 189.99 | 189.99 | 189.99 | 189.99 | 150.67 | 150.67 | 150.67 | 150.67 |
| **incandescent lamps** | 218.22 | 218.22 | 218.22 | 218.22 | 196.55 | 196.55 | 196.55 | 196.55 | 155.87 | 155.87 | 155.87 | 155.87 |
| **LED** | - | - | - | - | - | - | - | - | - | - | - | - |
| **TL** | 36.37 | 36.37 | 36.37 | 36.37 | 32.76 | 32.76 | 32.76 | 32.76 | 25.98 | 25.98 | 25.98 | 25.98 |
| **Tot** | **727.40** | **727.40** | **727.40** | **727.40** | **655.15** | **655.15** | **655.15** | **655.15** | **519.55** | **519.55** | **519.55** | **519.55** |

**Table A 18 Average Environmental PBT for archetypes (Scenario IV – partial nZEB with wood wool cement board)**

| | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 1.34 | 0.91 | 1.14 | 2.77 | 0.26 | 2.01 | 1.08 | 1.99 | 2.79 | 2.44 | 2.75 | 5.88 | 4.23 |
| **SFH<1945_M** | 1.11 | 0.82 | 1.23 | 1.72 | 0.44 | 1.37 | 1.48 | 1.29 | 2.54 | 1.15 | 2.53 | 3.71 | 3.96 |
| **SFH<1945_C** | 2.13 | 1.24 | 0.97 | 2.11 | 0.28 | 0.41 | 1.21 | 1.12 | 2.18 | 1.46 | 2.16 | 2.27 | 4.55 |
| **SFH1945-1969_W** | 1.50 | 0.95 | 1.26 | 2.88 | 0.30 | 2.13 | 1.22 | 2.18 | 3.25 | 2.26 | 3.05 | 6.49 | 4.78 |
| **SFH1945-1969_M** | 1.05 | 0.78 | 1.00 | 1.54 | 0.32 | 1.32 | 1.20 | 1.14 | 2.21 | 0.97 | 2.22 | 3.37 | 3.83 |
| **SFH1945-1969_C** | 2.13 | 1.24 | 0.99 | 2.14 | 0.28 | 0.42 | 1.22 | 1.15 | 2.21 | 1.47 | 2.20 | 2.34 | 4.64 |
| **SFH1970-1989_W** | 2.54 | 1.55 | 2.07 | 5.09 | 0.48 | 3.32 | 1.98 | 3.59 | 5.26 | 4.56 | 5.04 | 11.99 | 7.87 |
| **SFH1970-1989_M** | 1.14 | 0.78 | 1.02 | 1.71 | 0.31 | 0.95 | 1.19 | 1.26 | 2.36 | 1.12 | 2.36 | 3.81 | 3.80 |
| **SFH1970-1989_C** | 2.75 | 1.57 | 1.29 | 2.77 | 0.37 | 0.53 | 1.61 | 1.51 | 2.88 | 1.90 | 2.88 | 2.68 | 5.90 |
| **SFH1990-2010_W** | 4.56 | 2.79 | 3.42 | 6.21 | 0.91 | 4.12 | 3.63 | 4.86 | 7.92 | 3.88 | 7.68 | 23.89 | 12.32 |
| **SFH1990-2010_M** | 1.43 | 1.04 | 1.36 | 2.10 | 0.44 | 1.48 | 1.67 | 1.50 | 3.07 | 1.36 | 3.09 | 5.47 | 5.19 |
| **SFH1990-2010_C** | 3.92 | 2.28 | 1.86 | 4.10 | 0.52 | 0.82 | 2.27 | 2.21 | 4.14 | 2.78 | 4.16 | 6.17 | 9.05 |
| **MFH<1945_W** | 2.07 | 1.42 | 1.89 | 4.54 | 0.44 | 3.99 | 1.77 | 3.39 | 4.60 | 3.97 | 4.58 | 9.83 | 6.82 |
| **MFH<1945_M** | 1.77 | 1.24 | 1.59 | 2.53 | 0.50 | 1.54 | 1.95 | 1.80 | 3.62 | 1.59 | 3.68 | 5.34 | 6.22 |
| **MFH<1945_C** | 5.29 | 2.93 | 2.44 | 4.95 | 0.74 | 0.89 | 3.16 | 2.69 | 5.39 | 3.48 | 5.33 | 4.70 | 10.03 |
| **MFH1945-1969_W** | 2.20 | 1.47 | 1.99 | 4.58 | 0.47 | 3.57 | 1.89 | 3.42 | 4.84 | 3.88 | 4.74 | 10.15 | 7.08 |
| **MFH1945-1969_M** | 1.80 | 1.34 | 1.59 | 2.44 | 0.51 | 2.20 | 1.98 | 1.82 | 3.55 | 1.40 | 3.69 | 4.67 | 6.73 |
| **MFH1945-1969_C** | 5.33 | 3.12 | 2.43 | 5.26 | 0.69 | 1.04 | 3.01 | 2.78 | 5.41 | 3.64 | 5.37 | 5.67 | 11.44 |
| **MFH1970-1989_W** | 2.33 | 1.52 | 2.05 | 4.75 | 0.48 | 3.25 | 1.95 | 3.43 | 5.00 | 4.15 | 4.83 | 10.42 | 7.31 |
| **MFH1970-1989_M** | 1.99 | 1.47 | 1.60 | 2.72 | 0.47 | 2.02 | 1.94 | 1.94 | 3.82 | 1.62 | 3.88 | 6.28 | 7.40 |
| **MFH1970-1989_C** | 6.06 | 3.88 | 2.72 | 6.36 | 0.72 | 1.47 | 3.19 | 3.22 | 6.12 | 4.31 | 6.09 | 8.08 | 15.48 |
| **MFH1990-2010_W** | 2.42 | 1.52 | 1.93 | 3.60 | 0.51 | 2.00 | 2.00 | 2.65 | 4.28 | 2.55 | 4.20 | 12.37 | 6.38 |
| **MFH1990-2010_M** | 1.38 | 1.07 | 1.16 | 1.87 | 0.36 | 1.42 | 1.47 | 1.28 | 2.83 | 1.17 | 2.80 | 2.68 | 5.42 |
| **MFH1990-2010_C** | 12.37 | 7.11 | 5.80 | 12.42 | 1.67 | 2.41 | 7.21 | 6.65 | 12.81 | 8.54 | 12.78 | 12.23 | 26.72 |

**Table A 19 Average Environmental PBT for archetypes (Scenario IV – partial nZEB with cellulose fiber)**

| | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 0.39 | 0.37 | 0.97 | 1.67 | 0.24 | 0.91 | 0.45 | 1.08 | 1.15 | 1.57 | 1.15 | 1.36 | 9.44 |
| **SFH<1945_M** | 0.30 | 0.31 | 0.98 | 0.97 | 0.37 | 0.58 | 0.57 | 0.66 | 0.98 | 0.70 | 1.00 | 0.86 | 8.30 |
| **SFH<1945_C** | 0.59 | 0.48 | 0.80 | 1.22 | 0.24 | 0.18 | 0.48 | 0.59 | 0.86 | 0.90 | 0.87 | 0.56 | 9.74 |
| **SFH1945-1969_W** | 0.42 | 0.37 | 1.04 | 1.68 | 0.26 | 0.94 | 0.49 | 1.15 | 1.29 | 1.41 | 1.24 | 1.54 | 10.34 |
| **SFH1945-1969_M** | 0.30 | 0.31 | 0.85 | 0.92 | 0.29 | 0.59 | 0.49 | 0.62 | 0.90 | 0.62 | 0.93 | 0.88 | 8.51 |
| **SFH1945-1969_C** | 0.59 | 0.48 | 0.81 | 1.24 | 0.25 | 0.18 | 0.48 | 0.60 | 0.87 | 0.91 | 0.89 | 0.58 | 9.93 |
| **SFH1970-1989_W** | 0.78 | 0.67 | 1.88 | 3.26 | 0.46 | 1.60 | 0.87 | 2.08 | 2.30 | 3.13 | 2.25 | 2.85 | 18.68 |
| **SFH1970-1989_M** | 0.35 | 0.33 | 0.92 | 1.08 | 0.30 | 0.45 | 0.52 | 0.72 | 1.02 | 0.76 | 1.04 | 0.96 | 8.92 |
| **SFH1970-1989_C** | 0.62 | 0.49 | 0.85 | 1.29 | 0.26 | 0.19 | 0.51 | 0.63 | 0.92 | 0.95 | 0.93 | 0.60 | 10.18 |
| **SFH1990-2010_W** | 2.74 | 2.33 | 6.02 | 7.72 | 1.72 | 3.86 | 3.09 | 5.47 | 6.73 | 5.18 | 6.66 | 5.55 | 56.83 |
| **SFH1990-2010_M** | 0.44 | 0.44 | 1.22 | 1.33 | 0.42 | 0.71 | 0.72 | 0.86 | 1.33 | 0.92 | 1.36 | 1.27 | 12.18 |
| **SFH1990-2010_C** | 1.35 | 1.09 | 1.88 | 2.92 | 0.57 | 0.44 | 1.11 | 1.43 | 2.02 | 2.13 | 2.07 | 1.43 | 23.95 |
| **MFH<1945_W** | 0.63 | 0.61 | 1.69 | 2.87 | 0.42 | 1.91 | 0.77 | 1.94 | 1.99 | 2.70 | 2.02 | 2.60 | 16.00 |
| **MFH<1945_M** | 0.47 | 0.46 | 1.23 | 1.38 | 0.42 | 0.64 | 0.73 | 0.89 | 1.35 | 0.93 | 1.41 | 1.32 | 12.63 |
| **MFH<1945_C** | 1.41 | 1.09 | 1.91 | 2.74 | 0.62 | 0.37 | 1.20 | 1.35 | 2.04 | 2.07 | 2.06 | 1.18 | 20.60 |
| **MFH1945-1969_W** | 0.67 | 0.63 | 1.78 | 2.90 | 0.45 | 1.71 | 0.82 | 1.96 | 2.10 | 2.64 | 2.09 | 2.55 | 16.65 |
| **MFH1945-1969_M** | 0.39 | 0.41 | 1.02 | 1.10 | 0.35 | 0.75 | 0.61 | 0.74 | 1.10 | 0.68 | 1.16 | 1.15 | 11.27 |
| **MFH1945-1969_C** | 1.45 | 1.18 | 1.94 | 2.96 | 0.59 | 0.44 | 1.16 | 1.41 | 2.08 | 2.19 | 2.11 | 1.38 | 23.88 |
| **MFH1970-1989_W** | 0.75 | 0.68 | 1.94 | 3.16 | 0.49 | 1.63 | 0.89 | 2.07 | 2.27 | 2.97 | 2.24 | 2.64 | 18.05 |
| **MFH1970-1989_M** | 0.54 | 0.56 | 1.28 | 1.53 | 0.40 | 0.86 | 0.75 | 0.99 | 1.47 | 0.98 | 1.53 | 1.58 | 15.47 |
| **MFH1970-1989_C** | 1.58 | 1.40 | 2.08 | 3.43 | 0.59 | 0.60 | 1.18 | 1.57 | 2.26 | 2.49 | 2.29 | 1.82 | 30.99 |
| **MFH1990-2010_W** | 1.42 | 1.25 | 3.32 | 4.38 | 0.94 | 1.84 | 1.67 | 2.92 | 3.56 | 3.33 | 3.56 | 2.87 | 28.82 |
| **MFH1990-2010_M** | 0.27 | 0.29 | 0.66 | 0.75 | 0.22 | 0.43 | 0.41 | 0.47 | 0.78 | 0.51 | 0.79 | 0.79 | 8.11 |
| **MFH1990-2010_C** | 3.13 | 2.50 | 4.31 | 6.51 | 1.33 | 0.95 | 2.60 | 3.16 | 4.59 | 4.80 | 4.68 | 3.04 | 52.00 |

### Table A 20 Average Environmental PBT for archetypes (Scenario IV – partial nZEB with cork slab)

| | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SFH<1945_W** | 1.49 | 1.44 | 1.84 | 4.74 | 0.70 | 4.44 | 1.24 | 3.93 | 3.93 | 6.96 | 3.01 | 2.85 | 6.12 |
| **SFH<1945_M** | 1.15 | 1.23 | 1.86 | 2.76 | 1.09 | 2.85 | 1.59 | 2.39 | 3.35 | 3.09 | 2.60 | 1.80 | 5.38 |
| **SFH<1945_C** | 2.26 | 1.90 | 1.51 | 3.46 | 0.71 | 0.88 | 1.33 | 2.13 | 2.94 | 3.99 | 2.27 | 1.18 | 6.31 |
| **SFH1945-1969_W** | 1.61 | 1.46 | 1.97 | 4.77 | 0.77 | 4.57 | 1.35 | 4.18 | 4.43 | 6.25 | 3.24 | 3.21 | 6.70 |
| **SFH1945-1969_M** | 1.15 | 1.24 | 1.61 | 2.62 | 0.85 | 2.89 | 1.36 | 2.25 | 3.09 | 2.75 | 2.42 | 1.83 | 5.51 |
| **SFH1945-1969_C** | 2.26 | 1.89 | 1.53 | 3.52 | 0.72 | 0.89 | 1.34 | 2.19 | 2.98 | 4.03 | 2.32 | 1.22 | 6.44 |
| **SFH1970-1989_W** | 2.99 | 2.64 | 3.56 | 9.27 | 1.35 | 7.80 | 2.41 | 7.56 | 7.87 | 13.84 | 5.87 | 5.95 | 12.10 |
| **SFH1970-1989_M** | 1.32 | 1.30 | 1.74 | 3.08 | 0.86 | 2.21 | 1.44 | 2.63 | 3.49 | 3.35 | 2.72 | 2.00 | 5.78 |
| **SFH1970-1989_C** | 2.54 | 2.09 | 1.73 | 3.95 | 0.83 | 0.98 | 1.54 | 2.48 | 3.38 | 4.53 | 2.63 | 1.35 | 7.11 |
| **SFH1990-2010_W** | 10.43 | 9.20 | 11.41 | 21.96 | 5.03 | 18.81 | 8.59 | 19.86 | 23.04 | 22.90 | 17.40 | 11.58 | 36.83 |
| **SFH1990-2010_M** | 1.67 | 1.74 | 2.31 | 3.78 | 1.23 | 3.44 | 2.01 | 3.13 | 4.55 | 4.07 | 3.56 | 2.65 | 7.89 |
| **SFH1990-2010_C** | 5.15 | 4.31 | 3.56 | 8.31 | 1.66 | 2.16 | 3.08 | 5.18 | 6.92 | 9.42 | 5.41 | 2.99 | 15.52 |
| **MFH<1945_W** | 2.41 | 2.39 | 3.20 | 8.17 | 1.22 | 9.28 | 2.13 | 7.05 | 6.80 | 11.93 | 5.28 | 5.42 | 10.37 |
| **MFH<1945_M** | 1.79 | 1.80 | 2.34 | 3.94 | 1.22 | 3.10 | 2.04 | 3.25 | 4.63 | 4.12 | 3.67 | 2.75 | 8.19 |
| **MFH<1945_C** | 5.00 | 3.99 | 3.36 | 7.23 | 1.69 | 1.68 | 3.10 | 4.54 | 6.47 | 8.48 | 4.99 | 2.28 | 12.38 |
| **MFH1945-1969_W** | 2.57 | 2.47 | 3.38 | 8.25 | 1.31 | 8.32 | 2.28 | 7.12 | 7.19 | 11.66 | 5.47 | 5.32 | 10.79 |
| **MFH1945-1969_M** | 1.49 | 1.60 | 1.93 | 3.13 | 1.01 | 3.65 | 1.70 | 2.70 | 3.75 | 3.01 | 3.03 | 2.40 | 7.30 |
| **MFH1945-1969_C** | 5.11 | 4.31 | 3.40 | 7.79 | 1.60 | 1.99 | 2.99 | 4.76 | 6.59 | 8.99 | 5.10 | 2.67 | 14.33 |
| **MFH1970-1989_W** | 2.86 | 2.68 | 3.67 | 8.99 | 1.43 | 7.95 | 2.48 | 7.50 | 7.79 | 13.12 | 5.86 | 5.51 | 11.70 |
| **MFH1970-1989_M** | 2.07 | 2.20 | 2.43 | 4.35 | 1.18 | 4.18 | 2.08 | 3.59 | 5.04 | 4.32 | 3.99 | 3.29 | 10.02 |
| **MFH1970-1989_C** | 6.02 | 5.54 | 3.94 | 9.75 | 1.72 | 2.92 | 3.27 | 5.71 | 7.72 | 11.03 | 5.99 | 3.80 | 20.08 |
| **MFH1990-2010_W** | 5.43 | 4.92 | 6.29 | 12.46 | 2.76 | 8.94 | 4.63 | 10.61 | 12.19 | 14.75 | 9.31 | 6.00 | 18.68 |
| **MFH1990-2010_M** | 1.03 | 1.14 | 1.25 | 2.14 | 0.65 | 2.10 | 1.13 | 1.69 | 2.67 | 2.24 | 2.06 | 1.65 | 5.25 |
| **MFH1990-2010_C** | 11.95 | 9.88 | 8.16 | 18.52 | 3.89 | 4.65 | 7.21 | 11.47 | 15.73 | 21.26 | 12.22 | 6.35 | 33.70 |

# APPENDIX B: MATLAB CODE FOR HDD AND CDD CALCULATIONS

This section reports the code developed on MATLAB for calculating the HDD and CDD of each weather data.

%% Initialize variables.

```
clear
clc
Tref_c=15;
Tref_h=24;
dir_to_search = uigetdir;
txtpattern = fullfile(dir_to_search, '*.epw');
dinfo = dir(txtpattern);
n = numel(dinfo);


for k=1:n

 filename = fullfile(dir_to_search, dinfo(k).name);  %just the name;

 startRow=9; endRow=8768;

TT=double(temperatue_epw(filename, startRow, endRow));
T=mean(reshape(TT,24,365));
T_m(:,k)=T;

for j=1:365
    CDD1(j)=0;
    HDD1(j)=0;
```

```
    if(T(j)<=Tref_c)
    HDD1(j)=(18-T(j));
    else
    HDD1(j)=0;
    end
    if (T(j)>=Tref_h)
   CDD1(j)=(T(j)-21);
    else
        CDD1(j)=0;
    end
 end
HDD_f(k)=sum(HDD1);
CDD_f(k)=sum(CDD1);
startRow1=1; endRow1=1;
dtaEPW = importfile2(filename, startRow1, endRow1);
Number(k)=k;
location(k)=dtaEPW(1,2) ;
region(k)=dtaEPW(1,4) ;
lat(k)=dtaEPW(1,7);
lon(k)=dtaEPW(1,8);

end

 resume=table(Number',region',location',lon',lat',HDD_f',CDD_f');
resume.Properties.VariableNames ={'Number','region','location','lon','lat','HDD','CDD'};
%
```

# APPENDIX C: ENVIRONMENTAL PBT RESULTS

This section provides all the PBT calculated for archetypes, in order to the global difference between results.

## Table C 1 PBT scenario I

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### STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | cities | 0.82 | 0.44 | 3.20 | 4.27 | 0.87 | 1.73 | 1.04 | 0.89 | 1.12 | 7.67 | 0.72 | 0.84 | 3.32 |
| **1** | 1 | country | 0.67 | 0.36 | 2.61 | 3.51 | 0.71 | 1.43 | 0.86 | 0.73 | 0.92 | 6.28 | 0.60 | 0.69 | 2.71 |
| **1** | 1 | suburbs | 0.74 | 0.39 | 2.86 | 3.83 | 0.78 | 1.56 | 0.94 | 0.80 | 1.01 | 6.87 | 0.65 | 0.76 | 2.97 |
| **1** | 2 | cities | 0.82 | 0.44 | 3.20 | 4.27 | 0.87 | 1.73 | 1.04 | 0.89 | 1.12 | 7.67 | 0.72 | 0.84 | 3.32 |
| **1** | 2 | country | 0.67 | 0.36 | 2.61 | 3.51 | 0.71 | 1.43 | 0.86 | 0.73 | 0.92 | 6.28 | 0.60 | 0.69 | 2.71 |
| **1** | 2 | suburbs | 0.74 | 0.39 | 2.86 | 3.83 | 0.78 | 1.56 | 0.94 | 0.80 | 1.01 | 6.87 | 0.65 | 0.76 | 2.97 |
| **1** | 3 | cities | 0.66 | 0.35 | 2.58 | 3.43 | 0.70 | 1.38 | 0.84 | 0.71 | 0.89 | 6.17 | 0.58 | 0.67 | 2.67 |
| **1** | 3 | country | 0.57 | 0.30 | 2.20 | 2.93 | 0.60 | 1.19 | 0.72 | 0.61 | 0.77 | 5.28 | 0.50 | 0.58 | 2.28 |
| **1** | 3 | suburbs | 0.61 | 0.32 | 2.37 | 3.15 | 0.64 | 1.27 | 0.77 | 0.65 | 0.82 | 5.66 | 0.53 | 0.62 | 2.45 |
| **1** | 4 | cities | 1.53 | 0.82 | 5.91 | 7.97 | 1.62 | 3.25 | 1.96 | 1.67 | 2.10 | 14.24 | 1.36 | 1.58 | 6.15 |
| **1** | 4 | country | 1.20 | 0.65 | 4.61 | 6.23 | 1.27 | 2.54 | 1.53 | 1.31 | 1.65 | 11.12 | 1.07 | 1.24 | 4.80 |
| **1** | 4 | suburbs | 1.27 | 0.68 | 4.91 | 6.62 | 1.35 | 2.70 | 1.62 | 1.39 | 1.75 | 11.83 | 1.13 | 1.31 | 5.11 |
| **1** | 13 | cities | 1.09 | 0.57 | 4.27 | 5.61 | 1.15 | 2.25 | 1.36 | 1.15 | 1.45 | 10.17 | 0.94 | 1.09 | 4.41 |
| **1** | 13 | country | 0.89 | 0.47 | 3.49 | 4.60 | 0.94 | 1.85 | 1.12 | 0.95 | 1.20 | 8.32 | 0.77 | 0.90 | 3.60 |
| **1** | 13 | suburbs | 0.98 | 0.51 | 3.82 | 5.04 | 1.03 | 2.02 | 1.23 | 1.03 | 1.31 | 9.11 | 0.85 | 0.98 | 3.95 |
| **1** | 14 | cities | 1.01 | 0.53 | 3.96 | 5.21 | 1.07 | 2.09 | 1.27 | 1.07 | 1.35 | 9.43 | 0.87 | 1.01 | 4.09 |
| **1** | 14 | country | 0.83 | 0.44 | 3.24 | 4.29 | 0.88 | 1.73 | 1.04 | 0.88 | 1.11 | 7.74 | 0.72 | 0.84 | 3.35 |
| **1** | 14 | suburbs | 0.91 | 0.47 | 3.55 | 4.68 | 0.96 | 1.88 | 1.14 | 0.96 | 1.21 | 8.45 | 0.79 | 0.91 | 3.66 |
| **1** | 15 | cities | 1.08 | 0.56 | 4.25 | 5.58 | 1.15 | 2.24 | 1.36 | 1.14 | 1.44 | 10.12 | 0.94 | 1.09 | 4.39 |
| **1** | 15 | country | 0.88 | 0.46 | 3.45 | 4.55 | 0.93 | 1.83 | 1.11 | 0.93 | 1.18 | 8.22 | 0.76 | 0.89 | 3.56 |
| **1** | 15 | suburbs | 0.97 | 0.51 | 3.79 | 4.99 | 1.02 | 2.00 | 1.21 | 1.02 | 1.29 | 9.03 | 0.84 | 0.97 | 3.91 |
| **1** | 16 | cities | 2.83 | 1.54 | 10.89 | 14.77 | 3.00 | 6.05 | 3.63 | 3.12 | 3.92 | 26.31 | 2.54 | 2.94 | 11.35 |

## STONE WOOL

| Country | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 16 | country | 2.69 | 1.48 | 10.32 | 14.11 | 2.85 | 5.81 | 3.48 | 3.00 | 3.76 | 25.01 | 2.44 | 2.83 | 10.78 |
| **1** | 16 | suburbs | 2.78 | 1.52 | 10.66 | 14.54 | 2.94 | 5.97 | 3.58 | 3.08 | 3.87 | 25.81 | 2.51 | 2.91 | 11.13 |
| **2** | 1 | cities | 0.89 | 0.43 | 3.14 | 3.52 | 1.33 | 1.55 | 1.62 | 1.44 | 1.81 | 7.12 | 1.20 | 1.26 | 2.64 |
| **2** | 1 | country | 0.80 | 0.38 | 2.81 | 3.15 | 1.25 | 1.38 | 1.55 | 1.40 | 1.76 | 6.37 | 1.17 | 1.26 | 2.36 |
| **2** | 1 | suburbs | 0.85 | 0.41 | 2.98 | 3.35 | 1.31 | 1.47 | 1.60 | 1.44 | 1.81 | 6.77 | 1.20 | 1.29 | 2.51 |
| **2** | 2 | cities | 0.89 | 0.43 | 3.14 | 3.52 | 1.33 | 1.55 | 1.62 | 1.44 | 1.81 | 7.12 | 1.20 | 1.26 | 2.64 |
| **2** | 2 | country | 0.80 | 0.38 | 2.81 | 3.15 | 1.25 | 1.38 | 1.55 | 1.40 | 1.76 | 6.37 | 1.17 | 1.26 | 2.36 |
| **2** | 2 | suburbs | 0.85 | 0.41 | 2.98 | 3.35 | 1.31 | 1.47 | 1.60 | 1.44 | 1.81 | 6.77 | 1.20 | 1.29 | 2.51 |
| **2** | 3 | cities | 0.74 | 0.35 | 2.59 | 2.92 | 1.08 | 1.28 | 1.29 | 1.14 | 1.43 | 5.88 | 0.95 | 0.99 | 2.19 |
| **2** | 3 | country | 0.67 | 0.32 | 2.36 | 2.65 | 1.01 | 1.17 | 1.23 | 1.09 | 1.37 | 5.35 | 0.91 | 0.96 | 1.99 |
| **2** | 3 | suburbs | 0.71 | 0.34 | 2.49 | 2.80 | 1.05 | 1.23 | 1.27 | 1.13 | 1.42 | 5.65 | 0.94 | 0.99 | 2.10 |
| **2** | 4 | cities | 1.15 | 0.55 | 4.05 | 4.55 | 1.71 | 2.00 | 2.07 | 1.83 | 2.30 | 9.18 | 1.53 | 1.60 | 3.41 |
| **2** | 4 | country | 1.21 | 0.58 | 4.23 | 4.74 | 1.86 | 2.08 | 2.28 | 2.05 | 2.58 | 9.58 | 1.71 | 1.83 | 3.55 |
| **2** | 4 | suburbs | 1.20 | 0.57 | 4.22 | 4.73 | 1.82 | 2.08 | 2.22 | 1.98 | 2.49 | 9.56 | 1.65 | 1.75 | 3.55 |
| **2** | 13 | cities | 1.08 | 0.51 | 3.84 | 4.33 | 1.52 | 1.91 | 1.81 | 1.56 | 1.96 | 8.72 | 1.30 | 1.33 | 3.26 |
| **2** | 13 | country | 0.99 | 0.47 | 3.49 | 3.93 | 1.43 | 1.73 | 1.72 | 1.51 | 1.89 | 7.92 | 1.26 | 1.30 | 2.95 |
| **2** | 13 | suburbs | 1.04 | 0.49 | 3.68 | 4.14 | 1.49 | 1.82 | 1.78 | 1.55 | 1.94 | 8.34 | 1.29 | 1.33 | 3.11 |
| **2** | 14 | cities | 0.99 | 0.47 | 3.52 | 3.97 | 1.40 | 1.75 | 1.66 | 1.43 | 1.80 | 8.00 | 1.20 | 1.22 | 2.99 |
| **2** | 14 | country | 0.91 | 0.43 | 3.21 | 3.61 | 1.32 | 1.59 | 1.59 | 1.39 | 1.75 | 7.29 | 1.16 | 1.20 | 2.72 |
| **2** | 14 | suburbs | 0.96 | 0.45 | 3.38 | 3.80 | 1.37 | 1.68 | 1.63 | 1.42 | 1.79 | 7.66 | 1.19 | 1.23 | 2.86 |
| **2** | 15 | cities | 1.09 | 0.52 | 3.85 | 4.34 | 1.53 | 1.92 | 1.81 | 1.57 | 1.97 | 8.75 | 1.31 | 1.34 | 3.27 |
| **2** | 15 | country | 0.98 | 0.46 | 3.45 | 3.88 | 1.41 | 1.71 | 1.69 | 1.48 | 1.85 | 7.82 | 1.23 | 1.27 | 2.91 |
| **2** | 15 | suburbs | 1.03 | 0.49 | 3.65 | 4.11 | 1.48 | 1.81 | 1.76 | 1.53 | 1.93 | 8.29 | 1.28 | 1.32 | 3.09 |
| **2** | 16 | cities | 3.30 | 1.58 | 11.56 | 12.98 | 5.11 | 5.70 | 6.29 | 5.67 | 7.13 | 26.23 | 4.74 | 5.07 | 9.71 |
| **2** | 16 | country | 3.50 | 1.68 | 12.13 | 13.57 | 5.84 | 5.94 | 7.41 | 6.97 | 8.76 | 27.50 | 5.82 | 6.54 | 10.13 |
| **2** | 16 | suburbs | 3.54 | 1.70 | 12.30 | 13.78 | 5.76 | 6.03 | 7.23 | 6.71 | 8.43 | 27.89 | 5.60 | 6.19 | 10.29 |
| **3** | 1 | cities | 2.52 | 2.40 | 0.83 | 5.32 | 0.26 | 8.39 | 0.80 | 5.89 | 3.18 | 5.91 | 2.14 | 3.69 | 6.94 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT**$_{CC}$ | **PBT**$_{OD}$ | **PBT**$_{HT\_CE}$ | **PBT**$_{HT\_nCE}$ | **PBT**$_{PM}$ | **PBT**$_{IR\_hh}$ | **PBT**$_{POF}$ | **PBT**$_{AC}$ | **PBT**$_{ET}$ | **PBT**$_{EuF}$ | **PBT**$_{EuM}$ | **PBT**$_{Ec\_FW}$ | **PBT**$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | 1 | country | 1.91 | 1.81 | 0.63 | 4.05 | 0.20 | 6.40 | 0.61 | 4.49 | 2.41 | 4.51 | 1.62 | 2.86 | 5.29 |
| **3** | 1 | suburbs | 2.15 | 2.04 | 0.71 | 4.56 | 0.22 | 7.19 | 0.68 | 5.05 | 2.72 | 5.07 | 1.82 | 3.19 | 5.95 |
| **3** | 2 | cities | 2.52 | 2.40 | 0.83 | 5.32 | 0.26 | 8.39 | 0.80 | 5.89 | 3.18 | 5.91 | 2.14 | 3.69 | 6.94 |
| **3** | 2 | country | 1.91 | 1.81 | 0.63 | 4.05 | 0.20 | 6.40 | 0.61 | 4.49 | 2.41 | 4.51 | 1.62 | 2.86 | 5.29 |
| **3** | 2 | suburbs | 2.15 | 2.04 | 0.71 | 4.56 | 0.22 | 7.19 | 0.68 | 5.05 | 2.72 | 5.07 | 1.82 | 3.19 | 5.95 |
| **3** | 3 | cities | 2.66 | 2.54 | 0.88 | 5.59 | 0.28 | 8.78 | 0.85 | 6.18 | 3.37 | 6.19 | 2.26 | 3.80 | 7.29 |
| **3** | 3 | country | 1.88 | 1.80 | 0.63 | 3.94 | 0.20 | 6.19 | 0.60 | 4.36 | 2.38 | 4.36 | 1.60 | 2.66 | 5.15 |
| **3** | 3 | suburbs | 2.19 | 2.09 | 0.73 | 4.58 | 0.23 | 7.20 | 0.70 | 5.07 | 2.77 | 5.07 | 1.86 | 3.11 | 5.98 |
| **3** | 4 | cities | 6.00 | 5.57 | 1.93 | 13.35 | 0.60 | 21.54 | 1.85 | 14.92 | 7.55 | 15.17 | 5.08 | 11.02 | 17.42 |
| **3** | 4 | country | 4.07 | 3.80 | 1.32 | 8.95 | 0.41 | 14.36 | 1.27 | 9.98 | 5.13 | 10.11 | 3.45 | 7.07 | 11.68 |
| **3** | 4 | suburbs | 4.84 | 4.51 | 1.56 | 10.71 | 0.49 | 17.24 | 1.50 | 11.96 | 6.09 | 12.14 | 4.10 | 8.66 | 13.98 |
| **3** | 13 | cities | 3.17 | 3.08 | 1.07 | 6.47 | 0.34 | 10.06 | 1.04 | 7.13 | 4.03 | 7.09 | 2.70 | 4.07 | 8.45 |
| **3** | 13 | country | 2.49 | 2.40 | 0.84 | 5.14 | 0.27 | 8.02 | 0.81 | 5.67 | 3.16 | 5.65 | 2.12 | 3.33 | 6.71 |
| **3** | 13 | suburbs | 2.76 | 2.67 | 0.93 | 5.68 | 0.30 | 8.85 | 0.90 | 6.26 | 3.51 | 6.24 | 2.35 | 3.65 | 7.42 |
| **3** | 14 | cities | 2.94 | 2.85 | 0.99 | 6.01 | 0.32 | 9.34 | 0.96 | 6.62 | 3.73 | 6.58 | 2.50 | 3.79 | 7.84 |
| **3** | 14 | country | 2.29 | 2.20 | 0.77 | 4.73 | 0.24 | 7.39 | 0.74 | 5.22 | 2.90 | 5.21 | 1.94 | 3.08 | 6.17 |
| **3** | 14 | suburbs | 2.55 | 2.46 | 0.86 | 5.26 | 0.27 | 8.20 | 0.83 | 5.80 | 3.24 | 5.78 | 2.17 | 3.39 | 6.86 |
| **3** | 15 | cities | 3.27 | 3.17 | 1.11 | 6.66 | 0.35 | 10.33 | 1.07 | 7.33 | 4.15 | 7.28 | 2.78 | 4.16 | 8.69 |
| **3** | 15 | country | 2.54 | 2.45 | 0.85 | 5.21 | 0.27 | 8.12 | 0.82 | 5.74 | 3.22 | 5.72 | 2.16 | 3.34 | 6.81 |
| **3** | 15 | suburbs | 2.82 | 2.73 | 0.95 | 5.78 | 0.30 | 9.00 | 0.92 | 6.37 | 3.58 | 6.34 | 2.40 | 3.68 | 7.55 |
| **3** | 16 | cities | 8.87 | 8.23 | 2.85 | 19.79 | 0.89 | 31.96 | 2.73 | 22.12 | 11.16 | 22.50 | 7.51 | 16.47 | 25.81 |
| **3** | 16 | country | 5.92 | 5.53 | 1.92 | 12.98 | 0.60 | 20.82 | 1.84 | 14.47 | 7.46 | 14.66 | 5.01 | 10.18 | 16.94 |
| **3** | 16 | suburbs | 7.00 | 6.53 | 2.26 | 15.47 | 0.71 | 24.87 | 2.17 | 17.26 | 8.82 | 17.51 | 5.93 | 12.41 | 20.18 |
| **4** | 1 | cities | 0.62 | 0.30 | 0.99 | 1.68 | 0.44 | 1.04 | 0.99 | 1.95 | 2.13 | 1.92 | 1.39 | 1.99 | 1.74 |
| **4** | 1 | country | 0.56 | 0.26 | 1.15 | 4.46 | 0.39 | 0.92 | 0.87 | 1.96 | 1.96 | (2.56) | 1.38 | 14.87 | 1.59 |
| **4** | 1 | suburbs | 0.58 | 0.28 | 1.03 | 2.25 | 0.41 | 0.97 | 0.92 | 1.92 | 2.02 | 7.46 | 1.36 | 3.11 | 1.64 |
| **4** | 2 | cities | 0.65 | 0.32 | 1.06 | 1.85 | 0.46 | 1.10 | 1.05 | 2.08 | 2.26 | 2.26 | 1.48 | 2.23 | 1.85 |

### STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 2 | country | 0.59 | 0.28 | 1.27 | 6.42 | 0.41 | 0.97 | 0.93 | 2.12 | 2.09 | (2.05) | 1.49 | 29.74 | 1.69 |
| **4** | 2 | suburbs | 0.62 | 0.30 | 1.12 | 2.61 | 0.43 | 1.03 | 0.98 | 2.06 | 2.15 | 21.09 | 1.46 | 3.80 | 1.75 |
| **4** | 3 | cities | 0.63 | 0.31 | 0.93 | 1.37 | 0.45 | 1.07 | 1.02 | 1.91 | 2.15 | 1.20 | 1.37 | 1.53 | 1.76 |
| **4** | 3 | country | 0.55 | 0.27 | 0.96 | 2.00 | 0.39 | 0.92 | 0.88 | 1.81 | 1.91 | 4.76 | 1.28 | 2.67 | 1.55 |
| **4** | 3 | suburbs | 0.58 | 0.29 | 0.93 | 1.56 | 0.41 | 0.98 | 0.94 | 1.83 | 2.00 | 1.76 | 1.31 | 1.85 | 1.64 |
| **4** | 4 | cities | 1.02 | 0.51 | 1.58 | 2.52 | 0.73 | 1.74 | 1.66 | 3.19 | 3.53 | 2.52 | 2.27 | 2.91 | 2.88 |
| **4** | 4 | country | 0.88 | 0.42 | 1.75 | 5.62 | 0.61 | 1.46 | 1.39 | 3.06 | 3.10 | (6.07) | 2.17 | 12.00 | 2.52 |
| **4** | 4 | suburbs | 0.94 | 0.45 | 1.60 | 3.15 | 0.66 | 1.57 | 1.50 | 3.05 | 3.25 | 5.66 | 2.17 | 4.06 | 2.65 |
| **4** | 13 | cities | 0.78 | 0.41 | 0.98 | 1.16 | 0.58 | 1.38 | 1.31 | 2.20 | 2.65 | 0.78 | 1.58 | 1.20 | 2.18 |
| **4** | 13 | country | 0.71 | 0.36 | 1.00 | 1.38 | 0.51 | 1.23 | 1.17 | 2.12 | 2.43 | 1.09 | 1.52 | 1.50 | 1.99 |
| **4** | 13 | suburbs | 0.74 | 0.38 | 0.99 | 1.28 | 0.54 | 1.29 | 1.23 | 2.16 | 2.53 | 0.93 | 1.55 | 1.35 | 2.08 |
| **4** | 14 | cities | 0.71 | 0.37 | 0.89 | 1.06 | 0.53 | 1.25 | 1.19 | 2.01 | 2.41 | 0.72 | 1.44 | 1.10 | 1.98 |
| **4** | 14 | country | 0.65 | 0.33 | 0.92 | 1.28 | 0.47 | 1.11 | 1.06 | 1.93 | 2.21 | 1.03 | 1.38 | 1.39 | 1.81 |
| **4** | 14 | suburbs | 0.67 | 0.35 | 0.91 | 1.17 | 0.49 | 1.17 | 1.12 | 1.97 | 2.30 | 0.86 | 1.41 | 1.24 | 1.89 |
| **4** | 15 | cities | 0.79 | 0.42 | 0.99 | 1.18 | 0.59 | 1.40 | 1.33 | 2.23 | 2.68 | 0.79 | 1.60 | 1.22 | 2.21 |
| **4** | 15 | country | 0.72 | 0.37 | 0.99 | 1.33 | 0.52 | 1.24 | 1.18 | 2.12 | 2.44 | 1.03 | 1.52 | 1.43 | 2.01 |
| **4** | 15 | suburbs | 0.75 | 0.39 | 0.99 | 1.26 | 0.55 | 1.30 | 1.24 | 2.17 | 2.55 | 0.91 | 1.56 | 1.33 | 2.09 |
| **4** | 16 | cities | 1.62 | 0.78 | 2.83 | 5.85 | 1.14 | 2.72 | 2.59 | 5.33 | 5.65 | 1.59 | 3.79 | 2.66 | 4.59 |
| **4** | 16 | country | 1.42 | 0.66 | 3.15 | 21.89 | 0.98 | 2.32 | 2.21 | 5.13 | 5.03 | (3.18) | 3.62 | (5.32) | 4.06 |
| **4** | 16 | suburbs | 1.51 | 0.71 | 3.03 | 10.16 | 1.05 | 2.49 | 2.38 | 5.26 | 5.32 | (1.82) | 3.72 | 2.66 | 4.31 |
| **5** | 1 | cities | 0.75 | 0.54 | 0.85 | 1.38 | 0.43 | 0.47 | 0.94 | 1.66 | 1.76 | 1.60 | 1.14 | 0.55 | 1.45 |
| **5** | 1 | country | 0.65 | 0.46 | 0.73 | 1.18 | 0.37 | 0.40 | 0.80 | 1.42 | 1.51 | 1.38 | 0.98 | 0.47 | 1.24 |
| **5** | 1 | suburbs | 0.69 | 0.50 | 0.78 | 1.27 | 0.39 | 0.43 | 0.86 | 1.53 | 1.62 | 1.48 | 1.05 | 0.50 | 1.33 |
| **5** | 2 | cities | 0.75 | 0.54 | 0.85 | 1.38 | 0.43 | 0.47 | 0.94 | 1.66 | 1.76 | 1.60 | 1.14 | 0.55 | 1.45 |
| **5** | 2 | country | 0.65 | 0.46 | 0.73 | 1.18 | 0.37 | 0.40 | 0.80 | 1.42 | 1.51 | 1.38 | 0.98 | 0.47 | 1.24 |
| **5** | 2 | suburbs | 0.69 | 0.50 | 0.78 | 1.27 | 0.39 | 0.43 | 0.86 | 1.53 | 1.62 | 1.48 | 1.05 | 0.50 | 1.33 |
| **5** | 3 | cities | 0.74 | 0.53 | 0.84 | 1.36 | 0.42 | 0.46 | 0.92 | 1.63 | 1.74 | 1.58 | 1.12 | 0.54 | 1.43 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT**$_{\mathrm{CC}}$ | **PBT**$_{\mathrm{OD}}$ | **PBT**$_{\mathrm{HT\_CE}}$ | **PBT**$_{\mathrm{HT\_nCE}}$ | **PBT**$_{\mathrm{PM}}$ | **PBT**$_{\mathrm{IR\_hh}}$ | **PBT**$_{\mathrm{POF}}$ | **PBT**$_{\mathrm{AC}}$ | **PBT**$_{\mathrm{ET}}$ | **PBT**$_{\mathrm{EuF}}$ | **PBT**$_{\mathrm{EuM}}$ | **PBT**$_{\mathrm{Ec\_FW}}$ | **PBT**$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5** | 3 | country | 0.63 | 0.45 | 0.71 | 1.14 | 0.36 | 0.39 | 0.78 | 1.38 | 1.46 | 1.34 | 0.95 | 0.46 | 1.20 |
| **5** | 3 | suburbs | 0.68 | 0.49 | 0.76 | 1.24 | 0.39 | 0.42 | 0.84 | 1.49 | 1.58 | 1.44 | 1.03 | 0.49 | 1.30 |
| **5** | 4 | cities | 1.35 | 0.97 | 1.53 | 2.51 | 0.76 | 0.87 | 1.68 | 3.02 | 3.20 | 2.94 | 2.07 | 1.01 | 2.64 |
| **5** | 4 | country | 1.11 | 0.80 | 1.26 | 2.06 | 0.63 | 0.71 | 1.38 | 2.48 | 2.62 | 2.42 | 1.70 | 0.83 | 2.16 |
| **5** | 4 | suburbs | 1.21 | 0.87 | 1.37 | 2.25 | 0.68 | 0.78 | 1.50 | 2.70 | 2.86 | 2.63 | 1.85 | 0.91 | 2.36 |
| **5** | 13 | cities | 1.02 | 0.73 | 1.15 | 1.85 | 0.58 | 0.63 | 1.27 | 2.23 | 2.37 | 2.16 | 1.54 | 0.73 | 1.95 |
| **5** | 13 | country | 0.89 | 0.64 | 1.00 | 1.62 | 0.51 | 0.55 | 1.11 | 1.95 | 2.07 | 1.89 | 1.34 | 0.64 | 1.70 |
| **5** | 13 | suburbs | 0.95 | 0.68 | 1.07 | 1.72 | 0.54 | 0.59 | 1.18 | 2.08 | 2.21 | 2.01 | 1.43 | 0.68 | 1.81 |
| **5** | 14 | cities | 0.92 | 0.66 | 1.04 | 1.68 | 0.53 | 0.57 | 1.15 | 2.02 | 2.15 | 1.95 | 1.39 | 0.67 | 1.76 |
| **5** | 14 | country | 0.81 | 0.58 | 0.91 | 1.47 | 0.46 | 0.50 | 1.00 | 1.77 | 1.88 | 1.71 | 1.22 | 0.58 | 1.55 |
| **5** | 14 | suburbs | 0.86 | 0.62 | 0.97 | 1.56 | 0.49 | 0.53 | 1.07 | 1.88 | 2.00 | 1.82 | 1.30 | 0.62 | 1.64 |
| **5** | 15 | cities | 1.04 | 0.74 | 1.17 | 1.88 | 0.59 | 0.64 | 1.29 | 2.27 | 2.41 | 2.19 | 1.56 | 0.75 | 1.98 |
| **5** | 15 | country | 0.90 | 0.65 | 1.02 | 1.64 | 0.51 | 0.56 | 1.12 | 1.98 | 2.10 | 1.92 | 1.36 | 0.65 | 1.73 |
| **5** | 15 | suburbs | 0.96 | 0.69 | 1.08 | 1.75 | 0.55 | 0.60 | 1.20 | 2.11 | 2.24 | 2.04 | 1.45 | 0.69 | 1.84 |
| **5** | 16 | cities | 1.86 | 1.34 | 2.11 | 3.46 | 1.05 | 1.20 | 2.31 | 4.16 | 4.40 | 4.05 | 2.85 | 1.39 | 3.62 |
| **5** | 16 | country | 1.64 | 1.18 | 1.86 | 3.06 | 0.92 | 1.06 | 2.04 | 3.68 | 3.89 | 3.59 | 2.52 | 1.24 | 3.21 |
| **5** | 16 | suburbs | 1.73 | 1.24 | 1.96 | 3.22 | 0.98 | 1.12 | 2.15 | 3.87 | 4.10 | 3.77 | 2.66 | 1.30 | 3.38 |
| **6** | 1 | cities | 0.45 | 0.39 | 0.65 | 1.85 | 0.24 | 3.13 | 0.59 | 2.64 | 1.87 | 3.02 | 1.19 | 2.32 | 1.56 |
| **6** | 1 | country | 0.42 | 0.37 | 0.60 | 1.75 | 0.22 | 3.15 | 0.54 | 2.55 | 1.81 | 2.93 | 1.11 | 2.53 | 1.48 |
| **6** | 1 | suburbs | 0.43 | 0.38 | 0.63 | 1.80 | 0.23 | 3.18 | 0.56 | 2.61 | 1.85 | 2.99 | 1.15 | 2.49 | 1.52 |
| **6** | 2 | cities | 0.45 | 0.39 | 0.65 | 1.85 | 0.24 | 3.13 | 0.59 | 2.64 | 1.87 | 3.02 | 1.19 | 2.32 | 1.56 |
| **6** | 2 | country | 0.42 | 0.37 | 0.60 | 1.75 | 0.22 | 3.15 | 0.54 | 2.55 | 1.81 | 2.93 | 1.11 | 2.53 | 1.48 |
| **6** | 2 | suburbs | 0.43 | 0.38 | 0.63 | 1.80 | 0.23 | 3.18 | 0.56 | 2.61 | 1.85 | 2.99 | 1.15 | 2.49 | 1.52 |
| **6** | 3 | cities | 0.42 | 0.37 | 0.61 | 1.71 | 0.22 | 2.79 | 0.55 | 2.41 | 1.71 | 2.75 | 1.11 | 1.97 | 1.44 |
| **6** | 3 | country | 0.39 | 0.34 | 0.57 | 1.62 | 0.21 | 2.74 | 0.52 | 2.31 | 1.64 | 2.64 | 1.04 | 2.02 | 1.37 |
| **6** | 3 | suburbs | 0.41 | 0.36 | 0.59 | 1.67 | 0.21 | 2.79 | 0.53 | 2.37 | 1.68 | 2.71 | 1.08 | 2.03 | 1.41 |
| **6** | 4 | cities | 0.64 | 0.56 | 0.92 | 2.61 | 0.33 | 4.37 | 0.83 | 3.71 | 2.63 | 4.23 | 1.68 | 3.18 | 2.20 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6** | 4 | country | 0.59 | 0.51 | 0.85 | 2.45 | 0.31 | 4.31 | 0.76 | 3.53 | 2.51 | 4.06 | 1.56 | 3.38 | 2.06 |
| **6** | 4 | suburbs | 0.61 | 0.53 | 0.88 | 2.53 | 0.32 | 4.38 | 0.80 | 3.63 | 2.58 | 4.17 | 1.62 | 3.35 | 2.13 |
| **6** | 13 | cities | 0.59 | 0.51 | 0.85 | 2.32 | 0.31 | 3.54 | 0.78 | 3.19 | 2.27 | 3.61 | 1.52 | 2.31 | 1.96 |
| **6** | 13 | country | 0.55 | 0.48 | 0.80 | 2.21 | 0.29 | 3.51 | 0.72 | 3.08 | 2.19 | 3.50 | 1.44 | 2.39 | 1.86 |
| **6** | 13 | suburbs | 0.57 | 0.49 | 0.82 | 2.26 | 0.30 | 3.54 | 0.75 | 3.14 | 2.23 | 3.56 | 1.48 | 2.38 | 1.91 |
| **6** | 14 | cities | 0.53 | 0.46 | 0.76 | 2.09 | 0.28 | 3.19 | 0.70 | 2.88 | 2.04 | 3.25 | 1.37 | 2.09 | 1.76 |
| **6** | 14 | country | 0.49 | 0.43 | 0.71 | 1.99 | 0.26 | 3.16 | 0.65 | 2.77 | 1.97 | 3.15 | 1.29 | 2.16 | 1.67 |
| **6** | 14 | suburbs | 0.51 | 0.45 | 0.74 | 2.04 | 0.27 | 3.20 | 0.67 | 2.83 | 2.01 | 3.21 | 1.33 | 2.15 | 1.72 |
| **6** | 15 | cities | 0.59 | 0.51 | 0.85 | 2.31 | 0.31 | 3.52 | 0.77 | 3.18 | 2.26 | 3.59 | 1.52 | 2.29 | 1.95 |
| **6** | 15 | country | 0.55 | 0.48 | 0.80 | 2.20 | 0.29 | 3.45 | 0.72 | 3.06 | 2.17 | 3.46 | 1.43 | 2.33 | 1.85 |
| **6** | 15 | suburbs | 0.57 | 0.49 | 0.82 | 2.25 | 0.30 | 3.50 | 0.75 | 3.12 | 2.21 | 3.53 | 1.47 | 2.33 | 1.90 |
| **6** | 16 | cities | 0.92 | 0.80 | 1.33 | 3.79 | 0.48 | 6.50 | 1.20 | 5.43 | 3.85 | 6.21 | 2.43 | 4.89 | 3.20 |
| **6** | 16 | country | 0.85 | 0.75 | 1.23 | 3.56 | 0.44 | 6.32 | 1.11 | 5.16 | 3.66 | 5.93 | 2.27 | 5.00 | 3.00 |
| **6** | 16 | suburbs | 0.88 | 0.77 | 1.28 | 3.68 | 0.46 | 6.46 | 1.15 | 5.31 | 3.77 | 6.09 | 2.35 | 5.02 | 3.10 |
| **7** | 5 | cities | 0.58 | 0.30 | 0.71 | 1.54 | 0.32 | 0.20 | 0.78 | 2.04 | 1.91 | 2.30 | 1.22 | 0.61 | 1.09 |
| **7** | 5 | country | 0.52 | 0.27 | 0.63 | 1.39 | 0.29 | 0.18 | 0.70 | 1.84 | 1.72 | 2.07 | 1.10 | 0.55 | 0.98 |
| **7** | 5 | suburbs | 0.55 | 0.28 | 0.66 | 1.44 | 0.30 | 0.18 | 0.73 | 1.92 | 1.80 | 2.16 | 1.15 | 0.57 | 1.01 |
| **7** | 6 | cities | 0.60 | 0.31 | 0.73 | 1.60 | 0.33 | 0.21 | 0.81 | 2.12 | 1.98 | 2.38 | 1.27 | 0.64 | 1.13 |
| **7** | 6 | country | 0.54 | 0.28 | 0.65 | 1.43 | 0.30 | 0.18 | 0.72 | 1.90 | 1.77 | 2.13 | 1.13 | 0.57 | 1.01 |
| **7** | 6 | suburbs | 0.57 | 0.29 | 0.68 | 1.49 | 0.31 | 0.19 | 0.76 | 1.99 | 1.86 | 2.23 | 1.19 | 0.59 | 1.05 |
| **7** | 7 | cities | 0.72 | 0.37 | 0.87 | 1.88 | 0.40 | 0.23 | 0.97 | 2.52 | 2.36 | 2.81 | 1.51 | 0.73 | 1.31 |
| **7** | 7 | country | 0.66 | 0.34 | 0.80 | 1.73 | 0.36 | 0.22 | 0.89 | 2.31 | 2.16 | 2.58 | 1.38 | 0.67 | 1.21 |
| **7** | 7 | suburbs | 0.69 | 0.35 | 0.82 | 1.79 | 0.38 | 0.22 | 0.92 | 2.40 | 2.24 | 2.67 | 1.43 | 0.69 | 1.25 |
| **7** | 8 | cities | 1.72 | 0.89 | 2.09 | 4.56 | 0.95 | 0.60 | 2.30 | 6.04 | 5.64 | 6.80 | 3.61 | 1.82 | 3.23 |
| **7** | 8 | country | 1.49 | 0.78 | 1.81 | 3.97 | 0.82 | 0.52 | 2.00 | 5.24 | 4.89 | 5.91 | 3.14 | 1.59 | 2.81 |
| **7** | 8 | suburbs | 1.58 | 0.82 | 1.91 | 4.18 | 0.87 | 0.54 | 2.11 | 5.54 | 5.17 | 6.23 | 3.31 | 1.67 | 2.95 |
| **7** | 17 | cities | 0.69 | 0.35 | 0.83 | 1.80 | 0.38 | 0.22 | 0.92 | 2.41 | 2.25 | 2.69 | 1.44 | 0.70 | 1.25 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7** | 17 | country | 0.63 | 0.33 | 0.77 | 1.69 | 0.35 | 0.22 | 0.85 | 2.23 | 2.08 | 2.51 | 1.33 | 0.68 | 1.20 |
| **7** | 17 | suburbs | 0.65 | 0.34 | 0.79 | 1.72 | 0.36 | 0.22 | 0.88 | 2.30 | 2.15 | 2.57 | 1.37 | 0.67 | 1.21 |
| **7** | 18 | cities | 0.70 | 0.36 | 0.84 | 1.84 | 0.39 | 0.23 | 0.94 | 2.46 | 2.30 | 2.74 | 1.47 | 0.71 | 1.28 |
| **7** | 18 | country | 0.64 | 0.33 | 0.78 | 1.71 | 0.35 | 0.23 | 0.86 | 2.26 | 2.11 | 2.55 | 1.35 | 0.69 | 1.21 |
| **7** | 18 | suburbs | 0.67 | 0.34 | 0.80 | 1.75 | 0.37 | 0.22 | 0.89 | 2.34 | 2.18 | 2.62 | 1.40 | 0.69 | 1.23 |
| **7** | 19 | cities | 1.12 | 0.57 | 1.35 | 2.93 | 0.62 | 0.37 | 1.50 | 3.92 | 3.66 | 4.38 | 2.34 | 1.14 | 2.05 |
| **7** | 19 | country | 1.01 | 0.52 | 1.23 | 2.68 | 0.56 | 0.34 | 1.36 | 3.56 | 3.32 | 3.99 | 2.13 | 1.06 | 1.88 |
| **7** | 19 | suburbs | 1.06 | 0.54 | 1.28 | 2.78 | 0.58 | 0.35 | 1.42 | 3.71 | 3.47 | 4.15 | 2.22 | 1.09 | 1.95 |
| **7** | 20 | cities | 3.30 | 1.71 | 4.00 | 8.73 | 1.82 | 1.13 | 4.42 | 11.59 | 10.82 | 13.02 | 6.93 | 3.46 | 6.15 |
| **7** | 20 | country | 2.62 | 1.36 | 3.19 | 6.96 | 1.45 | 0.91 | 3.52 | 9.23 | 8.61 | 10.38 | 5.52 | 2.78 | 4.93 |
| **7** | 20 | suburbs | 2.92 | 1.51 | 3.54 | 7.74 | 1.61 | 1.00 | 3.92 | 10.27 | 9.59 | 11.54 | 6.14 | 3.07 | 5.46 |
| **8** | 5 | cities | 0.58 | 0.38 | 0.35 | 0.95 | 0.13 | 0.63 | 0.36 | 1.01 | 1.03 | 0.74 | 0.68 | 0.82 | 1.71 |
| **8** | 5 | country | 0.54 | 0.36 | 0.32 | 0.89 | 0.12 | 0.59 | 0.34 | 0.94 | 0.96 | 0.69 | 0.64 | 0.77 | 1.60 |
| **8** | 5 | suburbs | 0.56 | 0.37 | 0.33 | 0.92 | 0.12 | 0.61 | 0.35 | 0.97 | 1.00 | 0.71 | 0.66 | 0.79 | 1.65 |
| **8** | 6 | cities | 0.59 | 0.39 | 0.36 | 0.98 | 0.13 | 0.65 | 0.37 | 1.03 | 1.06 | 0.76 | 0.70 | 0.84 | 1.76 |
| **8** | 6 | country | 0.55 | 0.37 | 0.33 | 0.91 | 0.12 | 0.61 | 0.35 | 0.97 | 0.99 | 0.71 | 0.66 | 0.79 | 1.64 |
| **8** | 6 | suburbs | 0.57 | 0.38 | 0.34 | 0.94 | 0.13 | 0.63 | 0.36 | 1.00 | 1.02 | 0.73 | 0.68 | 0.81 | 1.70 |
| **8** | 7 | cities | 0.75 | 0.49 | 0.45 | 1.22 | 0.16 | 0.81 | 0.47 | 1.30 | 1.33 | 0.95 | 0.88 | 1.05 | 2.21 |
| **8** | 7 | country | 0.70 | 0.46 | 0.42 | 1.15 | 0.15 | 0.76 | 0.44 | 1.22 | 1.25 | 0.89 | 0.83 | 0.99 | 2.07 |
| **8** | 7 | suburbs | 0.72 | 0.48 | 0.43 | 1.18 | 0.16 | 0.79 | 0.45 | 1.26 | 1.29 | 0.92 | 0.85 | 1.02 | 2.14 |
| **8** | 8 | cities | 1.55 | 1.03 | 0.94 | 2.79 | 0.34 | 1.96 | 0.96 | 2.89 | 2.80 | 2.32 | 1.86 | 2.54 | 4.75 |
| **8** | 8 | country | 1.46 | 0.97 | 0.88 | 2.65 | 0.32 | 1.87 | 0.90 | 2.73 | 2.64 | 2.21 | 1.75 | 2.42 | 4.48 |
| **8** | 8 | suburbs | 1.50 | 1.00 | 0.91 | 2.70 | 0.33 | 1.90 | 0.93 | 2.79 | 2.71 | 2.24 | 1.80 | 2.46 | 4.60 |
| **8** | 17 | cities | 0.69 | 0.46 | 0.41 | 1.13 | 0.15 | 0.75 | 0.43 | 1.20 | 1.23 | 0.87 | 0.81 | 0.97 | 2.04 |
| **8** | 17 | country | 0.65 | 0.43 | 0.39 | 1.06 | 0.14 | 0.71 | 0.40 | 1.13 | 1.15 | 0.83 | 0.77 | 0.91 | 1.92 |
| **8** | 17 | suburbs | 0.67 | 0.44 | 0.40 | 1.09 | 0.15 | 0.73 | 0.42 | 1.16 | 1.19 | 0.85 | 0.79 | 0.94 | 1.97 |
| **8** | 18 | cities | 0.70 | 0.46 | 0.42 | 1.14 | 0.15 | 0.76 | 0.43 | 1.21 | 1.24 | 0.89 | 0.82 | 0.98 | 2.06 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **8** | 18 | country | 0.65 | 0.43 | 0.39 | 1.08 | 0.14 | 0.72 | 0.41 | 1.14 | 1.17 | 0.84 | 0.77 | 0.93 | 1.94 |
| **8** | 18 | suburbs | 0.67 | 0.45 | 0.40 | 1.11 | 0.15 | 0.74 | 0.42 | 1.18 | 1.20 | 0.86 | 0.80 | 0.95 | 2.00 |
| **8** | 19 | cities | 1.07 | 0.71 | 0.64 | 1.79 | 0.24 | 1.20 | 0.67 | 1.89 | 1.92 | 1.41 | 1.27 | 1.56 | 3.20 |
| **8** | 19 | country | 1.02 | 0.68 | 0.61 | 1.71 | 0.22 | 1.15 | 0.63 | 1.80 | 1.82 | 1.35 | 1.21 | 1.49 | 3.04 |
| **8** | 19 | suburbs | 1.05 | 0.69 | 0.63 | 1.75 | 0.23 | 1.17 | 0.65 | 1.84 | 1.87 | 1.37 | 1.24 | 1.52 | 3.12 |
| **8** | 20 | cities | 2.17 | 1.44 | 1.31 | 3.85 | 0.47 | 2.67 | 1.34 | 3.99 | 3.92 | 3.15 | 2.60 | 3.46 | 6.61 |
| **8** | 20 | country | 2.04 | 1.35 | 1.23 | 3.66 | 0.44 | 2.56 | 1.26 | 3.78 | 3.69 | 3.02 | 2.45 | 3.31 | 6.24 |
| **8** | 20 | suburbs | 2.10 | 1.39 | 1.26 | 3.72 | 0.46 | 2.59 | 1.30 | 3.86 | 3.78 | 3.05 | 2.51 | 3.35 | 6.39 |
| **9** | 5 | cities | 0.35 | 0.35 | 0.37 | 0.71 | 0.17 | 0.54 | 0.42 | 1.10 | 1.05 | 0.58 | 0.67 | 0.59 | 1.22 |
| **9** | 5 | country | 0.32 | 0.32 | 0.34 | 0.65 | 0.15 | 0.49 | 0.38 | 1.00 | 0.96 | 0.53 | 0.61 | 0.54 | 1.11 |
| **9** | 5 | suburbs | 0.34 | 0.33 | 0.36 | 0.68 | 0.16 | 0.51 | 0.40 | 1.04 | 1.00 | 0.55 | 0.64 | 0.56 | 1.16 |
| **9** | 6 | cities | 0.36 | 0.35 | 0.38 | 0.73 | 0.17 | 0.55 | 0.43 | 1.12 | 1.07 | 0.59 | 0.68 | 0.60 | 1.24 |
| **9** | 6 | country | 0.33 | 0.32 | 0.35 | 0.66 | 0.15 | 0.50 | 0.39 | 1.02 | 0.98 | 0.54 | 0.62 | 0.55 | 1.14 |
| **9** | 6 | suburbs | 0.34 | 0.34 | 0.36 | 0.69 | 0.16 | 0.52 | 0.41 | 1.06 | 1.02 | 0.56 | 0.65 | 0.58 | 1.18 |
| **9** | 7 | cities | 0.47 | 0.46 | 0.50 | 0.95 | 0.22 | 0.71 | 0.56 | 1.46 | 1.40 | 0.77 | 0.89 | 0.79 | 1.63 |
| **9** | 7 | country | 0.43 | 0.43 | 0.46 | 0.87 | 0.20 | 0.65 | 0.51 | 1.34 | 1.29 | 0.71 | 0.82 | 0.72 | 1.49 |
| **9** | 7 | suburbs | 0.45 | 0.44 | 0.48 | 0.91 | 0.21 | 0.68 | 0.54 | 1.40 | 1.34 | 0.73 | 0.85 | 0.75 | 1.55 |
| **9** | 8 | cities | 0.88 | 0.87 | 0.93 | 1.79 | 0.41 | 1.37 | 1.04 | 2.73 | 2.62 | 1.46 | 1.67 | 1.50 | 3.05 |
| **9** | 8 | country | 0.80 | 0.79 | 0.85 | 1.64 | 0.38 | 1.26 | 0.95 | 2.50 | 2.39 | 1.35 | 1.53 | 1.38 | 2.79 |
| **9** | 8 | suburbs | 0.84 | 0.82 | 0.89 | 1.71 | 0.39 | 1.31 | 0.99 | 2.60 | 2.49 | 1.40 | 1.59 | 1.43 | 2.90 |
| **9** | 17 | cities | 0.44 | 0.44 | 0.47 | 0.89 | 0.21 | 0.67 | 0.53 | 1.38 | 1.32 | 0.72 | 0.84 | 0.74 | 1.53 |
| **9** | 17 | country | 0.41 | 0.40 | 0.43 | 0.82 | 0.19 | 0.62 | 0.49 | 1.27 | 1.22 | 0.67 | 0.77 | 0.68 | 1.41 |
| **9** | 17 | suburbs | 0.42 | 0.42 | 0.45 | 0.85 | 0.20 | 0.64 | 0.50 | 1.32 | 1.26 | 0.69 | 0.80 | 0.71 | 1.46 |
| **9** | 18 | cities | 0.45 | 0.44 | 0.47 | 0.90 | 0.21 | 0.67 | 0.53 | 1.39 | 1.33 | 0.73 | 0.85 | 0.75 | 1.54 |
| **9** | 18 | country | 0.41 | 0.41 | 0.44 | 0.83 | 0.19 | 0.62 | 0.49 | 1.28 | 1.22 | 0.67 | 0.78 | 0.69 | 1.42 |
| **9** | 18 | suburbs | 0.43 | 0.42 | 0.45 | 0.86 | 0.20 | 0.64 | 0.51 | 1.33 | 1.27 | 0.70 | 0.81 | 0.71 | 1.48 |
| **9** | 19 | cities | 0.68 | 0.67 | 0.72 | 1.37 | 0.32 | 1.03 | 0.81 | 2.12 | 2.03 | 1.12 | 1.29 | 1.14 | 2.35 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **9** | 19 | country | 0.64 | 0.62 | 0.67 | 1.28 | 0.30 | 0.97 | 0.75 | 1.97 | 1.89 | 1.04 | 1.20 | 1.07 | 2.19 |
| **9** | 19 | suburbs | 0.66 | 0.65 | 0.69 | 1.32 | 0.31 | 1.00 | 0.78 | 2.04 | 1.95 | 1.07 | 1.24 | 1.10 | 2.26 |
| **9** | 20 | cities | 1.35 | 1.33 | 1.43 | 2.73 | 0.63 | 2.07 | 1.60 | 4.19 | 4.01 | 2.23 | 2.56 | 2.28 | 4.67 |
| **9** | 20 | country | 1.24 | 1.22 | 1.31 | 2.52 | 0.58 | 1.91 | 1.47 | 3.85 | 3.68 | 2.05 | 2.35 | 2.10 | 4.29 |
| **9** | 20 | suburbs | 1.29 | 1.27 | 1.37 | 2.62 | 0.61 | 1.99 | 1.54 | 4.02 | 3.85 | 2.14 | 2.45 | 2.19 | 4.48 |
| **10** | 5 | cities | 0.63 | 0.73 | 0.38 | 1.29 | 0.13 | 1.97 | 0.38 | 1.41 | 1.16 | 1.10 | 0.76 | 1.28 | 2.58 |
| **10** | 5 | country | 0.59 | 0.68 | 0.36 | 1.24 | 0.13 | 2.01 | 0.36 | 1.33 | 1.10 | 1.08 | 0.72 | 1.26 | 2.46 |
| **10** | 5 | suburbs | 0.61 | 0.70 | 0.37 | 1.25 | 0.13 | 1.98 | 0.37 | 1.36 | 1.12 | 1.09 | 0.74 | 1.26 | 2.51 |
| **10** | 6 | cities | 0.64 | 0.74 | 0.39 | 1.32 | 0.14 | 2.03 | 0.39 | 1.44 | 1.19 | 1.13 | 0.78 | 1.31 | 2.64 |
| **10** | 6 | country | 0.61 | 0.70 | 0.37 | 1.27 | 0.13 | 2.07 | 0.37 | 1.36 | 1.12 | 1.11 | 0.74 | 1.29 | 2.52 |
| **10** | 6 | suburbs | 0.62 | 0.72 | 0.38 | 1.28 | 0.13 | 2.04 | 0.38 | 1.39 | 1.15 | 1.11 | 0.75 | 1.29 | 2.56 |
| **10** | 7 | cities | 0.84 | 0.97 | 0.51 | 1.66 | 0.18 | 2.39 | 0.51 | 1.86 | 1.55 | 1.39 | 1.01 | 1.61 | 3.39 |
| **10** | 7 | country | 0.79 | 0.92 | 0.48 | 1.59 | 0.17 | 2.37 | 0.48 | 1.77 | 1.47 | 1.35 | 0.96 | 1.57 | 3.23 |
| **10** | 7 | suburbs | 0.81 | 0.94 | 0.49 | 1.62 | 0.17 | 2.37 | 0.49 | 1.80 | 1.50 | 1.36 | 0.98 | 1.58 | 3.28 |
| **10** | 8 | cities | 1.76 | 2.01 | 1.08 | 4.04 | 0.37 | 8.51 | 1.06 | 3.99 | 3.24 | 3.87 | 2.15 | 4.44 | 7.61 |
| **10** | 8 | country | 1.66 | 1.89 | 1.02 | 3.89 | 0.35 | 8.87 | 0.99 | 3.78 | 3.06 | 3.82 | 2.03 | 4.38 | 7.25 |
| **10** | 8 | suburbs | 1.70 | 1.94 | 1.04 | 3.92 | 0.35 | 8.49 | 1.02 | 3.85 | 3.13 | 3.79 | 2.07 | 4.35 | 7.37 |
| **10** | 17 | cities | 0.78 | 0.90 | 0.47 | 1.53 | 0.17 | 2.19 | 0.47 | 1.72 | 1.44 | 1.28 | 0.94 | 1.49 | 3.14 |
| **10** | 17 | country | 0.74 | 0.86 | 0.45 | 1.48 | 0.16 | 2.16 | 0.45 | 1.65 | 1.37 | 1.24 | 0.90 | 1.44 | 3.01 |
| **10** | 17 | suburbs | 0.76 | 0.87 | 0.46 | 1.50 | 0.16 | 2.17 | 0.46 | 1.68 | 1.40 | 1.25 | 0.91 | 1.46 | 3.06 |
| **10** | 18 | cities | 0.78 | 0.91 | 0.47 | 1.55 | 0.17 | 2.22 | 0.48 | 1.74 | 1.45 | 1.29 | 0.95 | 1.50 | 3.16 |
| **10** | 18 | country | 0.75 | 0.86 | 0.45 | 1.49 | 0.16 | 2.18 | 0.46 | 1.66 | 1.38 | 1.25 | 0.90 | 1.46 | 3.03 |
| **10** | 18 | suburbs | 0.76 | 0.88 | 0.46 | 1.51 | 0.16 | 2.19 | 0.46 | 1.69 | 1.41 | 1.27 | 0.92 | 1.47 | 3.08 |
| **10** | 19 | cities | 1.23 | 1.43 | 0.75 | 2.48 | 0.26 | 3.69 | 0.75 | 2.74 | 2.28 | 2.10 | 1.49 | 2.44 | 5.02 |
| **10** | 19 | country | 1.19 | 1.37 | 0.72 | 2.43 | 0.25 | 3.74 | 0.72 | 2.65 | 2.19 | 2.08 | 1.44 | 2.42 | 4.87 |
| **10** | 19 | suburbs | 1.21 | 1.39 | 0.73 | 2.44 | 0.26 | 3.70 | 0.73 | 2.69 | 2.23 | 2.08 | 1.46 | 2.42 | 4.93 |
| **10** | 20 | cities | 2.33 | 2.69 | 1.42 | 4.83 | 0.49 | 7.66 | 1.42 | 5.21 | 4.31 | 4.19 | 2.83 | 4.86 | 9.63 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | 20 | country | 2.24 | 2.57 | 1.36 | 4.71 | 0.47 | 7.81 | 1.35 | 5.01 | 4.12 | 4.16 | 2.71 | 4.81 | 9.30 |
| **10** | 20 | suburbs | 2.28 | 2.62 | 1.38 | 4.75 | 0.48 | 7.68 | 1.38 | 5.09 | 4.20 | 4.15 | 2.76 | 4.81 | 9.43 |
| **11** | 5 | cities | 0.63 | 1.13 | 0.28 | 0.49 | 0.13 | 0.60 | 0.40 | 0.81 | 1.06 | 0.29 | 0.62 | 0.44 | 2.80 |
| **11** | 5 | country | 0.59 | 1.05 | 0.26 | 0.45 | 0.12 | 0.56 | 0.37 | 0.75 | 0.98 | 0.27 | 0.57 | 0.41 | 2.60 |
| **11** | 5 | suburbs | 0.61 | 1.08 | 0.27 | 0.47 | 0.13 | 0.58 | 0.38 | 0.77 | 1.02 | 0.27 | 0.59 | 0.42 | 2.69 |
| **11** | 6 | cities | 0.65 | 1.15 | 0.29 | 0.50 | 0.14 | 0.61 | 0.40 | 0.82 | 1.08 | 0.29 | 0.63 | 0.45 | 2.86 |
| **11** | 6 | country | 0.60 | 1.07 | 0.27 | 0.46 | 0.13 | 0.57 | 0.37 | 0.76 | 1.00 | 0.27 | 0.58 | 0.42 | 2.65 |
| **11** | 6 | suburbs | 0.62 | 1.10 | 0.27 | 0.48 | 0.13 | 0.59 | 0.39 | 0.79 | 1.04 | 0.28 | 0.60 | 0.43 | 2.74 |
| **11** | 7 | cities | 0.84 | 1.50 | 0.37 | 0.64 | 0.18 | 0.79 | 0.53 | 1.07 | 1.41 | 0.38 | 0.82 | 0.58 | 3.70 |
| **11** | 7 | country | 0.78 | 1.39 | 0.35 | 0.60 | 0.17 | 0.74 | 0.49 | 0.99 | 1.31 | 0.35 | 0.76 | 0.54 | 3.44 |
| **11** | 7 | suburbs | 0.81 | 1.44 | 0.36 | 0.62 | 0.17 | 0.76 | 0.51 | 1.03 | 1.36 | 0.36 | 0.79 | 0.56 | 3.56 |
| **11** | 8 | cities | 1.82 | 3.28 | 0.81 | 1.44 | 0.38 | 1.84 | 1.12 | 2.31 | 3.02 | 0.86 | 1.78 | 1.33 | 8.37 |
| **11** | 8 | country | 1.65 | 2.98 | 0.73 | 1.31 | 0.34 | 1.67 | 1.02 | 2.10 | 2.74 | 0.78 | 1.61 | 1.21 | 7.60 |
| **11** | 8 | suburbs | 1.73 | 3.12 | 0.77 | 1.37 | 0.36 | 1.75 | 1.06 | 2.20 | 2.87 | 0.82 | 1.69 | 1.26 | 7.97 |
| **11** | 17 | cities | 0.76 | 1.35 | 0.34 | 0.58 | 0.16 | 0.72 | 0.48 | 0.97 | 1.28 | 0.34 | 0.74 | 0.53 | 3.34 |
| **11** | 17 | country | 0.72 | 1.27 | 0.32 | 0.55 | 0.15 | 0.67 | 0.45 | 0.91 | 1.20 | 0.32 | 0.70 | 0.49 | 3.14 |
| **11** | 17 | suburbs | 0.74 | 1.31 | 0.33 | 0.56 | 0.16 | 0.69 | 0.46 | 0.94 | 1.24 | 0.33 | 0.72 | 0.51 | 3.23 |
| **11** | 18 | cities | 0.77 | 1.36 | 0.34 | 0.59 | 0.16 | 0.72 | 0.48 | 0.98 | 1.29 | 0.34 | 0.75 | 0.53 | 3.37 |
| **11** | 18 | country | 0.72 | 1.28 | 0.32 | 0.55 | 0.15 | 0.68 | 0.45 | 0.92 | 1.21 | 0.32 | 0.70 | 0.50 | 3.16 |
| **11** | 18 | suburbs | 0.74 | 1.32 | 0.33 | 0.57 | 0.16 | 0.70 | 0.47 | 0.94 | 1.24 | 0.33 | 0.72 | 0.51 | 3.26 |
| **11** | 19 | cities | 1.21 | 2.14 | 0.53 | 0.92 | 0.26 | 1.14 | 0.76 | 1.53 | 2.02 | 0.54 | 1.18 | 0.84 | 5.32 |
| **11** | 19 | country | 1.13 | 2.02 | 0.50 | 0.87 | 0.24 | 1.08 | 0.71 | 1.44 | 1.89 | 0.51 | 1.11 | 0.79 | 5.01 |
| **11** | 19 | suburbs | 1.17 | 2.08 | 0.52 | 0.89 | 0.25 | 1.11 | 0.73 | 1.48 | 1.95 | 0.53 | 1.14 | 0.81 | 5.16 |
| **11** | 20 | cities | 2.45 | 4.37 | 1.08 | 1.90 | 0.51 | 2.38 | 1.52 | 3.11 | 4.08 | 1.12 | 2.39 | 1.73 | 10.96 |
| **11** | 20 | country | 2.26 | 4.04 | 1.00 | 1.76 | 0.47 | 2.21 | 1.40 | 2.87 | 3.76 | 1.04 | 2.20 | 1.60 | 10.15 |
| **11** | 20 | suburbs | 2.34 | 4.19 | 1.04 | 1.82 | 0.49 | 2.28 | 1.45 | 2.97 | 3.90 | 1.08 | 2.28 | 1.66 | 10.52 |
| **12** | 5 | cities | 0.22 | 0.17 | 0.47 | 0.52 | 0.40 | 0.60 | 0.70 | 0.57 | 1.00 | 0.66 | 0.66 | 0.44 | 0.79 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **12** | 5 | country | 0.21 | 0.16 | 0.45 | 0.50 | 0.38 | 0.58 | 0.67 | 0.55 | 0.95 | 0.63 | 0.63 | 0.41 | 0.75 |
| **12** | 5 | suburbs | 0.21 | 0.16 | 0.46 | 0.51 | 0.39 | 0.59 | 0.68 | 0.56 | 0.97 | 0.65 | 0.64 | 0.42 | 0.76 |
| **12** | 6 | cities | 0.22 | 0.17 | 0.48 | 0.53 | 0.41 | 0.61 | 0.72 | 0.58 | 1.01 | 0.68 | 0.67 | 0.44 | 0.80 |
| **12** | 6 | country | 0.21 | 0.16 | 0.46 | 0.51 | 0.39 | 0.59 | 0.68 | 0.56 | 0.96 | 0.64 | 0.64 | 0.42 | 0.76 |
| **12** | 6 | suburbs | 0.22 | 0.17 | 0.47 | 0.52 | 0.40 | 0.60 | 0.70 | 0.57 | 0.98 | 0.66 | 0.65 | 0.43 | 0.78 |
| **12** | 7 | cities | 0.29 | 0.22 | 0.62 | 0.69 | 0.53 | 0.79 | 0.93 | 0.75 | 1.31 | 0.87 | 0.87 | 0.57 | 1.03 |
| **12** | 7 | country | 0.28 | 0.21 | 0.60 | 0.66 | 0.51 | 0.76 | 0.89 | 0.72 | 1.25 | 0.84 | 0.83 | 0.55 | 0.99 |
| **12** | 7 | suburbs | 0.28 | 0.22 | 0.61 | 0.67 | 0.51 | 0.77 | 0.90 | 0.73 | 1.27 | 0.85 | 0.84 | 0.56 | 1.00 |
| **12** | 8 | cities | 0.59 | 0.46 | 1.27 | 1.41 | 1.08 | 1.63 | 1.90 | 1.55 | 2.68 | 1.79 | 1.78 | 1.18 | 2.12 |
| **12** | 8 | country | 0.56 | 0.43 | 1.21 | 1.33 | 1.03 | 1.54 | 1.80 | 1.47 | 2.54 | 1.70 | 1.68 | 1.12 | 2.01 |
| **12** | 8 | suburbs | 0.58 | 0.44 | 1.24 | 1.37 | 1.06 | 1.58 | 1.85 | 1.51 | 2.62 | 1.75 | 1.73 | 1.15 | 2.06 |
| **12** | 17 | cities | 0.28 | 0.22 | 0.60 | 0.67 | 0.51 | 0.77 | 0.90 | 0.73 | 1.27 | 0.85 | 0.84 | 0.56 | 1.00 |
| **12** | 17 | country | 0.27 | 0.21 | 0.58 | 0.64 | 0.49 | 0.74 | 0.87 | 0.71 | 1.22 | 0.82 | 0.81 | 0.54 | 0.97 |
| **12** | 17 | suburbs | 0.28 | 0.21 | 0.59 | 0.65 | 0.50 | 0.75 | 0.88 | 0.72 | 1.24 | 0.83 | 0.82 | 0.54 | 0.98 |
| **12** | 18 | cities | 0.28 | 0.22 | 0.61 | 0.67 | 0.52 | 0.78 | 0.90 | 0.74 | 1.28 | 0.85 | 0.85 | 0.56 | 1.01 |
| **12** | 18 | country | 0.27 | 0.21 | 0.58 | 0.65 | 0.50 | 0.75 | 0.87 | 0.71 | 1.23 | 0.82 | 0.81 | 0.54 | 0.97 |
| **12** | 18 | suburbs | 0.28 | 0.21 | 0.59 | 0.66 | 0.51 | 0.76 | 0.88 | 0.72 | 1.25 | 0.83 | 0.83 | 0.55 | 0.99 |
| **12** | 19 | cities | 0.47 | 0.36 | 1.00 | 1.11 | 0.85 | 1.28 | 1.49 | 1.22 | 2.11 | 1.41 | 1.40 | 0.92 | 1.67 |
| **12** | 19 | country | 0.45 | 0.34 | 0.96 | 1.06 | 0.81 | 1.22 | 1.42 | 1.16 | 2.01 | 1.34 | 1.33 | 0.88 | 1.59 |
| **12** | 19 | suburbs | 0.46 | 0.35 | 0.98 | 1.08 | 0.83 | 1.25 | 1.45 | 1.18 | 2.05 | 1.37 | 1.36 | 0.90 | 1.62 |
| **12** | 20 | cities | 1.09 | 0.84 | 2.34 | 2.58 | 1.99 | 2.98 | 3.48 | 2.84 | 4.92 | 3.28 | 3.26 | 2.16 | 3.88 |
| **12** | 20 | country | 1.00 | 0.76 | 2.14 | 2.36 | 1.81 | 2.72 | 3.18 | 2.59 | 4.50 | 3.00 | 2.98 | 1.98 | 3.55 |
| **12** | 20 | suburbs | 1.04 | 0.80 | 2.23 | 2.46 | 1.89 | 2.84 | 3.31 | 2.70 | 4.69 | 3.13 | 3.10 | 2.06 | 3.70 |
| **13** | 5 | cities | 0.48 | 0.46 | 1.97 | 1.96 | 1.58 | 3.46 | 1.74 | 3.15 | 2.90 | 2.72 | 1.94 | 1.59 | 1.67 |
| **13** | 5 | country | 0.45 | 0.43 | 1.85 | 1.85 | 1.48 | 3.27 | 1.64 | 2.97 | 2.73 | 2.57 | 1.82 | 1.50 | 1.58 |
| **13** | 5 | suburbs | 0.47 | 0.44 | 1.90 | 1.89 | 1.52 | 3.34 | 1.68 | 3.04 | 2.80 | 2.63 | 1.87 | 1.54 | 1.62 |
| **13** | 6 | cities | 0.49 | 0.47 | 2.00 | 2.00 | 1.61 | 3.53 | 1.77 | 3.21 | 2.95 | 2.77 | 1.97 | 1.62 | 1.71 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT**$_{CC}$ | **PBT**$_{OD}$ | **PBT**$_{HT\_CE}$ | **PBT**$_{HT\_nCE}$ | **PBT**$_{PM}$ | **PBT**$_{IR\_hh}$ | **PBT**$_{POF}$ | **PBT**$_{AC}$ | **PBT**$_{ET}$ | **PBT**$_{EuF}$ | **PBT**$_{EuM}$ | **PBT**$_{Ec\_FW}$ | **PBT**$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | 6 | country | 0.46 | 0.44 | 1.89 | 1.88 | 1.51 | 3.33 | 1.67 | 3.02 | 2.78 | 2.62 | 1.86 | 1.53 | 1.61 |
| **13** | 6 | suburbs | 0.47 | 0.45 | 1.93 | 1.93 | 1.55 | 3.41 | 1.71 | 3.10 | 2.85 | 2.68 | 1.91 | 1.57 | 1.65 |
| **13** | 7 | cities | 0.63 | 0.60 | 2.56 | 2.55 | 2.06 | 4.48 | 2.27 | 4.11 | 3.77 | 3.52 | 2.52 | 2.06 | 2.18 |
| **13** | 7 | country | 0.60 | 0.57 | 2.43 | 2.41 | 1.95 | 4.25 | 2.15 | 3.89 | 3.57 | 3.34 | 2.39 | 1.96 | 2.07 |
| **13** | 7 | suburbs | 0.61 | 0.58 | 2.48 | 2.47 | 1.99 | 4.34 | 2.20 | 3.97 | 3.65 | 3.41 | 2.44 | 2.00 | 2.11 |
| **13** | 8 | cities | 1.31 | 1.24 | 5.42 | 5.41 | 4.26 | 9.83 | 4.72 | 8.60 | 7.96 | 7.73 | 5.29 | 4.56 | 4.56 |
| **13** | 8 | country | 1.23 | 1.16 | 5.07 | 5.07 | 3.99 | 9.21 | 4.42 | 8.05 | 7.45 | 7.24 | 4.96 | 4.28 | 4.27 |
| **13** | 8 | suburbs | 1.26 | 1.20 | 5.21 | 5.21 | 4.10 | 9.46 | 4.54 | 8.28 | 7.66 | 7.44 | 5.09 | 4.39 | 4.39 |
| **13** | 17 | cities | 0.58 | 0.55 | 2.37 | 2.36 | 1.90 | 4.16 | 2.10 | 3.80 | 3.49 | 3.26 | 2.34 | 1.91 | 2.02 |
| **13** | 17 | country | 0.56 | 0.53 | 2.27 | 2.26 | 1.82 | 3.98 | 2.01 | 3.64 | 3.34 | 3.12 | 2.23 | 1.83 | 1.93 |
| **13** | 17 | suburbs | 0.57 | 0.54 | 2.31 | 2.30 | 1.85 | 4.05 | 2.05 | 3.70 | 3.40 | 3.18 | 2.28 | 1.86 | 1.97 |
| **13** | 18 | cities | 0.59 | 0.56 | 2.39 | 2.38 | 1.92 | 4.19 | 2.12 | 3.83 | 3.52 | 3.29 | 2.35 | 1.93 | 2.03 |
| **13** | 18 | country | 0.56 | 0.53 | 2.28 | 2.27 | 1.83 | 4.00 | 2.02 | 3.65 | 3.36 | 3.14 | 2.24 | 1.84 | 1.94 |
| **13** | 18 | suburbs | 0.57 | 0.54 | 2.32 | 2.31 | 1.86 | 4.07 | 2.06 | 3.72 | 3.42 | 3.20 | 2.29 | 1.87 | 1.98 |
| **13** | 19 | cities | 0.94 | 0.89 | 3.82 | 3.81 | 3.06 | 6.75 | 3.38 | 6.12 | 5.63 | 5.31 | 3.76 | 3.11 | 3.25 |
| **13** | 19 | country | 0.89 | 0.85 | 3.65 | 3.64 | 2.92 | 6.46 | 3.22 | 5.85 | 5.38 | 5.08 | 3.59 | 2.98 | 3.10 |
| **13** | 19 | suburbs | 0.91 | 0.87 | 3.72 | 3.70 | 2.97 | 6.58 | 3.28 | 5.95 | 5.48 | 5.17 | 3.66 | 3.03 | 3.16 |
| **13** | 20 | cities | 1.96 | 1.86 | 8.09 | 8.08 | 6.39 | 14.59 | 7.08 | 12.88 | 11.90 | 11.48 | 7.92 | 6.77 | 6.83 |
| **13** | 20 | country | 1.81 | 1.72 | 7.46 | 7.45 | 5.89 | 13.47 | 6.52 | 11.86 | 10.96 | 10.60 | 7.30 | 6.25 | 6.29 |
| **13** | 20 | suburbs | 1.87 | 1.78 | 7.72 | 7.71 | 6.10 | 13.94 | 6.75 | 12.28 | 11.35 | 10.96 | 7.56 | 6.46 | 6.52 |
| **14** | 5 | cities | 0.49 | 0.30 | 1.39 | 1.71 | 0.92 | 0.58 | 1.41 | 2.14 | 2.38 | 2.81 | 1.59 | 1.19 | 1.35 |
| **14** | 5 | country | 0.46 | 0.28 | 1.31 | 1.61 | 0.86 | 0.55 | 1.33 | 2.01 | 2.24 | 2.64 | 1.50 | 1.12 | 1.27 |
| **14** | 5 | suburbs | 0.47 | 0.29 | 1.34 | 1.65 | 0.88 | 0.56 | 1.36 | 2.06 | 2.29 | 2.71 | 1.53 | 1.15 | 1.30 |
| **14** | 6 | cities | 0.50 | 0.30 | 1.42 | 1.74 | 0.94 | 0.59 | 1.44 | 2.18 | 2.42 | 2.86 | 1.62 | 1.21 | 1.37 |
| **14** | 6 | country | 0.47 | 0.28 | 1.33 | 1.64 | 0.88 | 0.56 | 1.35 | 2.05 | 2.28 | 2.69 | 1.52 | 1.14 | 1.29 |
| **14** | 6 | suburbs | 0.48 | 0.29 | 1.37 | 1.68 | 0.90 | 0.57 | 1.39 | 2.10 | 2.34 | 2.76 | 1.56 | 1.17 | 1.32 |
| **14** | 7 | cities | 0.62 | 0.38 | 1.78 | 2.19 | 1.18 | 0.74 | 1.81 | 2.75 | 3.05 | 3.60 | 2.04 | 1.51 | 1.73 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **14** | 7 | country | 0.59 | 0.36 | 1.69 | 2.07 | 1.11 | 0.70 | 1.72 | 2.60 | 2.88 | 3.41 | 1.93 | 1.43 | 1.63 |
| **14** | 7 | suburbs | 0.60 | 0.37 | 1.72 | 2.12 | 1.14 | 0.72 | 1.75 | 2.66 | 2.95 | 3.48 | 1.97 | 1.46 | 1.67 |
| **14** | 8 | cities | 1.36 | 0.83 | 3.92 | 4.81 | 2.56 | 1.72 | 3.94 | 5.99 | 6.67 | 7.96 | 4.45 | 3.48 | 3.81 |
| **14** | 8 | country | 1.27 | 0.78 | 3.67 | 4.51 | 2.40 | 1.61 | 3.70 | 5.62 | 6.25 | 7.46 | 4.18 | 3.25 | 3.57 |
| **14** | 8 | suburbs | 1.31 | 0.80 | 3.77 | 4.63 | 2.46 | 1.65 | 3.80 | 5.77 | 6.42 | 7.66 | 4.29 | 3.33 | 3.66 |
| **14** | 17 | cities | 0.56 | 0.34 | 1.60 | 1.97 | 1.06 | 0.67 | 1.63 | 2.47 | 2.74 | 3.24 | 1.83 | 1.36 | 1.55 |
| **14** | 17 | country | 0.54 | 0.33 | 1.55 | 1.90 | 1.02 | 0.64 | 1.57 | 2.38 | 2.64 | 3.12 | 1.77 | 1.32 | 1.50 |
| **14** | 17 | suburbs | 0.55 | 0.34 | 1.57 | 1.92 | 1.04 | 0.65 | 1.59 | 2.41 | 2.68 | 3.16 | 1.79 | 1.33 | 1.52 |
| **14** | 18 | cities | 0.56 | 0.34 | 1.61 | 1.98 | 1.06 | 0.67 | 1.64 | 2.48 | 2.75 | 3.25 | 1.84 | 1.37 | 1.56 |
| **14** | 18 | country | 0.54 | 0.33 | 1.55 | 1.90 | 1.02 | 0.65 | 1.58 | 2.39 | 2.65 | 3.13 | 1.77 | 1.32 | 1.50 |
| **14** | 18 | suburbs | 0.55 | 0.34 | 1.57 | 1.93 | 1.04 | 0.65 | 1.60 | 2.43 | 2.69 | 3.18 | 1.80 | 1.34 | 1.52 |
| **14** | 19 | cities | 0.93 | 0.57 | 2.66 | 3.26 | 1.75 | 1.12 | 2.70 | 4.09 | 4.54 | 5.37 | 3.04 | 2.28 | 2.58 |
| **14** | 19 | country | 0.89 | 0.54 | 2.54 | 3.11 | 1.67 | 1.07 | 2.57 | 3.90 | 4.33 | 5.13 | 2.90 | 2.18 | 2.46 |
| **14** | 19 | suburbs | 0.90 | 0.55 | 2.59 | 3.18 | 1.70 | 1.09 | 2.63 | 3.98 | 4.42 | 5.23 | 2.95 | 2.22 | 2.51 |
| **14** | 20 | cities | 1.87 | 1.15 | 5.38 | 6.61 | 3.52 | 2.33 | 5.43 | 8.25 | 9.17 | 10.91 | 6.13 | 4.71 | 5.22 |
| **14** | 20 | country | 1.76 | 1.08 | 5.08 | 6.23 | 3.32 | 2.20 | 5.12 | 7.77 | 8.65 | 10.29 | 5.78 | 4.45 | 4.93 |
| **14** | 20 | suburbs | 1.83 | 1.12 | 5.27 | 6.47 | 3.45 | 2.28 | 5.32 | 8.07 | 8.98 | 10.69 | 6.00 | 4.62 | 5.12 |
| **15** | 5 | cities | 0.28 | 0.18 | 0.95 | 0.91 | 0.80 | 0.60 | 0.96 | 1.29 | 1.32 | 1.05 | 0.95 | 0.82 | 0.84 |
| **15** | 5 | country | 0.25 | 0.16 | 0.86 | 0.83 | 0.73 | 0.55 | 0.88 | 1.17 | 1.21 | 0.96 | 0.87 | 0.74 | 0.76 |
| **15** | 5 | suburbs | 0.27 | 0.17 | 0.90 | 0.86 | 0.76 | 0.57 | 0.91 | 1.22 | 1.26 | 1.00 | 0.90 | 0.77 | 0.79 |
| **15** | 6 | cities | 0.28 | 0.18 | 0.96 | 0.92 | 0.81 | 0.61 | 0.98 | 1.31 | 1.35 | 1.07 | 0.97 | 0.83 | 0.85 |
| **15** | 6 | country | 0.26 | 0.16 | 0.88 | 0.84 | 0.74 | 0.55 | 0.89 | 1.19 | 1.23 | 0.97 | 0.88 | 0.76 | 0.78 |
| **15** | 6 | suburbs | 0.27 | 0.17 | 0.91 | 0.88 | 0.77 | 0.58 | 0.93 | 1.24 | 1.28 | 1.01 | 0.92 | 0.79 | 0.81 |
| **15** | 7 | cities | 0.37 | 0.23 | 1.26 | 1.20 | 1.06 | 0.79 | 1.28 | 1.71 | 1.76 | 1.39 | 1.26 | 1.08 | 1.11 |
| **15** | 7 | country | 0.34 | 0.22 | 1.16 | 1.11 | 0.97 | 0.73 | 1.17 | 1.57 | 1.61 | 1.28 | 1.16 | 1.00 | 1.02 |
| **15** | 7 | suburbs | 0.35 | 0.22 | 1.20 | 1.15 | 1.01 | 0.76 | 1.22 | 1.63 | 1.67 | 1.32 | 1.20 | 1.03 | 1.06 |
| **15** | 8 | cities | 0.63 | 0.40 | 2.14 | 2.05 | 1.79 | 1.35 | 2.16 | 2.90 | 2.98 | 2.39 | 2.14 | 1.85 | 1.88 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **15** | 8 | country | 0.59 | 0.37 | 2.01 | 1.93 | 1.68 | 1.27 | 2.02 | 2.71 | 2.80 | 2.25 | 2.00 | 1.74 | 1.76 |
| **15** | 8 | suburbs | 0.61 | 0.38 | 2.06 | 1.98 | 1.73 | 1.30 | 2.08 | 2.79 | 2.88 | 2.31 | 2.06 | 1.79 | 1.81 |
| **15** | 17 | cities | 0.35 | 0.22 | 1.19 | 1.14 | 1.00 | 0.75 | 1.21 | 1.62 | 1.66 | 1.32 | 1.20 | 1.03 | 1.05 |
| **15** | 17 | country | 0.32 | 0.20 | 1.09 | 1.05 | 0.92 | 0.69 | 1.11 | 1.48 | 1.53 | 1.21 | 1.10 | 0.94 | 0.96 |
| **15** | 17 | suburbs | 0.33 | 0.21 | 1.13 | 1.09 | 0.95 | 0.72 | 1.15 | 1.54 | 1.58 | 1.25 | 1.14 | 0.98 | 1.00 |
| **15** | 18 | cities | 0.35 | 0.22 | 1.20 | 1.15 | 1.01 | 0.76 | 1.22 | 1.63 | 1.68 | 1.33 | 1.21 | 1.04 | 1.06 |
| **15** | 18 | country | 0.33 | 0.21 | 1.10 | 1.06 | 0.93 | 0.70 | 1.12 | 1.50 | 1.54 | 1.22 | 1.11 | 0.95 | 0.97 |
| **15** | 18 | suburbs | 0.34 | 0.21 | 1.14 | 1.10 | 0.96 | 0.72 | 1.16 | 1.55 | 1.60 | 1.27 | 1.15 | 0.99 | 1.01 |
| **15** | 19 | cities | 0.54 | 0.34 | 1.83 | 1.75 | 1.54 | 1.15 | 1.85 | 2.48 | 2.55 | 2.02 | 1.83 | 1.57 | 1.61 |
| **15** | 19 | country | 0.50 | 0.32 | 1.70 | 1.63 | 1.42 | 1.07 | 1.72 | 2.30 | 2.37 | 1.89 | 1.70 | 1.47 | 1.50 |
| **15** | 19 | suburbs | 0.52 | 0.33 | 1.75 | 1.68 | 1.47 | 1.11 | 1.78 | 2.38 | 2.45 | 1.94 | 1.76 | 1.51 | 1.55 |
| **15** | 20 | cities | 1.06 | 0.67 | 3.59 | 3.45 | 3.01 | 2.27 | 3.63 | 4.86 | 5.01 | 4.02 | 3.59 | 3.12 | 3.16 |
| **15** | 20 | country | 0.99 | 0.62 | 3.40 | 3.27 | 2.80 | 2.16 | 3.39 | 4.56 | 4.73 | 3.92 | 3.37 | 3.00 | 2.96 |
| **15** | 20 | suburbs | 1.02 | 0.64 | 3.48 | 3.35 | 2.90 | 2.21 | 3.49 | 4.69 | 4.85 | 3.95 | 3.47 | 3.04 | 3.05 |
| **16** | 5 | cities | 0.37 | 0.38 | 0.97 | 0.92 | 1.15 | 1.44 | 1.20 | 1.35 | 1.62 | 1.10 | 1.04 | 0.55 | 1.24 |
| **16** | 5 | country | 0.32 | 0.33 | 0.85 | 0.81 | 1.01 | 1.25 | 1.04 | 1.17 | 1.41 | 0.95 | 0.91 | 0.48 | 1.08 |
| **16** | 5 | suburbs | 0.34 | 0.35 | 0.90 | 0.86 | 1.07 | 1.33 | 1.11 | 1.25 | 1.50 | 1.01 | 0.96 | 0.51 | 1.15 |
| **16** | 6 | cities | 0.38 | 0.39 | 1.00 | 0.95 | 1.18 | 1.48 | 1.23 | 1.38 | 1.67 | 1.13 | 1.07 | 0.57 | 1.28 |
| **16** | 6 | country | 0.33 | 0.34 | 0.87 | 0.83 | 1.03 | 1.29 | 1.07 | 1.21 | 1.45 | 0.98 | 0.93 | 0.49 | 1.11 |
| **16** | 6 | suburbs | 0.35 | 0.36 | 0.92 | 0.88 | 1.10 | 1.37 | 1.14 | 1.28 | 1.54 | 1.04 | 0.99 | 0.52 | 1.18 |
| **16** | 7 | cities | 0.48 | 0.50 | 1.26 | 1.20 | 1.50 | 1.86 | 1.55 | 1.75 | 2.11 | 1.42 | 1.35 | 0.71 | 1.61 |
| **16** | 7 | country | 0.42 | 0.43 | 1.10 | 1.04 | 1.31 | 1.63 | 1.35 | 1.52 | 1.84 | 1.24 | 1.18 | 0.62 | 1.41 |
| **16** | 7 | suburbs | 0.45 | 0.46 | 1.17 | 1.11 | 1.39 | 1.73 | 1.44 | 1.62 | 1.95 | 1.32 | 1.25 | 0.66 | 1.50 |
| **16** | 8 | cities | 1.08 | 1.08 | 3.00 | 2.87 | 3.38 | 4.48 | 3.55 | 4.18 | 4.99 | 3.51 | 3.20 | 1.80 | 3.64 |
| **16** | 8 | country | 0.94 | 0.95 | 2.52 | 2.41 | 2.91 | 3.76 | 3.05 | 3.51 | 4.21 | 2.90 | 2.70 | 1.47 | 3.14 |
| **16** | 8 | suburbs | 1.00 | 1.00 | 2.72 | 2.60 | 3.11 | 4.05 | 3.26 | 3.79 | 4.53 | 3.15 | 2.90 | 1.60 | 3.35 |
| **16** | 17 | cities | 0.45 | 0.47 | 1.18 | 1.13 | 1.41 | 1.75 | 1.46 | 1.64 | 1.98 | 1.33 | 1.27 | 0.67 | 1.52 |

## STONE WOOL

| Country | **Arc** | **GL** | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16** | 17 | country | 0.40 | 0.41 | 1.04 | 0.99 | 1.24 | 1.55 | 1.29 | 1.45 | 1.75 | 1.18 | 1.12 | 0.59 | 1.34 |
| **16** | 17 | suburbs | 0.42 | 0.44 | 1.10 | 1.05 | 1.31 | 1.63 | 1.36 | 1.53 | 1.84 | 1.24 | 1.18 | 0.63 | 1.41 |
| **16** | 18 | cities | 0.46 | 0.47 | 1.20 | 1.14 | 1.43 | 1.78 | 1.48 | 1.66 | 2.01 | 1.35 | 1.29 | 0.68 | 1.54 |
| **16** | 18 | country | 0.41 | 0.42 | 1.06 | 1.01 | 1.26 | 1.57 | 1.31 | 1.47 | 1.77 | 1.19 | 1.14 | 0.60 | 1.36 |
| **16** | 18 | suburbs | 0.43 | 0.44 | 1.12 | 1.07 | 1.33 | 1.66 | 1.38 | 1.55 | 1.87 | 1.26 | 1.20 | 0.64 | 1.43 |
| **16** | 19 | cities | 0.75 | 0.77 | 1.97 | 1.88 | 2.32 | 2.92 | 2.42 | 2.74 | 3.29 | 2.24 | 2.11 | 1.13 | 2.50 |
| **16** | 19 | country | 0.67 | 0.69 | 1.74 | 1.66 | 2.07 | 2.59 | 2.15 | 2.42 | 2.92 | 1.97 | 1.87 | 0.99 | 2.23 |
| **16** | 19 | suburbs | 0.70 | 0.72 | 1.84 | 1.75 | 2.17 | 2.72 | 2.26 | 2.55 | 3.07 | 2.08 | 1.97 | 1.05 | 2.34 |
| **16** | 20 | cities | 1.73 | 1.74 | 4.74 | 4.54 | 5.40 | 7.06 | 5.66 | 6.60 | 7.89 | 5.50 | 5.06 | 2.81 | 5.81 |
| **16** | 20 | country | 1.50 | 1.52 | 4.04 | 3.86 | 4.68 | 6.01 | 4.88 | 5.62 | 6.74 | 4.64 | 4.32 | 2.35 | 5.04 |
| **16** | 20 | suburbs | 1.60 | 1.61 | 4.33 | 4.14 | 4.97 | 6.44 | 5.20 | 6.02 | 7.21 | 4.99 | 4.62 | 2.54 | 5.36 |
| **17** | 5 | cities | 0.63 | 0.65 | 1.42 | 1.41 | 1.20 | 1.17 | 1.78 | 1.71 | 2.34 | 1.19 | 1.48 | 1.25 | 2.49 |
| **17** | 5 | country | 0.58 | 0.60 | 1.32 | 1.31 | 1.11 | 1.08 | 1.66 | 1.58 | 2.18 | 1.10 | 1.37 | 1.16 | 2.31 |
| **17** | 5 | suburbs | 0.60 | 0.62 | 1.36 | 1.36 | 1.15 | 1.12 | 1.71 | 1.64 | 2.25 | 1.14 | 1.42 | 1.20 | 2.39 |
| **17** | 6 | cities | 0.64 | 0.66 | 1.45 | 1.44 | 1.23 | 1.19 | 1.82 | 1.74 | 2.39 | 1.21 | 1.51 | 1.27 | 2.54 |
| **17** | 6 | country | 0.60 | 0.61 | 1.34 | 1.34 | 1.14 | 1.11 | 1.69 | 1.62 | 2.22 | 1.13 | 1.40 | 1.18 | 2.36 |
| **17** | 6 | suburbs | 0.62 | 0.63 | 1.39 | 1.39 | 1.18 | 1.14 | 1.75 | 1.67 | 2.30 | 1.17 | 1.45 | 1.22 | 2.44 |
| **17** | 7 | cities | 0.83 | 0.85 | 1.86 | 1.86 | 1.58 | 1.53 | 2.35 | 2.25 | 3.09 | 1.56 | 1.95 | 1.64 | 3.28 |
| **17** | 7 | country | 0.77 | 0.79 | 1.74 | 1.74 | 1.48 | 1.43 | 2.19 | 2.10 | 2.88 | 1.46 | 1.82 | 1.53 | 3.06 |
| **17** | 7 | suburbs | 0.80 | 0.82 | 1.79 | 1.79 | 1.52 | 1.47 | 2.26 | 2.16 | 2.97 | 1.50 | 1.87 | 1.58 | 3.15 |
| **17** | 8 | cities | 1.64 | 1.68 | 3.72 | 3.74 | 3.12 | 3.18 | 4.64 | 4.45 | 6.11 | 3.18 | 3.86 | 3.34 | 6.52 |
| **17** | 8 | country | 1.53 | 1.57 | 3.47 | 3.48 | 2.92 | 2.96 | 4.33 | 4.16 | 5.71 | 2.96 | 3.60 | 3.11 | 6.08 |
| **17** | 8 | suburbs | 1.58 | 1.62 | 3.59 | 3.60 | 3.01 | 3.07 | 4.47 | 4.29 | 5.89 | 3.06 | 3.72 | 3.22 | 6.28 |
| **17** | 17 | cities | 0.76 | 0.78 | 1.71 | 1.71 | 1.45 | 1.40 | 2.15 | 2.06 | 2.83 | 1.43 | 1.78 | 1.50 | 3.00 |
| **17** | 17 | country | 0.72 | 0.73 | 1.61 | 1.61 | 1.36 | 1.32 | 2.03 | 1.94 | 2.66 | 1.35 | 1.68 | 1.42 | 2.83 |
| **17** | 17 | suburbs | 0.74 | 0.75 | 1.65 | 1.65 | 1.40 | 1.36 | 2.08 | 1.99 | 2.74 | 1.38 | 1.72 | 1.45 | 2.90 |
| **17** | 18 | cities | 0.77 | 0.79 | 1.72 | 1.72 | 1.46 | 1.42 | 2.18 | 2.08 | 2.86 | 1.44 | 1.80 | 1.52 | 3.03 |

## STONE WOOL

| Country | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17** | 18 | country | 0.72 | 0.74 | 1.62 | 1.62 | 1.37 | 1.33 | 2.04 | 1.95 | 2.68 | 1.36 | 1.69 | 1.43 | 2.85 |
| **17** | 18 | suburbs | 0.74 | 0.76 | 1.67 | 1.66 | 1.41 | 1.37 | 2.10 | 2.01 | 2.76 | 1.40 | 1.74 | 1.47 | 2.93 |
| **17** | 19 | cities | 1.19 | 1.22 | 2.67 | 2.66 | 2.26 | 2.20 | 3.36 | 3.21 | 4.41 | 2.24 | 2.78 | 2.35 | 4.68 |
| **17** | 19 | country | 1.13 | 1.16 | 2.54 | 2.54 | 2.15 | 2.11 | 3.20 | 3.06 | 4.21 | 2.14 | 2.65 | 2.25 | 4.47 |
| **17** | 19 | suburbs | 1.15 | 1.18 | 2.60 | 2.60 | 2.20 | 2.15 | 3.27 | 3.13 | 4.30 | 2.18 | 2.71 | 2.30 | 4.56 |
| **17** | 20 | cities | 2.32 | 2.38 | 5.24 | 5.25 | 4.42 | 4.41 | 6.57 | 6.29 | 8.64 | 4.44 | 5.45 | 4.67 | 9.19 |
| **17** | 20 | country | 2.16 | 2.22 | 4.89 | 4.89 | 4.12 | 4.11 | 6.12 | 5.86 | 8.05 | 4.14 | 5.08 | 4.35 | 8.57 |
| **17** | 20 | suburbs | 2.24 | 2.30 | 5.07 | 5.08 | 4.27 | 4.27 | 6.35 | 6.08 | 8.35 | 4.30 | 5.27 | 4.52 | 8.89 |
| **18** | 5 | cities | 0.41 | 0.32 | 0.72 | 0.85 | 0.46 | 0.91 | 0.91 | 1.33 | 1.27 | 0.65 | 1.00 | 0.69 | 1.23 |
| **18** | 5 | country | 0.38 | 0.29 | 0.67 | 0.79 | 0.43 | 0.85 | 0.84 | 1.23 | 1.17 | 0.61 | 0.92 | 0.64 | 1.14 |
| **18** | 5 | suburbs | 0.39 | 0.30 | 0.69 | 0.81 | 0.44 | 0.87 | 0.87 | 1.27 | 1.21 | 0.63 | 0.96 | 0.66 | 1.18 |
| **18** | 6 | cities | 0.41 | 0.32 | 0.73 | 0.87 | 0.47 | 0.93 | 0.93 | 1.36 | 1.29 | 0.67 | 1.02 | 0.70 | 1.26 |
| **18** | 6 | country | 0.38 | 0.30 | 0.68 | 0.81 | 0.43 | 0.86 | 0.85 | 1.25 | 1.19 | 0.62 | 0.94 | 0.65 | 1.16 |
| **18** | 6 | suburbs | 0.40 | 0.31 | 0.70 | 0.83 | 0.45 | 0.89 | 0.88 | 1.30 | 1.23 | 0.64 | 0.97 | 0.67 | 1.20 |
| **18** | 7 | cities | 0.54 | 0.42 | 0.95 | 1.12 | 0.62 | 1.20 | 1.21 | 1.77 | 1.67 | 0.86 | 1.33 | 0.90 | 1.63 |
| **18** | 7 | country | 0.50 | 0.39 | 0.88 | 1.04 | 0.57 | 1.12 | 1.12 | 1.64 | 1.55 | 0.80 | 1.23 | 0.84 | 1.52 |
| **18** | 7 | suburbs | 0.52 | 0.40 | 0.91 | 1.07 | 0.59 | 1.15 | 1.16 | 1.69 | 1.60 | 0.82 | 1.27 | 0.86 | 1.57 |
| **18** | 8 | cities | 1.00 | 0.77 | 1.80 | 2.19 | 1.12 | 2.33 | 2.21 | 3.30 | 3.19 | 1.75 | 2.47 | 1.81 | 3.07 |
| **18** | 8 | country | 0.94 | 0.72 | 1.72 | 2.11 | 1.05 | 2.24 | 2.08 | 3.12 | 3.05 | 1.72 | 2.34 | 1.77 | 2.92 |
| **18** | 8 | suburbs | 0.96 | 0.74 | 1.75 | 2.14 | 1.08 | 2.27 | 2.13 | 3.19 | 3.11 | 1.73 | 2.39 | 1.79 | 2.98 |
| **18** | 17 | cities | 0.51 | 0.40 | 0.90 | 1.06 | 0.58 | 1.14 | 1.15 | 1.67 | 1.58 | 0.81 | 1.26 | 0.85 | 1.55 |
| **18** | 17 | country | 0.48 | 0.37 | 0.84 | 0.99 | 0.54 | 1.06 | 1.07 | 1.56 | 1.48 | 0.76 | 1.17 | 0.80 | 1.44 |
| **18** | 17 | suburbs | 0.49 | 0.38 | 0.87 | 1.02 | 0.56 | 1.09 | 1.10 | 1.61 | 1.52 | 0.78 | 1.21 | 0.82 | 1.49 |
| **18** | 18 | cities | 0.52 | 0.40 | 0.91 | 1.07 | 0.59 | 1.14 | 1.15 | 1.68 | 1.59 | 0.82 | 1.26 | 0.86 | 1.56 |
| **18** | 18 | country | 0.48 | 0.37 | 0.85 | 1.00 | 0.55 | 1.07 | 1.07 | 1.57 | 1.49 | 0.77 | 1.18 | 0.81 | 1.45 |
| **18** | 18 | suburbs | 0.50 | 0.39 | 0.87 | 1.03 | 0.56 | 1.10 | 1.11 | 1.62 | 1.53 | 0.79 | 1.21 | 0.83 | 1.50 |
| **18** | 19 | cities | 0.80 | 0.62 | 1.42 | 1.68 | 0.91 | 1.80 | 1.79 | 2.62 | 2.49 | 1.29 | 1.97 | 1.36 | 2.43 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT**$_{CC}$ | **PBT**$_{OD}$ | **PBT**$_{HT\_CE}$ | **PBT**$_{HT\_nCE}$ | **PBT**$_{PM}$ | **PBT**$_{IR\_hh}$ | **PBT**$_{POF}$ | **PBT**$_{AC}$ | **PBT**$_{ET}$ | **PBT**$_{EuF}$ | **PBT**$_{EuM}$ | **PBT**$_{Ec\_FW}$ | **PBT**$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **18** | 19 | country | 0.75 | 0.58 | 1.33 | 1.59 | 0.85 | 1.70 | 1.67 | 2.46 | 2.35 | 1.24 | 1.85 | 1.29 | 2.28 |
| **18** | 19 | suburbs | 0.77 | 0.60 | 1.37 | 1.63 | 0.88 | 1.74 | 1.72 | 2.53 | 2.42 | 1.26 | 1.90 | 1.32 | 2.35 |
| **18** | 20 | cities | 1.58 | 1.22 | 2.82 | 3.39 | 1.78 | 3.62 | 3.50 | 5.19 | 4.99 | 2.67 | 3.90 | 2.78 | 4.83 |
| **18** | 20 | country | 1.47 | 1.13 | 2.67 | 3.25 | 1.65 | 3.46 | 3.26 | 4.87 | 4.74 | 2.62 | 3.66 | 2.71 | 4.55 |
| **18** | 20 | suburbs | 1.51 | 1.17 | 2.73 | 3.31 | 1.70 | 3.53 | 3.35 | 5.00 | 4.84 | 2.64 | 3.75 | 2.74 | 4.66 |
| **19** | 5 | cities | 0.35 | 0.26 | 0.33 | 0.62 | 0.15 | 0.63 | 0.38 | 0.88 | 0.79 | 0.49 | 0.58 | 0.38 | 0.98 |
| **19** | 5 | country | 0.33 | 0.25 | 0.31 | 0.57 | 0.14 | 0.58 | 0.35 | 0.82 | 0.73 | 0.45 | 0.53 | 0.35 | 0.91 |
| **19** | 5 | suburbs | 0.34 | 0.25 | 0.32 | 0.59 | 0.14 | 0.61 | 0.37 | 0.85 | 0.76 | 0.47 | 0.55 | 0.37 | 0.95 |
| **19** | 6 | cities | 0.36 | 0.27 | 0.34 | 0.63 | 0.15 | 0.64 | 0.39 | 0.90 | 0.81 | 0.50 | 0.59 | 0.39 | 1.00 |
| **19** | 6 | country | 0.33 | 0.25 | 0.31 | 0.58 | 0.14 | 0.59 | 0.36 | 0.83 | 0.75 | 0.46 | 0.54 | 0.36 | 0.93 |
| **19** | 6 | suburbs | 0.34 | 0.26 | 0.32 | 0.60 | 0.15 | 0.62 | 0.37 | 0.86 | 0.78 | 0.48 | 0.56 | 0.37 | 0.96 |
| **19** | 7 | cities | 0.48 | 0.36 | 0.45 | 0.84 | 0.20 | 0.86 | 0.52 | 1.20 | 1.08 | 0.67 | 0.79 | 0.52 | 1.34 |
| **19** | 7 | country | 0.45 | 0.34 | 0.42 | 0.78 | 0.19 | 0.80 | 0.48 | 1.12 | 1.00 | 0.62 | 0.73 | 0.48 | 1.24 |
| **19** | 7 | suburbs | 0.46 | 0.35 | 0.43 | 0.81 | 0.20 | 0.83 | 0.50 | 1.16 | 1.04 | 0.64 | 0.76 | 0.50 | 1.29 |
| **19** | 8 | cities | 0.89 | 0.67 | 0.84 | 1.57 | 0.37 | 1.61 | 0.96 | 2.24 | 2.01 | 1.26 | 1.46 | 0.99 | 2.50 |
| **19** | 8 | country | 0.83 | 0.62 | 0.78 | 1.46 | 0.35 | 1.49 | 0.90 | 2.08 | 1.87 | 1.17 | 1.36 | 0.91 | 2.32 |
| **19** | 8 | suburbs | 0.86 | 0.64 | 0.81 | 1.51 | 0.36 | 1.55 | 0.93 | 2.15 | 1.94 | 1.21 | 1.41 | 0.95 | 2.41 |
| **19** | 17 | cities | 0.45 | 0.34 | 0.42 | 0.78 | 0.19 | 0.80 | 0.49 | 1.13 | 1.01 | 0.62 | 0.74 | 0.49 | 1.25 |
| **19** | 17 | country | 0.42 | 0.32 | 0.39 | 0.73 | 0.18 | 0.75 | 0.46 | 1.05 | 0.95 | 0.58 | 0.69 | 0.46 | 1.17 |
| **19** | 17 | suburbs | 0.43 | 0.33 | 0.41 | 0.76 | 0.18 | 0.78 | 0.47 | 1.09 | 0.98 | 0.60 | 0.71 | 0.47 | 1.21 |
| **19** | 18 | cities | 0.45 | 0.34 | 0.42 | 0.79 | 0.19 | 0.81 | 0.49 | 1.13 | 1.02 | 0.63 | 0.74 | 0.49 | 1.26 |
| **19** | 18 | country | 0.42 | 0.32 | 0.40 | 0.74 | 0.18 | 0.76 | 0.46 | 1.06 | 0.95 | 0.59 | 0.69 | 0.46 | 1.18 |
| **19** | 18 | suburbs | 0.44 | 0.33 | 0.41 | 0.76 | 0.18 | 0.78 | 0.47 | 1.10 | 0.98 | 0.61 | 0.72 | 0.48 | 1.22 |
| **19** | 19 | cities | 0.69 | 0.52 | 0.65 | 1.21 | 0.29 | 1.23 | 0.75 | 1.73 | 1.55 | 0.96 | 1.13 | 0.75 | 1.93 |
| **19** | 19 | country | 0.65 | 0.49 | 0.60 | 1.13 | 0.27 | 1.16 | 0.70 | 1.62 | 1.45 | 0.90 | 1.06 | 0.70 | 1.80 |
| **19** | 19 | suburbs | 0.67 | 0.50 | 0.62 | 1.17 | 0.28 | 1.19 | 0.72 | 1.67 | 1.50 | 0.93 | 1.09 | 0.73 | 1.86 |
| **19** | 20 | cities | 1.34 | 1.01 | 1.26 | 2.36 | 0.56 | 2.42 | 1.45 | 3.37 | 3.03 | 1.89 | 2.20 | 1.48 | 3.76 |

## STONE WOOL

| Country | **Arc** | **GL** | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **19** | 20 | country | 1.25 | 0.94 | 1.18 | 2.21 | 0.53 | 2.26 | 1.36 | 3.15 | 2.83 | 1.76 | 2.05 | 1.38 | 3.51 |
| **19** | 20 | suburbs | 1.30 | 0.97 | 1.22 | 2.28 | 0.55 | 2.34 | 1.40 | 3.25 | 2.93 | 1.82 | 2.12 | 1.43 | 3.63 |
| **20** | 5 | cities | 0.29 | 0.40 | 0.26 | 0.37 | 0.14 | 0.51 | 0.37 | 0.56 | 0.78 | 0.25 | 0.47 | 0.36 | 1.31 |
| **20** | 5 | country | 0.27 | 0.38 | 0.24 | 0.34 | 0.13 | 0.48 | 0.35 | 0.53 | 0.72 | 0.23 | 0.44 | 0.33 | 1.22 |
| **20** | 5 | suburbs | 0.27 | 0.39 | 0.25 | 0.35 | 0.14 | 0.49 | 0.36 | 0.54 | 0.74 | 0.24 | 0.45 | 0.34 | 1.26 |
| **20** | 6 | cities | 0.29 | 0.41 | 0.26 | 0.38 | 0.15 | 0.52 | 0.38 | 0.57 | 0.79 | 0.25 | 0.48 | 0.36 | 1.33 |
| **20** | 6 | country | 0.27 | 0.38 | 0.25 | 0.35 | 0.14 | 0.49 | 0.35 | 0.53 | 0.74 | 0.24 | 0.44 | 0.34 | 1.24 |
| **20** | 6 | suburbs | 0.28 | 0.40 | 0.25 | 0.36 | 0.14 | 0.50 | 0.36 | 0.55 | 0.76 | 0.24 | 0.46 | 0.35 | 1.28 |
| **20** | 7 | cities | 0.38 | 0.53 | 0.34 | 0.49 | 0.19 | 0.68 | 0.49 | 0.74 | 1.02 | 0.33 | 0.62 | 0.47 | 1.73 |
| **20** | 7 | country | 0.35 | 0.50 | 0.32 | 0.46 | 0.18 | 0.63 | 0.46 | 0.70 | 0.96 | 0.31 | 0.58 | 0.44 | 1.62 |
| **20** | 7 | suburbs | 0.36 | 0.51 | 0.33 | 0.47 | 0.18 | 0.65 | 0.47 | 0.72 | 0.99 | 0.32 | 0.59 | 0.45 | 1.66 |
| **20** | 8 | cities | 0.75 | 1.07 | 0.69 | 0.98 | 0.38 | 1.38 | 0.97 | 1.48 | 2.04 | 0.67 | 1.24 | 0.95 | 3.47 |
| **20** | 8 | country | 0.70 | 1.00 | 0.64 | 0.91 | 0.35 | 1.28 | 0.91 | 1.39 | 1.91 | 0.62 | 1.15 | 0.89 | 3.23 |
| **20** | 8 | suburbs | 0.72 | 1.03 | 0.66 | 0.94 | 0.36 | 1.32 | 0.94 | 1.43 | 1.97 | 0.64 | 1.19 | 0.91 | 3.33 |
| **20** | 17 | cities | 0.34 | 0.48 | 0.31 | 0.44 | 0.17 | 0.61 | 0.44 | 0.67 | 0.92 | 0.30 | 0.55 | 0.42 | 1.55 |
| **20** | 17 | country | 0.32 | 0.45 | 0.29 | 0.41 | 0.16 | 0.58 | 0.42 | 0.63 | 0.87 | 0.28 | 0.53 | 0.40 | 1.47 |
| **20** | 17 | suburbs | 0.33 | 0.47 | 0.30 | 0.42 | 0.17 | 0.59 | 0.43 | 0.65 | 0.89 | 0.29 | 0.54 | 0.41 | 1.50 |
| **20** | 18 | cities | 0.34 | 0.48 | 0.31 | 0.44 | 0.17 | 0.61 | 0.44 | 0.67 | 0.92 | 0.30 | 0.56 | 0.42 | 1.56 |
| **20** | 18 | country | 0.32 | 0.46 | 0.29 | 0.42 | 0.16 | 0.58 | 0.42 | 0.63 | 0.87 | 0.28 | 0.53 | 0.40 | 1.47 |
| **20** | 18 | suburbs | 0.33 | 0.47 | 0.30 | 0.43 | 0.17 | 0.59 | 0.43 | 0.65 | 0.89 | 0.29 | 0.54 | 0.41 | 1.51 |
| **20** | 19 | cities | 0.54 | 0.76 | 0.49 | 0.70 | 0.27 | 0.97 | 0.70 | 1.06 | 1.46 | 0.47 | 0.88 | 0.67 | 2.47 |
| **20** | 19 | country | 0.51 | 0.73 | 0.47 | 0.66 | 0.26 | 0.92 | 0.66 | 1.01 | 1.39 | 0.45 | 0.84 | 0.64 | 2.35 |
| **20** | 19 | suburbs | 0.52 | 0.74 | 0.48 | 0.68 | 0.26 | 0.95 | 0.68 | 1.04 | 1.42 | 0.46 | 0.86 | 0.66 | 2.41 |
| **20** | 20 | cities | 1.02 | 1.45 | 0.93 | 1.33 | 0.52 | 1.86 | 1.33 | 2.02 | 2.78 | 0.90 | 1.68 | 1.29 | 4.71 |
| **20** | 20 | country | 0.96 | 1.37 | 0.88 | 1.25 | 0.49 | 1.75 | 1.25 | 1.90 | 2.62 | 0.85 | 1.58 | 1.21 | 4.43 |
| **20** | 20 | suburbs | 0.99 | 1.41 | 0.90 | 1.29 | 0.50 | 1.80 | 1.28 | 1.96 | 2.69 | 0.87 | 1.63 | 1.25 | 4.56 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **21** | 5 | cities | 0.31 | 0.67 | 0.31 | 0.47 | 0.17 | 2.71 | 0.49 | 0.46 | 0.96 | 0.44 | 0.60 | 0.70 | 3.23 |
| **21** | 5 | country | 0.28 | 0.60 | 0.28 | 0.43 | 0.16 | 2.47 | 0.44 | 0.42 | 0.87 | 0.40 | 0.55 | 0.63 | 2.94 |
| **21** | 5 | suburbs | 0.29 | 0.63 | 0.29 | 0.45 | 0.16 | 2.57 | 0.46 | 0.44 | 0.91 | 0.42 | 0.57 | 0.66 | 3.06 |
| **21** | 6 | cities | 0.31 | 0.68 | 0.31 | 0.48 | 0.17 | 2.77 | 0.49 | 0.47 | 0.98 | 0.45 | 0.61 | 0.71 | 3.30 |
| **21** | 6 | country | 0.28 | 0.61 | 0.28 | 0.44 | 0.16 | 2.51 | 0.45 | 0.43 | 0.89 | 0.41 | 0.56 | 0.64 | 2.99 |
| **21** | 6 | suburbs | 0.30 | 0.64 | 0.29 | 0.46 | 0.17 | 2.62 | 0.47 | 0.44 | 0.93 | 0.43 | 0.58 | 0.67 | 3.12 |
| **21** | 7 | cities | 0.41 | 0.89 | 0.41 | 0.63 | 0.23 | 3.62 | 0.65 | 0.61 | 1.28 | 0.59 | 0.80 | 0.92 | 4.31 |
| **21** | 7 | country | 0.38 | 0.81 | 0.37 | 0.58 | 0.21 | 3.31 | 0.59 | 0.56 | 1.18 | 0.54 | 0.74 | 0.85 | 3.95 |
| **21** | 7 | suburbs | 0.39 | 0.85 | 0.39 | 0.60 | 0.22 | 3.45 | 0.62 | 0.58 | 1.22 | 0.56 | 0.76 | 0.88 | 4.10 |
| **21** | 8 | cities | 0.73 | 1.58 | 0.73 | 1.13 | 0.41 | 6.48 | 1.16 | 1.10 | 2.30 | 1.06 | 1.44 | 1.68 | 7.74 |
| **21** | 8 | country | 0.68 | 1.47 | 0.68 | 1.05 | 0.38 | 6.01 | 1.07 | 1.02 | 2.13 | 0.99 | 1.33 | 1.56 | 7.18 |
| **21** | 8 | suburbs | 0.71 | 1.53 | 0.70 | 1.10 | 0.39 | 6.26 | 1.12 | 1.06 | 2.22 | 1.03 | 1.39 | 1.62 | 7.47 |
| **21** | 17 | cities | 0.38 | 0.82 | 0.38 | 0.59 | 0.21 | 3.36 | 0.60 | 0.57 | 1.19 | 0.54 | 0.75 | 0.86 | 4.00 |
| **21** | 17 | country | 0.35 | 0.76 | 0.35 | 0.54 | 0.20 | 3.09 | 0.55 | 0.52 | 1.10 | 0.50 | 0.69 | 0.79 | 3.68 |
| **21** | 17 | suburbs | 0.36 | 0.79 | 0.36 | 0.56 | 0.20 | 3.21 | 0.57 | 0.54 | 1.14 | 0.52 | 0.71 | 0.82 | 3.82 |
| **21** | 18 | cities | 0.38 | 0.83 | 0.38 | 0.59 | 0.21 | 3.39 | 0.61 | 0.57 | 1.20 | 0.55 | 0.75 | 0.87 | 4.03 |
| **21** | 18 | country | 0.35 | 0.76 | 0.35 | 0.54 | 0.20 | 3.11 | 0.56 | 0.53 | 1.10 | 0.50 | 0.69 | 0.79 | 3.70 |
| **21** | 18 | suburbs | 0.37 | 0.79 | 0.36 | 0.56 | 0.20 | 3.23 | 0.58 | 0.55 | 1.14 | 0.52 | 0.72 | 0.82 | 3.84 |
| **21** | 19 | cities | 0.59 | 1.27 | 0.58 | 0.90 | 0.33 | 5.17 | 0.92 | 0.88 | 1.83 | 0.84 | 1.15 | 1.33 | 6.16 |
| **21** | 19 | country | 0.54 | 1.18 | 0.54 | 0.84 | 0.30 | 4.80 | 0.86 | 0.81 | 1.70 | 0.78 | 1.06 | 1.23 | 5.72 |
| **21** | 19 | suburbs | 0.56 | 1.21 | 0.56 | 0.87 | 0.31 | 4.96 | 0.89 | 0.84 | 1.76 | 0.81 | 1.10 | 1.27 | 5.91 |
| **21** | 20 | cities | 1.15 | 2.47 | 1.14 | 1.77 | 0.64 | 10.12 | 1.81 | 1.71 | 3.59 | 1.66 | 2.25 | 2.61 | 12.08 |
| **21** | 20 | country | 1.06 | 2.29 | 1.05 | 1.64 | 0.59 | 9.37 | 1.67 | 1.59 | 3.32 | 1.53 | 2.08 | 2.42 | 11.19 |
| **21** | 20 | suburbs | 1.10 | 2.36 | 1.09 | 1.69 | 0.61 | 9.68 | 1.73 | 1.64 | 3.43 | 1.58 | 2.15 | 2.50 | 11.55 |
| **22** | 5 | cities | 0.59 | 0.61 | 0.65 | 1.27 | 0.28 | 2.12 | 0.68 | 1.01 | 1.21 | 1.21 | 0.81 | 1.40 | 3.19 |
| **22** | 5 | country | 0.54 | 0.55 | 0.59 | 1.13 | 0.25 | 1.86 | 0.62 | 0.91 | 1.09 | 1.07 | 0.73 | 1.17 | 2.80 |
| **22** | 5 | suburbs | 0.56 | 0.57 | 0.61 | 1.19 | 0.26 | 1.95 | 0.64 | 0.95 | 1.14 | 1.12 | 0.76 | 1.25 | 2.94 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **22** | 6 | cities | 0.61 | 0.62 | 0.67 | 1.31 | 0.29 | 2.19 | 0.70 | 1.03 | 1.24 | 1.24 | 0.83 | 1.46 | 3.29 |
| **22** | 6 | country | 0.55 | 0.56 | 0.60 | 1.16 | 0.26 | 1.91 | 0.64 | 0.94 | 1.12 | 1.10 | 0.75 | 1.21 | 2.87 |
| **22** | 6 | suburbs | 0.57 | 0.59 | 0.63 | 1.22 | 0.27 | 2.01 | 0.66 | 0.97 | 1.17 | 1.15 | 0.78 | 1.29 | 3.02 |
| **22** | 7 | cities | 0.75 | 0.77 | 0.82 | 1.57 | 0.35 | 2.58 | 0.86 | 1.27 | 1.51 | 1.48 | 1.02 | 1.62 | 3.88 |
| **22** | 7 | country | 0.68 | 0.70 | 0.75 | 1.44 | 0.32 | 2.34 | 0.79 | 1.16 | 1.39 | 1.35 | 0.93 | 1.46 | 3.53 |
| **22** | 7 | suburbs | 0.71 | 0.73 | 0.78 | 1.49 | 0.34 | 2.43 | 0.82 | 1.20 | 1.44 | 1.40 | 0.97 | 1.52 | 3.66 |
| **22** | 8 | cities | 1.61 | 1.63 | 1.78 | 3.54 | 0.75 | 6.08 | 1.83 | 2.73 | 3.30 | 3.40 | 2.19 | 4.37 | 9.09 |
| **22** | 8 | country | 1.48 | 1.50 | 1.63 | 3.21 | 0.69 | 5.44 | 1.69 | 2.51 | 3.02 | 3.07 | 2.02 | 3.74 | 8.14 |
| **22** | 8 | suburbs | 1.54 | 1.55 | 1.69 | 3.34 | 0.71 | 5.69 | 1.75 | 2.59 | 3.13 | 3.20 | 2.09 | 3.98 | 8.52 |
| **22** | 17 | cities | 0.66 | 0.68 | 0.73 | 1.40 | 0.31 | 2.29 | 0.77 | 1.13 | 1.35 | 1.32 | 0.91 | 1.44 | 3.45 |
| **22** | 17 | country | 0.61 | 0.63 | 0.67 | 1.29 | 0.29 | 2.10 | 0.71 | 1.04 | 1.24 | 1.21 | 0.84 | 1.31 | 3.17 |
| **22** | 17 | suburbs | 0.63 | 0.65 | 0.70 | 1.33 | 0.30 | 2.18 | 0.73 | 1.08 | 1.29 | 1.25 | 0.87 | 1.36 | 3.28 |
| **22** | 18 | cities | 0.67 | 0.69 | 0.73 | 1.41 | 0.32 | 2.32 | 0.77 | 1.14 | 1.36 | 1.33 | 0.91 | 1.46 | 3.49 |
| **22** | 18 | country | 0.62 | 0.63 | 0.68 | 1.30 | 0.29 | 2.12 | 0.71 | 1.05 | 1.25 | 1.22 | 0.84 | 1.32 | 3.20 |
| **22** | 18 | suburbs | 0.64 | 0.66 | 0.70 | 1.35 | 0.30 | 2.20 | 0.74 | 1.09 | 1.30 | 1.27 | 0.87 | 1.38 | 3.31 |
| **22** | 19 | cities | 1.05 | 1.07 | 1.15 | 2.24 | 0.49 | 3.70 | 1.21 | 1.78 | 2.14 | 2.12 | 1.43 | 2.40 | 5.56 |
| **22** | 19 | country | 0.99 | 1.01 | 1.08 | 2.09 | 0.47 | 3.44 | 1.14 | 1.67 | 2.00 | 1.97 | 1.35 | 2.19 | 5.17 |
| **22** | 19 | suburbs | 1.01 | 1.04 | 1.11 | 2.15 | 0.48 | 3.54 | 1.17 | 1.72 | 2.06 | 2.03 | 1.38 | 2.27 | 5.33 |
| **22** | 20 | cities | 2.04 | 2.08 | 2.24 | 4.37 | 0.96 | 7.29 | 2.34 | 3.46 | 4.15 | 4.15 | 2.78 | 4.82 | 10.94 |
| **22** | 20 | country | 1.88 | 1.91 | 2.06 | 4.00 | 0.88 | 6.63 | 2.15 | 3.18 | 3.81 | 3.78 | 2.56 | 4.32 | 9.96 |
| **22** | 20 | suburbs | 1.94 | 1.98 | 2.13 | 4.14 | 0.91 | 6.89 | 2.22 | 3.28 | 3.94 | 3.92 | 2.64 | 4.51 | 10.34 |
| **23** | 9 | cities | 1.83 | 2.74 | 1.16 | 3.25 | 0.43 | 9.93 | 1.23 | 2.57 | 2.94 | 2.97 | 1.95 | 4.25 | 14.56 |
| **23** | 9 | country | 1.79 | 2.67 | 1.13 | 3.17 | 0.42 | 9.69 | 1.20 | 2.50 | 2.87 | 2.90 | 1.90 | 4.14 | 14.21 |
| **23** | 9 | suburbs | 1.81 | 2.69 | 1.14 | 3.20 | 0.43 | 9.77 | 1.21 | 2.53 | 2.90 | 2.92 | 1.92 | 4.18 | 14.34 |
| **23** | 10 | cities | 1.84 | 2.75 | 1.17 | 3.27 | 0.44 | 9.99 | 1.23 | 2.58 | 2.96 | 2.98 | 1.96 | 4.27 | 14.65 |
| **23** | 10 | country | 1.80 | 2.68 | 1.14 | 3.19 | 0.43 | 9.73 | 1.20 | 2.51 | 2.88 | 2.91 | 1.91 | 4.16 | 14.27 |
| **23** | 10 | suburbs | 1.81 | 2.71 | 1.15 | 3.22 | 0.43 | 9.82 | 1.21 | 2.54 | 2.91 | 2.94 | 1.93 | 4.20 | 14.41 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT**$_{CC}$ | **PBT**$_{OD}$ | **PBT**$_{HT\_CE}$ | **PBT**$_{HT\_nCE}$ | **PBT**$_{PM}$ | **PBT**$_{IR\_hh}$ | **PBT**$_{POF}$ | **PBT**$_{AC}$ | **PBT**$_{ET}$ | **PBT**$_{EuF}$ | **PBT**$_{EuM}$ | **PBT**$_{Ec\_FW}$ | **PBT**$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23** | 11 | cities | 2.26 | 3.37 | 1.43 | 4.00 | 0.53 | 12.21 | 1.51 | 3.16 | 3.62 | 3.65 | 2.40 | 5.22 | 17.91 |
| **23** | 11 | country | 2.20 | 3.28 | 1.39 | 3.89 | 0.52 | 11.88 | 1.47 | 3.07 | 3.52 | 3.55 | 2.33 | 5.08 | 17.43 |
| **23** | 11 | suburbs | 2.22 | 3.31 | 1.41 | 3.93 | 0.52 | 12.00 | 1.48 | 3.11 | 3.56 | 3.59 | 2.36 | 5.14 | 17.61 |
| **23** | 12 | cities | 3.06 | 4.58 | 1.94 | 5.43 | 0.72 | 16.76 | 2.05 | 4.28 | 4.91 | 4.96 | 3.25 | 7.15 | 24.45 |
| **23** | 12 | country | 3.02 | 4.52 | 1.91 | 5.36 | 0.71 | 16.52 | 2.02 | 4.23 | 4.85 | 4.89 | 3.21 | 7.05 | 24.11 |
| **23** | 12 | suburbs | 3.04 | 4.54 | 1.92 | 5.38 | 0.72 | 16.60 | 2.03 | 4.25 | 4.87 | 4.91 | 3.23 | 7.08 | 24.22 |
| **23** | 21 | cities | 2.05 | 3.07 | 1.30 | 3.64 | 0.49 | 11.20 | 1.37 | 2.87 | 3.30 | 3.32 | 2.18 | 4.78 | 16.37 |
| **23** | 21 | country | 2.01 | 3.01 | 1.27 | 3.57 | 0.48 | 10.97 | 1.34 | 2.81 | 3.23 | 3.25 | 2.14 | 4.68 | 16.03 |
| **23** | 21 | suburbs | 2.03 | 3.03 | 1.28 | 3.59 | 0.48 | 11.04 | 1.35 | 2.84 | 3.25 | 3.28 | 2.15 | 4.72 | 16.14 |
| **23** | 22 | cities | 1.99 | 2.97 | 1.26 | 3.52 | 0.47 | 10.84 | 1.33 | 2.78 | 3.19 | 3.22 | 2.11 | 4.63 | 15.84 |
| **23** | 22 | country | 1.94 | 2.90 | 1.23 | 3.44 | 0.46 | 10.59 | 1.30 | 2.72 | 3.11 | 3.14 | 2.06 | 4.52 | 15.48 |
| **23** | 22 | suburbs | 1.96 | 2.93 | 1.24 | 3.47 | 0.46 | 10.68 | 1.31 | 2.74 | 3.14 | 3.17 | 2.08 | 4.56 | 15.61 |
| **23** | 23 | cities | 2.59 | 3.88 | 1.64 | 4.60 | 0.61 | 14.20 | 1.73 | 3.63 | 4.16 | 4.20 | 2.76 | 6.06 | 20.71 |
| **23** | 23 | country | 2.55 | 3.81 | 1.61 | 4.52 | 0.60 | 13.95 | 1.70 | 3.57 | 4.09 | 4.13 | 2.71 | 5.95 | 20.35 |
| **23** | 23 | suburbs | 2.56 | 3.83 | 1.62 | 4.55 | 0.61 | 14.02 | 1.71 | 3.59 | 4.11 | 4.15 | 2.73 | 5.98 | 20.47 |
| **23** | 24 | cities | 3.31 | 4.96 | 2.09 | 5.87 | 0.78 | 18.25 | 2.21 | 4.63 | 5.31 | 5.36 | 3.52 | 7.77 | 26.53 |
| **23** | 24 | country | 3.19 | 4.77 | 2.02 | 5.65 | 0.75 | 17.55 | 2.13 | 4.46 | 5.11 | 5.16 | 3.39 | 7.47 | 25.52 |
| **23** | 24 | suburbs | 3.24 | 4.85 | 2.05 | 5.74 | 0.76 | 17.81 | 2.16 | 4.53 | 5.19 | 5.24 | 3.44 | 7.59 | 25.91 |
| **24** | 9 | cities | 1.55 | 1.99 | 0.87 | 2.85 | 0.31 | 6.95 | 0.88 | 2.20 | 2.25 | 2.63 | 1.51 | 3.50 | 10.38 |
| **24** | 9 | country | 1.47 | 1.88 | 0.82 | 2.70 | 0.29 | 6.59 | 0.83 | 2.09 | 2.13 | 2.49 | 1.43 | 3.31 | 9.83 |
| **24** | 9 | suburbs | 1.51 | 1.93 | 0.84 | 2.77 | 0.30 | 6.75 | 0.85 | 2.14 | 2.18 | 2.56 | 1.46 | 3.40 | 10.08 |
| **24** | 10 | cities | 1.56 | 2.00 | 0.87 | 2.87 | 0.31 | 6.99 | 0.88 | 2.22 | 2.26 | 2.64 | 1.52 | 3.52 | 10.44 |
| **24** | 10 | country | 1.48 | 1.89 | 0.82 | 2.71 | 0.29 | 6.62 | 0.84 | 2.10 | 2.14 | 2.50 | 1.43 | 3.33 | 9.88 |
| **24** | 10 | suburbs | 1.51 | 1.94 | 0.85 | 2.78 | 0.30 | 6.79 | 0.86 | 2.15 | 2.19 | 2.57 | 1.47 | 3.41 | 10.14 |
| **24** | 11 | cities | 1.89 | 2.42 | 1.05 | 3.47 | 0.37 | 8.46 | 1.07 | 2.68 | 2.73 | 3.20 | 1.83 | 4.26 | 12.63 |
| **24** | 11 | country | 1.80 | 2.30 | 1.01 | 3.31 | 0.36 | 8.07 | 1.02 | 2.56 | 2.61 | 3.05 | 1.75 | 4.06 | 12.04 |
| **24** | 11 | suburbs | 1.84 | 2.36 | 1.03 | 3.38 | 0.36 | 8.25 | 1.04 | 2.61 | 2.66 | 3.12 | 1.79 | 4.15 | 12.31 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **24** | 12 | cities | 2.52 | 3.23 | 1.41 | 4.63 | 0.50 | 11.29 | 1.42 | 3.58 | 3.65 | 4.27 | 2.45 | 5.68 | 16.85 |
| **24** | 12 | country | 2.43 | 3.11 | 1.36 | 4.47 | 0.48 | 10.91 | 1.38 | 3.46 | 3.52 | 4.12 | 2.36 | 5.49 | 16.28 |
| **24** | 12 | suburbs | 2.47 | 3.17 | 1.38 | 4.55 | 0.49 | 11.10 | 1.40 | 3.52 | 3.59 | 4.20 | 2.41 | 5.58 | 16.57 |
| **24** | 21 | cities | 1.72 | 2.21 | 0.96 | 3.17 | 0.34 | 7.74 | 0.98 | 2.45 | 2.50 | 2.92 | 1.68 | 3.89 | 11.55 |
| **24** | 21 | country | 1.63 | 2.08 | 0.91 | 2.99 | 0.32 | 7.29 | 0.92 | 2.31 | 2.36 | 2.76 | 1.58 | 3.67 | 10.88 |
| **24** | 21 | suburbs | 1.67 | 2.14 | 0.93 | 3.07 | 0.33 | 7.49 | 0.94 | 2.37 | 2.42 | 2.83 | 1.62 | 3.77 | 11.18 |
| **24** | 22 | cities | 1.67 | 2.14 | 0.93 | 3.07 | 0.33 | 7.48 | 0.94 | 2.37 | 2.42 | 2.83 | 1.62 | 3.76 | 11.17 |
| **24** | 22 | country | 1.57 | 2.01 | 0.88 | 2.89 | 0.31 | 7.04 | 0.89 | 2.23 | 2.27 | 2.66 | 1.53 | 3.54 | 10.51 |
| **24** | 22 | suburbs | 1.61 | 2.07 | 0.90 | 2.97 | 0.32 | 7.24 | 0.91 | 2.29 | 2.34 | 2.74 | 1.57 | 3.64 | 10.81 |
| **24** | 23 | cities | 2.16 | 2.76 | 1.20 | 3.97 | 0.43 | 9.68 | 1.22 | 3.07 | 3.13 | 3.66 | 2.10 | 4.87 | 14.44 |
| **24** | 23 | country | 2.04 | 2.62 | 1.14 | 3.76 | 0.40 | 9.17 | 1.16 | 2.90 | 2.96 | 3.46 | 1.99 | 4.61 | 13.68 |
| **24** | 23 | suburbs | 2.10 | 2.69 | 1.17 | 3.85 | 0.41 | 9.40 | 1.19 | 2.98 | 3.04 | 3.55 | 2.04 | 4.73 | 14.03 |
| **24** | 24 | cities | 2.68 | 3.44 | 1.50 | 4.94 | 0.53 | 12.05 | 1.52 | 3.82 | 3.89 | 4.55 | 2.61 | 6.06 | 17.98 |
| **24** | 24 | country | 2.52 | 3.23 | 1.41 | 4.64 | 0.50 | 11.33 | 1.43 | 3.59 | 3.66 | 4.28 | 2.45 | 5.70 | 16.91 |
| **24** | 24 | suburbs | 2.60 | 3.33 | 1.45 | 4.78 | 0.51 | 11.66 | 1.47 | 3.69 | 3.76 | 4.41 | 2.53 | 5.86 | 17.40 |
| **25** | 9 | cities | 1.38 | 1.66 | 0.79 | 2.50 | 0.28 | 4.15 | 0.78 | 1.70 | 1.81 | 2.28 | 1.20 | 2.47 | 9.73 |
| **25** | 9 | country | 1.33 | 1.59 | 0.76 | 2.41 | 0.27 | 3.99 | 0.75 | 1.64 | 1.74 | 2.19 | 1.16 | 2.38 | 9.36 |
| **25** | 9 | suburbs | 1.35 | 1.62 | 0.77 | 2.45 | 0.27 | 4.06 | 0.76 | 1.67 | 1.77 | 2.23 | 1.18 | 2.41 | 9.51 |
| **25** | 10 | cities | 1.38 | 1.66 | 0.79 | 2.51 | 0.28 | 4.16 | 0.78 | 1.71 | 1.81 | 2.28 | 1.21 | 2.48 | 9.75 |
| **25** | 10 | country | 1.33 | 1.60 | 0.76 | 2.41 | 0.27 | 4.00 | 0.75 | 1.64 | 1.74 | 2.19 | 1.16 | 2.38 | 9.37 |
| **25** | 10 | suburbs | 1.35 | 1.62 | 0.77 | 2.45 | 0.27 | 4.06 | 0.76 | 1.67 | 1.77 | 2.23 | 1.18 | 2.42 | 9.52 |
| **25** | 11 | cities | 1.73 | 2.07 | 0.98 | 3.13 | 0.35 | 5.19 | 0.97 | 2.13 | 2.26 | 2.85 | 1.51 | 3.09 | 12.16 |
| **25** | 11 | country | 1.66 | 1.99 | 0.95 | 3.01 | 0.34 | 4.99 | 0.93 | 2.05 | 2.18 | 2.74 | 1.45 | 2.97 | 11.70 |
| **25** | 11 | suburbs | 1.69 | 2.03 | 0.96 | 3.06 | 0.34 | 5.07 | 0.95 | 2.08 | 2.21 | 2.78 | 1.47 | 3.02 | 11.88 |
| **25** | 12 | cities | 2.22 | 2.67 | 1.27 | 4.03 | 0.45 | 6.69 | 1.25 | 2.75 | 2.91 | 3.66 | 1.94 | 3.98 | 15.67 |
| **25** | 12 | country | 2.16 | 2.60 | 1.23 | 3.93 | 0.44 | 6.51 | 1.22 | 2.67 | 2.84 | 3.57 | 1.89 | 3.87 | 15.25 |
| **25** | 12 | suburbs | 2.19 | 2.63 | 1.25 | 3.97 | 0.44 | 6.59 | 1.23 | 2.71 | 2.87 | 3.61 | 1.91 | 3.92 | 15.44 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **25** | 21 | cities | 1.51 | 1.81 | 0.86 | 2.73 | 0.30 | 4.53 | 0.85 | 1.86 | 1.97 | 2.48 | 1.31 | 2.70 | 10.61 |
| **25** | 21 | country | 1.45 | 1.74 | 0.82 | 2.63 | 0.29 | 4.36 | 0.82 | 1.79 | 1.90 | 2.39 | 1.26 | 2.59 | 10.21 |
| **25** | 21 | suburbs | 1.47 | 1.77 | 0.84 | 2.67 | 0.30 | 4.43 | 0.83 | 1.82 | 1.93 | 2.43 | 1.28 | 2.63 | 10.37 |
| **25** | 22 | cities | 1.45 | 1.74 | 0.82 | 2.63 | 0.29 | 4.36 | 0.82 | 1.79 | 1.90 | 2.39 | 1.26 | 2.59 | 10.21 |
| **25** | 22 | country | 1.39 | 1.67 | 0.79 | 2.52 | 0.28 | 4.18 | 0.78 | 1.72 | 1.82 | 2.29 | 1.21 | 2.49 | 9.80 |
| **25** | 22 | suburbs | 1.41 | 1.70 | 0.80 | 2.56 | 0.29 | 4.25 | 0.79 | 1.74 | 1.85 | 2.33 | 1.23 | 2.53 | 9.96 |
| **25** | 23 | cities | 1.90 | 2.28 | 1.08 | 3.45 | 0.38 | 5.72 | 1.07 | 2.35 | 2.49 | 3.13 | 1.66 | 3.40 | 13.40 |
| **25** | 23 | country | 1.81 | 2.17 | 1.03 | 3.28 | 0.37 | 5.44 | 1.02 | 2.23 | 2.37 | 2.98 | 1.58 | 3.23 | 12.73 |
| **25** | 23 | suburbs | 1.85 | 2.22 | 1.05 | 3.35 | 0.37 | 5.56 | 1.04 | 2.28 | 2.42 | 3.05 | 1.61 | 3.31 | 13.03 |
| **25** | 24 | cities | 2.36 | 2.84 | 1.35 | 4.29 | 0.48 | 7.12 | 1.33 | 2.92 | 3.10 | 3.89 | 2.06 | 4.23 | 16.67 |
| **25** | 24 | country | 2.23 | 2.68 | 1.27 | 4.04 | 0.45 | 6.70 | 1.25 | 2.75 | 2.92 | 3.67 | 1.94 | 3.99 | 15.70 |
| **25** | 24 | suburbs | 2.29 | 2.75 | 1.30 | 4.15 | 0.46 | 6.89 | 1.29 | 2.82 | 3.00 | 3.77 | 1.99 | 4.10 | 16.12 |
| **26** | 9 | cities | 2.36 | 1.21 | 1.72 | 2.63 | 1.31 | 0.32 | 2.94 | 2.90 | 3.72 | 2.81 | 2.44 | 0.68 | 2.67 |
| **26** | 9 | country | 2.36 | 1.21 | 1.72 | 2.64 | 1.32 | 0.32 | 2.94 | 2.91 | 3.73 | 2.81 | 2.45 | 0.68 | 2.68 |
| **26** | 9 | suburbs | 2.35 | 1.21 | 1.72 | 2.63 | 1.31 | 0.32 | 2.93 | 2.90 | 3.71 | 2.80 | 2.44 | 0.68 | 2.67 |
| **26** | 10 | cities | 2.36 | 1.21 | 1.72 | 2.64 | 1.32 | 0.32 | 2.95 | 2.91 | 3.73 | 2.82 | 2.45 | 0.69 | 2.68 |
| **26** | 10 | country | 2.37 | 1.21 | 1.73 | 2.64 | 1.32 | 0.32 | 2.95 | 2.91 | 3.74 | 2.82 | 2.45 | 0.69 | 2.68 |
| **26** | 10 | suburbs | 2.36 | 1.21 | 1.72 | 2.64 | 1.32 | 0.32 | 2.94 | 2.90 | 3.73 | 2.81 | 2.45 | 0.68 | 2.68 |
| **26** | 11 | cities | 2.94 | 1.51 | 2.15 | 3.29 | 1.64 | 0.40 | 3.67 | 3.62 | 4.64 | 3.50 | 3.05 | 0.85 | 3.33 |
| **26** | 11 | country | 2.94 | 1.51 | 2.15 | 3.29 | 1.64 | 0.40 | 3.67 | 3.62 | 4.65 | 3.51 | 3.05 | 0.85 | 3.34 |
| **26** | 11 | suburbs | 2.93 | 1.50 | 2.14 | 3.28 | 1.63 | 0.40 | 3.66 | 3.61 | 4.63 | 3.50 | 3.04 | 0.85 | 3.32 |
| **26** | 12 | cities | 3.66 | 1.89 | 2.68 | 4.10 | 2.04 | 0.51 | 4.56 | 4.50 | 5.78 | 4.37 | 3.79 | 1.07 | 4.19 |
| **26** | 12 | country | 3.68 | 1.90 | 2.69 | 4.13 | 2.05 | 0.51 | 4.59 | 4.53 | 5.82 | 4.40 | 3.82 | 1.08 | 4.21 |
| **26** | 12 | suburbs | 3.67 | 1.89 | 2.69 | 4.11 | 2.04 | 0.51 | 4.57 | 4.52 | 5.80 | 4.38 | 3.81 | 1.07 | 4.20 |
| **26** | 21 | cities | 2.39 | 1.23 | 1.74 | 2.67 | 1.33 | 0.33 | 2.97 | 2.94 | 3.77 | 2.85 | 2.47 | 0.69 | 2.72 |
| **26** | 21 | country | 2.45 | 1.26 | 1.79 | 2.74 | 1.36 | 0.34 | 3.05 | 3.01 | 3.86 | 2.92 | 2.54 | 0.71 | 2.79 |
| **26** | 21 | suburbs | 2.41 | 1.24 | 1.76 | 2.70 | 1.34 | 0.33 | 3.00 | 2.97 | 3.81 | 2.87 | 2.50 | 0.70 | 2.74 |

## STONE WOOL

| Country | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26** | 22 | cities | 2.29 | 1.18 | 1.67 | 2.56 | 1.27 | 0.31 | 2.85 | 2.81 | 3.61 | 2.73 | 2.37 | 0.67 | 2.61 |
| **26** | 22 | country | 2.34 | 1.20 | 1.71 | 2.62 | 1.30 | 0.32 | 2.91 | 2.87 | 3.69 | 2.79 | 2.42 | 0.68 | 2.66 |
| **26** | 22 | suburbs | 2.31 | 1.19 | 1.69 | 2.58 | 1.29 | 0.32 | 2.88 | 2.84 | 3.64 | 2.75 | 2.39 | 0.67 | 2.63 |
| **26** | 23 | cities | 2.84 | 1.47 | 2.08 | 3.19 | 1.58 | 0.39 | 3.54 | 3.50 | 4.49 | 3.40 | 2.95 | 0.83 | 3.25 |
| **26** | 23 | country | 2.90 | 1.50 | 2.12 | 3.25 | 1.62 | 0.40 | 3.62 | 3.57 | 4.59 | 3.47 | 3.01 | 0.85 | 3.32 |
| **26** | 23 | suburbs | 2.87 | 1.48 | 2.10 | 3.21 | 1.60 | 0.40 | 3.57 | 3.53 | 4.53 | 3.42 | 2.97 | 0.84 | 3.27 |
| **26** | 24 | cities | 3.44 | 1.78 | 2.52 | 3.86 | 1.92 | 0.48 | 4.29 | 4.23 | 5.44 | 4.11 | 3.57 | 1.01 | 3.94 |
| **26** | 24 | country | 3.45 | 1.78 | 2.53 | 3.87 | 1.92 | 0.48 | 4.30 | 4.25 | 5.45 | 4.12 | 3.58 | 1.01 | 3.95 |
| **26** | 24 | suburbs | 3.44 | 1.78 | 2.52 | 3.86 | 1.92 | 0.48 | 4.29 | 4.23 | 5.43 | 4.11 | 3.57 | 1.01 | 3.94 |
| **27** | 9 | cities | 1.18 | 0.79 | 0.86 | 1.81 | 0.42 | 0.32 | 1.08 | 1.84 | 1.98 | 1.75 | 1.35 | 0.69 | 2.46 |
| **27** | 9 | country | 1.10 | 0.74 | 0.80 | 1.70 | 0.40 | 0.30 | 1.01 | 1.73 | 1.86 | 1.64 | 1.26 | 0.65 | 2.31 |
| **27** | 9 | suburbs | 1.14 | 0.76 | 0.83 | 1.75 | 0.41 | 0.31 | 1.04 | 1.78 | 1.91 | 1.69 | 1.30 | 0.67 | 2.38 |
| **27** | 10 | cities | 1.18 | 0.80 | 0.86 | 1.82 | 0.42 | 0.32 | 1.09 | 1.85 | 1.99 | 1.76 | 1.35 | 0.70 | 2.48 |
| **27** | 10 | country | 1.11 | 0.75 | 0.81 | 1.70 | 0.40 | 0.30 | 1.02 | 1.73 | 1.87 | 1.65 | 1.27 | 0.65 | 2.32 |
| **27** | 10 | suburbs | 1.14 | 0.77 | 0.83 | 1.75 | 0.41 | 0.31 | 1.05 | 1.78 | 1.92 | 1.70 | 1.31 | 0.67 | 2.39 |
| **27** | 11 | cities | 1.43 | 0.96 | 1.04 | 2.20 | 0.51 | 0.39 | 1.31 | 2.23 | 2.41 | 2.12 | 1.64 | 0.84 | 2.99 |
| **27** | 11 | country | 1.35 | 0.91 | 0.98 | 2.07 | 0.48 | 0.36 | 1.24 | 2.11 | 2.27 | 2.00 | 1.54 | 0.79 | 2.82 |
| **27** | 11 | suburbs | 1.38 | 0.93 | 1.01 | 2.13 | 0.50 | 0.37 | 1.27 | 2.16 | 2.33 | 2.06 | 1.59 | 0.82 | 2.90 |
| **27** | 12 | cities | 1.89 | 1.28 | 1.38 | 2.91 | 0.68 | 0.52 | 1.74 | 2.96 | 3.19 | 2.82 | 2.17 | 1.12 | 3.99 |
| **27** | 12 | country | 1.82 | 1.23 | 1.32 | 2.80 | 0.65 | 0.50 | 1.66 | 2.83 | 3.06 | 2.70 | 2.08 | 1.08 | 3.83 |
| **27** | 12 | suburbs | 1.85 | 1.25 | 1.35 | 2.85 | 0.66 | 0.51 | 1.70 | 2.89 | 3.12 | 2.75 | 2.12 | 1.10 | 3.90 |
| **27** | 21 | cities | 1.28 | 0.86 | 0.93 | 1.97 | 0.46 | 0.35 | 1.17 | 2.00 | 2.16 | 1.90 | 1.47 | 0.76 | 2.69 |
| **27** | 21 | country | 1.21 | 0.82 | 0.88 | 1.86 | 0.43 | 0.33 | 1.11 | 1.89 | 2.04 | 1.80 | 1.39 | 0.72 | 2.55 |
| **27** | 21 | suburbs | 1.24 | 0.84 | 0.91 | 1.91 | 0.44 | 0.34 | 1.14 | 1.94 | 2.09 | 1.85 | 1.42 | 0.74 | 2.61 |
| **27** | 22 | cities | 1.23 | 0.83 | 0.90 | 1.90 | 0.44 | 0.34 | 1.13 | 1.93 | 2.08 | 1.84 | 1.41 | 0.73 | 2.60 |
| **27** | 22 | country | 1.17 | 0.79 | 0.85 | 1.80 | 0.42 | 0.32 | 1.07 | 1.82 | 1.96 | 1.73 | 1.34 | 0.69 | 2.46 |
| **27** | 22 | suburbs | 1.20 | 0.81 | 0.87 | 1.84 | 0.43 | 0.33 | 1.10 | 1.87 | 2.01 | 1.78 | 1.37 | 0.71 | 2.52 |

## STONE WOOL

| Country | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **27** | 23 | cities | 1.59 | 1.07 | 1.16 | 2.44 | 0.57 | 0.43 | 1.45 | 2.48 | 2.67 | 2.36 | 1.82 | 0.94 | 3.35 |
| **27** | 23 | country | 1.50 | 1.01 | 1.09 | 2.31 | 0.53 | 0.41 | 1.37 | 2.34 | 2.52 | 2.23 | 1.72 | 0.89 | 3.17 |
| **27** | 23 | suburbs | 1.54 | 1.04 | 1.12 | 2.37 | 0.55 | 0.42 | 1.41 | 2.40 | 2.59 | 2.29 | 1.76 | 0.91 | 3.25 |
| **27** | 24 | cities | 1.96 | 1.32 | 1.43 | 3.02 | 0.70 | 0.54 | 1.79 | 3.05 | 3.29 | 2.91 | 2.24 | 1.17 | 4.14 |
| **27** | 24 | country | 1.84 | 1.24 | 1.34 | 2.83 | 0.65 | 0.51 | 1.68 | 2.86 | 3.09 | 2.74 | 2.10 | 1.10 | 3.90 |
| **27** | 24 | suburbs | 1.89 | 1.28 | 1.38 | 2.92 | 0.67 | 0.52 | 1.73 | 2.95 | 3.18 | 2.82 | 2.16 | 1.13 | 4.01 |
| **28** | 5 | cities | 0.76 | 0.69 | 0.37 | 2.52 | 0.11 | 7.96 | 0.34 | 2.25 | 1.30 | 4.77 | 0.87 | 5.47 | 2.99 |
| **28** | 5 | country | 0.69 | 0.62 | 0.33 | 2.34 | 0.10 | 8.21 | 0.31 | 2.06 | 1.17 | 4.87 | 0.79 | 5.78 | 2.71 |
| **28** | 5 | suburbs | 0.72 | 0.65 | 0.35 | 2.32 | 0.11 | 6.88 | 0.32 | 2.10 | 1.22 | 4.14 | 0.82 | 4.66 | 2.79 |
| **28** | 6 | cities | 0.78 | 0.71 | 0.38 | 2.67 | 0.12 | 9.39 | 0.35 | 2.35 | 1.33 | 5.57 | 0.90 | 6.62 | 3.09 |
| **28** | 6 | country | 0.70 | 0.63 | 0.34 | 2.48 | 0.11 | 9.81 | 0.31 | 2.14 | 1.20 | 5.75 | 0.81 | 7.15 | 2.81 |
| **28** | 6 | suburbs | 0.73 | 0.66 | 0.35 | 2.45 | 0.11 | 7.93 | 0.33 | 2.18 | 1.25 | 4.74 | 0.84 | 5.48 | 2.89 |
| **28** | 7 | cities | 0.98 | 0.90 | 0.48 | 2.51 | 0.15 | 4.70 | 0.46 | 2.57 | 1.65 | 2.92 | 1.11 | 2.96 | 3.59 |
| **28** | 7 | country | 0.89 | 0.82 | 0.43 | 2.36 | 0.14 | 4.63 | 0.41 | 2.37 | 1.50 | 2.87 | 1.01 | 2.93 | 3.29 |
| **28** | 7 | suburbs | 0.93 | 0.85 | 0.45 | 2.40 | 0.15 | 4.53 | 0.43 | 2.44 | 1.57 | 2.81 | 1.05 | 2.85 | 3.41 |
| **28** | 8 | cities | 2.91 | 2.38 | 1.32 | (6.72) | 0.33 | (3.44) | 1.03 | 5.13 | 5.44 | (2.22) | 3.83 | (1.98) | 30.35 |
| **28** | 8 | country | 2.48 | 2.05 | 1.13 | (7.55) | 0.29 | (3.48) | 0.91 | 4.74 | 4.57 | (2.26) | 3.20 | (2.00) | 20.92 |
| **28** | 8 | suburbs | 2.64 | 2.18 | 1.20 | (7.61) | 0.31 | (3.59) | 0.96 | 4.88 | 4.88 | (2.32) | 3.42 | (2.07) | 23.09 |
| **28** | 17 | cities | 0.90 | 0.83 | 0.44 | 2.25 | 0.14 | 4.06 | 0.42 | 2.33 | 1.52 | 2.53 | 1.02 | 2.54 | 3.27 |
| **28** | 17 | country | 0.83 | 0.76 | 0.40 | 2.14 | 0.13 | 4.05 | 0.39 | 2.18 | 1.40 | 2.52 | 0.94 | 2.55 | 3.04 |
| **28** | 17 | suburbs | 0.86 | 0.79 | 0.42 | 2.18 | 0.14 | 4.02 | 0.40 | 2.24 | 1.45 | 2.50 | 0.97 | 2.52 | 3.14 |
| **28** | 18 | cities | 0.91 | 0.84 | 0.44 | 2.30 | 0.14 | 4.19 | 0.43 | 2.36 | 1.54 | 2.61 | 1.03 | 2.63 | 3.32 |
| **28** | 18 | country | 0.84 | 0.77 | 0.41 | 2.19 | 0.13 | 4.21 | 0.39 | 2.22 | 1.42 | 2.61 | 0.95 | 2.66 | 3.08 |
| **28** | 18 | suburbs | 0.87 | 0.80 | 0.42 | 2.22 | 0.14 | 4.15 | 0.41 | 2.27 | 1.47 | 2.58 | 0.98 | 2.61 | 3.18 |
| **28** | 19 | cities | 1.50 | 1.36 | 0.72 | 5.10 | 0.23 | 17.46 | 0.68 | 4.50 | 2.56 | 10.38 | 1.73 | 12.23 | 5.94 |
| **28** | 19 | country | 1.39 | 1.25 | 0.67 | 5.01 | 0.21 | 22.12 | 0.62 | 4.27 | 2.37 | 12.81 | 1.60 | 16.71 | 5.56 |
| **28** | 19 | suburbs | 1.43 | 1.30 | 0.69 | 4.93 | 0.22 | 17.80 | 0.64 | 4.33 | 2.45 | 10.53 | 1.65 | 12.63 | 5.69 |

## STONE WOOL

| Country | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **28** | 20 | cities | 3.65 | 3.15 | 1.71 | (10.19) | 0.48 | (10.98) | 1.47 | 9.01 | 6.48 | (7.19) | 4.45 | (6.18) | 20.00 |
| **28** | 20 | country | 3.24 | 2.80 | 1.52 | (10.02) | 0.43 | (10.66) | 1.31 | 8.54 | 5.73 | (7.00) | 3.93 | (5.98) | 17.29 |
| **28** | 20 | suburbs | 3.40 | 2.94 | 1.59 | (9.87) | 0.45 | (11.31) | 1.37 | 8.65 | 6.01 | (7.43) | 4.12 | (6.34) | 18.06 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | cities | 7.34 | 3.27 | 19.23 | 26.80 | 3.06 | 11.88 | 6.14 | 3.06 | 6.49 | 33.38 | 6.27 | 4.52 | 33.01 |
| **1** | 1 | country | 6.02 | 2.69 | 15.72 | 22.00 | 2.51 | 9.78 | 5.05 | 2.52 | 5.35 | 27.34 | 5.16 | 3.73 | 27.01 |
| **1** | 1 | suburbs | 6.58 | 2.94 | 17.21 | 24.06 | 2.75 | 10.69 | 5.52 | 2.75 | 5.84 | 29.92 | 5.64 | 4.07 | 29.57 |
| **1** | 2 | cities | 7.34 | 3.27 | 19.23 | 26.80 | 3.06 | 11.88 | 6.14 | 3.06 | 6.49 | 33.38 | 6.27 | 4.52 | 33.01 |
| **1** | 2 | country | 6.02 | 2.69 | 15.72 | 22.00 | 2.51 | 9.78 | 5.05 | 2.52 | 5.35 | 27.34 | 5.16 | 3.73 | 27.01 |
| **1** | 2 | suburbs | 6.58 | 2.94 | 17.21 | 24.06 | 2.75 | 10.69 | 5.52 | 2.75 | 5.84 | 29.92 | 5.64 | 4.07 | 29.57 |
| **1** | 3 | cities | 5.91 | 2.61 | 15.53 | 21.51 | 2.47 | 9.50 | 4.92 | 2.44 | 5.19 | 26.88 | 5.01 | 3.61 | 26.61 |
| **1** | 3 | country | 5.05 | 2.24 | 13.26 | 18.41 | 2.11 | 8.14 | 4.21 | 2.10 | 4.45 | 22.98 | 4.29 | 3.10 | 22.74 |
| **1** | 3 | suburbs | 5.42 | 2.40 | 14.24 | 19.75 | 2.26 | 8.73 | 4.52 | 2.25 | 4.76 | 24.66 | 4.60 | 3.32 | 24.40 |
| **1** | 4 | cities | 13.66 | 6.14 | 35.57 | 50.00 | 5.70 | 22.29 | 11.49 | 5.75 | 12.19 | 61.98 | 11.77 | 8.49 | 61.21 |
| **1** | 4 | country | 10.67 | 4.81 | 27.76 | 39.10 | 4.45 | 17.45 | 8.99 | 4.51 | 9.54 | 48.41 | 9.21 | 6.65 | 47.79 |
| **1** | 4 | suburbs | 11.35 | 5.10 | 29.55 | 41.55 | 4.73 | 18.52 | 9.55 | 4.78 | 10.13 | 51.50 | 9.78 | 7.06 | 50.86 |
| **1** | 13 | cities | 8.50 | 3.70 | 22.49 | 30.81 | 3.55 | 13.52 | 7.01 | 3.47 | 7.37 | 38.72 | 7.11 | 5.14 | 38.40 |
| **1** | 13 | country | 6.96 | 3.05 | 18.36 | 25.28 | 2.90 | 11.13 | 5.77 | 2.86 | 6.07 | 31.69 | 5.86 | 4.23 | 31.40 |
| **1** | 13 | suburbs | 7.62 | 3.33 | 20.12 | 27.66 | 3.18 | 12.16 | 6.30 | 3.12 | 6.63 | 34.70 | 6.40 | 4.62 | 34.39 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{\mathrm{CC}}$** | **PBT$_{\mathrm{OD}}$** | **PBT$_{\mathrm{HT\_CE}}$** | **PBT$_{\mathrm{HT\_nCE}}$** | **PBT$_{\mathrm{PM}}$** | **PBT$_{\mathrm{IR\_hh}}$** | **PBT$_{\mathrm{POF}}$** | **PBT$_{\mathrm{AC}}$** | **PBT$_{\mathrm{ET}}$** | **PBT$_{\mathrm{EuF}}$** | **PBT$_{\mathrm{EuM}}$** | **PBT$_{\mathrm{Ec\_FW}}$** | **PBT$_{\mathrm{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 14 | cities | 8.36 | 3.65 | 22.13 | 30.34 | 3.49 | 13.32 | 6.91 | 3.42 | 7.26 | 38.11 | 7.01 | 5.06 | 37.79 |
| **1** | 14 | country | 6.87 | 3.01 | 18.13 | 24.98 | 2.87 | 11.00 | 5.70 | 2.83 | 6.00 | 31.30 | 5.79 | 4.18 | 31.01 |
| **1** | 14 | suburbs | 7.50 | 3.28 | 19.81 | 27.24 | 3.13 | 11.98 | 6.21 | 3.08 | 6.53 | 34.17 | 6.31 | 4.55 | 33.86 |
| **1** | 15 | cities | 8.86 | 3.86 | 23.45 | 32.12 | 3.70 | 14.09 | 7.31 | 3.61 | 7.68 | 40.37 | 7.41 | 5.35 | 40.04 |
| **1** | 15 | country | 7.20 | 3.15 | 19.01 | 26.15 | 3.01 | 11.50 | 5.96 | 2.95 | 6.27 | 32.80 | 6.05 | 4.37 | 32.51 |
| **1** | 15 | suburbs | 7.91 | 3.45 | 20.90 | 28.70 | 3.30 | 12.61 | 6.54 | 3.23 | 6.87 | 36.03 | 6.63 | 4.79 | 35.72 |
| **1** | 16 | cities | 25.26 | 11.45 | 65.52 | 92.71 | 10.53 | 41.51 | 21.36 | 10.74 | 22.71 | 114.51 | 21.93 | 15.83 | 112.96 |
| **1** | 16 | country | 24.05 | 11.01 | 62.07 | 88.55 | 10.03 | 39.86 | 20.46 | 10.33 | 21.83 | 108.89 | 21.08 | 15.21 | 107.27 |
| **1** | 16 | suburbs | 24.80 | 11.32 | 64.14 | 91.23 | 10.34 | 40.98 | 21.06 | 10.61 | 22.43 | 112.37 | 21.66 | 15.63 | 110.76 |
| **2** | 1 | cities | 7.97 | 3.17 | 18.87 | 22.11 | 4.69 | 10.64 | 9.51 | 4.95 | 10.47 | 30.97 | 10.37 | 6.78 | 26.31 |
| **2** | 1 | country | 7.17 | 2.86 | 16.91 | 19.78 | 4.41 | 9.49 | 9.09 | 4.83 | 10.22 | 27.74 | 10.12 | 6.77 | 23.48 |
| **2** | 1 | suburbs | 7.61 | 3.03 | 17.96 | 21.02 | 4.60 | 10.10 | 9.43 | 4.97 | 10.52 | 29.47 | 10.42 | 6.91 | 24.98 |
| **2** | 2 | cities | 7.97 | 3.17 | 18.87 | 22.11 | 4.69 | 10.64 | 9.51 | 4.95 | 10.47 | 30.97 | 10.37 | 6.78 | 26.31 |
| **2** | 2 | country | 7.17 | 2.86 | 16.91 | 19.78 | 4.41 | 9.49 | 9.09 | 4.83 | 10.22 | 27.74 | 10.12 | 6.77 | 23.48 |
| **2** | 2 | suburbs | 7.61 | 3.03 | 17.96 | 21.02 | 4.60 | 10.10 | 9.43 | 4.97 | 10.52 | 29.47 | 10.42 | 6.91 | 24.98 |
| **2** | 3 | cities | 6.57 | 2.60 | 15.60 | 18.30 | 3.78 | 8.81 | 7.61 | 3.92 | 8.29 | 25.61 | 8.21 | 5.31 | 21.80 |
| **2** | 3 | country | 6.00 | 2.38 | 14.20 | 16.63 | 3.54 | 8.00 | 7.20 | 3.76 | 7.94 | 23.30 | 7.87 | 5.16 | 19.79 |
| **2** | 3 | suburbs | 6.32 | 2.51 | 14.98 | 17.56 | 3.70 | 8.45 | 7.49 | 3.89 | 8.22 | 24.60 | 8.14 | 5.31 | 20.90 |
| **2** | 4 | cities | 10.27 | 4.08 | 24.35 | 28.54 | 6.01 | 13.74 | 12.16 | 6.31 | 13.34 | 39.97 | 13.21 | 8.61 | 33.97 |
| **2** | 4 | country | 10.77 | 4.29 | 25.42 | 29.76 | 6.53 | 14.29 | 13.40 | 7.08 | 14.96 | 41.72 | 14.82 | 9.84 | 35.35 |
| **2** | 4 | suburbs | 10.72 | 4.27 | 25.36 | 29.71 | 6.39 | 14.28 | 13.02 | 6.82 | 14.41 | 41.63 | 14.27 | 9.39 | 35.32 |
| **2** | 13 | cities | 8.47 | 3.35 | 20.22 | 23.76 | 4.68 | 11.47 | 9.29 | 4.71 | 9.96 | 33.22 | 9.86 | 6.27 | 28.37 |
| **2** | 13 | country | 7.72 | 3.06 | 18.36 | 21.55 | 4.41 | 10.39 | 8.84 | 4.54 | 9.60 | 30.15 | 9.50 | 6.12 | 25.68 |
| **2** | 13 | suburbs | 8.12 | 3.22 | 19.35 | 22.72 | 4.58 | 10.96 | 9.14 | 4.67 | 9.87 | 31.78 | 9.77 | 6.26 | 27.10 |
| **2** | 14 | cities | 8.24 | 3.26 | 19.68 | 23.12 | 4.56 | 11.16 | 9.05 | 4.59 | 9.70 | 32.32 | 9.60 | 6.11 | 27.60 |
| **2** | 14 | country | 7.55 | 2.99 | 17.95 | 21.06 | 4.31 | 10.15 | 8.65 | 4.45 | 9.40 | 29.47 | 9.31 | 6.00 | 25.10 |
| **2** | 14 | suburbs | 7.92 | 3.13 | 18.86 | 22.14 | 4.47 | 10.68 | 8.92 | 4.56 | 9.63 | 30.97 | 9.54 | 6.12 | 26.40 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2** | 15 | cities | 8.90 | 3.52 | 21.26 | 24.98 | 4.92 | 12.06 | 9.76 | 4.95 | 10.46 | 34.91 | 10.36 | 6.59 | 29.82 |
| **2** | 15 | country | 7.99 | 3.16 | 19.01 | 22.31 | 4.54 | 10.75 | 9.09 | 4.66 | 9.86 | 31.21 | 9.76 | 6.28 | 26.59 |
| **2** | 15 | suburbs | 8.46 | 3.35 | 20.15 | 23.67 | 4.76 | 11.42 | 9.49 | 4.84 | 10.24 | 33.10 | 10.14 | 6.49 | 28.22 |
| **2** | 16 | cities | 29.50 | 11.76 | 69.57 | 81.42 | 17.97 | 39.10 | 36.94 | 19.55 | 41.34 | 114.17 | 40.94 | 27.27 | 96.70 |
| **2** | 16 | country | 31.22 | 12.53 | 72.99 | 85.18 | 20.52 | 40.75 | 43.55 | 24.03 | 50.79 | 119.70 | 50.32 | 35.18 | 100.81 |
| **2** | 16 | suburbs | 31.57 | 12.64 | 74.03 | 86.47 | 20.25 | 41.41 | 42.51 | 23.12 | 48.87 | 121.42 | 48.42 | 33.27 | 102.44 |
| **3** | 1 | cities | 22.47 | 17.85 | 5.01 | 33.38 | 0.93 | 57.58 | 4.72 | 20.30 | 18.46 | 25.73 | 18.47 | 19.86 | 69.13 |
| **3** | 1 | country | 17.01 | 13.48 | 3.78 | 25.41 | 0.70 | 43.94 | 3.56 | 15.47 | 13.97 | 19.63 | 13.98 | 15.38 | 52.62 |
| **3** | 1 | suburbs | 19.19 | 15.22 | 4.27 | 28.59 | 0.79 | 49.38 | 4.02 | 17.40 | 15.76 | 22.06 | 15.77 | 17.16 | 59.20 |
| **3** | 2 | cities | 22.47 | 17.85 | 5.01 | 33.38 | 0.93 | 57.58 | 4.72 | 20.30 | 18.46 | 25.73 | 18.47 | 19.86 | 69.13 |
| **3** | 2 | country | 17.01 | 13.48 | 3.78 | 25.41 | 0.70 | 43.94 | 3.56 | 15.47 | 13.97 | 19.63 | 13.98 | 15.38 | 52.62 |
| **3** | 2 | suburbs | 19.19 | 15.22 | 4.27 | 28.59 | 0.79 | 49.38 | 4.02 | 17.40 | 15.76 | 22.06 | 15.77 | 17.16 | 59.20 |
| **3** | 3 | cities | 23.76 | 18.93 | 5.31 | 35.06 | 0.98 | 60.30 | 5.01 | 21.30 | 19.54 | 26.94 | 19.53 | 20.45 | 72.60 |
| **3** | 3 | country | 16.80 | 13.41 | 3.77 | 24.73 | 0.70 | 42.49 | 3.55 | 15.02 | 13.82 | 18.99 | 13.82 | 14.32 | 51.22 |
| **3** | 3 | suburbs | 19.51 | 15.56 | 4.37 | 28.74 | 0.81 | 49.41 | 4.12 | 17.46 | 16.05 | 22.08 | 16.04 | 16.69 | 59.53 |
| **3** | 4 | cities | 53.54 | 41.50 | 11.59 | 83.77 | 2.12 | 147.88 | 10.88 | 51.41 | 43.77 | 66.02 | 43.89 | 59.26 | 173.36 |
| **3** | 4 | country | 36.34 | 28.33 | 7.92 | 56.17 | 1.45 | 98.59 | 7.44 | 34.40 | 29.75 | 44.03 | 29.81 | 37.99 | 116.26 |
| **3** | 4 | suburbs | 43.20 | 33.57 | 9.38 | 67.22 | 1.72 | 118.35 | 8.81 | 41.21 | 35.34 | 52.85 | 35.43 | 46.57 | 139.12 |
| **3** | 13 | cities | 24.79 | 20.04 | 5.64 | 35.54 | 1.05 | 60.41 | 5.33 | 21.49 | 20.44 | 27.00 | 20.41 | 19.16 | 73.62 |
| **3** | 13 | country | 19.45 | 15.64 | 4.40 | 28.20 | 0.82 | 48.16 | 4.15 | 17.09 | 16.02 | 21.53 | 16.01 | 15.67 | 58.42 |
| **3** | 13 | suburbs | 21.59 | 17.39 | 4.89 | 31.19 | 0.91 | 53.18 | 4.62 | 18.88 | 17.79 | 23.77 | 17.77 | 17.15 | 64.61 |
| **3** | 14 | cities | 24.37 | 19.69 | 5.54 | 35.00 | 1.03 | 59.53 | 5.24 | 21.17 | 20.10 | 26.61 | 20.07 | 18.94 | 72.50 |
| **3** | 14 | country | 18.97 | 15.23 | 4.28 | 27.55 | 0.80 | 47.08 | 4.04 | 16.70 | 15.62 | 21.04 | 15.61 | 15.38 | 57.07 |
| **3** | 14 | suburbs | 21.17 | 17.03 | 4.79 | 30.63 | 0.89 | 52.26 | 4.52 | 18.55 | 17.44 | 23.36 | 17.42 | 16.92 | 63.45 |
| **3** | 15 | cities | 26.77 | 21.67 | 6.10 | 38.29 | 1.14 | 65.01 | 5.77 | 23.14 | 22.08 | 29.06 | 22.04 | 20.51 | 79.32 |
| **3** | 15 | country | 20.76 | 16.72 | 4.70 | 29.98 | 0.87 | 51.10 | 4.44 | 18.15 | 17.11 | 22.84 | 17.08 | 16.47 | 62.09 |
| **3** | 15 | suburbs | 23.11 | 18.64 | 5.25 | 33.27 | 0.98 | 56.64 | 4.96 | 20.13 | 19.05 | 25.32 | 19.02 | 18.13 | 68.91 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | 16 | cities | 79.18 | 61.32 | 17.12 | 124.16 | 3.13 | 219.39 | 16.06 | 76.23 | 64.72 | 97.95 | 64.91 | 88.53 | 256.93 |
| **3** | 16 | country | 52.82 | 41.21 | 11.52 | 81.48 | 2.11 | 142.90 | 10.82 | 49.88 | 43.24 | 63.81 | 43.33 | 54.75 | 168.65 |
| **3** | 16 | suburbs | 62.51 | 48.63 | 13.59 | 97.05 | 2.49 | 170.71 | 12.76 | 59.48 | 51.14 | 76.22 | 51.27 | 66.71 | 200.86 |
| **4** | 1 | cities | 5.50 | 2.26 | 5.94 | 10.53 | 1.54 | 7.17 | 5.85 | 6.72 | 12.36 | 8.36 | 12.03 | 10.72 | 17.32 |
| **4** | 1 | country | 4.97 | 1.95 | 6.90 | 27.97 | 1.35 | 6.29 | 5.14 | 6.75 | 11.38 | (11.16) | 11.97 | 79.93 | 15.81 |
| **4** | 1 | suburbs | 5.17 | 2.08 | 6.21 | 14.10 | 1.43 | 6.64 | 5.42 | 6.62 | 11.71 | 32.47 | 11.79 | 16.71 | 16.35 |
| **4** | 2 | cities | 5.83 | 2.39 | 6.38 | 11.62 | 1.63 | 7.58 | 6.19 | 7.17 | 13.12 | 9.83 | 12.82 | 11.98 | 18.37 |
| **4** | 2 | country | 5.29 | 2.06 | 7.64 | 40.25 | 1.44 | 6.67 | 5.45 | 7.29 | 12.14 | (8.92) | 12.92 | 159.85 | 16.86 |
| **4** | 2 | suburbs | 5.49 | 2.20 | 6.74 | 16.36 | 1.52 | 7.04 | 5.74 | 7.09 | 12.46 | 91.83 | 12.63 | 20.43 | 17.37 |
| **4** | 3 | cities | 5.60 | 2.34 | 5.58 | 8.60 | 1.58 | 7.37 | 6.01 | 6.60 | 12.49 | 5.24 | 11.83 | 8.22 | 17.54 |
| **4** | 3 | country | 4.90 | 1.98 | 5.78 | 12.54 | 1.36 | 6.31 | 5.15 | 6.22 | 11.09 | 20.70 | 11.10 | 14.36 | 15.48 |
| **4** | 3 | suburbs | 5.18 | 2.13 | 5.57 | 9.79 | 1.45 | 6.74 | 5.50 | 6.31 | 11.63 | 7.64 | 11.30 | 9.93 | 16.28 |
| **4** | 4 | cities | 9.13 | 3.78 | 9.52 | 15.83 | 2.57 | 11.94 | 9.74 | 10.98 | 20.45 | 10.98 | 19.67 | 15.62 | 28.68 |
| **4** | 4 | country | 7.88 | 3.11 | 10.55 | 35.26 | 2.16 | 10.01 | 8.18 | 10.55 | 18.00 | (26.42) | 18.74 | 64.49 | 25.04 |
| **4** | 4 | suburbs | 8.35 | 3.38 | 9.64 | 19.76 | 2.32 | 10.79 | 8.80 | 10.51 | 18.87 | 24.65 | 18.76 | 21.82 | 26.36 |
| **4** | 13 | cities | 6.12 | 2.68 | 5.15 | 6.38 | 1.78 | 8.28 | 6.74 | 6.64 | 13.43 | 2.98 | 11.97 | 5.64 | 18.99 |
| **4** | 13 | country | 5.56 | 2.35 | 5.28 | 7.58 | 1.58 | 7.37 | 6.00 | 6.40 | 12.34 | 4.17 | 11.49 | 7.04 | 17.37 |
| **4** | 13 | suburbs | 5.80 | 2.49 | 5.23 | 7.00 | 1.67 | 7.76 | 6.32 | 6.51 | 12.82 | 3.54 | 11.72 | 6.35 | 18.08 |
| **4** | 14 | cities | 5.91 | 2.59 | 4.99 | 6.20 | 1.72 | 7.99 | 6.50 | 6.42 | 12.98 | 2.90 | 11.58 | 5.49 | 18.35 |
| **4** | 14 | country | 5.35 | 2.26 | 5.13 | 7.45 | 1.52 | 7.08 | 5.77 | 6.18 | 11.89 | 4.16 | 11.11 | 6.95 | 16.72 |
| **4** | 14 | suburbs | 5.59 | 2.40 | 5.07 | 6.83 | 1.61 | 7.47 | 6.09 | 6.29 | 12.37 | 3.49 | 11.32 | 6.21 | 17.43 |
| **4** | 15 | cities | 6.50 | 2.84 | 5.47 | 6.78 | 1.89 | 8.79 | 7.16 | 7.05 | 14.26 | 3.17 | 12.72 | 6.00 | 20.17 |
| **4** | 15 | country | 5.86 | 2.49 | 5.47 | 7.67 | 1.67 | 7.79 | 6.35 | 6.69 | 12.99 | 4.10 | 12.03 | 7.06 | 18.29 |
| **4** | 15 | suburbs | 6.13 | 2.64 | 5.48 | 7.26 | 1.76 | 8.21 | 6.69 | 6.85 | 13.54 | 3.63 | 12.34 | 6.56 | 19.10 |
| **4** | 16 | cities | 14.48 | 5.84 | 17.04 | 36.73 | 4.01 | 18.65 | 15.22 | 18.37 | 32.75 | 6.34 | 32.77 | 13.11 | 45.73 |
| **4** | 16 | country | 12.67 | 4.91 | 18.95 | 137.34 | 3.43 | 15.92 | 13.01 | 17.69 | 29.15 | (12.67) | 31.33 | (26.22) | 40.43 |
| **4** | 16 | suburbs | 13.49 | 5.31 | 18.23 | 63.77 | 3.69 | 17.12 | 13.98 | 18.12 | 30.84 | (7.26) | 32.19 | 13.11 | 42.88 |

## WOOD WOOL

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5** | 1 | cities | 6.72 | 4.02 | 5.11 | 8.63 | 1.51 | 3.23 | 5.50 | 5.71 | 10.20 | 6.98 | 9.85 | 2.94 | 14.39 |
| **5** | 1 | country | 5.77 | 3.45 | 4.39 | 7.43 | 1.29 | 2.78 | 4.73 | 4.91 | 8.78 | 6.01 | 8.47 | 2.54 | 12.38 |
| **5** | 1 | suburbs | 6.19 | 3.70 | 4.71 | 7.95 | 1.39 | 2.97 | 5.07 | 5.26 | 9.40 | 6.43 | 9.08 | 2.71 | 13.26 |
| **5** | 2 | cities | 6.72 | 4.02 | 5.11 | 8.63 | 1.51 | 3.23 | 5.50 | 5.71 | 10.20 | 6.98 | 9.85 | 2.94 | 14.39 |
| **5** | 2 | country | 5.77 | 3.45 | 4.39 | 7.43 | 1.29 | 2.78 | 4.73 | 4.91 | 8.78 | 6.01 | 8.47 | 2.54 | 12.38 |
| **5** | 2 | suburbs | 6.19 | 3.70 | 4.71 | 7.95 | 1.39 | 2.97 | 5.07 | 5.26 | 9.40 | 6.43 | 9.08 | 2.71 | 13.26 |
| **5** | 3 | cities | 6.63 | 3.97 | 5.04 | 8.51 | 1.48 | 3.18 | 5.42 | 5.63 | 10.06 | 6.89 | 9.72 | 2.90 | 14.19 |
| **5** | 3 | country | 5.59 | 3.35 | 4.25 | 7.18 | 1.25 | 2.69 | 4.58 | 4.75 | 8.49 | 5.81 | 8.20 | 2.45 | 11.98 |
| **5** | 3 | suburbs | 6.05 | 3.62 | 4.60 | 7.77 | 1.36 | 2.90 | 4.95 | 5.14 | 9.19 | 6.29 | 8.87 | 2.65 | 12.96 |
| **5** | 4 | cities | 12.04 | 7.22 | 9.20 | 15.76 | 2.68 | 5.98 | 9.85 | 10.42 | 18.55 | 12.82 | 17.92 | 5.45 | 26.23 |
| **5** | 4 | country | 9.89 | 5.93 | 7.55 | 12.94 | 2.20 | 4.91 | 8.09 | 8.55 | 15.22 | 10.52 | 14.70 | 4.47 | 21.53 |
| **5** | 4 | suburbs | 10.80 | 6.47 | 8.24 | 14.10 | 2.40 | 5.34 | 8.83 | 9.32 | 16.60 | 11.46 | 16.03 | 4.87 | 23.47 |
| **5** | 13 | cities | 7.96 | 4.76 | 6.04 | 10.17 | 1.79 | 3.79 | 6.52 | 6.72 | 12.04 | 8.22 | 11.62 | 3.45 | 16.97 |
| **5** | 13 | country | 6.94 | 4.15 | 5.28 | 8.89 | 1.56 | 3.32 | 5.68 | 5.88 | 10.52 | 7.19 | 10.16 | 3.03 | 14.84 |
| **5** | 13 | suburbs | 7.40 | 4.43 | 5.62 | 9.47 | 1.66 | 3.53 | 6.06 | 6.26 | 11.21 | 7.66 | 10.82 | 3.22 | 15.79 |
| **5** | 14 | cities | 7.65 | 4.57 | 5.81 | 9.77 | 1.72 | 3.64 | 6.26 | 6.46 | 11.57 | 7.90 | 11.17 | 3.32 | 16.31 |
| **5** | 14 | country | 6.69 | 4.00 | 5.08 | 8.57 | 1.50 | 3.20 | 5.47 | 5.66 | 10.14 | 6.93 | 9.79 | 2.92 | 14.29 |
| **5** | 14 | suburbs | 7.12 | 4.26 | 5.41 | 9.11 | 1.60 | 3.40 | 5.83 | 6.02 | 10.78 | 7.37 | 10.41 | 3.10 | 15.20 |
| **5** | 15 | cities | 8.48 | 5.07 | 6.44 | 10.83 | 1.90 | 4.03 | 6.94 | 7.16 | 12.83 | 8.75 | 12.38 | 3.68 | 18.07 |
| **5** | 15 | country | 7.38 | 4.42 | 5.61 | 9.45 | 1.66 | 3.53 | 6.04 | 6.25 | 11.19 | 7.64 | 10.80 | 3.22 | 15.77 |
| **5** | 15 | suburbs | 7.87 | 4.71 | 5.98 | 10.07 | 1.77 | 3.75 | 6.44 | 6.66 | 11.92 | 8.14 | 11.51 | 3.42 | 16.80 |
| **5** | 16 | cities | 16.59 | 9.94 | 12.67 | 21.68 | 3.69 | 8.21 | 13.57 | 14.33 | 25.52 | 17.62 | 24.65 | 7.49 | 36.08 |
| **5** | 16 | country | 14.63 | 8.77 | 11.18 | 19.19 | 3.25 | 7.29 | 11.97 | 12.69 | 22.56 | 15.62 | 21.80 | 6.65 | 31.93 |
| **5** | 16 | suburbs | 15.44 | 9.25 | 11.79 | 20.20 | 3.43 | 7.66 | 12.63 | 13.35 | 23.76 | 16.42 | 22.96 | 6.99 | 33.61 |
| **6** | 1 | cities | 4.01 | 2.93 | 3.92 | 11.61 | 0.83 | 21.51 | 3.46 | 9.09 | 10.86 | 13.13 | 10.28 | 12.45 | 15.53 |
| **6** | 1 | country | 3.72 | 2.72 | 3.64 | 10.98 | 0.76 | 21.59 | 3.19 | 8.77 | 10.48 | 12.75 | 9.62 | 13.61 | 14.70 |
| **6** | 1 | suburbs | 3.86 | 2.82 | 3.77 | 11.32 | 0.79 | 21.85 | 3.31 | 8.99 | 10.74 | 13.04 | 9.95 | 13.40 | 15.14 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{\text{CC}}$** | **PBT$_{\text{OD}}$** | **PBT$_{\text{HT\_CE}}$** | **PBT$_{\text{HT\_nCE}}$** | **PBT$_{\text{PM}}$** | **PBT$_{\text{IR\_hh}}$** | **PBT$_{\text{POF}}$** | **PBT$_{\text{AC}}$** | **PBT$_{\text{ET}}$** | **PBT$_{\text{EuF}}$** | **PBT$_{\text{EuM}}$** | **PBT$_{\text{Ec\_FW}}$** | **PBT$_{\text{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6** | 2 | cities | 4.01 | 2.93 | 3.92 | 11.61 | 0.83 | 21.51 | 3.46 | 9.09 | 10.86 | 13.13 | 10.28 | 12.45 | 15.53 |
| **6** | 2 | country | 3.72 | 2.72 | 3.64 | 10.98 | 0.76 | 21.59 | 3.19 | 8.77 | 10.48 | 12.75 | 9.62 | 13.61 | 14.70 |
| **6** | 2 | suburbs | 3.86 | 2.82 | 3.77 | 11.32 | 0.79 | 21.85 | 3.31 | 8.99 | 10.74 | 13.04 | 9.95 | 13.40 | 15.14 |
| **6** | 3 | cities | 3.77 | 2.75 | 3.68 | 10.75 | 0.78 | 19.18 | 3.26 | 8.31 | 9.93 | 11.96 | 9.59 | 10.58 | 14.37 |
| **6** | 3 | country | 3.52 | 2.57 | 3.44 | 10.17 | 0.73 | 18.78 | 3.03 | 7.96 | 9.51 | 11.49 | 9.01 | 10.84 | 13.60 |
| **6** | 3 | suburbs | 3.64 | 2.65 | 3.55 | 10.47 | 0.75 | 19.17 | 3.14 | 8.17 | 9.76 | 11.79 | 9.30 | 10.93 | 14.01 |
| **6** | 4 | cities | 5.69 | 4.15 | 5.55 | 16.38 | 1.18 | 29.99 | 4.90 | 12.78 | 15.27 | 18.43 | 14.53 | 17.10 | 21.90 |
| **6** | 4 | country | 5.23 | 3.82 | 5.11 | 15.34 | 1.08 | 29.61 | 4.49 | 12.18 | 14.55 | 17.67 | 13.49 | 18.15 | 20.53 |
| **6** | 4 | suburbs | 5.44 | 3.97 | 5.31 | 15.87 | 1.12 | 30.09 | 4.68 | 12.53 | 14.96 | 18.13 | 13.99 | 18.00 | 21.23 |
| **6** | 13 | cities | 4.59 | 3.34 | 4.47 | 12.75 | 0.96 | 21.27 | 3.99 | 9.63 | 11.51 | 13.76 | 11.53 | 10.88 | 17.04 |
| **6** | 13 | country | 4.30 | 3.13 | 4.19 | 12.14 | 0.90 | 21.07 | 3.72 | 9.30 | 11.11 | 13.34 | 10.89 | 11.25 | 16.23 |
| **6** | 13 | suburbs | 4.43 | 3.23 | 4.32 | 12.43 | 0.92 | 21.28 | 3.84 | 9.48 | 11.32 | 13.57 | 11.18 | 11.19 | 16.62 |
| **6** | 14 | cities | 4.38 | 3.19 | 4.27 | 12.18 | 0.92 | 20.36 | 3.80 | 9.21 | 11.00 | 13.15 | 11.00 | 10.44 | 16.27 |
| **6** | 14 | country | 4.09 | 2.98 | 3.99 | 11.57 | 0.85 | 20.15 | 3.54 | 8.87 | 10.60 | 12.73 | 10.37 | 10.81 | 15.47 |
| **6** | 14 | suburbs | 4.23 | 3.08 | 4.12 | 11.87 | 0.88 | 20.39 | 3.66 | 9.06 | 10.83 | 12.98 | 10.67 | 10.75 | 15.87 |
| **6** | 15 | cities | 4.80 | 3.49 | 4.67 | 13.30 | 1.01 | 22.12 | 4.17 | 10.04 | 11.99 | 14.33 | 12.04 | 11.27 | 17.78 |
| **6** | 15 | country | 4.50 | 3.28 | 4.38 | 12.64 | 0.94 | 21.72 | 3.90 | 9.65 | 11.53 | 13.83 | 11.36 | 11.47 | 16.90 |
| **6** | 15 | suburbs | 4.63 | 3.37 | 4.51 | 12.96 | 0.97 | 22.03 | 4.01 | 9.86 | 11.77 | 14.10 | 11.67 | 11.50 | 17.32 |
| **6** | 16 | cities | 8.19 | 5.98 | 8.00 | 23.79 | 1.69 | 44.61 | 7.05 | 18.71 | 22.35 | 27.05 | 21.02 | 26.26 | 31.82 |
| **6** | 16 | country | 7.60 | 5.55 | 7.43 | 22.34 | 1.56 | 43.40 | 6.52 | 17.78 | 21.23 | 25.80 | 19.62 | 26.86 | 29.89 |
| **6** | 16 | suburbs | 7.88 | 5.75 | 7.69 | 23.07 | 1.62 | 44.32 | 6.77 | 18.29 | 21.85 | 26.52 | 20.30 | 26.99 | 30.87 |
| **7** | 5 | cities | 5.19 | 2.25 | 4.25 | 9.68 | 1.13 | 1.38 | 4.58 | 7.04 | 11.06 | 10.01 | 10.57 | 3.30 | 10.85 |
| **7** | 5 | country | 4.67 | 2.02 | 3.82 | 8.69 | 1.01 | 1.23 | 4.13 | 6.34 | 9.96 | 8.99 | 9.51 | 2.95 | 9.72 |
| **7** | 5 | suburbs | 4.89 | 2.10 | 3.99 | 9.07 | 1.06 | 1.27 | 4.32 | 6.63 | 10.41 | 9.38 | 9.94 | 3.05 | 10.10 |
| **7** | 6 | cities | 4.78 | 2.07 | 3.91 | 8.91 | 1.04 | 1.27 | 4.22 | 6.49 | 10.19 | 9.22 | 9.73 | 3.05 | 10.00 |
| **7** | 6 | country | 4.28 | 1.85 | 3.50 | 7.97 | 0.93 | 1.13 | 3.78 | 5.81 | 9.12 | 8.24 | 8.71 | 2.71 | 8.92 |
| **7** | 6 | suburbs | 4.49 | 1.93 | 3.66 | 8.33 | 0.98 | 1.17 | 3.97 | 6.09 | 9.56 | 8.62 | 9.13 | 2.81 | 9.29 |

## WOOD WOOL

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7** | 7 | cities | 5.97 | 2.53 | 4.84 | 10.97 | 1.30 | 1.49 | 5.28 | 8.08 | 12.70 | 11.37 | 12.10 | 3.62 | 12.12 |
| **7** | 7 | country | 5.47 | 2.33 | 4.44 | 10.08 | 1.19 | 1.38 | 4.84 | 7.41 | 11.64 | 10.44 | 11.10 | 3.35 | 11.16 |
| **7** | 7 | suburbs | 5.68 | 2.41 | 4.60 | 10.43 | 1.23 | 1.42 | 5.02 | 7.68 | 12.07 | 10.81 | 11.51 | 3.44 | 11.52 |
| **7** | 8 | cities | 15.33 | 6.65 | 12.56 | 28.63 | 3.33 | 4.09 | 13.54 | 20.82 | 32.69 | 29.60 | 31.23 | 9.81 | 32.15 |
| **7** | 8 | country | 13.30 | 5.79 | 10.91 | 24.89 | 2.89 | 3.58 | 11.74 | 18.07 | 28.37 | 25.73 | 27.11 | 8.57 | 28.02 |
| **7** | 8 | suburbs | 14.06 | 6.09 | 11.51 | 26.22 | 3.05 | 3.73 | 12.42 | 19.09 | 29.98 | 27.12 | 28.64 | 8.95 | 29.40 |
| **7** | 17 | cities | 5.79 | 2.46 | 4.70 | 10.66 | 1.26 | 1.46 | 5.12 | 7.84 | 12.32 | 11.05 | 11.74 | 3.53 | 11.79 |
| **7** | 17 | country | 5.33 | 2.32 | 4.38 | 9.99 | 1.16 | 1.45 | 4.71 | 7.24 | 11.37 | 10.33 | 10.87 | 3.46 | 11.27 |
| **7** | 17 | suburbs | 5.52 | 2.36 | 4.49 | 10.21 | 1.20 | 1.42 | 4.88 | 7.48 | 11.75 | 10.57 | 11.21 | 3.42 | 11.35 |
| **7** | 18 | cities | 5.91 | 2.52 | 4.80 | 10.89 | 1.29 | 1.49 | 5.23 | 8.00 | 12.58 | 11.28 | 11.99 | 3.61 | 12.05 |
| **7** | 18 | country | 5.41 | 2.36 | 4.44 | 10.13 | 1.17 | 1.46 | 4.77 | 7.35 | 11.54 | 10.47 | 11.03 | 3.50 | 11.42 |
| **7** | 18 | suburbs | 5.61 | 2.40 | 4.57 | 10.39 | 1.22 | 1.44 | 4.96 | 7.61 | 11.95 | 10.75 | 11.40 | 3.48 | 11.55 |
| **7** | 19 | cities | 9.27 | 3.95 | 7.53 | 17.10 | 2.01 | 2.35 | 8.19 | 12.55 | 19.72 | 17.71 | 18.81 | 5.69 | 18.96 |
| **7** | 19 | country | 8.40 | 3.62 | 6.86 | 15.60 | 1.83 | 2.19 | 7.42 | 11.40 | 17.90 | 16.15 | 17.09 | 5.27 | 17.41 |
| **7** | 19 | suburbs | 8.77 | 3.75 | 7.14 | 16.22 | 1.91 | 2.25 | 7.75 | 11.88 | 18.67 | 16.80 | 17.81 | 5.43 | 18.02 |
| **7** | 20 | cities | 24.53 | 10.59 | 20.04 | 45.64 | 5.33 | 6.45 | 21.66 | 33.28 | 52.27 | 47.22 | 49.91 | 15.50 | 51.05 |
| **7** | 20 | country | 19.52 | 8.46 | 15.98 | 36.42 | 4.24 | 5.19 | 17.24 | 26.50 | 41.61 | 37.66 | 39.75 | 12.45 | 40.86 |
| **7** | 20 | suburbs | 21.73 | 9.39 | 17.77 | 40.46 | 4.72 | 5.73 | 19.19 | 29.49 | 46.32 | 41.86 | 44.23 | 13.76 | 45.29 |
| **8** | 5 | cities | 5.15 | 2.85 | 2.08 | 5.96 | 0.45 | 4.34 | 2.12 | 3.47 | 5.98 | 3.21 | 5.91 | 4.40 | 17.03 |
| **8** | 5 | country | 4.82 | 2.66 | 1.95 | 5.59 | 0.42 | 4.08 | 1.98 | 3.25 | 5.59 | 3.02 | 5.53 | 4.13 | 15.94 |
| **8** | 5 | suburbs | 4.98 | 2.75 | 2.01 | 5.76 | 0.43 | 4.20 | 2.05 | 3.35 | 5.78 | 3.11 | 5.71 | 4.25 | 16.46 |
| **8** | 6 | cities | 4.70 | 2.60 | 1.90 | 5.44 | 0.41 | 3.97 | 1.93 | 3.17 | 5.46 | 2.94 | 5.39 | 4.02 | 15.55 |
| **8** | 6 | country | 4.39 | 2.43 | 1.78 | 5.10 | 0.38 | 3.73 | 1.81 | 2.97 | 5.10 | 2.76 | 5.04 | 3.78 | 14.55 |
| **8** | 6 | suburbs | 4.55 | 2.51 | 1.84 | 5.26 | 0.39 | 3.83 | 1.87 | 3.06 | 5.27 | 2.84 | 5.21 | 3.88 | 15.03 |
| **8** | 7 | cities | 6.18 | 3.42 | 2.50 | 7.11 | 0.54 | 5.17 | 2.54 | 4.15 | 7.17 | 3.82 | 7.08 | 5.24 | 20.40 |
| **8** | 7 | country | 5.79 | 3.20 | 2.34 | 6.68 | 0.50 | 4.86 | 2.38 | 3.89 | 6.72 | 3.59 | 6.64 | 4.92 | 19.13 |
| **8** | 7 | suburbs | 5.98 | 3.31 | 2.42 | 6.89 | 0.52 | 5.01 | 2.46 | 4.02 | 6.94 | 3.70 | 6.86 | 5.07 | 19.75 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT**$_{CC}$ | **PBT**$_{OD}$ | **PBT**$_{HT\_CE}$ | **PBT**$_{HT\_nCE}$ | **PBT**$_{PM}$ | **PBT**$_{IR\_hh}$ | **PBT**$_{POF}$ | **PBT**$_{AC}$ | **PBT**$_{ET}$ | **PBT**$_{EuF}$ | **PBT**$_{EuM}$ | **PBT**$_{Ec\_FW}$ | **PBT**$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **8** | 8 | cities | 13.85 | 7.65 | 5.63 | 17.53 | 1.18 | 13.49 | 5.62 | 9.95 | 16.24 | 10.10 | 16.09 | 13.68 | 47.26 |
| **8** | 8 | country | 13.03 | 7.20 | 5.30 | 16.61 | 1.11 | 12.83 | 5.28 | 9.40 | 15.29 | 9.61 | 15.15 | 13.02 | 44.56 |
| **8** | 8 | suburbs | 13.42 | 7.41 | 5.45 | 16.96 | 1.14 | 13.03 | 5.44 | 9.63 | 15.73 | 9.75 | 15.59 | 13.22 | 45.77 |
| **8** | 17 | cities | 5.79 | 3.21 | 2.34 | 6.68 | 0.50 | 4.86 | 2.38 | 3.89 | 6.72 | 3.59 | 6.64 | 4.92 | 19.13 |
| **8** | 17 | country | 5.45 | 3.01 | 2.20 | 6.29 | 0.47 | 4.58 | 2.24 | 3.67 | 6.32 | 3.39 | 6.25 | 4.64 | 18.01 |
| **8** | 17 | suburbs | 5.62 | 3.11 | 2.27 | 6.48 | 0.49 | 4.71 | 2.31 | 3.78 | 6.51 | 3.49 | 6.44 | 4.77 | 18.55 |
| **8** | 18 | cities | 5.87 | 3.25 | 2.37 | 6.76 | 0.51 | 4.92 | 2.41 | 3.94 | 6.81 | 3.64 | 6.72 | 4.98 | 19.38 |
| **8** | 18 | country | 5.52 | 3.05 | 2.23 | 6.38 | 0.48 | 4.65 | 2.27 | 3.71 | 6.40 | 3.44 | 6.32 | 4.71 | 18.24 |
| **8** | 18 | suburbs | 5.69 | 3.15 | 2.30 | 6.56 | 0.49 | 4.78 | 2.34 | 3.82 | 6.60 | 3.53 | 6.52 | 4.84 | 18.79 |
| **8** | 19 | cities | 8.90 | 4.92 | 3.60 | 10.43 | 0.77 | 7.66 | 3.65 | 6.05 | 10.34 | 5.68 | 10.23 | 7.76 | 29.57 |
| **8** | 19 | country | 8.45 | 4.67 | 3.42 | 9.96 | 0.73 | 7.34 | 3.46 | 5.77 | 9.82 | 5.45 | 9.71 | 7.44 | 28.12 |
| **8** | 19 | suburbs | 8.66 | 4.79 | 3.50 | 10.17 | 0.75 | 7.48 | 3.55 | 5.90 | 10.07 | 5.54 | 9.96 | 7.58 | 28.80 |
| **8** | 20 | cities | 16.17 | 8.93 | 6.56 | 20.11 | 1.38 | 15.30 | 6.57 | 11.47 | 18.92 | 11.43 | 18.73 | 15.51 | 54.84 |
| **8** | 20 | country | 15.20 | 8.40 | 6.17 | 19.11 | 1.30 | 14.64 | 6.17 | 10.87 | 17.81 | 10.95 | 17.64 | 14.85 | 51.75 |
| **8** | 20 | suburbs | 15.63 | 8.63 | 6.34 | 19.46 | 1.34 | 14.81 | 6.35 | 11.10 | 18.29 | 11.06 | 18.11 | 15.02 | 53.03 |
| **9** | 5 | cities | 3.16 | 2.59 | 2.26 | 4.48 | 0.59 | 3.68 | 2.47 | 3.79 | 6.10 | 2.52 | 5.79 | 3.19 | 12.16 |
| **9** | 5 | country | 2.88 | 2.36 | 2.06 | 4.09 | 0.53 | 3.38 | 2.25 | 3.45 | 5.56 | 2.31 | 5.28 | 2.92 | 11.10 |
| **9** | 5 | suburbs | 3.00 | 2.46 | 2.14 | 4.26 | 0.56 | 3.51 | 2.35 | 3.60 | 5.79 | 2.40 | 5.50 | 3.04 | 11.56 |
| **9** | 6 | cities | 2.86 | 2.35 | 2.04 | 4.06 | 0.53 | 3.34 | 2.24 | 3.43 | 5.52 | 2.28 | 5.25 | 2.89 | 11.01 |
| **9** | 6 | country | 2.61 | 2.14 | 1.86 | 3.70 | 0.48 | 3.06 | 2.04 | 3.12 | 5.03 | 2.09 | 4.78 | 2.64 | 10.04 |
| **9** | 6 | suburbs | 2.72 | 2.23 | 1.94 | 3.86 | 0.50 | 3.18 | 2.13 | 3.26 | 5.25 | 2.17 | 4.98 | 2.75 | 10.47 |
| **9** | 7 | cities | 3.91 | 3.21 | 2.79 | 5.53 | 0.73 | 4.53 | 3.06 | 4.68 | 7.55 | 3.11 | 7.17 | 3.93 | 15.04 |
| **9** | 7 | country | 3.59 | 2.95 | 2.56 | 5.08 | 0.67 | 4.18 | 2.81 | 4.30 | 6.93 | 2.86 | 6.58 | 3.62 | 13.82 |
| **9** | 7 | suburbs | 3.74 | 3.06 | 2.66 | 5.28 | 0.69 | 4.33 | 2.92 | 4.47 | 7.20 | 2.97 | 6.84 | 3.76 | 14.36 |
| **9** | 8 | cities | 7.85 | 6.45 | 5.62 | 11.24 | 1.45 | 9.39 | 6.13 | 9.43 | 15.17 | 6.37 | 14.42 | 8.05 | 30.34 |
| **9** | 8 | country | 7.18 | 5.91 | 5.14 | 10.32 | 1.33 | 8.67 | 5.60 | 8.63 | 13.88 | 5.87 | 13.20 | 7.41 | 27.80 |
| **9** | 8 | suburbs | 7.47 | 6.14 | 5.34 | 10.71 | 1.38 | 8.97 | 5.83 | 8.97 | 14.43 | 6.08 | 13.73 | 7.68 | 28.88 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **9** | 17 | cities | 3.75 | 3.07 | 2.67 | 5.29 | 0.69 | 4.33 | 2.93 | 4.48 | 7.22 | 2.97 | 6.86 | 3.76 | 14.39 |
| **9** | 17 | country | 3.45 | 2.83 | 2.46 | 4.88 | 0.64 | 4.00 | 2.70 | 4.13 | 6.66 | 2.74 | 6.32 | 3.47 | 13.27 |
| **9** | 17 | suburbs | 3.58 | 2.93 | 2.55 | 5.06 | 0.66 | 4.15 | 2.80 | 4.29 | 6.91 | 2.85 | 6.56 | 3.60 | 13.76 |
| **9** | 18 | cities | 3.78 | 3.09 | 2.69 | 5.33 | 0.70 | 4.37 | 2.95 | 4.52 | 7.28 | 3.00 | 6.91 | 3.79 | 14.50 |
| **9** | 18 | country | 3.48 | 2.85 | 2.48 | 4.92 | 0.64 | 4.04 | 2.72 | 4.16 | 6.71 | 2.77 | 6.37 | 3.50 | 13.37 |
| **9** | 18 | suburbs | 3.61 | 2.96 | 2.57 | 5.10 | 0.67 | 4.18 | 2.82 | 4.32 | 6.96 | 2.87 | 6.61 | 3.63 | 13.87 |
| **9** | 19 | cities | 5.66 | 4.64 | 4.04 | 8.01 | 1.05 | 6.58 | 4.42 | 6.78 | 10.92 | 4.51 | 10.37 | 5.70 | 21.77 |
| **9** | 19 | country | 5.27 | 4.32 | 3.76 | 7.47 | 0.98 | 6.16 | 4.11 | 6.31 | 10.16 | 4.21 | 9.65 | 5.32 | 20.27 |
| **9** | 19 | suburbs | 5.44 | 4.46 | 3.88 | 7.71 | 1.01 | 6.34 | 4.25 | 6.52 | 10.50 | 4.34 | 9.97 | 5.49 | 20.93 |
| **9** | 20 | cities | 10.05 | 8.25 | 7.18 | 14.30 | 1.86 | 11.85 | 7.85 | 12.05 | 19.40 | 8.08 | 18.43 | 10.22 | 38.74 |
| **9** | 20 | country | 9.22 | 7.57 | 6.59 | 13.16 | 1.70 | 10.95 | 7.20 | 11.06 | 17.80 | 7.45 | 16.92 | 9.41 | 35.58 |
| **9** | 20 | suburbs | 9.63 | 7.90 | 6.88 | 13.72 | 1.78 | 11.39 | 7.52 | 11.55 | 18.59 | 7.76 | 17.67 | 9.81 | 37.14 |
| **10** | 5 | cities | 5.63 | 5.42 | 2.30 | 8.07 | 0.47 | 13.54 | 2.25 | 4.84 | 6.75 | 4.79 | 6.60 | 6.87 | 25.72 |
| **10** | 5 | country | 5.31 | 5.10 | 2.17 | 7.79 | 0.44 | 13.79 | 2.12 | 4.58 | 6.36 | 4.72 | 6.23 | 6.76 | 24.52 |
| **10** | 5 | suburbs | 5.43 | 5.22 | 2.22 | 7.87 | 0.45 | 13.59 | 2.17 | 4.68 | 6.50 | 4.73 | 6.36 | 6.77 | 24.94 |
| **10** | 6 | cities | 5.11 | 4.92 | 2.09 | 7.34 | 0.43 | 12.39 | 2.05 | 4.40 | 6.13 | 4.37 | 5.99 | 6.27 | 23.39 |
| **10** | 6 | country | 4.81 | 4.62 | 1.97 | 7.08 | 0.40 | 12.61 | 1.92 | 4.16 | 5.77 | 4.30 | 5.65 | 6.16 | 22.26 |
| **10** | 6 | suburbs | 4.93 | 4.74 | 2.01 | 7.17 | 0.41 | 12.43 | 1.97 | 4.25 | 5.91 | 4.31 | 5.78 | 6.18 | 22.67 |
| **10** | 7 | cities | 6.94 | 6.71 | 2.83 | 9.67 | 0.58 | 15.26 | 2.79 | 5.95 | 8.33 | 5.60 | 8.12 | 8.05 | 31.30 |
| **10** | 7 | country | 6.58 | 6.34 | 2.68 | 9.29 | 0.55 | 15.13 | 2.64 | 5.65 | 7.89 | 5.45 | 7.70 | 7.83 | 29.86 |
| **10** | 7 | suburbs | 6.71 | 6.47 | 2.73 | 9.42 | 0.56 | 15.13 | 2.69 | 5.76 | 8.05 | 5.50 | 7.85 | 7.90 | 30.36 |
| **10** | 8 | cities | 15.74 | 14.97 | 6.48 | 25.32 | 1.29 | 58.41 | 6.21 | 13.76 | 18.79 | 16.85 | 18.57 | 23.89 | 75.77 |
| **10** | 8 | country | 14.85 | 14.10 | 6.12 | 24.41 | 1.22 | 60.86 | 5.84 | 13.02 | 17.72 | 16.65 | 17.54 | 23.54 | 72.17 |
| **10** | 8 | suburbs | 15.18 | 14.43 | 6.25 | 24.61 | 1.25 | 58.31 | 5.98 | 13.28 | 18.12 | 16.52 | 17.92 | 23.40 | 73.32 |
| **10** | 17 | cities | 6.55 | 6.33 | 2.67 | 9.09 | 0.55 | 14.23 | 2.63 | 5.61 | 7.87 | 5.25 | 7.66 | 7.55 | 29.48 |
| **10** | 17 | country | 6.25 | 6.03 | 2.55 | 8.76 | 0.52 | 14.02 | 2.51 | 5.36 | 7.50 | 5.11 | 7.32 | 7.33 | 28.27 |
| **10** | 17 | suburbs | 6.37 | 6.15 | 2.59 | 8.88 | 0.53 | 14.07 | 2.56 | 5.46 | 7.65 | 5.16 | 7.45 | 7.41 | 28.74 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | 18 | cities | 6.61 | 6.39 | 2.69 | 9.17 | 0.55 | 14.39 | 2.66 | 5.66 | 7.94 | 5.30 | 7.73 | 7.62 | 29.75 |
| **10** | 18 | country | 6.29 | 6.08 | 2.56 | 8.83 | 0.53 | 14.16 | 2.53 | 5.40 | 7.55 | 5.15 | 7.37 | 7.40 | 28.48 |
| **10** | 18 | suburbs | 6.42 | 6.20 | 2.62 | 8.96 | 0.54 | 14.23 | 2.58 | 5.51 | 7.71 | 5.21 | 7.51 | 7.48 | 28.99 |
| **10** | 19 | cities | 10.22 | 9.86 | 4.17 | 14.44 | 0.86 | 23.51 | 4.10 | 8.78 | 12.26 | 8.48 | 11.97 | 12.17 | 46.40 |
| **10** | 19 | country | 9.84 | 9.47 | 4.02 | 14.14 | 0.82 | 23.85 | 3.94 | 8.47 | 11.80 | 8.42 | 11.53 | 12.06 | 45.02 |
| **10** | 19 | suburbs | 10.00 | 9.64 | 4.08 | 14.25 | 0.84 | 23.59 | 4.01 | 8.60 | 12.00 | 8.42 | 11.72 | 12.08 | 45.57 |
| **10** | 20 | cities | 17.36 | 16.69 | 7.10 | 25.25 | 1.45 | 43.83 | 6.94 | 14.98 | 20.81 | 15.20 | 20.37 | 21.77 | 79.89 |
| **10** | 20 | country | 16.63 | 15.96 | 6.81 | 24.64 | 1.38 | 44.69 | 6.63 | 14.38 | 19.92 | 15.08 | 19.53 | 21.56 | 77.17 |
| **10** | 20 | suburbs | 16.94 | 16.27 | 6.93 | 24.83 | 1.41 | 43.93 | 6.76 | 14.63 | 20.29 | 15.06 | 19.88 | 21.55 | 78.23 |
| **11** | 5 | cities | 5.67 | 8.40 | 1.69 | 3.05 | 0.47 | 4.13 | 2.33 | 2.78 | 6.15 | 1.24 | 5.35 | 2.37 | 27.87 |
| **11** | 5 | country | 5.25 | 7.78 | 1.57 | 2.83 | 0.44 | 3.85 | 2.16 | 2.57 | 5.69 | 1.16 | 4.95 | 2.20 | 25.90 |
| **11** | 5 | suburbs | 5.44 | 8.06 | 1.62 | 2.93 | 0.45 | 3.98 | 2.24 | 2.66 | 5.90 | 1.19 | 5.13 | 2.28 | 26.79 |
| **11** | 6 | cities | 5.13 | 7.61 | 1.53 | 2.76 | 0.43 | 3.75 | 2.11 | 2.52 | 5.57 | 1.13 | 4.85 | 2.15 | 25.27 |
| **11** | 6 | country | 4.75 | 7.05 | 1.42 | 2.56 | 0.39 | 3.49 | 1.95 | 2.33 | 5.15 | 1.05 | 4.48 | 2.00 | 23.48 |
| **11** | 6 | suburbs | 4.92 | 7.30 | 1.47 | 2.65 | 0.41 | 3.61 | 2.02 | 2.41 | 5.34 | 1.08 | 4.65 | 2.07 | 24.28 |
| **11** | 7 | cities | 7.00 | 10.35 | 2.09 | 3.74 | 0.58 | 5.05 | 2.89 | 3.43 | 7.61 | 1.52 | 6.61 | 2.90 | 34.20 |
| **11** | 7 | country | 6.50 | 9.61 | 1.94 | 3.48 | 0.54 | 4.71 | 2.68 | 3.18 | 7.06 | 1.42 | 6.13 | 2.70 | 31.81 |
| **11** | 7 | suburbs | 6.72 | 9.95 | 2.01 | 3.60 | 0.56 | 4.86 | 2.78 | 3.29 | 7.31 | 1.46 | 6.35 | 2.79 | 32.89 |
| **11** | 8 | cities | 16.27 | 24.43 | 4.86 | 9.05 | 1.33 | 12.63 | 6.58 | 7.97 | 17.53 | 3.74 | 15.37 | 7.14 | 83.35 |
| **11** | 8 | country | 14.76 | 22.17 | 4.41 | 8.21 | 1.20 | 11.47 | 5.97 | 7.23 | 15.90 | 3.40 | 13.95 | 6.48 | 75.67 |
| **11** | 8 | suburbs | 15.44 | 23.20 | 4.61 | 8.60 | 1.26 | 12.03 | 6.24 | 7.57 | 16.62 | 3.56 | 14.59 | 6.79 | 79.29 |
| **11** | 17 | cities | 6.44 | 9.52 | 1.92 | 3.44 | 0.54 | 4.64 | 2.66 | 3.16 | 7.01 | 1.40 | 6.08 | 2.67 | 31.43 |
| **11** | 17 | country | 6.04 | 8.93 | 1.80 | 3.23 | 0.50 | 4.37 | 2.49 | 2.96 | 6.56 | 1.31 | 5.70 | 2.51 | 29.52 |
| **11** | 17 | suburbs | 6.22 | 9.20 | 1.86 | 3.33 | 0.52 | 4.49 | 2.57 | 3.05 | 6.76 | 1.35 | 5.87 | 2.58 | 30.40 |
| **11** | 18 | cities | 6.49 | 9.60 | 1.94 | 3.47 | 0.54 | 4.68 | 2.68 | 3.18 | 7.06 | 1.41 | 6.13 | 2.69 | 31.68 |
| **11** | 18 | country | 6.08 | 8.99 | 1.81 | 3.26 | 0.51 | 4.40 | 2.51 | 2.98 | 6.61 | 1.32 | 5.74 | 2.53 | 29.74 |
| **11** | 18 | suburbs | 6.26 | 9.27 | 1.87 | 3.35 | 0.52 | 4.53 | 2.59 | 3.07 | 6.81 | 1.36 | 5.91 | 2.60 | 30.62 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | $\text{PBT}_{\text{CC}}$ | $\text{PBT}_{\text{OD}}$ | $\text{PBT}_{\text{HT\_CE}}$ | $\text{PBT}_{\text{HT\_nCE}}$ | $\text{PBT}_{\text{PM}}$ | $\text{PBT}_{\text{IR\_hh}}$ | $\text{PBT}_{\text{POF}}$ | $\text{PBT}_{\text{AC}}$ | $\text{PBT}_{\text{ET}}$ | $\text{PBT}_{\text{EuF}}$ | $\text{PBT}_{\text{EuM}}$ | $\text{PBT}_{\text{Ec\_FW}}$ | $\text{PBT}_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11** | 19 | cities | 10.01 | 14.83 | 2.99 | 5.37 | 0.83 | 7.28 | 4.13 | 4.91 | 10.88 | 2.19 | 9.45 | 4.18 | 49.13 |
| **11** | 19 | country | 9.40 | 13.94 | 2.80 | 5.06 | 0.78 | 6.87 | 3.87 | 4.61 | 10.20 | 2.06 | 8.87 | 3.94 | 46.31 |
| **11** | 19 | suburbs | 9.69 | 14.36 | 2.89 | 5.21 | 0.81 | 7.07 | 3.99 | 4.75 | 10.52 | 2.12 | 9.15 | 4.05 | 47.66 |
| **11** | 20 | cities | 18.21 | 27.12 | 5.43 | 9.92 | 1.50 | 13.60 | 7.45 | 8.92 | 19.71 | 4.06 | 17.19 | 7.75 | 90.95 |
| **11** | 20 | country | 16.81 | 25.06 | 5.02 | 9.18 | 1.38 | 12.61 | 6.86 | 8.24 | 18.18 | 3.77 | 15.87 | 7.18 | 84.23 |
| **11** | 20 | suburbs | 17.43 | 25.98 | 5.20 | 9.51 | 1.44 | 13.06 | 7.12 | 8.54 | 18.86 | 3.90 | 16.46 | 7.44 | 87.24 |
| **12** | 5 | cities | 1.97 | 1.26 | 2.85 | 3.28 | 1.41 | 4.15 | 4.14 | 1.98 | 5.77 | 2.89 | 5.70 | 2.34 | 7.83 |
| **12** | 5 | country | 1.88 | 1.20 | 2.71 | 3.12 | 1.35 | 3.95 | 3.94 | 1.88 | 5.50 | 2.75 | 5.43 | 2.23 | 7.45 |
| **12** | 5 | suburbs | 1.92 | 1.23 | 2.77 | 3.19 | 1.37 | 4.03 | 4.02 | 1.92 | 5.61 | 2.81 | 5.54 | 2.27 | 7.60 |
| **12** | 6 | cities | 1.78 | 1.14 | 2.58 | 2.97 | 1.28 | 3.75 | 3.74 | 1.79 | 5.22 | 2.62 | 5.16 | 2.12 | 7.08 |
| **12** | 6 | country | 1.70 | 1.09 | 2.45 | 2.82 | 1.22 | 3.57 | 3.57 | 1.70 | 4.97 | 2.49 | 4.91 | 2.02 | 6.74 |
| **12** | 6 | suburbs | 1.73 | 1.11 | 2.50 | 2.88 | 1.24 | 3.64 | 3.64 | 1.74 | 5.07 | 2.54 | 5.01 | 2.06 | 6.88 |
| **12** | 7 | cities | 2.41 | 1.54 | 3.48 | 4.00 | 1.73 | 5.06 | 5.05 | 2.41 | 7.04 | 3.53 | 6.95 | 2.86 | 9.55 |
| **12** | 7 | country | 2.30 | 1.47 | 3.33 | 3.83 | 1.65 | 4.84 | 4.84 | 2.31 | 6.74 | 3.38 | 6.66 | 2.74 | 9.14 |
| **12** | 7 | suburbs | 2.34 | 1.50 | 3.38 | 3.89 | 1.68 | 4.92 | 4.91 | 2.35 | 6.85 | 3.43 | 6.76 | 2.78 | 9.29 |
| **12** | 8 | cities | 5.31 | 3.39 | 7.67 | 8.84 | 3.80 | 11.16 | 11.14 | 5.33 | 15.57 | 7.80 | 15.36 | 6.35 | 21.08 |
| **12** | 8 | country | 5.03 | 3.21 | 7.27 | 8.37 | 3.60 | 10.57 | 10.56 | 5.05 | 14.75 | 7.39 | 14.55 | 6.02 | 19.97 |
| **12** | 8 | suburbs | 5.17 | 3.30 | 7.48 | 8.61 | 3.71 | 10.87 | 10.86 | 5.19 | 15.17 | 7.60 | 14.96 | 6.18 | 20.54 |
| **12** | 17 | cities | 2.38 | 1.52 | 3.43 | 3.95 | 1.70 | 4.99 | 4.99 | 2.38 | 6.95 | 3.48 | 6.86 | 2.82 | 9.42 |
| **12** | 17 | country | 2.29 | 1.46 | 3.31 | 3.81 | 1.64 | 4.81 | 4.80 | 2.30 | 6.70 | 3.36 | 6.61 | 2.72 | 9.08 |
| **12** | 17 | suburbs | 2.33 | 1.49 | 3.36 | 3.87 | 1.67 | 4.89 | 4.88 | 2.33 | 6.81 | 3.41 | 6.72 | 2.76 | 9.22 |
| **12** | 18 | cities | 2.39 | 1.53 | 3.45 | 3.98 | 1.72 | 5.03 | 5.02 | 2.40 | 7.00 | 3.51 | 6.91 | 2.84 | 9.49 |
| **12** | 18 | country | 2.30 | 1.47 | 3.32 | 3.83 | 1.65 | 4.84 | 4.83 | 2.31 | 6.74 | 3.38 | 6.65 | 2.73 | 9.13 |
| **12** | 18 | suburbs | 2.34 | 1.50 | 3.38 | 3.89 | 1.68 | 4.92 | 4.91 | 2.35 | 6.85 | 3.43 | 6.76 | 2.78 | 9.28 |
| **12** | 19 | cities | 3.89 | 2.49 | 5.61 | 6.46 | 2.79 | 8.17 | 8.16 | 3.90 | 11.38 | 5.70 | 11.23 | 4.61 | 15.42 |
| **12** | 19 | country | 3.70 | 2.37 | 5.34 | 6.15 | 2.65 | 7.78 | 7.76 | 3.71 | 10.83 | 5.43 | 10.69 | 4.40 | 14.68 |
| **12** | 19 | suburbs | 3.78 | 2.42 | 5.46 | 6.28 | 2.71 | 7.94 | 7.93 | 3.79 | 11.06 | 5.54 | 10.92 | 4.49 | 14.99 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **12** | 20 | cities | 8.12 | 5.19 | 11.73 | 13.51 | 5.82 | 17.06 | 17.04 | 8.15 | 23.79 | 11.92 | 23.47 | 9.69 | 32.22 |
| **12** | 20 | country | 7.42 | 4.73 | 10.72 | 12.35 | 5.31 | 15.58 | 15.57 | 7.45 | 21.76 | 10.90 | 21.46 | 8.89 | 29.46 |
| **12** | 20 | suburbs | 7.73 | 4.94 | 11.17 | 12.87 | 5.54 | 16.25 | 16.23 | 7.76 | 22.68 | 11.36 | 22.37 | 9.25 | 30.71 |
| **13** | 5 | cities | 4.30 | 3.42 | 11.83 | 12.28 | 5.54 | 23.74 | 10.23 | 10.86 | 16.79 | 11.82 | 16.74 | 8.56 | 16.66 |
| **13** | 5 | country | 4.05 | 3.22 | 11.15 | 11.58 | 5.21 | 22.42 | 9.63 | 10.23 | 15.83 | 11.17 | 15.78 | 8.09 | 15.69 |
| **13** | 5 | suburbs | 4.15 | 3.30 | 11.42 | 11.86 | 5.34 | 22.95 | 9.87 | 10.48 | 16.21 | 11.43 | 16.16 | 8.28 | 16.08 |
| **13** | 6 | cities | 3.90 | 3.10 | 10.72 | 11.13 | 5.02 | 21.52 | 9.27 | 9.84 | 15.22 | 10.72 | 15.17 | 7.76 | 15.09 |
| **13** | 6 | country | 3.67 | 2.91 | 10.10 | 10.49 | 4.72 | 20.31 | 8.72 | 9.26 | 14.33 | 10.12 | 14.28 | 7.33 | 14.21 |
| **13** | 6 | suburbs | 3.76 | 2.99 | 10.35 | 10.75 | 4.84 | 20.81 | 8.94 | 9.50 | 14.69 | 10.36 | 14.64 | 7.50 | 14.56 |
| **13** | 7 | cities | 5.21 | 4.14 | 14.29 | 14.83 | 6.71 | 28.58 | 12.38 | 13.14 | 20.30 | 14.23 | 20.25 | 10.29 | 20.15 |
| **13** | 7 | country | 4.94 | 3.92 | 13.55 | 14.07 | 6.36 | 27.12 | 11.74 | 12.45 | 19.25 | 13.51 | 19.20 | 9.77 | 19.10 |
| **13** | 7 | suburbs | 5.04 | 4.00 | 13.84 | 14.36 | 6.49 | 27.69 | 11.99 | 12.72 | 19.65 | 13.79 | 19.60 | 9.97 | 19.51 |
| **13** | 8 | cities | 11.69 | 9.26 | 32.59 | 33.97 | 14.98 | 67.46 | 27.75 | 29.64 | 46.14 | 33.66 | 45.76 | 24.53 | 45.42 |
| **13** | 8 | country | 10.94 | 8.67 | 30.52 | 31.82 | 14.02 | 63.20 | 25.98 | 27.76 | 43.21 | 31.53 | 42.85 | 22.99 | 42.53 |
| **13** | 8 | suburbs | 11.25 | 8.91 | 31.37 | 32.70 | 14.42 | 64.93 | 26.71 | 28.54 | 44.42 | 32.39 | 44.05 | 23.61 | 43.73 |
| **13** | 17 | cities | 4.91 | 3.90 | 13.47 | 13.98 | 6.31 | 26.95 | 11.66 | 12.38 | 19.13 | 13.42 | 19.08 | 9.71 | 18.98 |
| **13** | 17 | country | 4.69 | 3.72 | 12.87 | 13.37 | 6.04 | 25.77 | 11.15 | 11.83 | 18.29 | 12.84 | 18.24 | 9.28 | 18.15 |
| **13** | 17 | suburbs | 4.78 | 3.79 | 13.12 | 13.62 | 6.15 | 26.26 | 11.36 | 12.05 | 18.63 | 13.08 | 18.58 | 9.46 | 18.49 |
| **13** | 18 | cities | 4.94 | 3.92 | 13.56 | 14.08 | 6.36 | 27.15 | 11.74 | 12.46 | 19.26 | 13.52 | 19.21 | 9.78 | 19.11 |
| **13** | 18 | country | 4.71 | 3.74 | 12.94 | 13.43 | 6.07 | 25.91 | 11.20 | 11.89 | 18.37 | 12.90 | 18.33 | 9.33 | 18.23 |
| **13** | 18 | suburbs | 4.80 | 3.81 | 13.18 | 13.68 | 6.18 | 26.40 | 11.41 | 12.11 | 18.72 | 13.15 | 18.67 | 9.51 | 18.57 |
| **13** | 19 | cities | 7.75 | 6.15 | 21.35 | 22.19 | 9.97 | 43.05 | 18.43 | 19.58 | 30.31 | 21.45 | 30.20 | 15.53 | 30.03 |
| **13** | 19 | country | 7.41 | 5.88 | 20.40 | 21.20 | 9.52 | 41.18 | 17.60 | 18.71 | 28.96 | 20.52 | 28.85 | 14.86 | 28.68 |
| **13** | 19 | suburbs | 7.54 | 5.98 | 20.77 | 21.59 | 9.70 | 41.91 | 17.92 | 19.05 | 29.48 | 20.88 | 29.37 | 15.13 | 29.21 |
| **13** | 20 | cities | 14.60 | 11.56 | 40.58 | 42.27 | 18.72 | 83.49 | 34.65 | 36.98 | 57.49 | 41.64 | 57.07 | 30.31 | 56.68 |
| **13** | 20 | country | 13.44 | 10.65 | 37.40 | 38.96 | 17.24 | 77.06 | 31.91 | 34.07 | 52.97 | 38.44 | 52.57 | 27.99 | 52.21 |
| **13** | 20 | suburbs | 13.92 | 11.03 | 38.72 | 40.34 | 17.85 | 79.74 | 33.06 | 35.28 | 54.85 | 39.77 | 54.45 | 28.95 | 54.07 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **14** | 5 | cities | 4.35 | 2.21 | 8.37 | 10.72 | 3.23 | 3.99 | 8.31 | 7.38 | 13.78 | 12.23 | 13.75 | 6.39 | 13.41 |
| **14** | 5 | country | 4.09 | 2.08 | 7.88 | 10.08 | 3.03 | 3.77 | 7.81 | 6.94 | 12.96 | 11.51 | 12.93 | 6.03 | 12.62 |
| **14** | 5 | suburbs | 4.19 | 2.13 | 8.07 | 10.33 | 3.11 | 3.85 | 8.01 | 7.12 | 13.29 | 11.80 | 13.25 | 6.16 | 12.93 |
| **14** | 6 | cities | 3.94 | 2.01 | 7.58 | 9.71 | 2.92 | 3.62 | 7.53 | 6.69 | 12.48 | 11.08 | 12.45 | 5.79 | 12.15 |
| **14** | 6 | country | 3.70 | 1.89 | 7.13 | 9.13 | 2.74 | 3.41 | 7.07 | 6.28 | 11.74 | 10.43 | 11.70 | 5.46 | 11.43 |
| **14** | 6 | suburbs | 3.79 | 1.93 | 7.31 | 9.36 | 2.82 | 3.49 | 7.25 | 6.44 | 12.04 | 10.68 | 12.00 | 5.58 | 11.71 |
| **14** | 7 | cities | 5.18 | 2.64 | 9.96 | 12.75 | 3.84 | 4.71 | 9.90 | 8.79 | 16.40 | 14.54 | 16.36 | 7.55 | 15.94 |
| **14** | 7 | country | 4.90 | 2.49 | 9.43 | 12.07 | 3.64 | 4.47 | 9.37 | 8.32 | 15.53 | 13.77 | 15.49 | 7.16 | 15.10 |
| **14** | 7 | suburbs | 5.00 | 2.55 | 9.63 | 12.33 | 3.71 | 4.56 | 9.57 | 8.50 | 15.86 | 14.06 | 15.82 | 7.31 | 15.42 |
| **14** | 8 | cities | 12.12 | 6.21 | 23.58 | 30.17 | 8.98 | 11.83 | 23.17 | 20.64 | 38.68 | 34.66 | 38.51 | 18.69 | 37.90 |
| **14** | 8 | country | 11.37 | 5.82 | 22.10 | 28.28 | 8.43 | 11.04 | 21.74 | 19.36 | 36.27 | 32.47 | 36.11 | 17.46 | 35.52 |
| **14** | 8 | suburbs | 11.68 | 5.98 | 22.69 | 29.03 | 8.65 | 11.32 | 22.32 | 19.87 | 37.24 | 33.33 | 37.07 | 17.90 | 36.46 |
| **14** | 17 | cities | 4.74 | 2.41 | 9.12 | 11.67 | 3.52 | 4.31 | 9.06 | 8.04 | 15.01 | 13.30 | 14.98 | 6.91 | 14.59 |
| **14** | 17 | country | 4.56 | 2.32 | 8.78 | 11.24 | 3.38 | 4.18 | 8.72 | 7.74 | 14.46 | 12.83 | 14.42 | 6.69 | 14.06 |
| **14** | 17 | suburbs | 4.63 | 2.36 | 8.91 | 11.41 | 3.44 | 4.22 | 8.85 | 7.86 | 14.67 | 13.01 | 14.63 | 6.77 | 14.26 |
| **14** | 18 | cities | 4.76 | 2.42 | 9.15 | 11.72 | 3.53 | 4.33 | 9.10 | 8.08 | 15.08 | 13.36 | 15.04 | 6.94 | 14.65 |
| **14** | 18 | country | 4.58 | 2.33 | 8.81 | 11.28 | 3.40 | 4.19 | 8.75 | 7.77 | 14.51 | 12.87 | 14.47 | 6.71 | 14.11 |
| **14** | 18 | suburbs | 4.65 | 2.37 | 8.95 | 11.45 | 3.45 | 4.24 | 8.89 | 7.89 | 14.73 | 13.06 | 14.70 | 6.79 | 14.32 |
| **14** | 19 | cities | 7.70 | 3.93 | 14.86 | 19.02 | 5.72 | 7.13 | 14.73 | 13.09 | 24.45 | 21.72 | 24.38 | 11.38 | 23.81 |
| **14** | 19 | country | 7.34 | 3.75 | 14.17 | 18.14 | 5.45 | 6.80 | 14.04 | 12.48 | 23.31 | 20.72 | 23.25 | 10.87 | 22.71 |
| **14** | 19 | suburbs | 7.50 | 3.82 | 14.46 | 18.51 | 5.56 | 6.93 | 14.33 | 12.73 | 23.79 | 21.13 | 23.72 | 11.07 | 23.16 |
| **14** | 20 | cities | 13.92 | 7.12 | 26.99 | 34.54 | 10.32 | 13.30 | 26.61 | 23.68 | 44.33 | 39.59 | 44.15 | 21.11 | 43.33 |
| **14** | 20 | country | 13.12 | 6.71 | 25.45 | 32.56 | 9.72 | 12.59 | 25.07 | 22.32 | 41.78 | 37.34 | 41.61 | 19.95 | 40.86 |
| **14** | 20 | suburbs | 13.63 | 6.97 | 26.43 | 33.82 | 10.10 | 13.03 | 26.06 | 23.19 | 43.40 | 38.77 | 43.23 | 20.67 | 42.43 |
| **15** | 5 | cities | 2.50 | 1.32 | 5.71 | 5.70 | 2.80 | 4.11 | 5.66 | 4.44 | 7.68 | 4.57 | 8.23 | 4.39 | 8.33 |
| **15** | 5 | country | 2.28 | 1.20 | 5.20 | 5.19 | 2.56 | 3.74 | 5.16 | 4.04 | 7.00 | 4.16 | 7.50 | 4.00 | 7.59 |
| **15** | 5 | suburbs | 2.37 | 1.25 | 5.42 | 5.41 | 2.66 | 3.90 | 5.37 | 4.21 | 7.29 | 4.33 | 7.81 | 4.17 | 7.91 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **15** | 6 | cities | 2.26 | 1.19 | 5.16 | 5.15 | 2.54 | 3.71 | 5.12 | 4.01 | 6.94 | 4.13 | 7.44 | 3.97 | 7.53 |
| **15** | 6 | country | 2.06 | 1.08 | 4.70 | 4.69 | 2.31 | 3.38 | 4.66 | 3.65 | 6.32 | 3.76 | 6.77 | 3.61 | 6.86 |
| **15** | 6 | suburbs | 2.14 | 1.13 | 4.89 | 4.89 | 2.40 | 3.52 | 4.85 | 3.80 | 6.58 | 3.92 | 7.05 | 3.76 | 7.14 |
| **15** | 7 | cities | 3.08 | 1.62 | 7.03 | 7.02 | 3.45 | 5.05 | 6.97 | 5.46 | 9.45 | 5.62 | 10.13 | 5.40 | 10.26 |
| **15** | 7 | country | 2.83 | 1.49 | 6.46 | 6.45 | 3.18 | 4.65 | 6.41 | 5.02 | 8.69 | 5.17 | 9.32 | 4.97 | 9.44 |
| **15** | 7 | suburbs | 2.93 | 1.55 | 6.70 | 6.69 | 3.29 | 4.82 | 6.64 | 5.21 | 9.01 | 5.35 | 9.66 | 5.15 | 9.78 |
| **15** | 8 | cities | 5.61 | 2.96 | 12.87 | 12.87 | 6.30 | 9.27 | 12.71 | 9.98 | 17.30 | 10.39 | 18.51 | 9.95 | 18.74 |
| **15** | 8 | country | 5.25 | 2.77 | 12.07 | 12.08 | 5.89 | 8.71 | 11.89 | 9.35 | 16.23 | 9.81 | 17.33 | 9.37 | 17.54 |
| **15** | 8 | suburbs | 5.41 | 2.85 | 12.42 | 12.43 | 6.07 | 8.96 | 12.25 | 9.62 | 16.70 | 10.06 | 17.85 | 9.63 | 18.06 |
| **15** | 17 | cities | 2.97 | 1.56 | 6.78 | 6.77 | 3.33 | 4.88 | 6.72 | 5.27 | 9.12 | 5.42 | 9.77 | 5.21 | 9.90 |
| **15** | 17 | country | 2.72 | 1.43 | 6.21 | 6.21 | 3.05 | 4.47 | 6.16 | 4.83 | 8.36 | 4.97 | 8.96 | 4.78 | 9.07 |
| **15** | 17 | suburbs | 2.82 | 1.49 | 6.45 | 6.44 | 3.17 | 4.64 | 6.39 | 5.01 | 8.68 | 5.16 | 9.30 | 4.96 | 9.42 |
| **15** | 18 | cities | 2.99 | 1.58 | 6.84 | 6.83 | 3.36 | 4.92 | 6.78 | 5.32 | 9.20 | 5.47 | 9.86 | 5.26 | 9.98 |
| **15** | 18 | country | 2.74 | 1.44 | 6.26 | 6.25 | 3.08 | 4.51 | 6.21 | 4.87 | 8.42 | 5.01 | 9.03 | 4.82 | 9.14 |
| **15** | 18 | suburbs | 2.85 | 1.50 | 6.50 | 6.49 | 3.20 | 4.68 | 6.45 | 5.06 | 8.75 | 5.20 | 9.37 | 5.00 | 9.49 |
| **15** | 19 | cities | 4.46 | 2.35 | 10.20 | 10.19 | 5.01 | 7.34 | 10.11 | 7.93 | 13.73 | 8.17 | 14.71 | 7.85 | 14.90 |
| **15** | 19 | country | 4.14 | 2.18 | 9.48 | 9.48 | 4.65 | 6.83 | 9.38 | 7.36 | 12.75 | 7.63 | 13.65 | 7.32 | 13.82 |
| **15** | 19 | suburbs | 4.29 | 2.26 | 9.80 | 9.79 | 4.81 | 7.05 | 9.71 | 7.62 | 13.18 | 7.86 | 14.12 | 7.55 | 14.30 |
| **15** | 20 | cities | 7.85 | 4.14 | 18.02 | 18.03 | 8.81 | 13.00 | 17.78 | 13.97 | 24.23 | 14.59 | 25.90 | 13.97 | 26.22 |
| **15** | 20 | country | 7.33 | 3.86 | 17.02 | 17.11 | 8.21 | 12.35 | 16.58 | 13.09 | 22.86 | 14.22 | 24.28 | 13.45 | 24.54 |
| **15** | 20 | suburbs | 7.56 | 3.98 | 17.45 | 17.49 | 8.48 | 12.62 | 17.12 | 13.48 | 23.45 | 14.32 | 25.00 | 13.64 | 25.28 |
| **16** | 5 | cities | 3.32 | 2.85 | 5.84 | 5.80 | 4.06 | 9.88 | 7.04 | 4.64 | 9.42 | 4.77 | 9.00 | 2.97 | 12.39 |
| **16** | 5 | country | 2.89 | 2.49 | 5.09 | 5.05 | 3.53 | 8.60 | 6.13 | 4.04 | 8.20 | 4.15 | 7.84 | 2.58 | 10.79 |
| **16** | 5 | suburbs | 3.07 | 2.64 | 5.40 | 5.37 | 3.75 | 9.13 | 6.51 | 4.29 | 8.71 | 4.41 | 8.33 | 2.74 | 11.46 |
| **16** | 6 | cities | 3.03 | 2.60 | 5.33 | 5.30 | 3.70 | 9.02 | 6.42 | 4.24 | 8.60 | 4.36 | 8.22 | 2.71 | 11.30 |
| **16** | 6 | country | 2.64 | 2.27 | 4.64 | 4.61 | 3.23 | 7.85 | 5.60 | 3.69 | 7.49 | 3.79 | 7.16 | 2.36 | 9.85 |
| **16** | 6 | suburbs | 2.81 | 2.41 | 4.93 | 4.90 | 3.43 | 8.34 | 5.94 | 3.92 | 7.95 | 4.03 | 7.60 | 2.50 | 10.46 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16** | 7 | cities | 4.00 | 3.44 | 7.03 | 6.98 | 4.89 | 11.88 | 8.48 | 5.59 | 11.34 | 5.73 | 10.83 | 3.56 | 14.92 |
| **16** | 7 | country | 3.49 | 3.00 | 6.13 | 6.09 | 4.26 | 10.36 | 7.39 | 4.87 | 9.88 | 5.00 | 9.44 | 3.11 | 13.01 |
| **16** | 7 | suburbs | 3.71 | 3.19 | 6.52 | 6.48 | 4.53 | 11.02 | 7.86 | 5.18 | 10.52 | 5.32 | 10.05 | 3.31 | 13.84 |
| **16** | 8 | cities | 9.64 | 8.05 | 18.05 | 18.04 | 11.88 | 30.73 | 20.88 | 14.41 | 28.91 | 15.27 | 27.65 | 9.65 | 36.20 |
| **16** | 8 | country | 8.35 | 7.06 | 15.19 | 15.14 | 10.24 | 25.78 | 17.90 | 12.10 | 24.41 | 12.64 | 23.33 | 7.93 | 31.25 |
| **16** | 8 | suburbs | 8.89 | 7.48 | 16.36 | 16.33 | 10.92 | 27.81 | 19.14 | 13.05 | 26.26 | 13.71 | 25.11 | 8.63 | 33.30 |
| **16** | 17 | cities | 3.82 | 3.29 | 6.72 | 6.68 | 4.67 | 11.36 | 8.10 | 5.34 | 10.84 | 5.49 | 10.36 | 3.41 | 14.26 |
| **16** | 17 | country | 3.38 | 2.90 | 5.93 | 5.90 | 4.12 | 10.03 | 7.15 | 4.72 | 9.57 | 4.84 | 9.15 | 3.01 | 12.59 |
| **16** | 17 | suburbs | 3.57 | 3.07 | 6.26 | 6.22 | 4.35 | 10.59 | 7.55 | 4.98 | 10.10 | 5.11 | 9.65 | 3.18 | 13.29 |
| **16** | 18 | cities | 3.88 | 3.33 | 6.82 | 6.77 | 4.73 | 11.53 | 8.22 | 5.42 | 11.00 | 5.57 | 10.51 | 3.46 | 14.46 |
| **16** | 18 | country | 3.42 | 2.94 | 6.01 | 5.98 | 4.18 | 10.17 | 7.25 | 4.78 | 9.70 | 4.91 | 9.27 | 3.05 | 12.76 |
| **16** | 18 | suburbs | 3.62 | 3.11 | 6.35 | 6.31 | 4.42 | 10.74 | 7.66 | 5.05 | 10.25 | 5.19 | 9.79 | 3.22 | 13.48 |
| **16** | 19 | cities | 6.20 | 5.30 | 11.01 | 10.95 | 7.58 | 18.64 | 13.18 | 8.76 | 17.74 | 9.04 | 16.95 | 5.64 | 23.13 |
| **16** | 19 | country | 5.52 | 4.74 | 9.74 | 9.68 | 6.75 | 16.48 | 11.72 | 7.75 | 15.71 | 7.97 | 15.01 | 4.96 | 20.60 |
| **16** | 19 | suburbs | 5.80 | 4.97 | 10.25 | 10.20 | 7.09 | 17.35 | 12.32 | 8.16 | 16.53 | 8.40 | 15.80 | 5.23 | 21.64 |
| **16** | 20 | cities | 12.86 | 10.80 | 23.77 | 23.73 | 15.81 | 40.41 | 27.73 | 18.97 | 38.13 | 19.97 | 36.46 | 12.58 | 48.20 |
| **16** | 20 | country | 11.16 | 9.46 | 20.25 | 20.18 | 13.69 | 34.36 | 23.92 | 16.13 | 32.55 | 16.82 | 31.12 | 10.54 | 41.78 |
| **16** | 20 | suburbs | 11.86 | 10.01 | 21.69 | 21.63 | 14.57 | 36.83 | 25.49 | 17.29 | 34.84 | 18.10 | 33.30 | 11.37 | 44.43 |
| **17** | 5 | cities | 5.62 | 4.81 | 8.52 | 8.88 | 4.22 | 8.00 | 10.49 | 5.88 | 13.59 | 5.17 | 12.78 | 6.71 | 24.77 |
| **17** | 5 | country | 5.22 | 4.47 | 7.91 | 8.24 | 3.92 | 7.44 | 9.74 | 5.46 | 12.62 | 4.80 | 11.86 | 6.23 | 22.99 |
| **17** | 5 | suburbs | 5.40 | 4.62 | 8.18 | 8.52 | 4.05 | 7.69 | 10.07 | 5.64 | 13.05 | 4.97 | 12.26 | 6.44 | 23.78 |
| **17** | 6 | cities | 5.10 | 4.37 | 7.74 | 8.06 | 3.83 | 7.27 | 9.52 | 5.34 | 12.34 | 4.69 | 11.60 | 6.09 | 22.48 |
| **17** | 6 | country | 4.73 | 4.05 | 7.18 | 7.48 | 3.55 | 6.76 | 8.83 | 4.95 | 11.45 | 4.36 | 10.76 | 5.66 | 20.86 |
| **17** | 6 | suburbs | 4.90 | 4.19 | 7.43 | 7.74 | 3.68 | 6.98 | 9.14 | 5.12 | 11.84 | 4.51 | 11.13 | 5.85 | 21.58 |
| **17** | 7 | cities | 6.88 | 5.88 | 10.41 | 10.84 | 5.16 | 9.75 | 12.83 | 7.19 | 16.62 | 6.31 | 15.62 | 8.18 | 30.27 |
| **17** | 7 | country | 6.42 | 5.49 | 9.72 | 10.12 | 4.82 | 9.11 | 11.97 | 6.71 | 15.51 | 5.89 | 14.58 | 7.64 | 28.26 |
| **17** | 7 | suburbs | 6.62 | 5.66 | 10.02 | 10.44 | 4.97 | 9.39 | 12.35 | 6.92 | 16.00 | 6.07 | 15.03 | 7.88 | 29.14 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17** | 8 | cities | 14.61 | 12.54 | 22.41 | 23.45 | 10.98 | 21.85 | 27.28 | 15.34 | 35.44 | 13.83 | 33.38 | 17.96 | 64.91 |
| **17** | 8 | country | 13.64 | 11.70 | 20.90 | 21.86 | 10.25 | 20.31 | 25.47 | 14.32 | 33.08 | 12.88 | 31.15 | 16.73 | 60.56 |
| **17** | 8 | suburbs | 14.08 | 12.08 | 21.60 | 22.60 | 10.58 | 21.07 | 26.29 | 14.79 | 34.16 | 13.33 | 32.17 | 17.31 | 62.56 |
| **17** | 17 | cities | 6.41 | 5.48 | 9.70 | 10.10 | 4.81 | 9.08 | 11.96 | 6.70 | 15.49 | 5.88 | 14.56 | 7.63 | 28.22 |
| **17** | 17 | country | 6.03 | 5.16 | 9.14 | 9.51 | 4.53 | 8.56 | 11.26 | 6.31 | 14.58 | 5.54 | 13.70 | 7.19 | 26.56 |
| **17** | 17 | suburbs | 6.20 | 5.30 | 9.39 | 9.77 | 4.65 | 8.79 | 11.56 | 6.48 | 14.98 | 5.69 | 14.08 | 7.38 | 27.29 |
| **17** | 18 | cities | 6.47 | 5.54 | 9.80 | 10.20 | 4.86 | 9.18 | 12.07 | 6.76 | 15.64 | 5.94 | 14.70 | 7.70 | 28.49 |
| **17** | 18 | country | 6.08 | 5.20 | 9.20 | 9.58 | 4.56 | 8.63 | 11.34 | 6.35 | 14.69 | 5.58 | 13.80 | 7.24 | 26.76 |
| **17** | 18 | suburbs | 6.25 | 5.35 | 9.46 | 9.85 | 4.69 | 8.87 | 11.66 | 6.53 | 15.10 | 5.74 | 14.19 | 7.44 | 27.51 |
| **17** | 19 | cities | 9.82 | 8.40 | 14.90 | 15.52 | 7.37 | 14.04 | 18.32 | 10.27 | 23.74 | 9.05 | 22.32 | 11.75 | 43.29 |
| **17** | 19 | country | 9.36 | 8.01 | 14.21 | 14.82 | 7.03 | 13.42 | 17.47 | 9.79 | 22.64 | 8.65 | 21.29 | 11.22 | 41.30 |
| **17** | 19 | suburbs | 9.57 | 8.19 | 14.52 | 15.13 | 7.18 | 13.70 | 17.85 | 10.01 | 23.13 | 8.83 | 21.75 | 11.46 | 42.18 |
| **17** | 20 | cities | 17.23 | 14.76 | 26.29 | 27.46 | 12.94 | 25.23 | 32.16 | 18.06 | 41.73 | 16.11 | 39.27 | 20.91 | 76.27 |
| **17** | 20 | country | 16.06 | 13.76 | 24.50 | 25.59 | 12.06 | 23.51 | 29.97 | 16.83 | 38.89 | 15.02 | 36.60 | 19.49 | 71.08 |
| **17** | 20 | suburbs | 16.65 | 14.27 | 25.42 | 26.55 | 12.51 | 24.41 | 31.08 | 17.46 | 40.34 | 15.58 | 37.96 | 20.23 | 73.73 |
| **18** | 5 | cities | 3.64 | 2.36 | 4.33 | 5.33 | 1.63 | 6.25 | 5.35 | 4.59 | 7.34 | 2.85 | 8.65 | 3.69 | 12.28 |
| **18** | 5 | country | 3.35 | 2.17 | 4.00 | 4.95 | 1.50 | 5.80 | 4.92 | 4.24 | 6.80 | 2.66 | 7.98 | 3.44 | 11.35 |
| **18** | 5 | suburbs | 3.47 | 2.25 | 4.13 | 5.11 | 1.55 | 5.98 | 5.10 | 4.38 | 7.02 | 2.73 | 8.26 | 3.54 | 11.73 |
| **18** | 6 | cities | 3.29 | 2.13 | 3.92 | 4.83 | 1.47 | 5.66 | 4.84 | 4.16 | 6.65 | 2.58 | 7.83 | 3.34 | 11.11 |
| **18** | 6 | country | 3.03 | 1.97 | 3.63 | 4.49 | 1.35 | 5.26 | 4.45 | 3.84 | 6.16 | 2.41 | 7.23 | 3.12 | 10.28 |
| **18** | 6 | suburbs | 3.14 | 2.04 | 3.74 | 4.63 | 1.40 | 5.42 | 4.61 | 3.97 | 6.36 | 2.48 | 7.48 | 3.21 | 10.62 |
| **18** | 7 | cities | 4.48 | 2.91 | 5.31 | 6.52 | 2.01 | 7.65 | 6.60 | 5.65 | 9.00 | 3.46 | 10.64 | 4.49 | 15.09 |
| **18** | 7 | country | 4.16 | 2.70 | 4.94 | 6.07 | 1.86 | 7.12 | 6.12 | 5.25 | 8.37 | 3.23 | 9.88 | 4.19 | 14.02 |
| **18** | 7 | suburbs | 4.30 | 2.79 | 5.09 | 6.26 | 1.93 | 7.34 | 6.32 | 5.42 | 8.64 | 3.33 | 10.20 | 4.31 | 14.47 |
| **18** | 8 | cities | 8.91 | 5.73 | 10.85 | 13.72 | 3.94 | 15.98 | 12.98 | 11.36 | 18.52 | 7.61 | 21.39 | 9.75 | 30.60 |
| **18** | 8 | country | 8.40 | 5.38 | 10.34 | 13.24 | 3.70 | 15.37 | 12.20 | 10.76 | 17.70 | 7.48 | 20.27 | 9.53 | 29.08 |
| **18** | 8 | suburbs | 8.60 | 5.52 | 10.54 | 13.42 | 3.79 | 15.61 | 12.50 | 10.99 | 18.02 | 7.53 | 20.71 | 9.61 | 29.67 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{\mathrm{CC}}$** | **PBT$_{\mathrm{OD}}$** | **PBT$_{\mathrm{HT\_CE}}$** | **PBT$_{\mathrm{HT\_nCE}}$** | **PBT$_{\mathrm{PM}}$** | **PBT$_{\mathrm{IR\_hh}}$** | **PBT$_{\mathrm{POF}}$** | **PBT$_{\mathrm{AC}}$** | **PBT$_{\mathrm{ET}}$** | **PBT$_{\mathrm{EuF}}$** | **PBT$_{\mathrm{EuM}}$** | **PBT$_{\mathrm{Ec\_FW}}$** | **PBT$_{\mathrm{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **18** | 17 | cities | 4.32 | 2.81 | 5.12 | 6.28 | 1.94 | 7.37 | 6.36 | 5.44 | 8.67 | 3.33 | 10.25 | 4.32 | 14.53 |
| **18** | 17 | country | 4.02 | 2.61 | 4.78 | 5.88 | 1.80 | 6.90 | 5.92 | 5.08 | 8.10 | 3.13 | 9.56 | 4.06 | 13.57 |
| **18** | 17 | suburbs | 4.15 | 2.69 | 4.92 | 6.04 | 1.86 | 7.09 | 6.10 | 5.23 | 8.34 | 3.21 | 9.85 | 4.17 | 13.96 |
| **18** | 18 | cities | 4.35 | 2.82 | 5.15 | 6.32 | 1.95 | 7.42 | 6.40 | 5.48 | 8.73 | 3.36 | 10.32 | 4.35 | 14.63 |
| **18** | 18 | country | 4.05 | 2.63 | 4.81 | 5.93 | 1.81 | 6.95 | 5.96 | 5.11 | 8.16 | 3.16 | 9.63 | 4.09 | 13.66 |
| **18** | 18 | suburbs | 4.18 | 2.71 | 4.96 | 6.09 | 1.87 | 7.15 | 6.15 | 5.27 | 8.40 | 3.24 | 9.92 | 4.20 | 14.07 |
| **18** | 19 | cities | 6.63 | 4.30 | 7.91 | 9.77 | 2.97 | 11.44 | 9.75 | 8.38 | 13.42 | 5.23 | 15.79 | 6.77 | 22.43 |
| **18** | 19 | country | 6.21 | 4.02 | 7.45 | 9.26 | 2.77 | 10.83 | 9.11 | 7.87 | 12.66 | 5.00 | 14.82 | 6.45 | 21.09 |
| **18** | 19 | suburbs | 6.40 | 4.15 | 7.66 | 9.49 | 2.86 | 11.11 | 9.39 | 8.10 | 13.01 | 5.11 | 15.26 | 6.60 | 21.70 |
| **18** | 20 | cities | 11.73 | 7.57 | 14.16 | 17.74 | 5.21 | 20.71 | 17.15 | 14.90 | 24.12 | 9.70 | 28.07 | 12.47 | 40.03 |
| **18** | 20 | country | 10.96 | 7.04 | 13.40 | 17.01 | 4.84 | 19.79 | 15.95 | 13.99 | 22.89 | 9.49 | 26.36 | 12.14 | 37.75 |
| **18** | 20 | suburbs | 11.26 | 7.24 | 13.70 | 17.31 | 4.98 | 20.17 | 16.42 | 14.35 | 23.38 | 9.58 | 27.04 | 12.28 | 38.65 |
| **19** | 5 | cities | 3.14 | 1.97 | 1.98 | 3.86 | 0.52 | 4.32 | 2.24 | 3.04 | 4.60 | 2.13 | 4.98 | 2.06 | 9.79 |
| **19** | 5 | country | 2.91 | 1.83 | 1.84 | 3.58 | 0.48 | 4.01 | 2.08 | 2.82 | 4.26 | 1.97 | 4.62 | 1.91 | 9.06 |
| **19** | 5 | suburbs | 3.02 | 1.90 | 1.91 | 3.71 | 0.50 | 4.16 | 2.16 | 2.93 | 4.43 | 2.05 | 4.79 | 1.98 | 9.41 |
| **19** | 6 | cities | 2.84 | 1.78 | 1.79 | 3.49 | 0.47 | 3.91 | 2.03 | 2.75 | 4.16 | 1.93 | 4.50 | 1.86 | 8.84 |
| **19** | 6 | country | 2.63 | 1.65 | 1.66 | 3.23 | 0.44 | 3.62 | 1.88 | 2.55 | 3.85 | 1.78 | 4.17 | 1.72 | 8.19 |
| **19** | 6 | suburbs | 2.73 | 1.72 | 1.73 | 3.36 | 0.45 | 3.76 | 1.95 | 2.65 | 4.00 | 1.85 | 4.33 | 1.79 | 8.51 |
| **19** | 7 | cities | 3.98 | 2.50 | 2.51 | 4.89 | 0.66 | 5.47 | 2.84 | 3.86 | 5.83 | 2.70 | 6.31 | 2.60 | 12.39 |
| **19** | 7 | country | 3.70 | 2.32 | 2.33 | 4.54 | 0.61 | 5.08 | 2.64 | 3.58 | 5.41 | 2.50 | 5.86 | 2.42 | 11.50 |
| **19** | 7 | suburbs | 3.83 | 2.41 | 2.42 | 4.71 | 0.64 | 5.27 | 2.74 | 3.71 | 5.61 | 2.60 | 6.08 | 2.51 | 11.94 |
| **19** | 8 | cities | 7.95 | 4.98 | 5.03 | 9.86 | 1.32 | 11.04 | 5.66 | 7.71 | 11.67 | 5.47 | 12.61 | 5.30 | 24.88 |
| **19** | 8 | country | 7.39 | 4.63 | 4.67 | 9.15 | 1.23 | 10.25 | 5.26 | 7.16 | 10.84 | 5.07 | 11.73 | 4.91 | 23.11 |
| **19** | 8 | suburbs | 7.66 | 4.80 | 4.84 | 9.49 | 1.27 | 10.62 | 5.46 | 7.42 | 11.24 | 5.26 | 12.15 | 5.09 | 23.96 |
| **19** | 17 | cities | 3.79 | 2.38 | 2.39 | 4.65 | 0.63 | 5.21 | 2.70 | 3.67 | 5.54 | 2.57 | 6.00 | 2.48 | 11.79 |
| **19** | 17 | country | 3.54 | 2.22 | 2.23 | 4.35 | 0.59 | 4.87 | 2.53 | 3.43 | 5.18 | 2.40 | 5.61 | 2.32 | 11.02 |
| **19** | 17 | suburbs | 3.66 | 2.30 | 2.31 | 4.49 | 0.61 | 5.03 | 2.61 | 3.54 | 5.35 | 2.48 | 5.80 | 2.39 | 11.39 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **19** | 18 | cities | 3.81 | 2.39 | 2.41 | 4.69 | 0.63 | 5.25 | 2.72 | 3.69 | 5.58 | 2.58 | 6.05 | 2.50 | 11.87 |
| **19** | 18 | country | 3.56 | 2.24 | 2.25 | 4.38 | 0.59 | 4.90 | 2.54 | 3.45 | 5.21 | 2.41 | 5.65 | 2.33 | 11.09 |
| **19** | 18 | suburbs | 3.68 | 2.31 | 2.33 | 4.52 | 0.61 | 5.07 | 2.63 | 3.57 | 5.39 | 2.50 | 5.84 | 2.41 | 11.47 |
| **19** | 19 | cities | 5.71 | 3.58 | 3.61 | 7.03 | 0.95 | 7.87 | 4.07 | 5.53 | 8.36 | 3.88 | 9.05 | 3.75 | 17.80 |
| **19** | 19 | country | 5.35 | 3.36 | 3.38 | 6.58 | 0.89 | 7.37 | 3.82 | 5.18 | 7.83 | 3.64 | 8.48 | 3.52 | 16.67 |
| **19** | 19 | suburbs | 5.52 | 3.46 | 3.49 | 6.79 | 0.92 | 7.61 | 3.94 | 5.35 | 8.08 | 3.75 | 8.75 | 3.63 | 17.20 |
| **19** | 20 | cities | 9.97 | 6.25 | 6.31 | 12.35 | 1.65 | 13.83 | 7.11 | 9.67 | 14.64 | 6.85 | 15.83 | 6.63 | 31.20 |
| **19** | 20 | country | 9.32 | 5.85 | 5.90 | 11.54 | 1.55 | 12.92 | 6.65 | 9.04 | 13.68 | 6.39 | 14.80 | 6.18 | 29.15 |
| **19** | 20 | suburbs | 9.64 | 6.05 | 6.10 | 11.93 | 1.60 | 13.36 | 6.87 | 9.35 | 14.15 | 6.61 | 15.30 | 6.40 | 30.15 |
| **20** | 5 | cities | 2.54 | 3.01 | 1.56 | 2.31 | 0.51 | 3.52 | 2.17 | 1.94 | 4.49 | 1.09 | 4.05 | 1.92 | 13.02 |
| **20** | 5 | country | 2.37 | 2.81 | 1.46 | 2.16 | 0.47 | 3.29 | 2.03 | 1.81 | 4.19 | 1.01 | 3.78 | 1.79 | 12.15 |
| **20** | 5 | suburbs | 2.44 | 2.89 | 1.50 | 2.22 | 0.49 | 3.39 | 2.09 | 1.86 | 4.32 | 1.04 | 3.89 | 1.84 | 12.51 |
| **20** | 6 | cities | 2.30 | 2.73 | 1.41 | 2.09 | 0.46 | 3.19 | 1.97 | 1.76 | 4.07 | 0.98 | 3.66 | 1.73 | 11.78 |
| **20** | 6 | country | 2.15 | 2.54 | 1.32 | 1.95 | 0.43 | 2.97 | 1.83 | 1.64 | 3.79 | 0.92 | 3.41 | 1.62 | 10.98 |
| **20** | 6 | suburbs | 2.21 | 2.62 | 1.36 | 2.01 | 0.44 | 3.06 | 1.89 | 1.69 | 3.90 | 0.94 | 3.51 | 1.66 | 11.31 |
| **20** | 7 | cities | 3.12 | 3.69 | 1.91 | 2.83 | 0.62 | 4.31 | 2.67 | 2.38 | 5.51 | 1.33 | 4.96 | 2.34 | 15.95 |
| **20** | 7 | country | 2.93 | 3.47 | 1.80 | 2.66 | 0.58 | 4.05 | 2.50 | 2.23 | 5.17 | 1.25 | 4.65 | 2.20 | 14.97 |
| **20** | 7 | suburbs | 3.00 | 3.56 | 1.84 | 2.73 | 0.60 | 4.15 | 2.57 | 2.29 | 5.31 | 1.28 | 4.78 | 2.26 | 15.37 |
| **20** | 8 | cities | 6.70 | 7.94 | 4.12 | 6.15 | 1.33 | 9.46 | 5.72 | 5.12 | 11.85 | 2.90 | 10.68 | 5.11 | 34.50 |
| **20** | 8 | country | 6.26 | 7.41 | 3.85 | 5.73 | 1.24 | 8.81 | 5.34 | 4.78 | 11.07 | 2.70 | 9.97 | 4.76 | 32.18 |
| **20** | 8 | suburbs | 6.44 | 7.63 | 3.96 | 5.90 | 1.28 | 9.06 | 5.50 | 4.92 | 11.40 | 2.78 | 10.27 | 4.90 | 33.14 |
| **20** | 17 | cities | 2.85 | 3.37 | 1.75 | 2.59 | 0.57 | 3.94 | 2.43 | 2.17 | 5.03 | 1.21 | 4.53 | 2.14 | 14.56 |
| **20** | 17 | country | 2.70 | 3.20 | 1.66 | 2.45 | 0.54 | 3.73 | 2.31 | 2.06 | 4.77 | 1.15 | 4.29 | 2.03 | 13.80 |
| **20** | 17 | suburbs | 2.76 | 3.27 | 1.69 | 2.51 | 0.55 | 3.82 | 2.36 | 2.11 | 4.88 | 1.18 | 4.39 | 2.08 | 14.13 |
| **20** | 18 | cities | 2.86 | 3.39 | 1.76 | 2.60 | 0.57 | 3.96 | 2.45 | 2.18 | 5.05 | 1.22 | 4.55 | 2.15 | 14.63 |
| **20** | 18 | country | 2.71 | 3.21 | 1.66 | 2.46 | 0.54 | 3.75 | 2.31 | 2.07 | 4.78 | 1.15 | 4.30 | 2.04 | 13.85 |
| **20** | 18 | suburbs | 2.77 | 3.29 | 1.70 | 2.52 | 0.55 | 3.84 | 2.37 | 2.12 | 4.90 | 1.18 | 4.41 | 2.09 | 14.19 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **20** | 19 | cities | 4.46 | 5.28 | 2.74 | 4.06 | 0.89 | 6.19 | 3.81 | 3.40 | 7.88 | 1.91 | 7.10 | 3.36 | 22.84 |
| **20** | 19 | country | 4.25 | 5.03 | 2.61 | 3.87 | 0.84 | 5.89 | 3.63 | 3.24 | 7.50 | 1.81 | 6.75 | 3.20 | 21.75 |
| **20** | 19 | suburbs | 4.34 | 5.14 | 2.66 | 3.95 | 0.86 | 6.03 | 3.71 | 3.31 | 7.67 | 1.86 | 6.91 | 3.27 | 22.23 |
| **20** | 20 | cities | 7.61 | 9.01 | 4.67 | 6.96 | 1.51 | 10.66 | 6.49 | 5.81 | 13.45 | 3.27 | 12.12 | 5.77 | 39.07 |
| **20** | 20 | country | 7.16 | 8.48 | 4.40 | 6.55 | 1.42 | 10.04 | 6.11 | 5.47 | 12.66 | 3.08 | 11.41 | 5.44 | 36.79 |
| **20** | 20 | suburbs | 7.36 | 8.72 | 4.52 | 6.73 | 1.46 | 10.31 | 6.28 | 5.62 | 13.02 | 3.17 | 11.73 | 5.58 | 37.81 |
| **21** | 5 | cities | 2.75 | 4.95 | 1.84 | 2.97 | 0.60 | 18.63 | 2.85 | 1.59 | 5.58 | 1.92 | 5.21 | 3.74 | 32.20 |
| **21** | 5 | country | 2.49 | 4.50 | 1.67 | 2.70 | 0.55 | 16.92 | 2.59 | 1.44 | 5.07 | 1.74 | 4.73 | 3.39 | 29.24 |
| **21** | 5 | suburbs | 2.60 | 4.69 | 1.74 | 2.81 | 0.57 | 17.65 | 2.70 | 1.50 | 5.29 | 1.82 | 4.93 | 3.54 | 30.49 |
| **21** | 6 | cities | 2.49 | 4.48 | 1.66 | 2.69 | 0.55 | 16.87 | 2.58 | 1.44 | 5.06 | 1.74 | 4.72 | 3.39 | 29.16 |
| **21** | 6 | country | 2.26 | 4.07 | 1.51 | 2.44 | 0.50 | 15.31 | 2.35 | 1.30 | 4.59 | 1.58 | 4.28 | 3.07 | 26.45 |
| **21** | 6 | suburbs | 2.35 | 4.25 | 1.57 | 2.55 | 0.52 | 15.97 | 2.45 | 1.36 | 4.79 | 1.65 | 4.46 | 3.21 | 27.60 |
| **21** | 7 | cities | 3.40 | 6.14 | 2.27 | 3.67 | 0.75 | 23.07 | 3.54 | 1.96 | 6.91 | 2.37 | 6.45 | 4.62 | 39.83 |
| **21** | 7 | country | 3.12 | 5.62 | 2.08 | 3.36 | 0.68 | 21.13 | 3.24 | 1.80 | 6.33 | 2.17 | 5.91 | 4.22 | 36.47 |
| **21** | 7 | suburbs | 3.24 | 5.85 | 2.17 | 3.50 | 0.71 | 21.97 | 3.37 | 1.87 | 6.58 | 2.26 | 6.14 | 4.39 | 37.93 |
| **21** | 8 | cities | 6.54 | 11.77 | 4.38 | 7.11 | 1.43 | 44.45 | 6.79 | 3.78 | 13.31 | 4.63 | 12.43 | 9.02 | 77.02 |
| **21** | 8 | country | 6.06 | 10.91 | 4.06 | 6.60 | 1.33 | 41.22 | 6.30 | 3.50 | 12.34 | 4.29 | 11.53 | 8.37 | 71.43 |
| **21** | 8 | suburbs | 6.32 | 11.37 | 4.23 | 6.87 | 1.38 | 42.94 | 6.56 | 3.65 | 12.86 | 4.47 | 12.01 | 8.72 | 74.41 |
| **21** | 17 | cities | 3.21 | 5.80 | 2.15 | 3.47 | 0.71 | 21.79 | 3.34 | 1.85 | 6.53 | 2.24 | 6.09 | 4.36 | 37.63 |
| **21** | 17 | country | 2.95 | 5.33 | 1.97 | 3.19 | 0.65 | 20.03 | 3.07 | 1.71 | 6.00 | 2.06 | 5.60 | 4.01 | 34.59 |
| **21** | 17 | suburbs | 3.06 | 5.53 | 2.05 | 3.31 | 0.67 | 20.78 | 3.19 | 1.77 | 6.23 | 2.14 | 5.81 | 4.16 | 35.88 |
| **21** | 18 | cities | 3.24 | 5.84 | 2.16 | 3.50 | 0.71 | 21.96 | 3.37 | 1.87 | 6.58 | 2.26 | 6.14 | 4.40 | 37.93 |
| **21** | 18 | country | 2.97 | 5.37 | 1.99 | 3.21 | 0.65 | 20.17 | 3.09 | 1.72 | 6.04 | 2.07 | 5.64 | 4.03 | 34.82 |
| **21** | 18 | suburbs | 3.09 | 5.57 | 2.06 | 3.33 | 0.68 | 20.92 | 3.21 | 1.78 | 6.27 | 2.15 | 5.85 | 4.19 | 36.13 |
| **21** | 19 | cities | 4.85 | 8.75 | 3.25 | 5.25 | 1.07 | 32.94 | 5.04 | 2.80 | 9.87 | 3.40 | 9.21 | 6.62 | 56.94 |
| **21** | 19 | country | 4.51 | 8.13 | 3.01 | 4.88 | 0.99 | 30.58 | 4.68 | 2.60 | 9.16 | 3.15 | 8.55 | 6.14 | 52.86 |
| **21** | 19 | suburbs | 4.66 | 8.40 | 3.12 | 5.04 | 1.02 | 31.61 | 4.84 | 2.69 | 9.47 | 3.26 | 8.84 | 6.35 | 54.65 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **21** | 20 | cities | 8.52 | 15.35 | 5.70 | 9.25 | 1.87 | 57.90 | 8.85 | 4.92 | 17.34 | 6.00 | 16.19 | 11.71 | 100.22 |
| **21** | 20 | country | 7.89 | 14.21 | 5.28 | 8.56 | 1.73 | 53.60 | 8.19 | 4.55 | 16.05 | 5.56 | 14.98 | 10.84 | 92.78 |
| **21** | 20 | suburbs | 8.15 | 14.67 | 5.45 | 8.84 | 1.79 | 55.35 | 8.46 | 4.70 | 16.58 | 5.74 | 15.47 | 11.19 | 95.81 |
| **22** | 5 | cities | 5.31 | 4.51 | 3.93 | 7.99 | 0.98 | 14.59 | 4.00 | 3.47 | 7.01 | 5.26 | 7.00 | 7.55 | 31.73 |
| **22** | 5 | country | 4.80 | 4.10 | 3.55 | 7.12 | 0.89 | 12.76 | 3.64 | 3.15 | 6.32 | 4.65 | 6.35 | 6.30 | 27.84 |
| **22** | 5 | suburbs | 5.00 | 4.26 | 3.70 | 7.44 | 0.93 | 13.40 | 3.79 | 3.27 | 6.59 | 4.87 | 6.60 | 6.70 | 29.22 |
| **22** | 6 | cities | 4.85 | 4.11 | 3.59 | 7.31 | 0.89 | 13.38 | 3.65 | 3.17 | 6.40 | 4.82 | 6.39 | 6.97 | 29.09 |
| **22** | 6 | country | 4.37 | 3.74 | 3.23 | 6.49 | 0.81 | 11.66 | 3.32 | 2.86 | 5.76 | 4.24 | 5.78 | 5.77 | 25.42 |
| **22** | 6 | suburbs | 4.56 | 3.89 | 3.37 | 6.80 | 0.85 | 12.27 | 3.45 | 2.98 | 6.01 | 4.45 | 6.02 | 6.17 | 26.74 |
| **22** | 7 | cities | 6.20 | 5.29 | 4.58 | 9.18 | 1.15 | 16.43 | 4.70 | 4.06 | 8.15 | 5.99 | 8.19 | 8.09 | 35.85 |
| **22** | 7 | country | 5.67 | 4.85 | 4.19 | 8.37 | 1.06 | 14.93 | 4.31 | 3.72 | 7.46 | 5.46 | 7.50 | 7.28 | 32.59 |
| **22** | 7 | suburbs | 5.88 | 5.03 | 4.34 | 8.69 | 1.10 | 15.51 | 4.47 | 3.85 | 7.74 | 5.67 | 7.77 | 7.59 | 33.86 |
| **22** | 8 | cities | 14.41 | 12.14 | 10.74 | 22.22 | 2.63 | 41.77 | 10.76 | 9.40 | 19.12 | 14.80 | 18.96 | 23.48 | 90.47 |
| **22** | 8 | country | 13.24 | 11.19 | 9.83 | 20.16 | 2.43 | 37.32 | 9.93 | 8.64 | 17.51 | 13.34 | 17.44 | 20.08 | 81.03 |
| **22** | 8 | suburbs | 13.70 | 11.57 | 10.19 | 20.97 | 2.51 | 39.08 | 10.26 | 8.94 | 18.15 | 13.92 | 18.04 | 21.41 | 84.76 |
| **22** | 17 | cities | 5.60 | 4.78 | 4.14 | 8.29 | 1.04 | 14.86 | 4.25 | 3.67 | 7.37 | 5.42 | 7.40 | 7.32 | 32.41 |
| **22** | 17 | country | 5.18 | 4.43 | 3.82 | 7.64 | 0.97 | 13.64 | 3.94 | 3.39 | 6.81 | 4.98 | 6.84 | 6.66 | 29.77 |
| **22** | 17 | suburbs | 5.35 | 4.57 | 3.95 | 7.91 | 1.00 | 14.13 | 4.06 | 3.50 | 7.04 | 5.16 | 7.07 | 6.92 | 30.83 |
| **22** | 18 | cities | 5.65 | 4.83 | 4.18 | 8.38 | 1.05 | 15.03 | 4.29 | 3.70 | 7.44 | 5.48 | 7.47 | 7.42 | 32.78 |
| **22** | 18 | country | 5.22 | 4.46 | 3.85 | 7.71 | 0.97 | 13.76 | 3.97 | 3.42 | 6.87 | 5.03 | 6.90 | 6.73 | 30.04 |
| **22** | 18 | suburbs | 5.40 | 4.62 | 3.99 | 7.98 | 1.01 | 14.28 | 4.10 | 3.54 | 7.10 | 5.21 | 7.13 | 7.00 | 31.15 |
| **22** | 19 | cities | 8.72 | 7.42 | 6.45 | 13.04 | 1.61 | 23.61 | 6.59 | 5.70 | 11.50 | 8.55 | 11.51 | 11.97 | 51.43 |
| **22** | 19 | country | 8.18 | 6.98 | 6.05 | 12.18 | 1.52 | 21.93 | 6.20 | 5.36 | 10.78 | 7.97 | 10.81 | 10.95 | 47.80 |
| **22** | 19 | suburbs | 8.40 | 7.16 | 6.21 | 12.52 | 1.56 | 22.59 | 6.36 | 5.50 | 11.07 | 8.20 | 11.09 | 11.34 | 49.23 |
| **22** | 20 | cities | 15.18 | 12.89 | 11.25 | 22.85 | 2.80 | 41.73 | 11.45 | 9.93 | 20.04 | 15.04 | 20.02 | 21.61 | 90.78 |
| **22** | 20 | country | 13.95 | 11.87 | 10.33 | 20.90 | 2.58 | 37.95 | 10.54 | 9.13 | 18.41 | 13.73 | 18.41 | 19.35 | 82.63 |
| **22** | 20 | suburbs | 14.42 | 12.26 | 10.68 | 21.65 | 2.67 | 39.39 | 10.89 | 9.43 | 19.03 | 14.23 | 19.03 | 20.20 | 85.73 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23** | 9 | cities | 15.27 | 19.02 | 6.52 | 19.04 | 1.42 | 63.63 | 6.73 | 8.25 | 15.92 | 12.06 | 15.73 | 21.31 | 135.31 |
| **23** | 9 | country | 14.90 | 18.56 | 6.37 | 18.58 | 1.39 | 62.08 | 6.57 | 8.06 | 15.53 | 11.76 | 15.35 | 20.79 | 132.02 |
| **23** | 9 | suburbs | 15.04 | 18.72 | 6.42 | 18.75 | 1.40 | 62.62 | 6.63 | 8.13 | 15.67 | 11.87 | 15.49 | 20.98 | 133.20 |
| **23** | 10 | cities | 15.36 | 19.13 | 6.56 | 19.15 | 1.43 | 64.03 | 6.77 | 8.30 | 16.01 | 12.13 | 15.82 | 21.44 | 136.13 |
| **23** | 10 | country | 14.96 | 18.63 | 6.39 | 18.66 | 1.39 | 62.35 | 6.59 | 8.09 | 15.60 | 11.81 | 15.41 | 20.88 | 132.58 |
| **23** | 10 | suburbs | 15.11 | 18.82 | 6.45 | 18.84 | 1.41 | 62.94 | 6.66 | 8.17 | 15.75 | 11.93 | 15.56 | 21.08 | 133.86 |
| **23** | 11 | cities | 19.42 | 24.18 | 8.29 | 24.21 | 1.81 | 80.81 | 8.56 | 10.50 | 20.24 | 15.33 | 20.00 | 27.08 | 171.94 |
| **23** | 11 | country | 18.89 | 23.53 | 8.07 | 23.56 | 1.76 | 78.65 | 8.33 | 10.21 | 19.70 | 14.92 | 19.46 | 26.35 | 167.33 |
| **23** | 11 | suburbs | 19.09 | 23.77 | 8.16 | 23.80 | 1.78 | 79.45 | 8.41 | 10.32 | 19.90 | 15.07 | 19.66 | 26.62 | 169.05 |
| **23** | 12 | cities | 27.32 | 34.10 | 11.66 | 34.07 | 2.54 | 115.06 | 12.02 | 14.76 | 28.48 | 21.57 | 28.13 | 38.43 | 243.35 |
| **23** | 12 | country | 26.97 | 33.65 | 11.51 | 33.63 | 2.51 | 113.41 | 11.87 | 14.57 | 28.11 | 21.29 | 27.77 | 37.89 | 240.03 |
| **23** | 12 | suburbs | 27.09 | 33.80 | 11.56 | 33.78 | 2.52 | 113.92 | 11.92 | 14.64 | 28.24 | 21.39 | 27.89 | 38.06 | 241.10 |
| **23** | 21 | cities | 18.33 | 22.86 | 7.82 | 22.86 | 1.71 | 76.89 | 8.07 | 9.91 | 19.11 | 14.47 | 18.88 | 25.71 | 162.96 |
| **23** | 21 | country | 17.95 | 22.38 | 7.66 | 22.38 | 1.67 | 75.28 | 7.90 | 9.70 | 18.71 | 14.17 | 18.48 | 25.17 | 159.53 |
| **23** | 21 | suburbs | 18.09 | 22.55 | 7.72 | 22.55 | 1.68 | 75.80 | 7.96 | 9.77 | 18.85 | 14.28 | 18.62 | 25.35 | 160.71 |
| **23** | 22 | cities | 18.41 | 22.97 | 7.86 | 22.96 | 1.71 | 77.31 | 8.11 | 9.95 | 19.20 | 14.54 | 18.96 | 25.84 | 163.76 |
| **23** | 22 | country | 17.99 | 22.44 | 7.68 | 22.43 | 1.67 | 75.52 | 7.92 | 9.72 | 18.75 | 14.20 | 18.52 | 25.24 | 159.98 |
| **23** | 22 | suburbs | 18.16 | 22.64 | 7.75 | 22.64 | 1.69 | 76.15 | 7.99 | 9.81 | 18.93 | 14.33 | 18.69 | 25.46 | 161.38 |
| **23** | 23 | cities | 24.11 | 30.10 | 10.29 | 30.07 | 2.24 | 101.56 | 10.61 | 13.03 | 25.14 | 19.04 | 24.83 | 33.92 | 214.78 |
| **23** | 23 | country | 23.69 | 29.57 | 10.11 | 29.55 | 2.20 | 99.76 | 10.43 | 12.80 | 24.70 | 18.71 | 24.40 | 33.32 | 211.01 |
| **23** | 23 | suburbs | 23.84 | 29.75 | 10.17 | 29.73 | 2.22 | 100.29 | 10.49 | 12.88 | 24.85 | 18.82 | 24.54 | 33.50 | 212.21 |
| **23** | 24 | cities | 27.58 | 34.47 | 11.75 | 34.39 | 2.56 | 116.95 | 12.12 | 14.89 | 28.74 | 21.77 | 28.38 | 38.99 | 246.44 |
| **23** | 24 | country | 26.56 | 33.18 | 11.32 | 33.12 | 2.47 | 112.45 | 11.68 | 14.34 | 27.68 | 20.97 | 27.34 | 37.50 | 237.14 |
| **23** | 24 | suburbs | 26.97 | 33.69 | 11.50 | 33.63 | 2.51 | 114.13 | 11.86 | 14.57 | 28.11 | 21.29 | 27.76 | 38.07 | 240.75 |
| **24** | 9 | cities | 12.92 | 13.81 | 4.86 | 16.70 | 1.01 | 44.55 | 4.82 | 7.09 | 12.16 | 10.69 | 12.17 | 17.55 | 96.44 |
| **24** | 9 | country | 12.24 | 13.08 | 4.61 | 15.82 | 0.95 | 42.19 | 4.56 | 6.71 | 11.52 | 10.12 | 11.52 | 16.62 | 91.34 |
| **24** | 9 | suburbs | 12.55 | 13.41 | 4.73 | 16.23 | 0.98 | 43.27 | 4.68 | 6.89 | 11.81 | 10.38 | 11.82 | 17.04 | 93.69 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | $\text{PBT}_{\text{CC}}$ | $\text{PBT}_{\text{OD}}$ | $\text{PBT}_{\text{HT\_CE}}$ | $\text{PBT}_{\text{HT\_nCE}}$ | $\text{PBT}_{\text{PM}}$ | $\text{PBT}_{\text{IR\_hh}}$ | $\text{PBT}_{\text{POF}}$ | $\text{PBT}_{\text{AC}}$ | $\text{PBT}_{\text{ET}}$ | $\text{PBT}_{\text{EuF}}$ | $\text{PBT}_{\text{EuM}}$ | $\text{PBT}_{\text{Ec\_FW}}$ | $\text{PBT}_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **24** | 10 | cities | 12.99 | 13.88 | 4.89 | 16.79 | 1.01 | 44.79 | 4.84 | 7.13 | 12.23 | 10.74 | 12.23 | 17.64 | 96.97 |
| **24** | 10 | country | 12.30 | 13.14 | 4.63 | 15.90 | 0.96 | 42.40 | 4.58 | 6.75 | 11.58 | 10.17 | 11.58 | 16.70 | 91.80 |
| **24** | 10 | suburbs | 12.61 | 13.48 | 4.75 | 16.31 | 0.98 | 43.50 | 4.70 | 6.92 | 11.87 | 10.43 | 11.88 | 17.13 | 94.17 |
| **24** | 11 | cities | 16.24 | 17.36 | 6.12 | 21.00 | 1.27 | 56.00 | 6.05 | 8.91 | 15.29 | 13.44 | 15.29 | 22.06 | 121.25 |
| **24** | 11 | country | 15.49 | 16.55 | 5.83 | 20.02 | 1.21 | 53.39 | 5.77 | 8.50 | 14.58 | 12.81 | 14.58 | 21.03 | 115.60 |
| **24** | 11 | suburbs | 15.83 | 16.92 | 5.96 | 20.47 | 1.23 | 54.58 | 5.90 | 8.69 | 14.90 | 13.09 | 14.91 | 21.50 | 118.17 |
| **24** | 12 | cities | 22.47 | 24.02 | 8.46 | 29.05 | 1.75 | 77.53 | 8.37 | 12.33 | 21.15 | 18.59 | 21.16 | 30.53 | 167.77 |
| **24** | 12 | country | 21.70 | 23.20 | 8.17 | 28.06 | 1.69 | 74.89 | 8.09 | 11.91 | 20.43 | 17.95 | 20.43 | 29.49 | 162.04 |
| **24** | 12 | suburbs | 22.08 | 23.61 | 8.31 | 28.55 | 1.72 | 76.20 | 8.23 | 12.12 | 20.79 | 18.27 | 20.79 | 30.01 | 164.90 |
| **24** | 21 | cities | 15.39 | 16.45 | 5.80 | 19.90 | 1.20 | 53.10 | 5.74 | 8.45 | 14.49 | 12.73 | 14.49 | 20.91 | 114.93 |
| **24** | 21 | country | 14.51 | 15.51 | 5.46 | 18.76 | 1.13 | 50.06 | 5.41 | 7.96 | 13.66 | 12.00 | 13.66 | 19.71 | 108.34 |
| **24** | 21 | suburbs | 14.90 | 15.93 | 5.61 | 19.27 | 1.16 | 51.40 | 5.55 | 8.18 | 14.03 | 12.33 | 14.03 | 20.24 | 111.26 |
| **24** | 22 | cities | 15.46 | 16.52 | 5.82 | 19.99 | 1.20 | 53.33 | 5.76 | 8.48 | 14.55 | 12.79 | 14.56 | 21.00 | 115.42 |
| **24** | 22 | country | 14.55 | 15.55 | 5.48 | 18.81 | 1.13 | 50.20 | 5.42 | 7.98 | 13.69 | 12.03 | 13.70 | 19.77 | 108.63 |
| **24** | 22 | suburbs | 14.97 | 16.00 | 5.63 | 19.35 | 1.17 | 51.63 | 5.58 | 8.21 | 14.09 | 12.38 | 14.09 | 20.33 | 111.74 |
| **24** | 23 | cities | 20.05 | 21.44 | 7.55 | 25.93 | 1.56 | 69.19 | 7.47 | 11.00 | 18.88 | 16.59 | 18.88 | 27.25 | 149.73 |
| **24** | 23 | country | 18.99 | 20.30 | 7.15 | 24.55 | 1.48 | 65.54 | 7.08 | 10.42 | 17.88 | 15.71 | 17.88 | 25.81 | 141.80 |
| **24** | 23 | suburbs | 19.49 | 20.83 | 7.34 | 25.19 | 1.52 | 67.24 | 7.26 | 10.69 | 18.34 | 16.12 | 18.35 | 26.48 | 145.50 |
| **24** | 24 | cities | 22.36 | 23.91 | 8.42 | 28.91 | 1.74 | 77.19 | 8.33 | 12.27 | 21.05 | 18.50 | 21.06 | 30.39 | 167.01 |
| **24** | 24 | country | 21.03 | 22.48 | 7.92 | 27.19 | 1.64 | 72.61 | 7.84 | 11.54 | 19.80 | 17.39 | 19.80 | 28.59 | 157.06 |
| **24** | 24 | suburbs | 21.64 | 23.14 | 8.15 | 27.98 | 1.69 | 74.72 | 8.07 | 11.88 | 20.38 | 17.90 | 20.38 | 29.42 | 161.65 |
| **25** | 9 | cities | 11.50 | 11.52 | 4.42 | 14.67 | 0.92 | 26.58 | 4.26 | 5.48 | 9.79 | 9.25 | 9.72 | 12.39 | 90.35 |
| **25** | 9 | country | 11.07 | 11.09 | 4.25 | 14.12 | 0.88 | 25.58 | 4.10 | 5.28 | 9.42 | 8.90 | 9.35 | 11.93 | 86.95 |
| **25** | 9 | suburbs | 11.24 | 11.26 | 4.32 | 14.34 | 0.90 | 25.98 | 4.17 | 5.36 | 9.57 | 9.04 | 9.50 | 12.11 | 88.32 |
| **25** | 10 | cities | 11.53 | 11.54 | 4.42 | 14.70 | 0.92 | 26.64 | 4.27 | 5.50 | 9.81 | 9.27 | 9.74 | 12.42 | 90.55 |
| **25** | 10 | country | 11.09 | 11.10 | 4.26 | 14.14 | 0.88 | 25.62 | 4.11 | 5.29 | 9.44 | 8.92 | 9.37 | 11.94 | 87.09 |
| **25** | 10 | suburbs | 11.26 | 11.28 | 4.32 | 14.36 | 0.90 | 26.02 | 4.17 | 5.37 | 9.58 | 9.05 | 9.51 | 12.13 | 88.44 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{\mathrm{CC}}$** | **PBT$_{\mathrm{OD}}$** | **PBT$_{\mathrm{HT\_CE}}$** | **PBT$_{\mathrm{HT\_nCE}}$** | **PBT$_{\mathrm{PM}}$** | **PBT$_{\mathrm{IR\_hh}}$** | **PBT$_{\mathrm{POF}}$** | **PBT$_{\mathrm{AC}}$** | **PBT$_{\mathrm{ET}}$** | **PBT$_{\mathrm{EuF}}$** | **PBT$_{\mathrm{EuM}}$** | **PBT$_{\mathrm{Ec\_FW}}$** | **PBT$_{\mathrm{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **25** | 11 | cities | 14.86 | 14.88 | 5.71 | 18.95 | 1.18 | 34.34 | 5.51 | 7.09 | 12.65 | 11.95 | 12.55 | 16.01 | 116.73 |
| **25** | 11 | country | 14.30 | 14.32 | 5.49 | 18.24 | 1.14 | 33.05 | 5.30 | 6.82 | 12.17 | 11.50 | 12.08 | 15.41 | 112.33 |
| **25** | 11 | suburbs | 14.52 | 14.54 | 5.58 | 18.52 | 1.16 | 33.56 | 5.38 | 6.92 | 12.36 | 11.68 | 12.27 | 15.64 | 114.06 |
| **25** | 12 | cities | 19.84 | 19.89 | 7.62 | 25.30 | 1.58 | 45.94 | 7.35 | 9.46 | 16.89 | 15.95 | 16.76 | 21.40 | 156.00 |
| **25** | 12 | country | 19.32 | 19.36 | 7.41 | 24.63 | 1.54 | 44.71 | 7.15 | 9.21 | 16.44 | 15.53 | 16.32 | 20.83 | 151.84 |
| **25** | 12 | suburbs | 19.55 | 19.59 | 7.50 | 24.93 | 1.56 | 45.25 | 7.24 | 9.32 | 16.64 | 15.72 | 16.52 | 21.08 | 153.68 |
| **25** | 21 | cities | 13.44 | 13.47 | 5.16 | 17.14 | 1.07 | 31.10 | 4.98 | 6.41 | 11.44 | 10.81 | 11.36 | 14.49 | 105.65 |
| **25** | 21 | country | 12.93 | 12.96 | 4.96 | 16.49 | 1.03 | 29.91 | 4.79 | 6.17 | 11.01 | 10.40 | 10.92 | 13.94 | 101.62 |
| **25** | 21 | suburbs | 13.14 | 13.16 | 5.04 | 16.75 | 1.05 | 30.39 | 4.87 | 6.26 | 11.18 | 10.56 | 11.10 | 14.16 | 103.23 |
| **25** | 22 | cities | 13.43 | 13.46 | 5.15 | 17.13 | 1.07 | 31.08 | 4.97 | 6.40 | 11.43 | 10.80 | 11.34 | 14.48 | 105.55 |
| **25** | 22 | country | 12.88 | 12.91 | 4.95 | 16.43 | 1.03 | 29.81 | 4.77 | 6.14 | 10.97 | 10.36 | 10.88 | 13.89 | 101.26 |
| **25** | 22 | suburbs | 13.09 | 13.12 | 5.03 | 16.70 | 1.04 | 30.29 | 4.85 | 6.24 | 11.14 | 10.53 | 11.06 | 14.11 | 102.91 |
| **25** | 23 | cities | 17.67 | 17.71 | 6.78 | 22.53 | 1.41 | 40.91 | 6.54 | 8.43 | 15.04 | 14.20 | 14.93 | 19.05 | 138.90 |
| **25** | 23 | country | 16.80 | 16.83 | 6.45 | 21.42 | 1.34 | 38.87 | 6.22 | 8.01 | 14.30 | 13.50 | 14.19 | 18.11 | 132.02 |
| **25** | 23 | suburbs | 17.18 | 17.22 | 6.60 | 21.91 | 1.37 | 39.77 | 6.36 | 8.19 | 14.63 | 13.81 | 14.52 | 18.53 | 135.08 |
| **25** | 24 | cities | 19.69 | 19.74 | 7.55 | 25.10 | 1.57 | 45.63 | 7.29 | 9.39 | 16.76 | 15.82 | 16.63 | 21.24 | 154.84 |
| **25** | 24 | country | 18.55 | 18.59 | 7.12 | 23.65 | 1.48 | 42.96 | 6.87 | 8.85 | 15.79 | 14.91 | 15.67 | 20.01 | 145.84 |
| **25** | 24 | suburbs | 19.05 | 19.10 | 7.31 | 24.28 | 1.52 | 44.12 | 7.05 | 9.08 | 16.21 | 15.31 | 16.09 | 20.55 | 149.77 |
| **26** | 9 | cities | 19.62 | 8.40 | 9.65 | 15.42 | 4.30 | 2.07 | 16.10 | 9.32 | 20.13 | 11.41 | 19.70 | 3.43 | 24.83 |
| **26** | 9 | country | 19.67 | 8.42 | 9.67 | 15.45 | 4.31 | 2.07 | 16.14 | 9.35 | 20.17 | 11.43 | 19.75 | 3.43 | 24.88 |
| **26** | 9 | suburbs | 19.60 | 8.39 | 9.64 | 15.40 | 4.30 | 2.06 | 16.09 | 9.31 | 20.10 | 11.39 | 19.68 | 3.42 | 24.78 |
| **26** | 10 | cities | 19.69 | 8.43 | 9.69 | 15.47 | 4.32 | 2.07 | 16.16 | 9.36 | 20.20 | 11.45 | 19.78 | 3.44 | 24.92 |
| **26** | 10 | country | 19.71 | 8.44 | 9.69 | 15.49 | 4.32 | 2.08 | 16.18 | 9.37 | 20.22 | 11.46 | 19.80 | 3.44 | 24.94 |
| **26** | 10 | suburbs | 19.66 | 8.42 | 9.67 | 15.45 | 4.31 | 2.07 | 16.14 | 9.34 | 20.17 | 11.43 | 19.75 | 3.43 | 24.87 |
| **26** | 11 | cities | 25.31 | 10.83 | 12.44 | 19.88 | 5.55 | 2.66 | 20.77 | 12.03 | 25.96 | 14.71 | 25.42 | 4.42 | 32.01 |
| **26** | 11 | country | 25.34 | 10.84 | 12.46 | 19.90 | 5.56 | 2.67 | 20.80 | 12.04 | 25.99 | 14.73 | 25.44 | 4.42 | 32.04 |
| **26** | 11 | suburbs | 25.24 | 10.80 | 12.41 | 19.82 | 5.54 | 2.66 | 20.72 | 11.99 | 25.89 | 14.67 | 25.35 | 4.40 | 31.91 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT**$_{CC}$ | **PBT**$_{OD}$ | **PBT**$_{HT\_CE}$ | **PBT**$_{HT\_nCE}$ | **PBT**$_{PM}$ | **PBT**$_{IR\_hh}$ | **PBT**$_{POF}$ | **PBT**$_{AC}$ | **PBT**$_{ET}$ | **PBT**$_{EuF}$ | **PBT**$_{EuM}$ | **PBT**$_{Ec\_FW}$ | **PBT**$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26** | 12 | cities | 32.64 | 14.07 | 16.11 | 25.74 | 7.16 | 3.47 | 26.78 | 15.51 | 33.50 | 19.02 | 32.80 | 5.75 | 41.69 |
| **26** | 12 | country | 32.86 | 14.15 | 16.21 | 25.91 | 7.21 | 3.49 | 26.97 | 15.61 | 33.73 | 19.14 | 33.02 | 5.78 | 41.92 |
| **26** | 12 | suburbs | 32.75 | 14.10 | 16.16 | 25.82 | 7.18 | 3.48 | 26.87 | 15.56 | 33.61 | 19.08 | 32.91 | 5.76 | 41.77 |
| **26** | 21 | cities | 21.29 | 9.14 | 10.49 | 16.76 | 4.67 | 2.25 | 17.47 | 10.12 | 21.85 | 12.39 | 21.39 | 3.73 | 27.05 |
| **26** | 21 | country | 21.82 | 9.37 | 10.75 | 17.18 | 4.79 | 2.31 | 17.91 | 10.37 | 22.39 | 12.70 | 21.92 | 3.83 | 27.72 |
| **26** | 21 | suburbs | 21.51 | 9.23 | 10.59 | 16.92 | 4.72 | 2.27 | 17.65 | 10.22 | 22.07 | 12.52 | 21.61 | 3.77 | 27.31 |
| **26** | 22 | cities | 21.19 | 9.10 | 10.44 | 16.68 | 4.65 | 2.24 | 17.39 | 10.07 | 21.74 | 12.33 | 21.29 | 3.72 | 26.93 |
| **26** | 22 | country | 21.65 | 9.30 | 10.67 | 17.04 | 4.75 | 2.29 | 17.77 | 10.29 | 22.21 | 12.60 | 21.75 | 3.80 | 27.52 |
| **26** | 22 | suburbs | 21.39 | 9.18 | 10.53 | 16.83 | 4.69 | 2.26 | 17.55 | 10.16 | 21.94 | 12.45 | 21.48 | 3.75 | 27.17 |
| **26** | 23 | cities | 26.43 | 11.37 | 13.04 | 20.83 | 5.80 | 2.80 | 21.69 | 12.56 | 27.13 | 15.40 | 26.56 | 4.65 | 33.68 |
| **26** | 23 | country | 26.99 | 11.62 | 13.31 | 21.27 | 5.92 | 2.86 | 22.15 | 12.82 | 27.70 | 15.72 | 27.12 | 4.75 | 34.41 |
| **26** | 23 | suburbs | 26.64 | 11.46 | 13.14 | 20.99 | 5.84 | 2.83 | 21.86 | 12.66 | 27.34 | 15.52 | 26.77 | 4.68 | 33.94 |
| **26** | 24 | cities | 28.67 | 12.36 | 14.15 | 22.61 | 6.28 | 3.05 | 23.52 | 13.62 | 29.42 | 16.71 | 28.81 | 5.05 | 36.62 |
| **26** | 24 | country | 28.75 | 12.40 | 14.19 | 22.68 | 6.30 | 3.06 | 23.59 | 13.66 | 29.51 | 16.76 | 28.90 | 5.07 | 36.73 |
| **26** | 24 | suburbs | 28.65 | 12.35 | 14.14 | 22.60 | 6.28 | 3.05 | 23.51 | 13.61 | 29.41 | 16.70 | 28.80 | 5.05 | 36.59 |
| **27** | 9 | cities | 9.80 | 5.50 | 4.81 | 10.58 | 1.38 | 2.04 | 5.93 | 5.91 | 10.72 | 7.09 | 10.87 | 3.48 | 22.88 |
| **27** | 9 | country | 9.20 | 5.16 | 4.52 | 9.93 | 1.30 | 1.92 | 5.56 | 5.55 | 10.06 | 6.66 | 10.21 | 3.27 | 21.49 |
| **27** | 9 | suburbs | 9.47 | 5.31 | 4.65 | 10.22 | 1.33 | 1.97 | 5.72 | 5.71 | 10.35 | 6.85 | 10.50 | 3.36 | 22.10 |
| **27** | 10 | cities | 9.85 | 5.53 | 4.84 | 10.64 | 1.39 | 2.05 | 5.96 | 5.94 | 10.78 | 7.13 | 10.93 | 3.49 | 23.00 |
| **27** | 10 | country | 9.24 | 5.19 | 4.54 | 9.98 | 1.30 | 1.93 | 5.59 | 5.58 | 10.11 | 6.69 | 10.26 | 3.28 | 21.60 |
| **27** | 10 | suburbs | 9.51 | 5.34 | 4.67 | 10.27 | 1.34 | 1.98 | 5.75 | 5.74 | 10.41 | 6.89 | 10.56 | 3.38 | 22.22 |
| **27** | 11 | cities | 12.31 | 6.91 | 6.05 | 13.29 | 1.74 | 2.56 | 7.45 | 7.43 | 13.47 | 8.91 | 13.66 | 4.37 | 28.74 |
| **27** | 11 | country | 11.61 | 6.51 | 5.70 | 12.53 | 1.64 | 2.42 | 7.02 | 7.00 | 12.70 | 8.40 | 12.88 | 4.12 | 27.10 |
| **27** | 11 | suburbs | 11.92 | 6.69 | 5.85 | 12.87 | 1.68 | 2.48 | 7.21 | 7.19 | 13.04 | 8.63 | 13.22 | 4.23 | 27.82 |
| **27** | 12 | cities | 16.91 | 9.51 | 8.31 | 18.29 | 2.38 | 3.55 | 10.21 | 10.19 | 18.49 | 12.26 | 18.75 | 6.04 | 39.71 |
| **27** | 12 | country | 16.20 | 9.12 | 7.96 | 17.54 | 2.28 | 3.41 | 9.78 | 9.77 | 17.72 | 11.76 | 17.97 | 5.80 | 38.15 |
| **27** | 12 | suburbs | 16.53 | 9.30 | 8.12 | 17.88 | 2.32 | 3.47 | 9.97 | 9.96 | 18.07 | 11.99 | 18.33 | 5.91 | 38.86 |

## WOOD WOOL

| Country | Arc | GL | PBT$_{\text{CC}}$ | PBT$_{\text{OD}}$ | PBT$_{\text{HT\_CE}}$ | PBT$_{\text{HT\_nCE}}$ | PBT$_{\text{PM}}$ | PBT$_{\text{IR\_hh}}$ | PBT$_{\text{POF}}$ | PBT$_{\text{AC}}$ | PBT$_{\text{ET}}$ | PBT$_{\text{EuF}}$ | PBT$_{\text{EuM}}$ | PBT$_{\text{Ec\_FW}}$ | PBT$_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **27** | 21 | cities | 11.43 | 6.42 | 5.61 | 12.36 | 1.61 | 2.39 | 6.90 | 6.89 | 12.50 | 8.28 | 12.68 | 4.07 | 26.79 |
| **27** | 21 | country | 10.82 | 6.09 | 5.31 | 11.70 | 1.52 | 2.27 | 6.53 | 6.52 | 11.83 | 7.85 | 12.00 | 3.87 | 25.42 |
| **27** | 21 | suburbs | 11.08 | 6.23 | 5.45 | 11.99 | 1.56 | 2.32 | 6.69 | 6.68 | 12.12 | 8.04 | 12.29 | 3.96 | 26.01 |
| **27** | 22 | cities | 11.44 | 6.43 | 5.62 | 12.37 | 1.61 | 2.40 | 6.91 | 6.90 | 12.51 | 8.30 | 12.69 | 4.08 | 26.84 |
| **27** | 22 | country | 10.81 | 6.08 | 5.31 | 11.70 | 1.52 | 2.27 | 6.52 | 6.52 | 11.82 | 7.84 | 11.99 | 3.87 | 25.42 |
| **27** | 22 | suburbs | 11.09 | 6.24 | 5.45 | 11.99 | 1.56 | 2.33 | 6.69 | 6.68 | 12.13 | 8.04 | 12.30 | 3.96 | 26.04 |
| **27** | 23 | cities | 14.76 | 8.31 | 7.25 | 15.97 | 2.07 | 3.10 | 8.90 | 8.89 | 16.14 | 10.71 | 16.36 | 5.28 | 34.71 |
| **27** | 23 | country | 13.93 | 7.85 | 6.85 | 15.09 | 1.96 | 2.94 | 8.40 | 8.39 | 15.23 | 10.12 | 15.45 | 5.00 | 32.84 |
| **27** | 23 | suburbs | 14.30 | 8.05 | 7.02 | 15.48 | 2.01 | 3.01 | 8.62 | 8.61 | 15.63 | 10.38 | 15.85 | 5.12 | 33.66 |
| **27** | 24 | cities | 16.30 | 9.19 | 8.01 | 17.66 | 2.29 | 3.45 | 9.82 | 9.82 | 17.82 | 11.84 | 18.07 | 5.86 | 38.49 |
| **27** | 24 | country | 15.29 | 8.63 | 7.52 | 16.59 | 2.14 | 3.25 | 9.21 | 9.21 | 16.72 | 11.12 | 16.95 | 5.52 | 36.22 |
| **27** | 24 | suburbs | 15.75 | 8.88 | 7.74 | 17.07 | 2.21 | 3.34 | 9.49 | 9.48 | 17.22 | 11.45 | 17.46 | 5.67 | 37.24 |
| **28** | 5 | cities | 6.79 | 5.12 | 2.21 | 15.79 | 0.40 | 54.61 | 2.01 | 7.77 | 7.51 | 20.75 | 7.54 | 29.38 | 29.73 |
| **28** | 5 | country | 6.12 | 4.61 | 1.99 | 14.68 | 0.36 | 56.34 | 1.81 | 7.10 | 6.78 | 21.20 | 6.81 | 31.09 | 27.01 |
| **28** | 5 | suburbs | 6.38 | 4.82 | 2.08 | 14.53 | 0.38 | 47.20 | 1.90 | 7.23 | 7.06 | 18.03 | 7.08 | 25.05 | 27.80 |
| **28** | 6 | cities | 6.20 | 4.67 | 2.01 | 14.89 | 0.37 | 57.27 | 1.83 | 7.19 | 6.86 | 21.55 | 6.90 | 31.62 | 27.36 |
| **28** | 6 | country | 5.58 | 4.20 | 1.81 | 13.83 | 0.33 | 59.84 | 1.64 | 6.57 | 6.19 | 22.25 | 6.22 | 34.14 | 24.83 |
| **28** | 6 | suburbs | 5.82 | 4.39 | 1.89 | 13.65 | 0.35 | 48.36 | 1.73 | 6.68 | 6.44 | 18.34 | 6.47 | 26.17 | 25.55 |
| **28** | 7 | cities | 8.14 | 6.22 | 2.67 | 14.64 | 0.50 | 29.96 | 2.50 | 8.21 | 8.91 | 11.81 | 8.90 | 14.75 | 33.15 |
| **28** | 7 | country | 7.39 | 5.64 | 2.42 | 13.74 | 0.45 | 29.49 | 2.26 | 7.59 | 8.10 | 11.60 | 8.10 | 14.61 | 30.41 |
| **28** | 7 | suburbs | 7.71 | 5.90 | 2.53 | 13.97 | 0.48 | 28.84 | 2.36 | 7.81 | 8.45 | 11.37 | 8.44 | 14.22 | 31.48 |
| **28** | 8 | cities | 25.98 | 17.70 | 7.92 | (42.17) | 1.17 | (23.59) | 6.07 | 16.42 | 31.53 | (9.68) | 33.13 | (10.66) | 66.30 |
| **28** | 8 | country | 22.14 | 15.30 | 6.81 | (47.41) | 1.03 | (23.90) | 5.33 | 15.17 | 26.50 | (9.82) | 27.65 | (10.77) | 60.82 |
| **28** | 8 | suburbs | 23.59 | 16.26 | 7.24 | (47.76) | 1.09 | (24.62) | 5.65 | 15.62 | 28.31 | (10.12) | 29.57 | (11.10) | 62.97 |
| **28** | 17 | cities | 7.62 | 5.83 | 2.50 | 13.33 | 0.47 | 26.29 | 2.35 | 7.58 | 8.33 | 10.39 | 8.32 | 12.89 | 30.77 |
| **28** | 17 | country | 7.00 | 5.35 | 2.29 | 12.69 | 0.43 | 26.27 | 2.14 | 7.09 | 7.66 | 10.35 | 7.66 | 12.95 | 28.57 |
| **28** | 17 | suburbs | 7.27 | 5.56 | 2.38 | 12.93 | 0.45 | 26.06 | 2.23 | 7.29 | 7.95 | 10.28 | 7.95 | 12.81 | 29.51 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **28** | 18 | cities | 7.70 | 5.89 | 2.52 | 13.60 | 0.48 | 27.17 | 2.37 | 7.70 | 8.42 | 10.73 | 8.41 | 13.34 | 31.18 |
| **28** | 18 | country | 7.07 | 5.40 | 2.32 | 12.98 | 0.44 | 27.30 | 2.16 | 7.21 | 7.75 | 10.75 | 7.75 | 13.49 | 28.99 |
| **28** | 18 | suburbs | 7.34 | 5.61 | 2.41 | 13.18 | 0.45 | 26.88 | 2.25 | 7.40 | 8.04 | 10.60 | 8.03 | 13.23 | 29.89 |
| **28** | 19 | cities | 12.46 | 9.39 | 4.05 | 29.70 | 0.74 | 111.28 | 3.69 | 14.41 | 13.80 | 41.98 | 13.86 | 61.03 | 54.90 |
| **28** | 19 | country | 11.49 | 8.64 | 3.72 | 29.19 | 0.67 | 141.02 | 3.38 | 13.67 | 12.75 | 51.78 | 12.82 | 83.40 | 51.42 |
| **28** | 19 | suburbs | 11.89 | 8.96 | 3.86 | 28.75 | 0.70 | 113.44 | 3.51 | 13.84 | 13.17 | 42.58 | 13.23 | 63.05 | 52.57 |
| **28** | 20 | cities | 27.16 | 19.54 | 8.57 | (59.40) | 1.41 | (62.79) | 7.18 | 28.82 | 31.31 | (26.10) | 32.05 | (27.68) | 109.80 |
| **28** | 20 | country | 24.10 | 17.39 | 7.62 | (58.38) | 1.26 | (60.96) | 6.41 | 27.34 | 27.70 | (25.38) | 28.32 | (26.77) | 102.83 |
| **28** | 20 | suburbs | 25.26 | 18.24 | 7.99 | (57.51) | 1.32 | (64.72) | 6.73 | 27.68 | 29.02 | (26.96) | 29.67 | (28.41) | 105.15 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | cities | 0.55 | 0.34 | 4.22 | 4.15 | 0.72 | 1.39 | 0.65 | 0.43 | 0.69 | 5.54 | 0.68 | 1.05 | 18.96 |
| **1** | 1 | country | 0.45 | 0.28 | 3.45 | 3.41 | 0.59 | 1.14 | 0.54 | 0.35 | 0.57 | 4.54 | 0.56 | 0.86 | 15.52 |
| **1** | 1 | suburbs | 0.49 | 0.31 | 3.77 | 3.73 | 0.64 | 1.25 | 0.59 | 0.39 | 0.62 | 4.97 | 0.61 | 0.94 | 16.99 |
| **1** | 2 | cities | 0.55 | 0.34 | 4.22 | 4.15 | 0.72 | 1.39 | 0.65 | 0.43 | 0.69 | 5.54 | 0.68 | 1.05 | 18.96 |
| **1** | 2 | country | 0.45 | 0.28 | 3.45 | 3.41 | 0.59 | 1.14 | 0.54 | 0.35 | 0.57 | 4.54 | 0.56 | 0.86 | 15.52 |
| **1** | 2 | suburbs | 0.49 | 0.31 | 3.77 | 3.73 | 0.64 | 1.25 | 0.59 | 0.39 | 0.62 | 4.97 | 0.61 | 0.94 | 16.99 |
| **1** | 3 | cities | 0.44 | 0.27 | 3.41 | 3.33 | 0.58 | 1.11 | 0.52 | 0.34 | 0.55 | 4.46 | 0.54 | 0.84 | 15.29 |
| **1** | 3 | country | 0.38 | 0.23 | 2.91 | 2.85 | 0.49 | 0.95 | 0.45 | 0.29 | 0.47 | 3.82 | 0.46 | 0.72 | 13.06 |

## CELLULOSE FIBER

| Country | Arc | GL | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 3 | suburbs | 0.41 | 0.25 | 3.12 | 3.06 | 0.53 | 1.02 | 0.48 | 0.31 | 0.50 | 4.09 | 0.50 | 0.77 | 14.02 |
| **1** | 4 | cities | 1.02 | 0.64 | 7.80 | 7.74 | 1.34 | 2.60 | 1.22 | 0.81 | 1.29 | 10.29 | 1.27 | 1.97 | 35.16 |
| **1** | 4 | country | 0.80 | 0.50 | 6.09 | 6.06 | 1.04 | 2.04 | 0.96 | 0.63 | 1.01 | 8.04 | 1.00 | 1.54 | 27.46 |
| **1** | 4 | suburbs | 0.85 | 0.53 | 6.48 | 6.43 | 1.11 | 2.16 | 1.01 | 0.67 | 1.07 | 8.55 | 1.06 | 1.64 | 29.21 |
| **1** | 13 | cities | 0.73 | 0.44 | 5.63 | 5.45 | 0.95 | 1.81 | 0.85 | 0.56 | 0.89 | 7.35 | 0.88 | 1.36 | 25.21 |
| **1** | 13 | country | 0.59 | 0.36 | 4.60 | 4.48 | 0.78 | 1.49 | 0.70 | 0.46 | 0.73 | 6.01 | 0.72 | 1.12 | 20.61 |
| **1** | 13 | suburbs | 0.65 | 0.40 | 5.04 | 4.90 | 0.85 | 1.62 | 0.77 | 0.50 | 0.80 | 6.58 | 0.79 | 1.23 | 22.58 |
| **1** | 14 | cities | 0.67 | 0.41 | 5.22 | 5.06 | 0.88 | 1.68 | 0.79 | 0.52 | 0.83 | 6.82 | 0.82 | 1.26 | 23.38 |
| **1** | 14 | country | 0.55 | 0.34 | 4.28 | 4.17 | 0.73 | 1.38 | 0.65 | 0.43 | 0.68 | 5.60 | 0.67 | 1.05 | 19.18 |
| **1** | 14 | suburbs | 0.60 | 0.37 | 4.68 | 4.54 | 0.79 | 1.51 | 0.71 | 0.46 | 0.74 | 6.11 | 0.73 | 1.14 | 20.95 |
| **1** | 15 | cities | 0.72 | 0.44 | 5.61 | 5.43 | 0.95 | 1.80 | 0.85 | 0.55 | 0.89 | 7.31 | 0.87 | 1.36 | 25.09 |
| **1** | 15 | country | 0.59 | 0.36 | 4.55 | 4.42 | 0.77 | 1.47 | 0.69 | 0.45 | 0.72 | 5.94 | 0.71 | 1.11 | 20.37 |
| **1** | 15 | suburbs | 0.64 | 0.39 | 5.00 | 4.85 | 0.85 | 1.61 | 0.76 | 0.49 | 0.79 | 6.53 | 0.78 | 1.21 | 22.38 |
| **1** | 16 | cities | 1.89 | 1.19 | 14.36 | 14.36 | 2.47 | 4.85 | 2.27 | 1.50 | 2.40 | 19.01 | 2.37 | 3.67 | 64.89 |
| **1** | 16 | country | 1.80 | 1.15 | 13.61 | 13.72 | 2.35 | 4.66 | 2.17 | 1.45 | 2.31 | 18.08 | 2.28 | 3.53 | 61.62 |
| **1** | 16 | suburbs | 1.85 | 1.18 | 14.06 | 14.13 | 2.43 | 4.79 | 2.24 | 1.49 | 2.37 | 18.66 | 2.34 | 3.63 | 63.63 |
| **2** | 1 | cities | 0.60 | 0.33 | 4.14 | 3.43 | 1.10 | 1.24 | 1.01 | 0.69 | 1.11 | 5.14 | 1.12 | 1.57 | 15.11 |
| **2** | 1 | country | 0.54 | 0.30 | 3.71 | 3.06 | 1.03 | 1.11 | 0.97 | 0.68 | 1.08 | 4.61 | 1.09 | 1.57 | 13.49 |
| **2** | 1 | suburbs | 0.57 | 0.32 | 3.94 | 3.26 | 1.08 | 1.18 | 1.00 | 0.70 | 1.11 | 4.89 | 1.13 | 1.60 | 14.35 |
| **2** | 2 | cities | 0.60 | 0.33 | 4.14 | 3.43 | 1.10 | 1.24 | 1.01 | 0.69 | 1.11 | 5.14 | 1.12 | 1.57 | 15.11 |
| **2** | 2 | country | 0.54 | 0.30 | 3.71 | 3.06 | 1.03 | 1.11 | 0.97 | 0.68 | 1.08 | 4.61 | 1.09 | 1.57 | 13.49 |
| **2** | 2 | suburbs | 0.57 | 0.32 | 3.94 | 3.26 | 1.08 | 1.18 | 1.00 | 0.70 | 1.11 | 4.89 | 1.13 | 1.60 | 14.35 |
| **2** | 3 | cities | 0.49 | 0.27 | 3.42 | 2.83 | 0.89 | 1.03 | 0.81 | 0.55 | 0.88 | 4.25 | 0.89 | 1.23 | 12.52 |
| **2** | 3 | country | 0.45 | 0.25 | 3.11 | 2.58 | 0.83 | 0.93 | 0.77 | 0.53 | 0.84 | 3.87 | 0.85 | 1.20 | 11.37 |
| **2** | 3 | suburbs | 0.47 | 0.26 | 3.29 | 2.72 | 0.87 | 0.99 | 0.80 | 0.54 | 0.87 | 4.08 | 0.88 | 1.23 | 12.01 |
| **2** | 4 | cities | 0.77 | 0.42 | 5.34 | 4.42 | 1.41 | 1.60 | 1.29 | 0.88 | 1.41 | 6.64 | 1.43 | 2.00 | 19.51 |
| **2** | 4 | country | 0.81 | 0.45 | 5.57 | 4.61 | 1.53 | 1.67 | 1.42 | 0.99 | 1.58 | 6.93 | 1.60 | 2.28 | 20.31 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2** | 4 | suburbs | 0.80 | 0.44 | 5.56 | 4.60 | 1.50 | 1.67 | 1.38 | 0.96 | 1.53 | 6.91 | 1.54 | 2.18 | 20.29 |
| **2** | 13 | cities | 0.72 | 0.40 | 5.07 | 4.21 | 1.26 | 1.53 | 1.13 | 0.75 | 1.20 | 6.30 | 1.22 | 1.66 | 18.62 |
| **2** | 13 | country | 0.66 | 0.36 | 4.60 | 3.81 | 1.18 | 1.39 | 1.07 | 0.73 | 1.16 | 5.72 | 1.17 | 1.62 | 16.86 |
| **2** | 13 | suburbs | 0.69 | 0.38 | 4.85 | 4.02 | 1.23 | 1.46 | 1.11 | 0.75 | 1.19 | 6.03 | 1.21 | 1.66 | 17.79 |
| **2** | 14 | cities | 0.66 | 0.36 | 4.65 | 3.86 | 1.15 | 1.40 | 1.04 | 0.69 | 1.11 | 5.78 | 1.12 | 1.53 | 17.08 |
| **2** | 14 | country | 0.61 | 0.33 | 4.24 | 3.51 | 1.09 | 1.28 | 0.99 | 0.67 | 1.07 | 5.27 | 1.08 | 1.50 | 15.53 |
| **2** | 14 | suburbs | 0.64 | 0.35 | 4.45 | 3.69 | 1.13 | 1.34 | 1.02 | 0.69 | 1.10 | 5.54 | 1.11 | 1.53 | 16.33 |
| **2** | 15 | cities | 0.73 | 0.40 | 5.08 | 4.22 | 1.26 | 1.54 | 1.13 | 0.76 | 1.21 | 6.32 | 1.22 | 1.67 | 18.69 |
| **2** | 15 | country | 0.65 | 0.36 | 4.55 | 3.77 | 1.16 | 1.37 | 1.05 | 0.71 | 1.14 | 5.65 | 1.15 | 1.59 | 16.66 |
| **2** | 15 | suburbs | 0.69 | 0.38 | 4.82 | 4.00 | 1.22 | 1.45 | 1.10 | 0.74 | 1.18 | 6.00 | 1.20 | 1.64 | 17.69 |
| **2** | 16 | cities | 2.21 | 1.22 | 15.25 | 12.61 | 4.22 | 4.57 | 3.93 | 2.74 | 4.37 | 18.96 | 4.42 | 6.33 | 55.55 |
| **2** | 16 | country | 2.33 | 1.30 | 16.00 | 13.19 | 4.82 | 4.76 | 4.63 | 3.37 | 5.37 | 19.88 | 5.44 | 8.16 | 57.91 |
| **2** | 16 | suburbs | 2.36 | 1.31 | 16.23 | 13.39 | 4.75 | 4.84 | 4.52 | 3.24 | 5.17 | 20.16 | 5.23 | 7.72 | 58.85 |
| **3** | 1 | cities | 1.68 | 1.86 | 1.10 | 5.17 | 0.22 | 6.73 | 0.50 | 2.85 | 1.95 | 4.27 | 2.00 | 4.61 | 39.71 |
| **3** | 1 | country | 1.27 | 1.40 | 0.83 | 3.94 | 0.16 | 5.13 | 0.38 | 2.17 | 1.48 | 3.26 | 1.51 | 3.57 | 30.23 |
| **3** | 1 | suburbs | 1.43 | 1.58 | 0.94 | 4.43 | 0.19 | 5.77 | 0.43 | 2.44 | 1.67 | 3.66 | 1.70 | 3.98 | 34.01 |
| **3** | 2 | cities | 1.68 | 1.86 | 1.10 | 5.17 | 0.22 | 6.73 | 0.50 | 2.85 | 1.95 | 4.27 | 2.00 | 4.61 | 39.71 |
| **3** | 2 | country | 1.27 | 1.40 | 0.83 | 3.94 | 0.16 | 5.13 | 0.38 | 2.17 | 1.48 | 3.26 | 1.51 | 3.57 | 30.23 |
| **3** | 2 | suburbs | 1.43 | 1.58 | 0.94 | 4.43 | 0.19 | 5.77 | 0.43 | 2.44 | 1.67 | 3.66 | 1.70 | 3.98 | 34.01 |
| **3** | 3 | cities | 1.78 | 1.97 | 1.17 | 5.43 | 0.23 | 7.04 | 0.53 | 2.98 | 2.07 | 4.47 | 2.11 | 4.75 | 41.71 |
| **3** | 3 | country | 1.26 | 1.39 | 0.83 | 3.83 | 0.16 | 4.96 | 0.38 | 2.10 | 1.46 | 3.15 | 1.49 | 3.32 | 29.42 |
| **3** | 3 | suburbs | 1.46 | 1.62 | 0.96 | 4.45 | 0.19 | 5.77 | 0.44 | 2.45 | 1.70 | 3.67 | 1.73 | 3.87 | 34.20 |
| **3** | 4 | cities | 4.00 | 4.31 | 2.54 | 12.98 | 0.50 | 17.27 | 1.16 | 7.20 | 4.63 | 10.96 | 4.74 | 13.75 | 99.59 |
| **3** | 4 | country | 2.72 | 2.95 | 1.74 | 8.70 | 0.34 | 11.52 | 0.79 | 4.82 | 3.15 | 7.31 | 3.22 | 8.82 | 66.79 |
| **3** | 4 | suburbs | 3.23 | 3.49 | 2.06 | 10.41 | 0.40 | 13.82 | 0.94 | 5.78 | 3.74 | 8.77 | 3.83 | 10.81 | 79.92 |
| **3** | 13 | cities | 2.12 | 2.38 | 1.41 | 6.29 | 0.28 | 8.06 | 0.65 | 3.44 | 2.47 | 5.12 | 2.52 | 5.08 | 48.34 |
| **3** | 13 | country | 1.66 | 1.86 | 1.10 | 4.99 | 0.22 | 6.43 | 0.50 | 2.74 | 1.94 | 4.08 | 1.98 | 4.16 | 38.36 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{\mathrm{CC}}$** | **PBT$_{\mathrm{OD}}$** | **PBT$_{\mathrm{HT\_CE}}$** | **PBT$_{\mathrm{HT\_nCE}}$** | **PBT$_{\mathrm{PM}}$** | **PBT$_{\mathrm{IR\_hh}}$** | **PBT$_{\mathrm{POF}}$** | **PBT$_{\mathrm{AC}}$** | **PBT$_{\mathrm{ET}}$** | **PBT$_{\mathrm{EuF}}$** | **PBT$_{\mathrm{EuM}}$** | **PBT$_{\mathrm{Ec\_FW}}$** | **PBT$_{\mathrm{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | 13 | suburbs | 1.84 | 2.07 | 1.23 | 5.52 | 0.24 | 7.10 | 0.56 | 3.02 | 2.15 | 4.51 | 2.19 | 4.55 | 42.42 |
| **3** | 14 | cities | 1.96 | 2.20 | 1.31 | 5.84 | 0.26 | 7.49 | 0.60 | 3.19 | 2.29 | 4.76 | 2.33 | 4.74 | 44.85 |
| **3** | 14 | country | 1.53 | 1.71 | 1.01 | 4.60 | 0.20 | 5.92 | 0.46 | 2.52 | 1.78 | 3.76 | 1.82 | 3.84 | 35.31 |
| **3** | 14 | suburbs | 1.70 | 1.91 | 1.13 | 5.11 | 0.23 | 6.57 | 0.52 | 2.80 | 1.99 | 4.18 | 2.03 | 4.23 | 39.25 |
| **3** | 15 | cities | 2.18 | 2.46 | 1.46 | 6.47 | 0.29 | 8.28 | 0.67 | 3.54 | 2.55 | 5.26 | 2.60 | 5.19 | 49.71 |
| **3** | 15 | country | 1.69 | 1.90 | 1.13 | 5.06 | 0.22 | 6.51 | 0.51 | 2.77 | 1.97 | 4.14 | 2.01 | 4.17 | 38.91 |
| **3** | 15 | suburbs | 1.88 | 2.11 | 1.25 | 5.62 | 0.25 | 7.22 | 0.57 | 3.08 | 2.20 | 4.59 | 2.24 | 4.59 | 43.19 |
| **3** | 16 | cities | 5.92 | 6.38 | 3.75 | 19.23 | 0.74 | 25.62 | 1.71 | 10.68 | 6.85 | 16.26 | 7.01 | 20.55 | 147.60 |
| **3** | 16 | country | 3.95 | 4.28 | 2.53 | 12.62 | 0.50 | 16.69 | 1.15 | 6.99 | 4.58 | 10.60 | 4.68 | 12.71 | 96.88 |
| **3** | 16 | suburbs | 4.67 | 5.06 | 2.98 | 15.03 | 0.58 | 19.94 | 1.36 | 8.33 | 5.41 | 12.66 | 5.54 | 15.48 | 115.39 |
| **4** | 1 | cities | 0.41 | 0.24 | 1.30 | 1.63 | 0.36 | 0.84 | 0.62 | 0.94 | 1.31 | 1.39 | 1.30 | 2.49 | 9.95 |
| **4** | 1 | country | 0.37 | 0.20 | 1.51 | 4.33 | 0.32 | 0.73 | 0.55 | 0.95 | 1.20 | (1.85) | 1.29 | 18.55 | 9.08 |
| **4** | 1 | suburbs | 0.39 | 0.22 | 1.36 | 2.18 | 0.34 | 0.78 | 0.58 | 0.93 | 1.24 | 5.39 | 1.27 | 3.88 | 9.39 |
| **4** | 2 | cities | 0.44 | 0.25 | 1.40 | 1.80 | 0.38 | 0.89 | 0.66 | 1.00 | 1.39 | 1.63 | 1.39 | 2.78 | 10.55 |
| **4** | 2 | country | 0.40 | 0.21 | 1.68 | 6.23 | 0.34 | 0.78 | 0.58 | 1.02 | 1.29 | (1.48) | 1.40 | 37.11 | 9.68 |
| **4** | 2 | suburbs | 0.41 | 0.23 | 1.48 | 2.53 | 0.36 | 0.82 | 0.61 | 0.99 | 1.32 | 15.25 | 1.37 | 4.74 | 9.98 |
| **4** | 3 | cities | 0.42 | 0.24 | 1.22 | 1.33 | 0.37 | 0.86 | 0.64 | 0.92 | 1.32 | 0.87 | 1.28 | 1.91 | 10.08 |
| **4** | 3 | country | 0.37 | 0.21 | 1.27 | 1.94 | 0.32 | 0.74 | 0.55 | 0.87 | 1.17 | 3.44 | 1.20 | 3.33 | 8.89 |
| **4** | 3 | suburbs | 0.39 | 0.22 | 1.22 | 1.52 | 0.34 | 0.79 | 0.58 | 0.88 | 1.23 | 1.27 | 1.22 | 2.30 | 9.35 |
| **4** | 4 | cities | 0.68 | 0.39 | 2.09 | 2.45 | 0.60 | 1.40 | 1.03 | 1.54 | 2.16 | 1.82 | 2.13 | 3.63 | 16.47 |
| **4** | 4 | country | 0.59 | 0.32 | 2.31 | 5.46 | 0.51 | 1.17 | 0.87 | 1.48 | 1.91 | (4.39) | 2.02 | 14.97 | 14.38 |
| **4** | 4 | suburbs | 0.62 | 0.35 | 2.11 | 3.06 | 0.55 | 1.26 | 0.94 | 1.47 | 2.00 | 4.09 | 2.03 | 5.06 | 15.15 |
| **4** | 13 | cities | 0.52 | 0.32 | 1.29 | 1.13 | 0.48 | 1.10 | 0.82 | 1.06 | 1.62 | 0.56 | 1.48 | 1.50 | 12.47 |
| **4** | 13 | country | 0.47 | 0.28 | 1.32 | 1.34 | 0.42 | 0.98 | 0.73 | 1.02 | 1.49 | 0.79 | 1.42 | 1.87 | 11.40 |
| **4** | 13 | suburbs | 0.50 | 0.30 | 1.31 | 1.24 | 0.45 | 1.04 | 0.77 | 1.04 | 1.55 | 0.67 | 1.45 | 1.68 | 11.87 |
| **4** | 14 | cities | 0.48 | 0.29 | 1.18 | 1.03 | 0.43 | 1.00 | 0.74 | 0.97 | 1.48 | 0.52 | 1.35 | 1.37 | 11.35 |
| **4** | 14 | country | 0.43 | 0.25 | 1.21 | 1.24 | 0.38 | 0.89 | 0.66 | 0.93 | 1.36 | 0.74 | 1.29 | 1.74 | 10.35 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{\mathrm{CC}}$** | **PBT$_{\mathrm{OD}}$** | **PBT$_{\mathrm{HT\_CE}}$** | **PBT$_{\mathrm{HT\_nCE}}$** | **PBT$_{\mathrm{PM}}$** | **PBT$_{\mathrm{IR\_hh}}$** | **PBT$_{\mathrm{POF}}$** | **PBT$_{\mathrm{AC}}$** | **PBT$_{\mathrm{ET}}$** | **PBT$_{\mathrm{EuF}}$** | **PBT$_{\mathrm{EuM}}$** | **PBT$_{\mathrm{Ec\_FW}}$** | **PBT$_{\mathrm{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 14 | suburbs | 0.45 | 0.27 | 1.20 | 1.14 | 0.41 | 0.94 | 0.70 | 0.95 | 1.41 | 0.62 | 1.32 | 1.55 | 10.79 |
| **4** | 15 | cities | 0.53 | 0.32 | 1.31 | 1.15 | 0.48 | 1.12 | 0.83 | 1.08 | 1.65 | 0.57 | 1.50 | 1.52 | 12.64 |
| **4** | 15 | country | 0.48 | 0.28 | 1.31 | 1.30 | 0.43 | 0.99 | 0.74 | 1.02 | 1.50 | 0.74 | 1.42 | 1.79 | 11.47 |
| **4** | 15 | suburbs | 0.50 | 0.30 | 1.31 | 1.23 | 0.45 | 1.05 | 0.78 | 1.05 | 1.56 | 0.66 | 1.45 | 1.66 | 11.97 |
| **4** | 16 | cities | 1.08 | 0.61 | 3.74 | 5.69 | 0.94 | 2.18 | 1.62 | 2.57 | 3.47 | 1.15 | 3.54 | 3.32 | 26.27 |
| **4** | 16 | country | 0.95 | 0.51 | 4.16 | 21.27 | 0.81 | 1.86 | 1.38 | 2.48 | 3.09 | (2.30) | 3.39 | (6.64) | 23.22 |
| **4** | 16 | suburbs | 1.01 | 0.55 | 4.00 | 9.88 | 0.87 | 2.00 | 1.49 | 2.54 | 3.26 | (1.31) | 3.48 | 3.32 | 24.63 |
| **5** | 1 | cities | 0.50 | 0.42 | 1.12 | 1.34 | 0.35 | 0.38 | 0.58 | 0.80 | 1.08 | 1.16 | 1.06 | 0.68 | 8.27 |
| **5** | 1 | country | 0.43 | 0.36 | 0.96 | 1.15 | 0.30 | 0.32 | 0.50 | 0.69 | 0.93 | 1.00 | 0.92 | 0.59 | 7.11 |
| **5** | 1 | suburbs | 0.46 | 0.39 | 1.03 | 1.23 | 0.33 | 0.35 | 0.54 | 0.74 | 0.99 | 1.07 | 0.98 | 0.63 | 7.62 |
| **5** | 2 | cities | 0.50 | 0.42 | 1.12 | 1.34 | 0.35 | 0.38 | 0.58 | 0.80 | 1.08 | 1.16 | 1.06 | 0.68 | 8.27 |
| **5** | 2 | country | 0.43 | 0.36 | 0.96 | 1.15 | 0.30 | 0.32 | 0.50 | 0.69 | 0.93 | 1.00 | 0.92 | 0.59 | 7.11 |
| **5** | 2 | suburbs | 0.46 | 0.39 | 1.03 | 1.23 | 0.33 | 0.35 | 0.54 | 0.74 | 0.99 | 1.07 | 0.98 | 0.63 | 7.62 |
| **5** | 3 | cities | 0.50 | 0.41 | 1.10 | 1.32 | 0.35 | 0.37 | 0.58 | 0.79 | 1.06 | 1.14 | 1.05 | 0.67 | 8.15 |
| **5** | 3 | country | 0.42 | 0.35 | 0.93 | 1.11 | 0.29 | 0.31 | 0.49 | 0.67 | 0.90 | 0.97 | 0.89 | 0.57 | 6.88 |
| **5** | 3 | suburbs | 0.45 | 0.38 | 1.01 | 1.20 | 0.32 | 0.34 | 0.53 | 0.72 | 0.97 | 1.04 | 0.96 | 0.61 | 7.44 |
| **5** | 4 | cities | 0.90 | 0.75 | 2.02 | 2.44 | 0.63 | 0.70 | 1.05 | 1.46 | 1.96 | 2.13 | 1.94 | 1.27 | 15.07 |
| **5** | 4 | country | 0.74 | 0.62 | 1.66 | 2.00 | 0.52 | 0.57 | 0.86 | 1.20 | 1.61 | 1.75 | 1.59 | 1.04 | 12.37 |
| **5** | 4 | suburbs | 0.81 | 0.67 | 1.81 | 2.18 | 0.56 | 0.62 | 0.94 | 1.31 | 1.76 | 1.90 | 1.73 | 1.13 | 13.48 |
| **5** | 13 | cities | 0.68 | 0.57 | 1.51 | 1.80 | 0.48 | 0.51 | 0.79 | 1.08 | 1.46 | 1.56 | 1.44 | 0.92 | 11.14 |
| **5** | 13 | country | 0.59 | 0.49 | 1.32 | 1.57 | 0.42 | 0.44 | 0.69 | 0.94 | 1.27 | 1.37 | 1.25 | 0.80 | 9.74 |
| **5** | 13 | suburbs | 0.63 | 0.53 | 1.41 | 1.68 | 0.45 | 0.47 | 0.74 | 1.00 | 1.36 | 1.45 | 1.34 | 0.85 | 10.37 |
| **5** | 14 | cities | 0.62 | 0.51 | 1.37 | 1.63 | 0.43 | 0.46 | 0.72 | 0.98 | 1.32 | 1.41 | 1.30 | 0.83 | 10.09 |
| **5** | 14 | country | 0.54 | 0.45 | 1.20 | 1.43 | 0.38 | 0.40 | 0.63 | 0.85 | 1.16 | 1.24 | 1.14 | 0.73 | 8.84 |
| **5** | 14 | suburbs | 0.57 | 0.48 | 1.28 | 1.52 | 0.40 | 0.43 | 0.67 | 0.91 | 1.23 | 1.32 | 1.21 | 0.77 | 9.40 |
| **5** | 15 | cities | 0.69 | 0.58 | 1.54 | 1.83 | 0.49 | 0.51 | 0.80 | 1.09 | 1.48 | 1.59 | 1.46 | 0.93 | 11.33 |
| **5** | 15 | country | 0.60 | 0.50 | 1.34 | 1.60 | 0.42 | 0.45 | 0.70 | 0.96 | 1.29 | 1.38 | 1.27 | 0.81 | 9.88 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5** | 15 | suburbs | 0.64 | 0.53 | 1.43 | 1.70 | 0.45 | 0.48 | 0.75 | 1.02 | 1.38 | 1.47 | 1.36 | 0.87 | 10.53 |
| **5** | 16 | cities | 1.24 | 1.03 | 2.78 | 3.36 | 0.87 | 0.96 | 1.44 | 2.01 | 2.70 | 2.93 | 2.66 | 1.74 | 20.73 |
| **5** | 16 | country | 1.09 | 0.91 | 2.45 | 2.97 | 0.76 | 0.85 | 1.27 | 1.78 | 2.39 | 2.59 | 2.36 | 1.54 | 18.34 |
| **5** | 16 | suburbs | 1.15 | 0.96 | 2.58 | 3.13 | 0.81 | 0.89 | 1.34 | 1.87 | 2.51 | 2.73 | 2.48 | 1.62 | 19.31 |
| **6** | 1 | cities | 0.30 | 0.30 | 0.86 | 1.80 | 0.19 | 2.51 | 0.37 | 1.27 | 1.15 | 2.18 | 1.11 | 2.89 | 8.92 |
| **6** | 1 | country | 0.28 | 0.28 | 0.80 | 1.70 | 0.18 | 2.52 | 0.34 | 1.23 | 1.11 | 2.12 | 1.04 | 3.16 | 8.44 |
| **6** | 1 | suburbs | 0.29 | 0.29 | 0.83 | 1.75 | 0.19 | 2.55 | 0.35 | 1.26 | 1.14 | 2.16 | 1.08 | 3.11 | 8.70 |
| **6** | 2 | cities | 0.30 | 0.30 | 0.86 | 1.80 | 0.19 | 2.51 | 0.37 | 1.27 | 1.15 | 2.18 | 1.11 | 2.89 | 8.92 |
| **6** | 2 | country | 0.28 | 0.28 | 0.80 | 1.70 | 0.18 | 2.52 | 0.34 | 1.23 | 1.11 | 2.12 | 1.04 | 3.16 | 8.44 |
| **6** | 2 | suburbs | 0.29 | 0.29 | 0.83 | 1.75 | 0.19 | 2.55 | 0.35 | 1.26 | 1.14 | 2.16 | 1.08 | 3.11 | 8.70 |
| **6** | 3 | cities | 0.28 | 0.29 | 0.81 | 1.67 | 0.18 | 2.24 | 0.35 | 1.17 | 1.05 | 1.99 | 1.04 | 2.46 | 8.26 |
| **6** | 3 | country | 0.26 | 0.27 | 0.75 | 1.57 | 0.17 | 2.19 | 0.32 | 1.12 | 1.01 | 1.91 | 0.97 | 2.52 | 7.81 |
| **6** | 3 | suburbs | 0.27 | 0.28 | 0.78 | 1.62 | 0.18 | 2.24 | 0.33 | 1.15 | 1.03 | 1.96 | 1.00 | 2.54 | 8.05 |
| **6** | 4 | cities | 0.43 | 0.43 | 1.22 | 2.54 | 0.28 | 3.50 | 0.52 | 1.79 | 1.62 | 3.06 | 1.57 | 3.97 | 12.58 |
| **6** | 4 | country | 0.39 | 0.40 | 1.12 | 2.38 | 0.25 | 3.46 | 0.48 | 1.71 | 1.54 | 2.93 | 1.46 | 4.21 | 11.79 |
| **6** | 4 | suburbs | 0.41 | 0.41 | 1.17 | 2.46 | 0.26 | 3.52 | 0.50 | 1.76 | 1.58 | 3.01 | 1.51 | 4.18 | 12.19 |
| **6** | 13 | cities | 0.39 | 0.40 | 1.12 | 2.26 | 0.26 | 2.84 | 0.48 | 1.54 | 1.39 | 2.61 | 1.42 | 2.89 | 11.19 |
| **6** | 13 | country | 0.37 | 0.37 | 1.05 | 2.15 | 0.24 | 2.81 | 0.45 | 1.49 | 1.34 | 2.53 | 1.34 | 2.98 | 10.66 |
| **6** | 13 | suburbs | 0.38 | 0.38 | 1.08 | 2.20 | 0.25 | 2.84 | 0.47 | 1.52 | 1.37 | 2.58 | 1.38 | 2.97 | 10.91 |
| **6** | 14 | cities | 0.35 | 0.36 | 1.01 | 2.03 | 0.23 | 2.56 | 0.44 | 1.39 | 1.25 | 2.35 | 1.28 | 2.61 | 10.07 |
| **6** | 14 | country | 0.33 | 0.33 | 0.94 | 1.93 | 0.22 | 2.53 | 0.41 | 1.34 | 1.21 | 2.28 | 1.21 | 2.70 | 9.57 |
| **6** | 14 | suburbs | 0.34 | 0.34 | 0.97 | 1.98 | 0.22 | 2.56 | 0.42 | 1.37 | 1.23 | 2.32 | 1.24 | 2.69 | 9.82 |
| **6** | 15 | cities | 0.39 | 0.40 | 1.12 | 2.25 | 0.26 | 2.82 | 0.48 | 1.53 | 1.38 | 2.60 | 1.42 | 2.85 | 11.14 |
| **6** | 15 | country | 0.37 | 0.37 | 1.05 | 2.14 | 0.24 | 2.77 | 0.45 | 1.48 | 1.33 | 2.50 | 1.34 | 2.90 | 10.59 |
| **6** | 15 | suburbs | 0.38 | 0.38 | 1.08 | 2.19 | 0.25 | 2.81 | 0.47 | 1.51 | 1.36 | 2.55 | 1.38 | 2.91 | 10.86 |
| **6** | 16 | cities | 0.61 | 0.62 | 1.75 | 3.68 | 0.40 | 5.21 | 0.75 | 2.62 | 2.37 | 4.49 | 2.27 | 6.10 | 18.28 |
| **6** | 16 | country | 0.57 | 0.58 | 1.63 | 3.46 | 0.37 | 5.07 | 0.69 | 2.49 | 2.25 | 4.28 | 2.12 | 6.23 | 17.17 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6** | 16 | suburbs | 0.59 | 0.60 | 1.69 | 3.57 | 0.38 | 5.18 | 0.72 | 2.56 | 2.31 | 4.40 | 2.19 | 6.27 | 17.73 |
| **7** | 5 | cities | 0.39 | 0.23 | 0.93 | 1.50 | 0.26 | 0.16 | 0.49 | 0.99 | 1.17 | 1.66 | 1.14 | 0.77 | 6.23 |
| **7** | 5 | country | 0.35 | 0.21 | 0.84 | 1.35 | 0.24 | 0.14 | 0.44 | 0.89 | 1.05 | 1.49 | 1.03 | 0.68 | 5.58 |
| **7** | 5 | suburbs | 0.37 | 0.22 | 0.87 | 1.40 | 0.25 | 0.15 | 0.46 | 0.93 | 1.10 | 1.56 | 1.07 | 0.71 | 5.80 |
| **7** | 6 | cities | 0.40 | 0.24 | 0.96 | 1.55 | 0.27 | 0.17 | 0.50 | 1.02 | 1.21 | 1.72 | 1.18 | 0.80 | 6.46 |
| **7** | 6 | country | 0.36 | 0.22 | 0.86 | 1.39 | 0.25 | 0.15 | 0.45 | 0.92 | 1.09 | 1.54 | 1.06 | 0.71 | 5.76 |
| **7** | 6 | suburbs | 0.38 | 0.23 | 0.90 | 1.45 | 0.26 | 0.15 | 0.47 | 0.96 | 1.14 | 1.61 | 1.11 | 0.73 | 6.00 |
| **7** | 7 | cities | 0.48 | 0.28 | 1.14 | 1.83 | 0.33 | 0.19 | 0.60 | 1.22 | 1.45 | 2.03 | 1.41 | 0.91 | 7.50 |
| **7** | 7 | country | 0.44 | 0.26 | 1.05 | 1.68 | 0.30 | 0.17 | 0.55 | 1.12 | 1.33 | 1.87 | 1.29 | 0.84 | 6.91 |
| **7** | 7 | suburbs | 0.46 | 0.27 | 1.09 | 1.74 | 0.31 | 0.18 | 0.57 | 1.16 | 1.38 | 1.93 | 1.34 | 0.86 | 7.13 |
| **7** | 8 | cities | 1.15 | 0.69 | 2.75 | 4.43 | 0.78 | 0.48 | 1.44 | 2.92 | 3.46 | 4.92 | 3.37 | 2.28 | 18.47 |
| **7** | 8 | country | 0.99 | 0.60 | 2.39 | 3.86 | 0.68 | 0.42 | 1.25 | 2.53 | 3.00 | 4.27 | 2.93 | 1.99 | 16.10 |
| **7** | 8 | suburbs | 1.05 | 0.63 | 2.52 | 4.06 | 0.72 | 0.44 | 1.32 | 2.68 | 3.17 | 4.50 | 3.09 | 2.08 | 16.89 |
| **7** | 17 | cities | 0.46 | 0.27 | 1.09 | 1.75 | 0.31 | 0.18 | 0.58 | 1.16 | 1.38 | 1.94 | 1.34 | 0.87 | 7.17 |
| **7** | 17 | country | 0.42 | 0.26 | 1.02 | 1.64 | 0.29 | 0.18 | 0.53 | 1.07 | 1.27 | 1.82 | 1.24 | 0.85 | 6.86 |
| **7** | 17 | suburbs | 0.44 | 0.26 | 1.04 | 1.67 | 0.30 | 0.18 | 0.55 | 1.11 | 1.32 | 1.86 | 1.28 | 0.84 | 6.90 |
| **7** | 18 | cities | 0.47 | 0.28 | 1.11 | 1.79 | 0.32 | 0.18 | 0.59 | 1.19 | 1.41 | 1.98 | 1.37 | 0.89 | 7.33 |
| **7** | 18 | country | 0.43 | 0.26 | 1.03 | 1.66 | 0.29 | 0.18 | 0.54 | 1.09 | 1.29 | 1.84 | 1.26 | 0.86 | 6.95 |
| **7** | 18 | suburbs | 0.44 | 0.26 | 1.06 | 1.70 | 0.30 | 0.18 | 0.56 | 1.13 | 1.34 | 1.89 | 1.30 | 0.86 | 7.02 |
| **7** | 19 | cities | 0.75 | 0.44 | 1.78 | 2.85 | 0.51 | 0.30 | 0.94 | 1.89 | 2.25 | 3.17 | 2.19 | 1.42 | 11.73 |
| **7** | 19 | country | 0.68 | 0.40 | 1.62 | 2.60 | 0.46 | 0.28 | 0.85 | 1.72 | 2.04 | 2.89 | 1.99 | 1.32 | 10.77 |
| **7** | 19 | suburbs | 0.71 | 0.42 | 1.69 | 2.71 | 0.48 | 0.28 | 0.89 | 1.79 | 2.13 | 3.00 | 2.07 | 1.36 | 11.15 |
| **7** | 20 | cities | 2.20 | 1.32 | 5.27 | 8.48 | 1.50 | 0.90 | 2.76 | 5.60 | 6.64 | 9.41 | 6.47 | 4.32 | 35.20 |
| **7** | 20 | country | 1.75 | 1.05 | 4.20 | 6.77 | 1.19 | 0.73 | 2.20 | 4.46 | 5.28 | 7.50 | 5.15 | 3.47 | 28.17 |
| **7** | 20 | suburbs | 1.95 | 1.17 | 4.67 | 7.52 | 1.33 | 0.80 | 2.45 | 4.96 | 5.88 | 8.34 | 5.74 | 3.83 | 31.22 |
| **8** | 5 | cities | 0.39 | 0.30 | 0.46 | 0.92 | 0.10 | 0.51 | 0.23 | 0.49 | 0.63 | 0.53 | 0.64 | 1.02 | 9.78 |
| **8** | 5 | country | 0.36 | 0.28 | 0.43 | 0.87 | 0.10 | 0.48 | 0.21 | 0.46 | 0.59 | 0.50 | 0.60 | 0.96 | 9.16 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT**$_{\textbf{CC}}$ | **PBT**$_{\textbf{OD}}$ | **PBT**$_{\textbf{HT\_CE}}$ | **PBT**$_{\textbf{HT\_nCE}}$ | **PBT**$_{\textbf{PM}}$ | **PBT**$_{\textbf{IR\_hh}}$ | **PBT**$_{\textbf{POF}}$ | **PBT**$_{\textbf{AC}}$ | **PBT**$_{\textbf{ET}}$ | **PBT**$_{\textbf{EuF}}$ | **PBT**$_{\textbf{EuM}}$ | **PBT**$_{\textbf{Ec\_FW}}$ | **PBT**$_{\textbf{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **8** | 5 | suburbs | 0.37 | 0.29 | 0.44 | 0.89 | 0.10 | 0.49 | 0.22 | 0.47 | 0.61 | 0.52 | 0.62 | 0.99 | 9.46 |
| **8** | 6 | cities | 0.40 | 0.30 | 0.47 | 0.95 | 0.11 | 0.52 | 0.23 | 0.50 | 0.65 | 0.55 | 0.66 | 1.05 | 10.05 |
| **8** | 6 | country | 0.37 | 0.28 | 0.44 | 0.89 | 0.10 | 0.49 | 0.22 | 0.47 | 0.61 | 0.52 | 0.61 | 0.99 | 9.40 |
| **8** | 6 | suburbs | 0.38 | 0.29 | 0.45 | 0.92 | 0.10 | 0.50 | 0.22 | 0.48 | 0.63 | 0.53 | 0.63 | 1.01 | 9.71 |
| **8** | 7 | cities | 0.50 | 0.38 | 0.59 | 1.19 | 0.14 | 0.65 | 0.29 | 0.63 | 0.82 | 0.68 | 0.82 | 1.31 | 12.62 |
| **8** | 7 | country | 0.47 | 0.36 | 0.55 | 1.11 | 0.13 | 0.61 | 0.27 | 0.59 | 0.77 | 0.64 | 0.77 | 1.23 | 11.84 |
| **8** | 7 | suburbs | 0.48 | 0.37 | 0.57 | 1.15 | 0.13 | 0.63 | 0.28 | 0.61 | 0.79 | 0.66 | 0.80 | 1.27 | 12.22 |
| **8** | 8 | cities | 1.04 | 0.80 | 1.23 | 2.72 | 0.28 | 1.58 | 0.60 | 1.39 | 1.72 | 1.68 | 1.74 | 3.18 | 27.15 |
| **8** | 8 | country | 0.97 | 0.75 | 1.16 | 2.57 | 0.26 | 1.50 | 0.56 | 1.32 | 1.62 | 1.60 | 1.64 | 3.02 | 25.60 |
| **8** | 8 | suburbs | 1.00 | 0.77 | 1.20 | 2.63 | 0.27 | 1.52 | 0.58 | 1.35 | 1.66 | 1.62 | 1.68 | 3.07 | 26.29 |
| **8** | 17 | cities | 0.46 | 0.35 | 0.54 | 1.09 | 0.13 | 0.60 | 0.27 | 0.58 | 0.75 | 0.63 | 0.76 | 1.21 | 11.64 |
| **8** | 17 | country | 0.43 | 0.33 | 0.51 | 1.03 | 0.12 | 0.57 | 0.25 | 0.54 | 0.71 | 0.60 | 0.71 | 1.14 | 10.95 |
| **8** | 17 | suburbs | 0.44 | 0.34 | 0.53 | 1.06 | 0.12 | 0.58 | 0.26 | 0.56 | 0.73 | 0.61 | 0.74 | 1.17 | 11.28 |
| **8** | 18 | cities | 0.46 | 0.36 | 0.55 | 1.11 | 0.13 | 0.61 | 0.27 | 0.59 | 0.76 | 0.64 | 0.77 | 1.23 | 11.79 |
| **8** | 18 | country | 0.44 | 0.34 | 0.52 | 1.05 | 0.12 | 0.57 | 0.26 | 0.55 | 0.72 | 0.60 | 0.72 | 1.16 | 11.09 |
| **8** | 18 | suburbs | 0.45 | 0.35 | 0.53 | 1.08 | 0.12 | 0.59 | 0.26 | 0.57 | 0.74 | 0.62 | 0.75 | 1.19 | 11.43 |
| **8** | 19 | cities | 0.72 | 0.55 | 0.85 | 1.74 | 0.19 | 0.96 | 0.42 | 0.91 | 1.18 | 1.02 | 1.19 | 1.94 | 18.29 |
| **8** | 19 | country | 0.68 | 0.52 | 0.81 | 1.66 | 0.18 | 0.92 | 0.40 | 0.87 | 1.12 | 0.97 | 1.13 | 1.86 | 17.40 |
| **8** | 19 | suburbs | 0.70 | 0.54 | 0.83 | 1.70 | 0.19 | 0.94 | 0.41 | 0.89 | 1.15 | 0.99 | 1.16 | 1.89 | 17.82 |
| **8** | 20 | cities | 1.45 | 1.11 | 1.73 | 3.74 | 0.39 | 2.14 | 0.84 | 1.93 | 2.40 | 2.28 | 2.43 | 4.32 | 37.81 |
| **8** | 20 | country | 1.36 | 1.05 | 1.62 | 3.55 | 0.37 | 2.05 | 0.79 | 1.83 | 2.26 | 2.18 | 2.29 | 4.14 | 35.67 |
| **8** | 20 | suburbs | 1.40 | 1.08 | 1.67 | 3.62 | 0.38 | 2.08 | 0.81 | 1.87 | 2.32 | 2.20 | 2.35 | 4.18 | 36.55 |
| **9** | 5 | cities | 0.24 | 0.27 | 0.49 | 0.69 | 0.14 | 0.43 | 0.26 | 0.53 | 0.65 | 0.42 | 0.63 | 0.74 | 6.99 |
| **9** | 5 | country | 0.22 | 0.25 | 0.45 | 0.63 | 0.13 | 0.39 | 0.24 | 0.48 | 0.59 | 0.38 | 0.57 | 0.68 | 6.38 |
| **9** | 5 | suburbs | 0.22 | 0.26 | 0.47 | 0.66 | 0.13 | 0.41 | 0.25 | 0.50 | 0.61 | 0.40 | 0.59 | 0.70 | 6.64 |
| **9** | 6 | cities | 0.24 | 0.27 | 0.50 | 0.71 | 0.14 | 0.44 | 0.27 | 0.54 | 0.66 | 0.43 | 0.64 | 0.75 | 7.12 |
| **9** | 6 | country | 0.22 | 0.25 | 0.46 | 0.65 | 0.13 | 0.40 | 0.24 | 0.49 | 0.60 | 0.39 | 0.58 | 0.69 | 6.49 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT**$_{\text{CC}}$ | **PBT**$_{\text{OD}}$ | **PBT**$_{\text{HT\_CE}}$ | **PBT**$_{\text{HT\_nCE}}$ | **PBT**$_{\text{PM}}$ | **PBT**$_{\text{IR\_hh}}$ | **PBT**$_{\text{POF}}$ | **PBT**$_{\text{AC}}$ | **PBT**$_{\text{ET}}$ | **PBT**$_{\text{EuF}}$ | **PBT**$_{\text{EuM}}$ | **PBT**$_{\text{Ec\_FW}}$ | **PBT**$_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **9** | 6 | suburbs | 0.23 | 0.26 | 0.48 | 0.67 | 0.13 | 0.42 | 0.25 | 0.51 | 0.62 | 0.41 | 0.61 | 0.72 | 6.77 |
| **9** | 7 | cities | 0.32 | 0.36 | 0.66 | 0.92 | 0.18 | 0.57 | 0.35 | 0.71 | 0.86 | 0.56 | 0.83 | 0.98 | 9.31 |
| **9** | 7 | country | 0.29 | 0.33 | 0.61 | 0.85 | 0.17 | 0.53 | 0.32 | 0.65 | 0.79 | 0.51 | 0.77 | 0.90 | 8.55 |
| **9** | 7 | suburbs | 0.30 | 0.34 | 0.63 | 0.88 | 0.18 | 0.54 | 0.33 | 0.67 | 0.82 | 0.53 | 0.80 | 0.94 | 8.88 |
| **9** | 8 | cities | 0.59 | 0.67 | 1.23 | 1.74 | 0.34 | 1.10 | 0.65 | 1.32 | 1.61 | 1.06 | 1.56 | 1.87 | 17.43 |
| **9** | 8 | country | 0.54 | 0.61 | 1.13 | 1.60 | 0.31 | 1.01 | 0.60 | 1.21 | 1.47 | 0.97 | 1.43 | 1.72 | 15.97 |
| **9** | 8 | suburbs | 0.56 | 0.64 | 1.17 | 1.66 | 0.32 | 1.05 | 0.62 | 1.26 | 1.53 | 1.01 | 1.48 | 1.78 | 16.59 |
| **9** | 17 | cities | 0.30 | 0.34 | 0.62 | 0.87 | 0.17 | 0.54 | 0.33 | 0.67 | 0.81 | 0.52 | 0.78 | 0.92 | 8.75 |
| **9** | 17 | country | 0.27 | 0.31 | 0.57 | 0.80 | 0.16 | 0.50 | 0.30 | 0.61 | 0.75 | 0.48 | 0.72 | 0.85 | 8.07 |
| **9** | 17 | suburbs | 0.28 | 0.32 | 0.59 | 0.83 | 0.16 | 0.51 | 0.31 | 0.64 | 0.77 | 0.50 | 0.75 | 0.88 | 8.37 |
| **9** | 18 | cities | 0.30 | 0.34 | 0.62 | 0.87 | 0.17 | 0.54 | 0.33 | 0.67 | 0.82 | 0.53 | 0.79 | 0.93 | 8.82 |
| **9** | 18 | country | 0.28 | 0.31 | 0.58 | 0.81 | 0.16 | 0.50 | 0.31 | 0.62 | 0.75 | 0.49 | 0.73 | 0.86 | 8.13 |
| **9** | 18 | suburbs | 0.29 | 0.33 | 0.60 | 0.84 | 0.17 | 0.52 | 0.32 | 0.64 | 0.78 | 0.50 | 0.76 | 0.89 | 8.44 |
| **9** | 19 | cities | 0.46 | 0.52 | 0.95 | 1.34 | 0.27 | 0.83 | 0.51 | 1.02 | 1.24 | 0.81 | 1.21 | 1.43 | 13.47 |
| **9** | 19 | country | 0.42 | 0.48 | 0.89 | 1.25 | 0.25 | 0.77 | 0.47 | 0.95 | 1.16 | 0.75 | 1.12 | 1.33 | 12.54 |
| **9** | 19 | suburbs | 0.44 | 0.50 | 0.92 | 1.29 | 0.25 | 0.80 | 0.49 | 0.98 | 1.20 | 0.78 | 1.16 | 1.37 | 12.95 |
| **9** | 20 | cities | 0.90 | 1.03 | 1.89 | 2.66 | 0.52 | 1.66 | 1.00 | 2.03 | 2.46 | 1.61 | 2.39 | 2.85 | 26.70 |
| **9** | 20 | country | 0.83 | 0.94 | 1.73 | 2.45 | 0.48 | 1.53 | 0.92 | 1.86 | 2.26 | 1.48 | 2.19 | 2.62 | 24.53 |
| **9** | 20 | suburbs | 0.86 | 0.99 | 1.81 | 2.55 | 0.50 | 1.60 | 0.96 | 1.94 | 2.36 | 1.55 | 2.29 | 2.73 | 25.60 |
| **10** | 5 | cities | 0.42 | 0.56 | 0.50 | 1.25 | 0.11 | 1.58 | 0.24 | 0.68 | 0.71 | 0.80 | 0.71 | 1.60 | 14.77 |
| **10** | 5 | country | 0.40 | 0.53 | 0.48 | 1.21 | 0.10 | 1.61 | 0.23 | 0.64 | 0.67 | 0.78 | 0.67 | 1.57 | 14.09 |
| **10** | 5 | suburbs | 0.41 | 0.54 | 0.49 | 1.22 | 0.11 | 1.59 | 0.23 | 0.66 | 0.69 | 0.79 | 0.69 | 1.57 | 14.33 |
| **10** | 6 | cities | 0.43 | 0.58 | 0.51 | 1.28 | 0.11 | 1.63 | 0.24 | 0.69 | 0.73 | 0.82 | 0.73 | 1.64 | 15.11 |
| **10** | 6 | country | 0.40 | 0.54 | 0.49 | 1.23 | 0.11 | 1.66 | 0.23 | 0.66 | 0.69 | 0.80 | 0.69 | 1.61 | 14.39 |
| **10** | 6 | suburbs | 0.41 | 0.55 | 0.50 | 1.25 | 0.11 | 1.63 | 0.24 | 0.67 | 0.70 | 0.81 | 0.70 | 1.61 | 14.65 |
| **10** | 7 | cities | 0.56 | 0.75 | 0.67 | 1.61 | 0.15 | 1.92 | 0.32 | 0.90 | 0.95 | 1.00 | 0.95 | 2.01 | 19.36 |
| **10** | 7 | country | 0.53 | 0.71 | 0.63 | 1.55 | 0.14 | 1.90 | 0.30 | 0.85 | 0.90 | 0.98 | 0.90 | 1.96 | 18.47 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | 7 | suburbs | 0.54 | 0.72 | 0.65 | 1.57 | 0.14 | 1.90 | 0.31 | 0.87 | 0.92 | 0.98 | 0.91 | 1.97 | 18.78 |
| **10** | 8 | cities | 1.18 | 1.56 | 1.42 | 3.92 | 0.30 | 6.82 | 0.66 | 1.93 | 1.99 | 2.80 | 2.01 | 5.55 | 43.53 |
| **10** | 8 | country | 1.11 | 1.47 | 1.34 | 3.78 | 0.29 | 7.11 | 0.62 | 1.82 | 1.88 | 2.76 | 1.90 | 5.46 | 41.46 |
| **10** | 8 | suburbs | 1.13 | 1.50 | 1.37 | 3.81 | 0.29 | 6.81 | 0.64 | 1.86 | 1.92 | 2.74 | 1.94 | 5.43 | 42.12 |
| **10** | 17 | cities | 0.52 | 0.70 | 0.62 | 1.49 | 0.14 | 1.76 | 0.30 | 0.83 | 0.88 | 0.92 | 0.88 | 1.85 | 17.93 |
| **10** | 17 | country | 0.49 | 0.66 | 0.59 | 1.44 | 0.13 | 1.73 | 0.28 | 0.80 | 0.84 | 0.90 | 0.84 | 1.80 | 17.19 |
| **10** | 17 | suburbs | 0.50 | 0.68 | 0.60 | 1.46 | 0.13 | 1.74 | 0.29 | 0.81 | 0.86 | 0.91 | 0.85 | 1.82 | 17.48 |
| **10** | 18 | cities | 0.52 | 0.70 | 0.62 | 1.50 | 0.14 | 1.78 | 0.30 | 0.84 | 0.89 | 0.93 | 0.88 | 1.87 | 18.10 |
| **10** | 18 | country | 0.50 | 0.67 | 0.60 | 1.45 | 0.13 | 1.75 | 0.28 | 0.80 | 0.85 | 0.91 | 0.84 | 1.82 | 17.32 |
| **10** | 18 | suburbs | 0.51 | 0.68 | 0.61 | 1.47 | 0.13 | 1.76 | 0.29 | 0.82 | 0.86 | 0.92 | 0.86 | 1.84 | 17.63 |
| **10** | 19 | cities | 0.82 | 1.10 | 0.98 | 2.41 | 0.22 | 2.96 | 0.47 | 1.32 | 1.40 | 1.52 | 1.39 | 3.04 | 28.71 |
| **10** | 19 | country | 0.79 | 1.06 | 0.95 | 2.36 | 0.21 | 3.00 | 0.45 | 1.28 | 1.34 | 1.50 | 1.34 | 3.02 | 27.85 |
| **10** | 19 | suburbs | 0.81 | 1.08 | 0.96 | 2.38 | 0.21 | 2.97 | 0.46 | 1.30 | 1.37 | 1.51 | 1.36 | 3.02 | 28.19 |
| **10** | 20 | cities | 1.56 | 2.08 | 1.87 | 4.69 | 0.41 | 6.14 | 0.88 | 2.52 | 2.64 | 3.03 | 2.64 | 6.06 | 55.08 |
| **10** | 20 | country | 1.49 | 1.99 | 1.79 | 4.58 | 0.39 | 6.26 | 0.84 | 2.42 | 2.53 | 3.00 | 2.53 | 6.01 | 53.20 |
| **10** | 20 | suburbs | 1.52 | 2.03 | 1.82 | 4.62 | 0.40 | 6.16 | 0.86 | 2.46 | 2.58 | 3.00 | 2.58 | 6.00 | 53.93 |
| **11** | 5 | cities | 0.42 | 0.87 | 0.37 | 0.47 | 0.11 | 0.48 | 0.25 | 0.39 | 0.65 | 0.21 | 0.58 | 0.55 | 16.01 |
| **11** | 5 | country | 0.39 | 0.81 | 0.34 | 0.44 | 0.10 | 0.45 | 0.23 | 0.36 | 0.60 | 0.19 | 0.54 | 0.51 | 14.88 |
| **11** | 5 | suburbs | 0.41 | 0.84 | 0.36 | 0.45 | 0.11 | 0.46 | 0.24 | 0.37 | 0.62 | 0.20 | 0.55 | 0.53 | 15.39 |
| **11** | 6 | cities | 0.43 | 0.89 | 0.38 | 0.48 | 0.11 | 0.49 | 0.25 | 0.40 | 0.66 | 0.21 | 0.59 | 0.56 | 16.33 |
| **11** | 6 | country | 0.40 | 0.82 | 0.35 | 0.45 | 0.10 | 0.46 | 0.23 | 0.37 | 0.61 | 0.20 | 0.55 | 0.52 | 15.17 |
| **11** | 6 | suburbs | 0.41 | 0.85 | 0.36 | 0.46 | 0.11 | 0.47 | 0.24 | 0.38 | 0.64 | 0.20 | 0.57 | 0.54 | 15.69 |
| **11** | 7 | cities | 0.56 | 1.16 | 0.49 | 0.62 | 0.15 | 0.64 | 0.33 | 0.52 | 0.87 | 0.27 | 0.77 | 0.73 | 21.16 |
| **11** | 7 | country | 0.52 | 1.08 | 0.46 | 0.58 | 0.14 | 0.59 | 0.31 | 0.48 | 0.80 | 0.25 | 0.71 | 0.68 | 19.68 |
| **11** | 7 | suburbs | 0.54 | 1.11 | 0.47 | 0.60 | 0.14 | 0.61 | 0.32 | 0.50 | 0.83 | 0.26 | 0.74 | 0.70 | 20.35 |
| **11** | 8 | cities | 1.22 | 2.54 | 1.06 | 1.40 | 0.31 | 1.48 | 0.70 | 1.12 | 1.85 | 0.62 | 1.66 | 1.66 | 47.88 |
| **11** | 8 | country | 1.10 | 2.31 | 0.97 | 1.27 | 0.28 | 1.34 | 0.63 | 1.01 | 1.68 | 0.56 | 1.51 | 1.50 | 43.47 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11** | 8 | suburbs | 1.15 | 2.41 | 1.01 | 1.33 | 0.29 | 1.41 | 0.66 | 1.06 | 1.76 | 0.59 | 1.58 | 1.58 | 45.55 |
| **11** | 17 | cities | 0.51 | 1.05 | 0.45 | 0.56 | 0.13 | 0.57 | 0.30 | 0.47 | 0.79 | 0.25 | 0.70 | 0.66 | 19.12 |
| **11** | 17 | country | 0.48 | 0.98 | 0.42 | 0.53 | 0.13 | 0.54 | 0.28 | 0.44 | 0.74 | 0.23 | 0.65 | 0.62 | 17.96 |
| **11** | 17 | suburbs | 0.49 | 1.01 | 0.43 | 0.55 | 0.13 | 0.56 | 0.29 | 0.45 | 0.76 | 0.24 | 0.67 | 0.63 | 18.49 |
| **11** | 18 | cities | 0.51 | 1.06 | 0.45 | 0.57 | 0.13 | 0.58 | 0.30 | 0.47 | 0.79 | 0.25 | 0.70 | 0.66 | 19.27 |
| **11** | 18 | country | 0.48 | 0.99 | 0.42 | 0.53 | 0.13 | 0.54 | 0.28 | 0.44 | 0.74 | 0.23 | 0.66 | 0.62 | 18.09 |
| **11** | 18 | suburbs | 0.50 | 1.02 | 0.43 | 0.55 | 0.13 | 0.56 | 0.29 | 0.46 | 0.76 | 0.24 | 0.68 | 0.64 | 18.62 |
| **11** | 19 | cities | 0.81 | 1.66 | 0.71 | 0.90 | 0.21 | 0.92 | 0.47 | 0.74 | 1.24 | 0.39 | 1.10 | 1.04 | 30.39 |
| **11** | 19 | country | 0.76 | 1.56 | 0.66 | 0.84 | 0.20 | 0.86 | 0.44 | 0.70 | 1.16 | 0.37 | 1.03 | 0.98 | 28.65 |
| **11** | 19 | suburbs | 0.78 | 1.61 | 0.68 | 0.87 | 0.20 | 0.89 | 0.46 | 0.72 | 1.20 | 0.38 | 1.06 | 1.01 | 29.48 |
| **11** | 20 | cities | 1.63 | 3.38 | 1.43 | 1.84 | 0.42 | 1.91 | 0.95 | 1.50 | 2.50 | 0.81 | 2.23 | 2.16 | 62.70 |
| **11** | 20 | country | 1.51 | 3.13 | 1.32 | 1.71 | 0.39 | 1.77 | 0.88 | 1.39 | 2.31 | 0.75 | 2.06 | 2.00 | 58.06 |
| **11** | 20 | suburbs | 1.56 | 3.24 | 1.37 | 1.77 | 0.40 | 1.83 | 0.91 | 1.44 | 2.40 | 0.78 | 2.13 | 2.07 | 60.14 |
| **12** | 5 | cities | 0.15 | 0.13 | 0.62 | 0.51 | 0.33 | 0.48 | 0.44 | 0.28 | 0.61 | 0.48 | 0.62 | 0.54 | 4.50 |
| **12** | 5 | country | 0.14 | 0.12 | 0.59 | 0.48 | 0.32 | 0.46 | 0.42 | 0.26 | 0.58 | 0.46 | 0.59 | 0.52 | 4.28 |
| **12** | 5 | suburbs | 0.14 | 0.13 | 0.61 | 0.49 | 0.32 | 0.47 | 0.43 | 0.27 | 0.59 | 0.47 | 0.60 | 0.53 | 4.37 |
| **12** | 6 | cities | 0.15 | 0.13 | 0.64 | 0.52 | 0.34 | 0.49 | 0.45 | 0.28 | 0.62 | 0.49 | 0.63 | 0.55 | 4.57 |
| **12** | 6 | country | 0.14 | 0.13 | 0.61 | 0.49 | 0.32 | 0.47 | 0.43 | 0.27 | 0.59 | 0.47 | 0.60 | 0.53 | 4.36 |
| **12** | 6 | suburbs | 0.15 | 0.13 | 0.62 | 0.50 | 0.33 | 0.48 | 0.43 | 0.27 | 0.60 | 0.47 | 0.61 | 0.54 | 4.44 |
| **12** | 7 | cities | 0.19 | 0.17 | 0.82 | 0.67 | 0.44 | 0.64 | 0.58 | 0.36 | 0.80 | 0.63 | 0.81 | 0.71 | 5.91 |
| **12** | 7 | country | 0.19 | 0.17 | 0.79 | 0.64 | 0.42 | 0.61 | 0.55 | 0.35 | 0.77 | 0.60 | 0.77 | 0.68 | 5.65 |
| **12** | 7 | suburbs | 0.19 | 0.17 | 0.80 | 0.65 | 0.42 | 0.62 | 0.56 | 0.35 | 0.78 | 0.61 | 0.79 | 0.69 | 5.75 |
| **12** | 8 | cities | 0.40 | 0.35 | 1.68 | 1.37 | 0.89 | 1.30 | 1.18 | 0.75 | 1.65 | 1.29 | 1.66 | 1.47 | 12.11 |
| **12** | 8 | country | 0.38 | 0.33 | 1.59 | 1.30 | 0.85 | 1.23 | 1.12 | 0.71 | 1.56 | 1.23 | 1.57 | 1.40 | 11.47 |
| **12** | 8 | suburbs | 0.39 | 0.34 | 1.64 | 1.33 | 0.87 | 1.27 | 1.15 | 0.73 | 1.61 | 1.26 | 1.62 | 1.44 | 11.80 |
| **12** | 17 | cities | 0.19 | 0.17 | 0.80 | 0.65 | 0.42 | 0.62 | 0.56 | 0.35 | 0.78 | 0.61 | 0.79 | 0.69 | 5.73 |
| **12** | 17 | country | 0.18 | 0.16 | 0.77 | 0.62 | 0.41 | 0.60 | 0.54 | 0.34 | 0.75 | 0.59 | 0.76 | 0.67 | 5.52 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **$\mathrm{PBT}_{\mathrm{CC}}$** | **$\mathrm{PBT}_{\mathrm{OD}}$** | **$\mathrm{PBT}_{\mathrm{HT\_CE}}$** | **$\mathrm{PBT}_{\mathrm{HT\_nCE}}$** | **$\mathrm{PBT}_{\mathrm{PM}}$** | **$\mathrm{PBT}_{\mathrm{IR\_hh}}$** | **$\mathrm{PBT}_{\mathrm{POF}}$** | **$\mathrm{PBT}_{\mathrm{AC}}$** | **$\mathrm{PBT}_{\mathrm{ET}}$** | **$\mathrm{PBT}_{\mathrm{EuF}}$** | **$\mathrm{PBT}_{\mathrm{EuM}}$** | **$\mathrm{PBT}_{\mathrm{Ec\_FW}}$** | **$\mathrm{PBT}_{\mathrm{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **12** | 17 | suburbs | 0.18 | 0.16 | 0.78 | 0.63 | 0.41 | 0.60 | 0.55 | 0.35 | 0.76 | 0.60 | 0.77 | 0.68 | 5.61 |
| **12** | 18 | cities | 0.19 | 0.17 | 0.80 | 0.65 | 0.43 | 0.62 | 0.56 | 0.36 | 0.78 | 0.62 | 0.79 | 0.70 | 5.77 |
| **12** | 18 | country | 0.18 | 0.16 | 0.77 | 0.63 | 0.41 | 0.60 | 0.54 | 0.34 | 0.75 | 0.59 | 0.76 | 0.67 | 5.55 |
| **12** | 18 | suburbs | 0.19 | 0.16 | 0.78 | 0.64 | 0.42 | 0.61 | 0.55 | 0.35 | 0.77 | 0.60 | 0.77 | 0.68 | 5.64 |
| **12** | 19 | cities | 0.31 | 0.28 | 1.33 | 1.08 | 0.70 | 1.03 | 0.93 | 0.59 | 1.30 | 1.02 | 1.31 | 1.15 | 9.54 |
| **12** | 19 | country | 0.30 | 0.26 | 1.26 | 1.03 | 0.67 | 0.98 | 0.89 | 0.56 | 1.23 | 0.97 | 1.24 | 1.10 | 9.08 |
| **12** | 19 | suburbs | 0.30 | 0.27 | 1.29 | 1.05 | 0.69 | 1.00 | 0.91 | 0.57 | 1.26 | 0.99 | 1.27 | 1.12 | 9.27 |
| **12** | 20 | cities | 0.73 | 0.65 | 3.09 | 2.51 | 1.64 | 2.39 | 2.17 | 1.37 | 3.02 | 2.37 | 3.04 | 2.70 | 22.21 |
| **12** | 20 | country | 0.67 | 0.59 | 2.82 | 2.30 | 1.50 | 2.18 | 1.98 | 1.25 | 2.76 | 2.17 | 2.78 | 2.48 | 20.31 |
| **12** | 20 | suburbs | 0.69 | 0.62 | 2.94 | 2.39 | 1.56 | 2.28 | 2.07 | 1.31 | 2.88 | 2.26 | 2.90 | 2.58 | 21.17 |
| **13** | 5 | cities | 0.32 | 0.36 | 2.59 | 1.90 | 1.30 | 2.77 | 1.09 | 1.52 | 1.78 | 1.96 | 1.81 | 1.99 | 9.57 |
| **13** | 5 | country | 0.30 | 0.33 | 2.44 | 1.79 | 1.22 | 2.62 | 1.02 | 1.43 | 1.68 | 1.85 | 1.70 | 1.88 | 9.02 |
| **13** | 5 | suburbs | 0.31 | 0.34 | 2.50 | 1.84 | 1.25 | 2.68 | 1.05 | 1.47 | 1.72 | 1.90 | 1.75 | 1.92 | 9.24 |
| **13** | 6 | cities | 0.33 | 0.36 | 2.64 | 1.94 | 1.32 | 2.83 | 1.11 | 1.55 | 1.81 | 2.00 | 1.84 | 2.03 | 9.75 |
| **13** | 6 | country | 0.31 | 0.34 | 2.49 | 1.83 | 1.25 | 2.67 | 1.04 | 1.46 | 1.71 | 1.89 | 1.74 | 1.91 | 9.18 |
| **13** | 6 | suburbs | 0.32 | 0.35 | 2.55 | 1.87 | 1.28 | 2.73 | 1.07 | 1.50 | 1.75 | 1.94 | 1.78 | 1.96 | 9.41 |
| **13** | 7 | cities | 0.42 | 0.46 | 3.37 | 2.47 | 1.70 | 3.59 | 1.42 | 1.98 | 2.31 | 2.54 | 2.36 | 2.57 | 12.47 |
| **13** | 7 | country | 0.40 | 0.44 | 3.20 | 2.35 | 1.61 | 3.41 | 1.34 | 1.88 | 2.19 | 2.42 | 2.23 | 2.44 | 11.82 |
| **13** | 7 | suburbs | 0.41 | 0.45 | 3.27 | 2.40 | 1.64 | 3.48 | 1.37 | 1.92 | 2.24 | 2.47 | 2.28 | 2.49 | 12.07 |
| **13** | 8 | cities | 0.87 | 0.96 | 7.14 | 5.26 | 3.52 | 7.88 | 2.95 | 4.15 | 4.88 | 5.59 | 4.94 | 5.69 | 26.09 |
| **13** | 8 | country | 0.82 | 0.90 | 6.69 | 4.93 | 3.29 | 7.38 | 2.76 | 3.89 | 4.57 | 5.24 | 4.63 | 5.34 | 24.43 |
| **13** | 8 | suburbs | 0.84 | 0.93 | 6.88 | 5.07 | 3.39 | 7.58 | 2.84 | 4.00 | 4.70 | 5.38 | 4.76 | 5.48 | 25.12 |
| **13** | 17 | cities | 0.39 | 0.43 | 3.13 | 2.29 | 1.57 | 3.33 | 1.31 | 1.84 | 2.14 | 2.36 | 2.18 | 2.39 | 11.55 |
| **13** | 17 | country | 0.37 | 0.41 | 2.99 | 2.19 | 1.50 | 3.19 | 1.25 | 1.76 | 2.05 | 2.26 | 2.09 | 2.28 | 11.04 |
| **13** | 17 | suburbs | 0.38 | 0.42 | 3.05 | 2.23 | 1.53 | 3.25 | 1.28 | 1.79 | 2.09 | 2.30 | 2.13 | 2.32 | 11.25 |
| **13** | 18 | cities | 0.39 | 0.43 | 3.15 | 2.31 | 1.58 | 3.36 | 1.32 | 1.85 | 2.16 | 2.38 | 2.20 | 2.40 | 11.63 |
| **13** | 18 | country | 0.37 | 0.41 | 3.00 | 2.20 | 1.51 | 3.20 | 1.26 | 1.76 | 2.06 | 2.27 | 2.10 | 2.29 | 11.09 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | 18 | suburbs | 0.38 | 0.42 | 3.06 | 2.24 | 1.54 | 3.26 | 1.28 | 1.80 | 2.10 | 2.31 | 2.14 | 2.34 | 11.30 |
| **13** | 19 | cities | 0.62 | 0.69 | 5.04 | 3.70 | 2.52 | 5.41 | 2.11 | 2.96 | 3.45 | 3.84 | 3.51 | 3.88 | 18.58 |
| **13** | 19 | country | 0.60 | 0.66 | 4.82 | 3.54 | 2.41 | 5.18 | 2.01 | 2.82 | 3.30 | 3.67 | 3.36 | 3.72 | 17.75 |
| **13** | 19 | suburbs | 0.61 | 0.67 | 4.91 | 3.60 | 2.45 | 5.27 | 2.05 | 2.87 | 3.36 | 3.73 | 3.42 | 3.78 | 18.07 |
| **13** | 20 | cities | 1.31 | 1.44 | 10.68 | 7.86 | 5.27 | 11.70 | 4.42 | 6.22 | 7.30 | 8.30 | 7.40 | 8.44 | 39.07 |
| **13** | 20 | country | 1.21 | 1.33 | 9.84 | 7.24 | 4.86 | 10.80 | 4.07 | 5.73 | 6.73 | 7.66 | 6.82 | 7.80 | 35.99 |
| **13** | 20 | suburbs | 1.25 | 1.38 | 10.19 | 7.50 | 5.03 | 11.18 | 4.21 | 5.93 | 6.97 | 7.92 | 7.06 | 8.06 | 37.27 |
| **14** | 5 | cities | 0.32 | 0.23 | 1.84 | 1.66 | 0.76 | 0.47 | 0.88 | 1.03 | 1.46 | 2.03 | 1.49 | 1.48 | 7.70 |
| **14** | 5 | country | 0.31 | 0.22 | 1.73 | 1.56 | 0.71 | 0.44 | 0.83 | 0.97 | 1.37 | 1.91 | 1.40 | 1.40 | 7.25 |
| **14** | 5 | suburbs | 0.31 | 0.22 | 1.77 | 1.60 | 0.73 | 0.45 | 0.85 | 1.00 | 1.41 | 1.96 | 1.43 | 1.43 | 7.43 |
| **14** | 6 | cities | 0.33 | 0.23 | 1.87 | 1.69 | 0.77 | 0.48 | 0.90 | 1.05 | 1.49 | 2.07 | 1.51 | 1.51 | 7.85 |
| **14** | 6 | country | 0.31 | 0.22 | 1.76 | 1.59 | 0.72 | 0.45 | 0.85 | 0.99 | 1.40 | 1.95 | 1.42 | 1.43 | 7.39 |
| **14** | 6 | suburbs | 0.32 | 0.23 | 1.80 | 1.63 | 0.74 | 0.46 | 0.87 | 1.02 | 1.43 | 2.00 | 1.46 | 1.46 | 7.57 |
| **14** | 7 | cities | 0.42 | 0.30 | 2.35 | 2.13 | 0.97 | 0.59 | 1.13 | 1.33 | 1.87 | 2.60 | 1.90 | 1.89 | 9.86 |
| **14** | 7 | country | 0.39 | 0.28 | 2.23 | 2.01 | 0.92 | 0.56 | 1.07 | 1.26 | 1.77 | 2.46 | 1.80 | 1.79 | 9.34 |
| **14** | 7 | suburbs | 0.40 | 0.29 | 2.27 | 2.06 | 0.94 | 0.57 | 1.09 | 1.28 | 1.81 | 2.51 | 1.84 | 1.83 | 9.54 |
| **14** | 8 | cities | 0.91 | 0.65 | 5.17 | 4.67 | 2.11 | 1.38 | 2.46 | 2.89 | 4.09 | 5.76 | 4.16 | 4.34 | 21.77 |
| **14** | 8 | country | 0.85 | 0.61 | 4.85 | 4.38 | 1.98 | 1.29 | 2.31 | 2.71 | 3.84 | 5.39 | 3.90 | 4.05 | 20.40 |
| **14** | 8 | suburbs | 0.87 | 0.62 | 4.97 | 4.50 | 2.03 | 1.32 | 2.37 | 2.79 | 3.94 | 5.53 | 4.01 | 4.16 | 20.94 |
| **14** | 17 | cities | 0.38 | 0.27 | 2.12 | 1.91 | 0.87 | 0.53 | 1.02 | 1.19 | 1.68 | 2.34 | 1.71 | 1.70 | 8.88 |
| **14** | 17 | country | 0.36 | 0.26 | 2.04 | 1.84 | 0.84 | 0.52 | 0.98 | 1.15 | 1.62 | 2.26 | 1.65 | 1.64 | 8.55 |
| **14** | 17 | suburbs | 0.37 | 0.26 | 2.07 | 1.87 | 0.85 | 0.52 | 1.00 | 1.17 | 1.64 | 2.29 | 1.67 | 1.66 | 8.68 |
| **14** | 18 | cities | 0.38 | 0.27 | 2.13 | 1.92 | 0.88 | 0.54 | 1.02 | 1.20 | 1.69 | 2.35 | 1.72 | 1.71 | 8.91 |
| **14** | 18 | country | 0.36 | 0.26 | 2.05 | 1.85 | 0.84 | 0.52 | 0.98 | 1.15 | 1.63 | 2.26 | 1.66 | 1.65 | 8.59 |
| **14** | 18 | suburbs | 0.37 | 0.26 | 2.08 | 1.88 | 0.86 | 0.52 | 1.00 | 1.17 | 1.65 | 2.30 | 1.68 | 1.67 | 8.71 |
| **14** | 19 | cities | 0.62 | 0.44 | 3.51 | 3.17 | 1.45 | 0.90 | 1.69 | 1.98 | 2.79 | 3.88 | 2.84 | 2.85 | 14.73 |
| **14** | 19 | country | 0.59 | 0.42 | 3.35 | 3.03 | 1.38 | 0.86 | 1.61 | 1.88 | 2.66 | 3.70 | 2.71 | 2.72 | 14.05 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{\text{CC}}$** | **PBT$_{\text{OD}}$** | **PBT$_{\text{HT\_CE}}$** | **PBT$_{\text{HT\_nCE}}$** | **PBT$_{\text{PM}}$** | **PBT$_{\text{IR\_hh}}$** | **PBT$_{\text{POF}}$** | **PBT$_{\text{AC}}$** | **PBT$_{\text{ET}}$** | **PBT$_{\text{EuF}}$** | **PBT$_{\text{EuM}}$** | **PBT$_{\text{Ec\_FW}}$** | **PBT$_{\text{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **14** | 19 | suburbs | 0.60 | 0.43 | 3.41 | 3.09 | 1.41 | 0.87 | 1.64 | 1.92 | 2.71 | 3.78 | 2.76 | 2.77 | 14.33 |
| **14** | 20 | cities | 1.25 | 0.89 | 7.10 | 6.42 | 2.91 | 1.86 | 3.39 | 3.98 | 5.63 | 7.89 | 5.73 | 5.88 | 29.87 |
| **14** | 20 | country | 1.18 | 0.84 | 6.70 | 6.05 | 2.74 | 1.76 | 3.20 | 3.75 | 5.31 | 7.44 | 5.40 | 5.56 | 28.17 |
| **14** | 20 | suburbs | 1.22 | 0.87 | 6.95 | 6.29 | 2.85 | 1.83 | 3.32 | 3.90 | 5.51 | 7.72 | 5.61 | 5.76 | 29.25 |
| **15** | 5 | cities | 0.19 | 0.14 | 1.25 | 0.88 | 0.66 | 0.48 | 0.60 | 0.62 | 0.81 | 0.76 | 0.89 | 1.02 | 4.79 |
| **15** | 5 | country | 0.17 | 0.12 | 1.14 | 0.80 | 0.60 | 0.44 | 0.55 | 0.57 | 0.74 | 0.69 | 0.81 | 0.93 | 4.36 |
| **15** | 5 | suburbs | 0.18 | 0.13 | 1.19 | 0.84 | 0.62 | 0.46 | 0.57 | 0.59 | 0.77 | 0.72 | 0.84 | 0.97 | 4.54 |
| **15** | 6 | cities | 0.19 | 0.14 | 1.27 | 0.90 | 0.67 | 0.49 | 0.61 | 0.63 | 0.83 | 0.77 | 0.90 | 1.04 | 4.87 |
| **15** | 6 | country | 0.17 | 0.13 | 1.16 | 0.82 | 0.61 | 0.44 | 0.56 | 0.58 | 0.75 | 0.70 | 0.82 | 0.94 | 4.43 |
| **15** | 6 | suburbs | 0.18 | 0.13 | 1.21 | 0.85 | 0.63 | 0.46 | 0.58 | 0.60 | 0.78 | 0.73 | 0.86 | 0.98 | 4.62 |
| **15** | 7 | cities | 0.25 | 0.18 | 1.66 | 1.17 | 0.87 | 0.64 | 0.80 | 0.82 | 1.08 | 1.00 | 1.18 | 1.35 | 6.35 |
| **15** | 7 | country | 0.23 | 0.17 | 1.53 | 1.08 | 0.80 | 0.58 | 0.73 | 0.76 | 0.99 | 0.92 | 1.08 | 1.24 | 5.84 |
| **15** | 7 | suburbs | 0.24 | 0.17 | 1.58 | 1.12 | 0.83 | 0.61 | 0.76 | 0.79 | 1.03 | 0.96 | 1.12 | 1.29 | 6.05 |
| **15** | 8 | cities | 0.42 | 0.31 | 2.82 | 1.99 | 1.48 | 1.08 | 1.35 | 1.40 | 1.83 | 1.72 | 2.00 | 2.31 | 10.77 |
| **15** | 8 | country | 0.39 | 0.29 | 2.65 | 1.87 | 1.38 | 1.02 | 1.26 | 1.31 | 1.72 | 1.63 | 1.87 | 2.18 | 10.08 |
| **15** | 8 | suburbs | 0.40 | 0.30 | 2.72 | 1.92 | 1.42 | 1.05 | 1.30 | 1.35 | 1.77 | 1.67 | 1.93 | 2.24 | 10.38 |
| **15** | 17 | cities | 0.23 | 0.17 | 1.57 | 1.11 | 0.83 | 0.60 | 0.76 | 0.78 | 1.02 | 0.95 | 1.12 | 1.28 | 6.02 |
| **15** | 17 | country | 0.22 | 0.16 | 1.44 | 1.02 | 0.76 | 0.55 | 0.69 | 0.72 | 0.94 | 0.87 | 1.02 | 1.18 | 5.52 |
| **15** | 17 | suburbs | 0.22 | 0.16 | 1.50 | 1.06 | 0.79 | 0.57 | 0.72 | 0.74 | 0.97 | 0.91 | 1.06 | 1.22 | 5.73 |
| **15** | 18 | cities | 0.24 | 0.17 | 1.59 | 1.12 | 0.84 | 0.61 | 0.76 | 0.79 | 1.03 | 0.96 | 1.13 | 1.29 | 6.07 |
| **15** | 18 | country | 0.22 | 0.16 | 1.45 | 1.03 | 0.76 | 0.56 | 0.70 | 0.72 | 0.94 | 0.88 | 1.03 | 1.18 | 5.56 |
| **15** | 18 | suburbs | 0.23 | 0.17 | 1.51 | 1.06 | 0.79 | 0.58 | 0.73 | 0.75 | 0.98 | 0.91 | 1.07 | 1.23 | 5.78 |
| **15** | 19 | cities | 0.36 | 0.26 | 2.41 | 1.70 | 1.27 | 0.92 | 1.16 | 1.20 | 1.56 | 1.46 | 1.71 | 1.96 | 9.22 |
| **15** | 19 | country | 0.33 | 0.24 | 2.24 | 1.58 | 1.18 | 0.86 | 1.07 | 1.11 | 1.45 | 1.36 | 1.59 | 1.83 | 8.55 |
| **15** | 19 | suburbs | 0.35 | 0.25 | 2.31 | 1.63 | 1.22 | 0.89 | 1.11 | 1.15 | 1.50 | 1.40 | 1.64 | 1.89 | 8.85 |
| **15** | 20 | cities | 0.70 | 0.52 | 4.74 | 3.35 | 2.48 | 1.82 | 2.27 | 2.35 | 3.08 | 2.91 | 3.36 | 3.89 | 18.07 |
| **15** | 20 | country | 0.66 | 0.48 | 4.48 | 3.18 | 2.31 | 1.73 | 2.11 | 2.20 | 2.90 | 2.83 | 3.15 | 3.75 | 16.92 |

## CELLULOSE FIBER

| Country | Arc | GL | $\text{PBT}_{\text{CC}}$ | $\text{PBT}_{\text{OD}}$ | $\text{PBT}_{\text{HT\_CE}}$ | $\text{PBT}_{\text{HT\_nCE}}$ | $\text{PBT}_{\text{PM}}$ | $\text{PBT}_{\text{IR\_hh}}$ | $\text{PBT}_{\text{POF}}$ | $\text{PBT}_{\text{AC}}$ | $\text{PBT}_{\text{ET}}$ | $\text{PBT}_{\text{EuF}}$ | $\text{PBT}_{\text{EuM}}$ | $\text{PBT}_{\text{Ec\_FW}}$ | $\text{PBT}_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **15** | 20 | suburbs | 0.68 | 0.50 | 4.59 | 3.25 | 2.39 | 1.77 | 2.18 | 2.27 | 2.98 | 2.85 | 3.24 | 3.80 | 17.43 |
| **16** | 5 | cities | 0.25 | 0.30 | 1.28 | 0.90 | 0.95 | 1.15 | 0.75 | 0.65 | 1.00 | 0.79 | 0.97 | 0.69 | 7.11 |
| **16** | 5 | country | 0.22 | 0.26 | 1.12 | 0.78 | 0.83 | 1.00 | 0.65 | 0.57 | 0.87 | 0.69 | 0.85 | 0.60 | 6.20 |
| **16** | 5 | suburbs | 0.23 | 0.27 | 1.18 | 0.83 | 0.88 | 1.07 | 0.69 | 0.60 | 0.92 | 0.73 | 0.90 | 0.64 | 6.58 |
| **16** | 6 | cities | 0.25 | 0.30 | 1.31 | 0.92 | 0.98 | 1.18 | 0.77 | 0.67 | 1.02 | 0.81 | 1.00 | 0.71 | 7.30 |
| **16** | 6 | country | 0.22 | 0.27 | 1.15 | 0.80 | 0.85 | 1.03 | 0.67 | 0.58 | 0.89 | 0.71 | 0.87 | 0.62 | 6.36 |
| **16** | 6 | suburbs | 0.24 | 0.28 | 1.22 | 0.85 | 0.90 | 1.10 | 0.71 | 0.62 | 0.95 | 0.75 | 0.92 | 0.65 | 6.76 |
| **16** | 7 | cities | 0.32 | 0.39 | 1.66 | 1.16 | 1.24 | 1.49 | 0.97 | 0.84 | 1.29 | 1.03 | 1.26 | 0.89 | 9.23 |
| **16** | 7 | country | 0.28 | 0.34 | 1.45 | 1.02 | 1.08 | 1.30 | 0.85 | 0.74 | 1.13 | 0.89 | 1.10 | 0.78 | 8.05 |
| **16** | 7 | suburbs | 0.30 | 0.36 | 1.54 | 1.08 | 1.15 | 1.39 | 0.90 | 0.78 | 1.20 | 0.95 | 1.17 | 0.83 | 8.56 |
| **16** | 8 | cities | 0.72 | 0.84 | 3.96 | 2.79 | 2.79 | 3.59 | 2.22 | 2.02 | 3.06 | 2.54 | 2.99 | 2.24 | 20.80 |
| **16** | 8 | country | 0.62 | 0.73 | 3.33 | 2.34 | 2.40 | 3.01 | 1.90 | 1.70 | 2.58 | 2.10 | 2.52 | 1.84 | 17.95 |
| **16** | 8 | suburbs | 0.66 | 0.78 | 3.59 | 2.53 | 2.56 | 3.25 | 2.03 | 1.83 | 2.78 | 2.28 | 2.71 | 2.00 | 19.13 |
| **16** | 17 | cities | 0.30 | 0.36 | 1.56 | 1.10 | 1.16 | 1.41 | 0.91 | 0.79 | 1.21 | 0.96 | 1.19 | 0.84 | 8.67 |
| **16** | 17 | country | 0.27 | 0.32 | 1.38 | 0.97 | 1.02 | 1.24 | 0.80 | 0.70 | 1.07 | 0.85 | 1.05 | 0.74 | 7.66 |
| **16** | 17 | suburbs | 0.28 | 0.34 | 1.45 | 1.02 | 1.08 | 1.31 | 0.85 | 0.74 | 1.13 | 0.90 | 1.10 | 0.78 | 8.09 |
| **16** | 18 | cities | 0.31 | 0.37 | 1.58 | 1.11 | 1.18 | 1.43 | 0.92 | 0.80 | 1.23 | 0.98 | 1.20 | 0.85 | 8.79 |
| **16** | 18 | country | 0.27 | 0.32 | 1.40 | 0.98 | 1.04 | 1.26 | 0.82 | 0.71 | 1.09 | 0.86 | 1.06 | 0.75 | 7.76 |
| **16** | 18 | suburbs | 0.29 | 0.34 | 1.47 | 1.04 | 1.10 | 1.33 | 0.86 | 0.75 | 1.15 | 0.91 | 1.12 | 0.79 | 8.20 |
| **16** | 19 | cities | 0.50 | 0.59 | 2.60 | 1.83 | 1.92 | 2.34 | 1.51 | 1.32 | 2.02 | 1.62 | 1.97 | 1.41 | 14.31 |
| **16** | 19 | country | 0.44 | 0.53 | 2.30 | 1.61 | 1.71 | 2.07 | 1.34 | 1.17 | 1.79 | 1.42 | 1.75 | 1.24 | 12.74 |
| **16** | 19 | suburbs | 0.47 | 0.56 | 2.42 | 1.70 | 1.79 | 2.18 | 1.41 | 1.23 | 1.88 | 1.50 | 1.84 | 1.31 | 13.39 |
| **16** | 20 | cities | 1.15 | 1.35 | 6.25 | 4.41 | 4.45 | 5.66 | 3.54 | 3.19 | 4.84 | 3.98 | 4.73 | 3.50 | 33.23 |
| **16** | 20 | country | 1.00 | 1.18 | 5.33 | 3.75 | 3.86 | 4.82 | 3.05 | 2.71 | 4.13 | 3.35 | 4.03 | 2.94 | 28.80 |
| **16** | 20 | suburbs | 1.06 | 1.25 | 5.71 | 4.02 | 4.10 | 5.16 | 3.25 | 2.91 | 4.42 | 3.61 | 4.32 | 3.17 | 30.63 |
| **17** | 5 | cities | 0.42 | 0.50 | 1.87 | 1.37 | 0.99 | 0.93 | 1.11 | 0.82 | 1.44 | 0.86 | 1.38 | 1.56 | 14.23 |
| **17** | 5 | country | 0.39 | 0.46 | 1.73 | 1.28 | 0.92 | 0.87 | 1.03 | 0.76 | 1.34 | 0.80 | 1.28 | 1.45 | 13.21 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT**$_{\mathrm{CC}}$ | **PBT**$_{\mathrm{OD}}$ | **PBT**$_{\mathrm{HT\_CE}}$ | **PBT**$_{\mathrm{HT\_nCE}}$ | **PBT**$_{\mathrm{PM}}$ | **PBT**$_{\mathrm{IR\_hh}}$ | **PBT**$_{\mathrm{POF}}$ | **PBT**$_{\mathrm{AC}}$ | **PBT**$_{\mathrm{ET}}$ | **PBT**$_{\mathrm{EuF}}$ | **PBT**$_{\mathrm{EuM}}$ | **PBT**$_{\mathrm{Ec\_FW}}$ | **PBT**$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17** | 5 | suburbs | 0.40 | 0.48 | 1.79 | 1.32 | 0.95 | 0.90 | 1.07 | 0.79 | 1.38 | 0.82 | 1.33 | 1.50 | 13.66 |
| **17** | 6 | cities | 0.43 | 0.51 | 1.91 | 1.40 | 1.01 | 0.95 | 1.14 | 0.84 | 1.47 | 0.88 | 1.41 | 1.59 | 14.53 |
| **17** | 6 | country | 0.40 | 0.47 | 1.77 | 1.30 | 0.94 | 0.89 | 1.06 | 0.78 | 1.36 | 0.81 | 1.31 | 1.48 | 13.48 |
| **17** | 6 | suburbs | 0.41 | 0.49 | 1.83 | 1.35 | 0.97 | 0.92 | 1.09 | 0.81 | 1.41 | 0.84 | 1.35 | 1.53 | 13.95 |
| **17** | 7 | cities | 0.55 | 0.66 | 2.46 | 1.81 | 1.31 | 1.23 | 1.47 | 1.08 | 1.89 | 1.13 | 1.82 | 2.05 | 18.73 |
| **17** | 7 | country | 0.52 | 0.61 | 2.30 | 1.69 | 1.22 | 1.15 | 1.37 | 1.01 | 1.77 | 1.05 | 1.70 | 1.91 | 17.48 |
| **17** | 7 | suburbs | 0.53 | 0.63 | 2.37 | 1.74 | 1.26 | 1.18 | 1.41 | 1.04 | 1.82 | 1.09 | 1.75 | 1.97 | 18.03 |
| **17** | 8 | cities | 1.09 | 1.30 | 4.91 | 3.63 | 2.58 | 2.55 | 2.90 | 2.15 | 3.75 | 2.30 | 3.61 | 4.17 | 37.29 |
| **17** | 8 | country | 1.02 | 1.22 | 4.58 | 3.39 | 2.41 | 2.37 | 2.71 | 2.01 | 3.50 | 2.14 | 3.37 | 3.88 | 34.79 |
| **17** | 8 | suburbs | 1.05 | 1.26 | 4.74 | 3.50 | 2.48 | 2.46 | 2.79 | 2.07 | 3.61 | 2.21 | 3.48 | 4.02 | 35.94 |
| **17** | 17 | cities | 0.51 | 0.60 | 2.25 | 1.66 | 1.20 | 1.12 | 1.35 | 0.99 | 1.74 | 1.03 | 1.67 | 1.87 | 17.16 |
| **17** | 17 | country | 0.48 | 0.57 | 2.12 | 1.56 | 1.13 | 1.06 | 1.27 | 0.94 | 1.63 | 0.97 | 1.57 | 1.77 | 16.16 |
| **17** | 17 | suburbs | 0.49 | 0.58 | 2.18 | 1.60 | 1.16 | 1.09 | 1.30 | 0.96 | 1.68 | 1.00 | 1.61 | 1.81 | 16.60 |
| **17** | 18 | cities | 0.51 | 0.61 | 2.28 | 1.67 | 1.21 | 1.13 | 1.36 | 1.00 | 1.75 | 1.04 | 1.68 | 1.89 | 17.33 |
| **17** | 18 | country | 0.48 | 0.57 | 2.14 | 1.57 | 1.13 | 1.07 | 1.28 | 0.94 | 1.65 | 0.98 | 1.58 | 1.78 | 16.28 |
| **17** | 18 | suburbs | 0.49 | 0.59 | 2.20 | 1.62 | 1.17 | 1.10 | 1.31 | 0.97 | 1.69 | 1.01 | 1.62 | 1.83 | 16.73 |
| **17** | 19 | cities | 0.79 | 0.94 | 3.52 | 2.59 | 1.86 | 1.77 | 2.10 | 1.55 | 2.71 | 1.62 | 2.60 | 2.94 | 26.78 |
| **17** | 19 | country | 0.75 | 0.90 | 3.36 | 2.47 | 1.78 | 1.69 | 2.00 | 1.48 | 2.58 | 1.55 | 2.48 | 2.80 | 25.55 |
| **17** | 19 | suburbs | 0.77 | 0.92 | 3.43 | 2.52 | 1.82 | 1.72 | 2.04 | 1.51 | 2.64 | 1.58 | 2.53 | 2.86 | 26.10 |
| **17** | 20 | cities | 1.55 | 1.84 | 6.92 | 5.10 | 3.64 | 3.54 | 4.10 | 3.04 | 5.30 | 3.21 | 5.09 | 5.83 | 52.58 |
| **17** | 20 | country | 1.44 | 1.72 | 6.45 | 4.76 | 3.40 | 3.30 | 3.82 | 2.83 | 4.94 | 2.99 | 4.75 | 5.43 | 49.00 |
| **17** | 20 | suburbs | 1.49 | 1.78 | 6.69 | 4.93 | 3.52 | 3.42 | 3.96 | 2.94 | 5.12 | 3.11 | 4.92 | 5.63 | 50.83 |
| **18** | 5 | cities | 0.27 | 0.25 | 0.95 | 0.83 | 0.38 | 0.73 | 0.57 | 0.64 | 0.78 | 0.47 | 0.93 | 0.86 | 7.05 |
| **18** | 5 | country | 0.25 | 0.23 | 0.88 | 0.77 | 0.35 | 0.68 | 0.52 | 0.59 | 0.72 | 0.44 | 0.86 | 0.80 | 6.52 |
| **18** | 5 | suburbs | 0.26 | 0.23 | 0.91 | 0.79 | 0.36 | 0.70 | 0.54 | 0.61 | 0.74 | 0.45 | 0.89 | 0.82 | 6.74 |
| **18** | 6 | cities | 0.28 | 0.25 | 0.97 | 0.84 | 0.39 | 0.74 | 0.58 | 0.66 | 0.79 | 0.48 | 0.95 | 0.87 | 7.18 |
| **18** | 6 | country | 0.26 | 0.23 | 0.89 | 0.78 | 0.36 | 0.69 | 0.53 | 0.61 | 0.73 | 0.45 | 0.88 | 0.81 | 6.64 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **18** | 6 | suburbs | 0.26 | 0.24 | 0.92 | 0.81 | 0.37 | 0.71 | 0.55 | 0.63 | 0.76 | 0.46 | 0.91 | 0.84 | 6.86 |
| **18** | 7 | cities | 0.36 | 0.33 | 1.25 | 1.09 | 0.51 | 0.96 | 0.76 | 0.85 | 1.03 | 0.62 | 1.24 | 1.12 | 9.34 |
| **18** | 7 | country | 0.33 | 0.30 | 1.17 | 1.01 | 0.47 | 0.90 | 0.70 | 0.79 | 0.95 | 0.58 | 1.15 | 1.05 | 8.67 |
| **18** | 7 | suburbs | 0.35 | 0.31 | 1.20 | 1.04 | 0.49 | 0.92 | 0.72 | 0.82 | 0.98 | 0.59 | 1.19 | 1.08 | 8.95 |
| **18** | 8 | cities | 0.67 | 0.60 | 2.38 | 2.13 | 0.92 | 1.87 | 1.38 | 1.59 | 1.96 | 1.26 | 2.31 | 2.26 | 17.58 |
| **18** | 8 | country | 0.63 | 0.56 | 2.27 | 2.05 | 0.87 | 1.80 | 1.30 | 1.51 | 1.87 | 1.24 | 2.19 | 2.21 | 16.71 |
| **18** | 8 | suburbs | 0.64 | 0.57 | 2.31 | 2.08 | 0.89 | 1.82 | 1.33 | 1.54 | 1.91 | 1.25 | 2.24 | 2.23 | 17.04 |
| **18** | 17 | cities | 0.34 | 0.31 | 1.19 | 1.03 | 0.48 | 0.91 | 0.72 | 0.81 | 0.97 | 0.59 | 1.17 | 1.06 | 8.84 |
| **18** | 17 | country | 0.32 | 0.29 | 1.11 | 0.96 | 0.45 | 0.85 | 0.67 | 0.75 | 0.91 | 0.55 | 1.09 | 1.00 | 8.25 |
| **18** | 17 | suburbs | 0.33 | 0.30 | 1.14 | 0.99 | 0.46 | 0.88 | 0.69 | 0.78 | 0.93 | 0.57 | 1.13 | 1.02 | 8.49 |
| **18** | 18 | cities | 0.34 | 0.31 | 1.20 | 1.04 | 0.48 | 0.92 | 0.72 | 0.81 | 0.98 | 0.59 | 1.18 | 1.07 | 8.90 |
| **18** | 18 | country | 0.32 | 0.29 | 1.12 | 0.97 | 0.45 | 0.86 | 0.67 | 0.76 | 0.91 | 0.56 | 1.10 | 1.01 | 8.31 |
| **18** | 18 | suburbs | 0.33 | 0.30 | 1.15 | 1.00 | 0.47 | 0.88 | 0.69 | 0.78 | 0.94 | 0.57 | 1.14 | 1.03 | 8.56 |
| **18** | 19 | cities | 0.53 | 0.48 | 1.87 | 1.63 | 0.75 | 1.44 | 1.12 | 1.27 | 1.53 | 0.94 | 1.84 | 1.69 | 13.87 |
| **18** | 19 | country | 0.50 | 0.45 | 1.76 | 1.54 | 0.70 | 1.36 | 1.04 | 1.19 | 1.44 | 0.89 | 1.72 | 1.61 | 13.05 |
| **18** | 19 | suburbs | 0.52 | 0.46 | 1.81 | 1.58 | 0.72 | 1.40 | 1.07 | 1.22 | 1.48 | 0.91 | 1.78 | 1.65 | 13.42 |
| **18** | 20 | cities | 1.05 | 0.94 | 3.73 | 3.30 | 1.47 | 2.90 | 2.19 | 2.51 | 3.06 | 1.93 | 3.64 | 3.47 | 27.59 |
| **18** | 20 | country | 0.98 | 0.88 | 3.52 | 3.16 | 1.36 | 2.77 | 2.03 | 2.35 | 2.91 | 1.89 | 3.42 | 3.38 | 26.02 |
| **18** | 20 | suburbs | 1.01 | 0.90 | 3.61 | 3.22 | 1.40 | 2.83 | 2.09 | 2.41 | 2.97 | 1.91 | 3.51 | 3.42 | 26.65 |
| **19** | 5 | cities | 0.23 | 0.21 | 0.44 | 0.60 | 0.12 | 0.51 | 0.24 | 0.43 | 0.49 | 0.35 | 0.54 | 0.48 | 5.62 |
| **19** | 5 | country | 0.22 | 0.19 | 0.40 | 0.55 | 0.11 | 0.47 | 0.22 | 0.40 | 0.45 | 0.33 | 0.50 | 0.44 | 5.21 |
| **19** | 5 | suburbs | 0.23 | 0.20 | 0.42 | 0.58 | 0.12 | 0.49 | 0.23 | 0.41 | 0.47 | 0.34 | 0.52 | 0.46 | 5.41 |
| **19** | 6 | cities | 0.24 | 0.21 | 0.44 | 0.61 | 0.12 | 0.51 | 0.24 | 0.43 | 0.49 | 0.36 | 0.55 | 0.49 | 5.72 |
| **19** | 6 | country | 0.22 | 0.19 | 0.41 | 0.56 | 0.12 | 0.48 | 0.22 | 0.40 | 0.46 | 0.33 | 0.51 | 0.45 | 5.29 |
| **19** | 6 | suburbs | 0.23 | 0.20 | 0.43 | 0.59 | 0.12 | 0.49 | 0.23 | 0.42 | 0.48 | 0.35 | 0.53 | 0.47 | 5.50 |
| **19** | 7 | cities | 0.32 | 0.28 | 0.59 | 0.82 | 0.17 | 0.69 | 0.33 | 0.58 | 0.66 | 0.48 | 0.73 | 0.65 | 7.67 |
| **19** | 7 | country | 0.30 | 0.26 | 0.55 | 0.76 | 0.16 | 0.64 | 0.30 | 0.54 | 0.62 | 0.45 | 0.68 | 0.60 | 7.12 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **19** | 7 | suburbs | 0.31 | 0.27 | 0.57 | 0.79 | 0.16 | 0.66 | 0.31 | 0.56 | 0.64 | 0.46 | 0.71 | 0.63 | 7.38 |
| **19** | 8 | cities | 0.59 | 0.52 | 1.10 | 1.53 | 0.31 | 1.29 | 0.60 | 1.08 | 1.23 | 0.91 | 1.36 | 1.23 | 14.30 |
| **19** | 8 | country | 0.55 | 0.48 | 1.02 | 1.42 | 0.29 | 1.20 | 0.56 | 1.00 | 1.15 | 0.84 | 1.27 | 1.14 | 13.28 |
| **19** | 8 | suburbs | 0.57 | 0.50 | 1.06 | 1.47 | 0.30 | 1.24 | 0.58 | 1.04 | 1.19 | 0.87 | 1.31 | 1.18 | 13.76 |
| **19** | 17 | cities | 0.30 | 0.26 | 0.56 | 0.76 | 0.16 | 0.64 | 0.30 | 0.54 | 0.62 | 0.45 | 0.69 | 0.61 | 7.17 |
| **19** | 17 | country | 0.28 | 0.24 | 0.52 | 0.71 | 0.15 | 0.60 | 0.28 | 0.51 | 0.58 | 0.42 | 0.64 | 0.57 | 6.70 |
| **19** | 17 | suburbs | 0.29 | 0.25 | 0.54 | 0.74 | 0.15 | 0.62 | 0.29 | 0.53 | 0.60 | 0.44 | 0.66 | 0.59 | 6.93 |
| **19** | 18 | cities | 0.30 | 0.26 | 0.56 | 0.77 | 0.16 | 0.65 | 0.31 | 0.55 | 0.63 | 0.45 | 0.69 | 0.61 | 7.22 |
| **19** | 18 | country | 0.28 | 0.25 | 0.52 | 0.72 | 0.15 | 0.61 | 0.29 | 0.51 | 0.58 | 0.42 | 0.65 | 0.57 | 6.75 |
| **19** | 18 | suburbs | 0.29 | 0.25 | 0.54 | 0.74 | 0.15 | 0.63 | 0.30 | 0.53 | 0.60 | 0.44 | 0.67 | 0.59 | 6.98 |
| **19** | 19 | cities | 0.46 | 0.40 | 0.85 | 1.17 | 0.24 | 0.99 | 0.47 | 0.83 | 0.95 | 0.69 | 1.05 | 0.94 | 11.01 |
| **19** | 19 | country | 0.43 | 0.38 | 0.80 | 1.10 | 0.22 | 0.93 | 0.44 | 0.78 | 0.89 | 0.65 | 0.99 | 0.88 | 10.31 |
| **19** | 19 | suburbs | 0.44 | 0.39 | 0.82 | 1.13 | 0.23 | 0.96 | 0.45 | 0.81 | 0.92 | 0.67 | 1.02 | 0.91 | 10.64 |
| **19** | 20 | cities | 0.89 | 0.78 | 1.66 | 2.30 | 0.47 | 1.94 | 0.91 | 1.63 | 1.86 | 1.36 | 2.05 | 1.85 | 21.51 |
| **19** | 20 | country | 0.84 | 0.73 | 1.55 | 2.14 | 0.44 | 1.81 | 0.85 | 1.52 | 1.74 | 1.27 | 1.92 | 1.72 | 20.10 |
| **19** | 20 | suburbs | 0.86 | 0.75 | 1.60 | 2.22 | 0.45 | 1.87 | 0.88 | 1.57 | 1.80 | 1.32 | 1.98 | 1.78 | 20.78 |
| **20** | 5 | cities | 0.19 | 0.31 | 0.34 | 0.36 | 0.12 | 0.41 | 0.23 | 0.27 | 0.48 | 0.18 | 0.44 | 0.44 | 7.48 |
| **20** | 5 | country | 0.18 | 0.29 | 0.32 | 0.33 | 0.11 | 0.38 | 0.22 | 0.25 | 0.44 | 0.17 | 0.41 | 0.41 | 6.98 |
| **20** | 5 | suburbs | 0.18 | 0.30 | 0.33 | 0.34 | 0.11 | 0.40 | 0.22 | 0.26 | 0.46 | 0.17 | 0.42 | 0.43 | 7.18 |
| **20** | 6 | cities | 0.19 | 0.32 | 0.35 | 0.36 | 0.12 | 0.42 | 0.24 | 0.28 | 0.48 | 0.18 | 0.44 | 0.45 | 7.61 |
| **20** | 6 | country | 0.18 | 0.30 | 0.32 | 0.34 | 0.11 | 0.39 | 0.22 | 0.26 | 0.45 | 0.17 | 0.41 | 0.42 | 7.10 |
| **20** | 6 | suburbs | 0.19 | 0.31 | 0.33 | 0.35 | 0.12 | 0.40 | 0.23 | 0.27 | 0.46 | 0.18 | 0.43 | 0.43 | 7.31 |
| **20** | 7 | cities | 0.25 | 0.41 | 0.45 | 0.47 | 0.16 | 0.54 | 0.30 | 0.36 | 0.63 | 0.24 | 0.58 | 0.59 | 9.87 |
| **20** | 7 | country | 0.24 | 0.39 | 0.42 | 0.44 | 0.15 | 0.51 | 0.29 | 0.34 | 0.59 | 0.22 | 0.54 | 0.55 | 9.26 |
| **20** | 7 | suburbs | 0.24 | 0.40 | 0.44 | 0.46 | 0.15 | 0.52 | 0.29 | 0.35 | 0.60 | 0.23 | 0.56 | 0.56 | 9.51 |
| **20** | 8 | cities | 0.50 | 0.83 | 0.90 | 0.95 | 0.31 | 1.10 | 0.61 | 0.72 | 1.25 | 0.48 | 1.15 | 1.19 | 19.82 |
| **20** | 8 | country | 0.47 | 0.77 | 0.84 | 0.89 | 0.29 | 1.03 | 0.57 | 0.67 | 1.17 | 0.45 | 1.08 | 1.11 | 18.49 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | $\mathbf{PBT}_{\mathbf{CC}}$ | $\mathbf{PBT}_{\mathbf{OD}}$ | $\mathbf{PBT}_{\mathbf{HT\_CE}}$ | $\mathbf{PBT}_{\mathbf{HT\_nCE}}$ | $\mathbf{PBT}_{\mathbf{PM}}$ | $\mathbf{PBT}_{\mathbf{IR\_hh}}$ | $\mathbf{PBT}_{\mathbf{POF}}$ | $\mathbf{PBT}_{\mathbf{AC}}$ | $\mathbf{PBT}_{\mathbf{ET}}$ | $\mathbf{PBT}_{\mathbf{EuF}}$ | $\mathbf{PBT}_{\mathbf{EuM}}$ | $\mathbf{PBT}_{\mathbf{Ec\_FW}}$ | $\mathbf{PBT}_{\mathbf{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **20** | 8 | suburbs | 0.48 | 0.79 | 0.87 | 0.91 | 0.30 | 1.06 | 0.58 | 0.69 | 1.21 | 0.46 | 1.11 | 1.14 | 19.04 |
| **20** | 17 | cities | 0.23 | 0.37 | 0.41 | 0.42 | 0.14 | 0.49 | 0.27 | 0.32 | 0.56 | 0.21 | 0.52 | 0.53 | 8.86 |
| **20** | 17 | country | 0.21 | 0.35 | 0.38 | 0.40 | 0.13 | 0.46 | 0.26 | 0.31 | 0.53 | 0.20 | 0.49 | 0.50 | 8.40 |
| **20** | 17 | suburbs | 0.22 | 0.36 | 0.39 | 0.41 | 0.14 | 0.47 | 0.27 | 0.31 | 0.55 | 0.21 | 0.50 | 0.51 | 8.59 |
| **20** | 18 | cities | 0.23 | 0.37 | 0.41 | 0.43 | 0.14 | 0.49 | 0.28 | 0.32 | 0.57 | 0.21 | 0.52 | 0.53 | 8.90 |
| **20** | 18 | country | 0.21 | 0.35 | 0.39 | 0.40 | 0.13 | 0.46 | 0.26 | 0.31 | 0.54 | 0.20 | 0.49 | 0.50 | 8.43 |
| **20** | 18 | suburbs | 0.22 | 0.36 | 0.40 | 0.41 | 0.14 | 0.47 | 0.27 | 0.31 | 0.55 | 0.21 | 0.50 | 0.51 | 8.63 |
| **20** | 19 | cities | 0.36 | 0.59 | 0.65 | 0.68 | 0.22 | 0.78 | 0.44 | 0.51 | 0.90 | 0.34 | 0.83 | 0.84 | 14.13 |
| **20** | 19 | country | 0.34 | 0.56 | 0.62 | 0.64 | 0.21 | 0.74 | 0.42 | 0.49 | 0.86 | 0.32 | 0.79 | 0.80 | 13.45 |
| **20** | 19 | suburbs | 0.35 | 0.58 | 0.63 | 0.66 | 0.22 | 0.76 | 0.42 | 0.50 | 0.87 | 0.33 | 0.80 | 0.82 | 13.76 |
| **20** | 20 | cities | 0.68 | 1.12 | 1.23 | 1.29 | 0.43 | 1.49 | 0.83 | 0.98 | 1.71 | 0.65 | 1.57 | 1.61 | 26.93 |
| **20** | 20 | country | 0.64 | 1.06 | 1.16 | 1.22 | 0.40 | 1.41 | 0.78 | 0.92 | 1.61 | 0.61 | 1.48 | 1.51 | 25.36 |
| **20** | 20 | suburbs | 0.66 | 1.09 | 1.19 | 1.25 | 0.41 | 1.44 | 0.80 | 0.94 | 1.65 | 0.63 | 1.52 | 1.56 | 26.06 |
| **21** | 5 | cities | 0.21 | 0.51 | 0.40 | 0.46 | 0.14 | 2.18 | 0.30 | 0.22 | 0.59 | 0.32 | 0.56 | 0.87 | 18.50 |
| **21** | 5 | country | 0.19 | 0.47 | 0.37 | 0.42 | 0.13 | 1.98 | 0.28 | 0.20 | 0.54 | 0.29 | 0.51 | 0.79 | 16.80 |
| **21** | 5 | suburbs | 0.19 | 0.49 | 0.38 | 0.44 | 0.13 | 2.06 | 0.29 | 0.21 | 0.56 | 0.30 | 0.53 | 0.82 | 17.52 |
| **21** | 6 | cities | 0.21 | 0.52 | 0.41 | 0.47 | 0.14 | 2.22 | 0.31 | 0.23 | 0.60 | 0.32 | 0.57 | 0.88 | 18.85 |
| **21** | 6 | country | 0.19 | 0.48 | 0.37 | 0.43 | 0.13 | 2.01 | 0.28 | 0.21 | 0.55 | 0.29 | 0.52 | 0.80 | 17.10 |
| **21** | 6 | suburbs | 0.20 | 0.50 | 0.39 | 0.44 | 0.14 | 2.10 | 0.29 | 0.21 | 0.57 | 0.31 | 0.54 | 0.84 | 17.83 |
| **21** | 7 | cities | 0.27 | 0.69 | 0.54 | 0.61 | 0.19 | 2.90 | 0.40 | 0.30 | 0.79 | 0.42 | 0.75 | 1.15 | 24.64 |
| **21** | 7 | country | 0.25 | 0.63 | 0.49 | 0.56 | 0.17 | 2.66 | 0.37 | 0.27 | 0.72 | 0.39 | 0.69 | 1.06 | 22.56 |
| **21** | 7 | suburbs | 0.26 | 0.65 | 0.51 | 0.58 | 0.18 | 2.76 | 0.39 | 0.28 | 0.75 | 0.40 | 0.71 | 1.10 | 23.46 |
| **21** | 8 | cities | 0.49 | 1.22 | 0.96 | 1.10 | 0.34 | 5.19 | 0.72 | 0.53 | 1.41 | 0.77 | 1.34 | 2.09 | 44.24 |
| **21** | 8 | country | 0.45 | 1.13 | 0.89 | 1.02 | 0.31 | 4.82 | 0.67 | 0.49 | 1.31 | 0.71 | 1.25 | 1.94 | 41.03 |
| **21** | 8 | suburbs | 0.47 | 1.18 | 0.93 | 1.06 | 0.32 | 5.02 | 0.70 | 0.51 | 1.36 | 0.74 | 1.30 | 2.02 | 42.74 |
| **21** | 17 | cities | 0.25 | 0.64 | 0.50 | 0.57 | 0.18 | 2.69 | 0.38 | 0.28 | 0.73 | 0.39 | 0.70 | 1.07 | 22.89 |
| **21** | 17 | country | 0.23 | 0.59 | 0.46 | 0.52 | 0.16 | 2.48 | 0.35 | 0.25 | 0.67 | 0.36 | 0.64 | 0.98 | 21.04 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **21** | 17 | suburbs | 0.24 | 0.61 | 0.48 | 0.54 | 0.17 | 2.57 | 0.36 | 0.26 | 0.70 | 0.38 | 0.66 | 1.02 | 21.83 |
| **21** | 18 | cities | 0.26 | 0.64 | 0.50 | 0.57 | 0.18 | 2.72 | 0.38 | 0.28 | 0.74 | 0.40 | 0.70 | 1.08 | 23.07 |
| **21** | 18 | country | 0.24 | 0.59 | 0.46 | 0.53 | 0.16 | 2.49 | 0.35 | 0.25 | 0.68 | 0.36 | 0.65 | 0.99 | 21.18 |
| **21** | 18 | suburbs | 0.24 | 0.61 | 0.48 | 0.55 | 0.17 | 2.59 | 0.36 | 0.26 | 0.70 | 0.38 | 0.67 | 1.03 | 21.98 |
| **21** | 19 | cities | 0.39 | 0.98 | 0.77 | 0.88 | 0.27 | 4.14 | 0.58 | 0.42 | 1.12 | 0.61 | 1.07 | 1.65 | 35.23 |
| **21** | 19 | country | 0.36 | 0.91 | 0.71 | 0.81 | 0.25 | 3.85 | 0.54 | 0.39 | 1.04 | 0.56 | 0.99 | 1.54 | 32.70 |
| **21** | 19 | suburbs | 0.38 | 0.94 | 0.74 | 0.84 | 0.26 | 3.98 | 0.55 | 0.41 | 1.08 | 0.58 | 1.03 | 1.59 | 33.81 |
| **21** | 20 | cities | 0.76 | 1.92 | 1.50 | 1.72 | 0.53 | 8.12 | 1.13 | 0.83 | 2.20 | 1.20 | 2.10 | 3.26 | 69.09 |
| **21** | 20 | country | 0.71 | 1.77 | 1.39 | 1.59 | 0.49 | 7.51 | 1.04 | 0.77 | 2.04 | 1.11 | 1.94 | 3.02 | 63.96 |
| **21** | 20 | suburbs | 0.73 | 1.83 | 1.43 | 1.64 | 0.50 | 7.76 | 1.08 | 0.79 | 2.10 | 1.14 | 2.01 | 3.12 | 66.05 |
| **22** | 5 | cities | 0.40 | 0.47 | 0.86 | 1.24 | 0.23 | 1.70 | 0.43 | 0.49 | 0.74 | 0.87 | 0.76 | 1.75 | 18.23 |
| **22** | 5 | country | 0.36 | 0.43 | 0.78 | 1.10 | 0.21 | 1.49 | 0.39 | 0.44 | 0.67 | 0.77 | 0.69 | 1.46 | 15.99 |
| **22** | 5 | suburbs | 0.37 | 0.44 | 0.81 | 1.15 | 0.22 | 1.57 | 0.40 | 0.46 | 0.70 | 0.81 | 0.71 | 1.56 | 16.79 |
| **22** | 6 | cities | 0.41 | 0.48 | 0.89 | 1.27 | 0.24 | 1.76 | 0.44 | 0.50 | 0.76 | 0.90 | 0.78 | 1.82 | 18.80 |
| **22** | 6 | country | 0.37 | 0.44 | 0.80 | 1.13 | 0.21 | 1.53 | 0.40 | 0.45 | 0.69 | 0.79 | 0.70 | 1.51 | 16.43 |
| **22** | 6 | suburbs | 0.38 | 0.45 | 0.83 | 1.18 | 0.22 | 1.61 | 0.41 | 0.47 | 0.72 | 0.83 | 0.73 | 1.61 | 17.28 |
| **22** | 7 | cities | 0.50 | 0.59 | 1.08 | 1.53 | 0.29 | 2.07 | 0.54 | 0.61 | 0.93 | 1.07 | 0.95 | 2.02 | 22.18 |
| **22** | 7 | country | 0.46 | 0.54 | 0.99 | 1.40 | 0.27 | 1.88 | 0.49 | 0.56 | 0.85 | 0.98 | 0.87 | 1.82 | 20.16 |
| **22** | 7 | suburbs | 0.47 | 0.56 | 1.02 | 1.45 | 0.28 | 1.95 | 0.51 | 0.58 | 0.88 | 1.01 | 0.90 | 1.90 | 20.95 |
| **22** | 8 | cities | 1.08 | 1.26 | 2.35 | 3.44 | 0.62 | 4.88 | 1.14 | 1.32 | 2.02 | 2.46 | 2.05 | 5.45 | 51.97 |
| **22** | 8 | country | 0.99 | 1.16 | 2.16 | 3.12 | 0.57 | 4.36 | 1.06 | 1.21 | 1.85 | 2.22 | 1.88 | 4.66 | 46.55 |
| **22** | 8 | suburbs | 1.02 | 1.20 | 2.23 | 3.25 | 0.59 | 4.56 | 1.09 | 1.25 | 1.92 | 2.31 | 1.95 | 4.97 | 48.69 |
| **22** | 17 | cities | 0.44 | 0.53 | 0.96 | 1.36 | 0.26 | 1.84 | 0.48 | 0.54 | 0.83 | 0.95 | 0.85 | 1.80 | 19.72 |
| **22** | 17 | country | 0.41 | 0.49 | 0.89 | 1.25 | 0.24 | 1.69 | 0.44 | 0.50 | 0.76 | 0.88 | 0.78 | 1.64 | 18.11 |
| **22** | 17 | suburbs | 0.42 | 0.50 | 0.92 | 1.30 | 0.25 | 1.75 | 0.46 | 0.52 | 0.79 | 0.91 | 0.81 | 1.70 | 18.75 |
| **22** | 18 | cities | 0.45 | 0.53 | 0.97 | 1.37 | 0.26 | 1.86 | 0.48 | 0.55 | 0.83 | 0.96 | 0.85 | 1.82 | 19.94 |
| **22** | 18 | country | 0.41 | 0.49 | 0.89 | 1.26 | 0.24 | 1.70 | 0.45 | 0.51 | 0.77 | 0.88 | 0.79 | 1.65 | 18.27 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **22** | 18 | suburbs | 0.43 | 0.51 | 0.93 | 1.31 | 0.25 | 1.77 | 0.46 | 0.52 | 0.80 | 0.92 | 0.82 | 1.72 | 18.95 |
| **22** | 19 | cities | 0.70 | 0.83 | 1.52 | 2.17 | 0.41 | 2.97 | 0.75 | 0.86 | 1.31 | 1.53 | 1.34 | 2.99 | 31.82 |
| **22** | 19 | country | 0.66 | 0.78 | 1.43 | 2.03 | 0.38 | 2.76 | 0.71 | 0.81 | 1.23 | 1.43 | 1.26 | 2.74 | 29.57 |
| **22** | 19 | suburbs | 0.68 | 0.80 | 1.47 | 2.09 | 0.39 | 2.84 | 0.73 | 0.83 | 1.26 | 1.47 | 1.29 | 2.83 | 30.45 |
| **22** | 20 | cities | 1.36 | 1.61 | 2.96 | 4.25 | 0.79 | 5.85 | 1.46 | 1.67 | 2.55 | 3.00 | 2.60 | 6.02 | 62.58 |
| **22** | 20 | country | 1.25 | 1.48 | 2.72 | 3.89 | 0.73 | 5.32 | 1.34 | 1.54 | 2.34 | 2.74 | 2.39 | 5.39 | 56.96 |
| **22** | 20 | suburbs | 1.29 | 1.53 | 2.81 | 4.02 | 0.75 | 5.52 | 1.39 | 1.59 | 2.42 | 2.84 | 2.47 | 5.63 | 59.10 |
| **23** | 9 | cities | 1.22 | 2.12 | 1.53 | 3.16 | 0.36 | 7.96 | 0.77 | 1.24 | 1.81 | 2.14 | 1.82 | 5.30 | 83.28 |
| **23** | 9 | country | 1.19 | 2.07 | 1.50 | 3.08 | 0.35 | 7.77 | 0.75 | 1.21 | 1.76 | 2.09 | 1.78 | 5.17 | 81.26 |
| **23** | 9 | suburbs | 1.20 | 2.09 | 1.51 | 3.11 | 0.35 | 7.84 | 0.75 | 1.22 | 1.78 | 2.11 | 1.79 | 5.22 | 81.98 |
| **23** | 10 | cities | 1.23 | 2.13 | 1.54 | 3.18 | 0.36 | 8.01 | 0.77 | 1.25 | 1.82 | 2.16 | 1.83 | 5.33 | 83.79 |
| **23** | 10 | country | 1.20 | 2.08 | 1.50 | 3.10 | 0.35 | 7.80 | 0.75 | 1.21 | 1.77 | 2.10 | 1.78 | 5.19 | 81.60 |
| **23** | 10 | suburbs | 1.21 | 2.10 | 1.52 | 3.13 | 0.35 | 7.88 | 0.76 | 1.23 | 1.79 | 2.12 | 1.80 | 5.24 | 82.39 |
| **23** | 11 | cities | 1.40 | 2.42 | 1.75 | 3.61 | 0.41 | 9.09 | 0.88 | 1.42 | 2.06 | 2.45 | 2.08 | 6.05 | 95.12 |
| **23** | 11 | country | 1.36 | 2.36 | 1.70 | 3.51 | 0.40 | 8.85 | 0.85 | 1.38 | 2.01 | 2.38 | 2.02 | 5.89 | 92.57 |
| **23** | 11 | suburbs | 1.37 | 2.38 | 1.72 | 3.55 | 0.40 | 8.94 | 0.86 | 1.39 | 2.03 | 2.41 | 2.05 | 5.95 | 93.52 |
| **23** | 12 | cities | 2.04 | 3.55 | 2.56 | 5.28 | 0.60 | 13.44 | 1.28 | 2.07 | 3.01 | 3.58 | 3.04 | 8.92 | 139.80 |
| **23** | 12 | country | 2.02 | 3.50 | 2.52 | 5.21 | 0.59 | 13.25 | 1.26 | 2.04 | 2.98 | 3.54 | 3.00 | 8.80 | 137.89 |
| **23** | 12 | suburbs | 2.03 | 3.51 | 2.53 | 5.23 | 0.59 | 13.31 | 1.27 | 2.05 | 2.99 | 3.55 | 3.01 | 8.84 | 138.51 |
| **23** | 21 | cities | 1.47 | 2.55 | 1.84 | 3.79 | 0.43 | 9.62 | 0.92 | 1.49 | 2.17 | 2.57 | 2.19 | 6.39 | 100.30 |
| **23** | 21 | country | 1.44 | 2.49 | 1.80 | 3.71 | 0.42 | 9.42 | 0.90 | 1.46 | 2.12 | 2.52 | 2.14 | 6.26 | 98.19 |
| **23** | 21 | suburbs | 1.45 | 2.51 | 1.81 | 3.74 | 0.42 | 9.49 | 0.91 | 1.47 | 2.14 | 2.54 | 2.16 | 6.30 | 98.92 |
| **23** | 22 | cities | 1.43 | 2.48 | 1.79 | 3.69 | 0.42 | 9.36 | 0.89 | 1.45 | 2.11 | 2.50 | 2.12 | 6.22 | 97.56 |
| **23** | 22 | country | 1.39 | 2.42 | 1.75 | 3.60 | 0.41 | 9.15 | 0.87 | 1.41 | 2.06 | 2.45 | 2.08 | 6.08 | 95.31 |
| **23** | 22 | suburbs | 1.41 | 2.44 | 1.76 | 3.64 | 0.41 | 9.22 | 0.88 | 1.43 | 2.08 | 2.47 | 2.09 | 6.13 | 96.14 |
| **23** | 23 | cities | 1.73 | 3.00 | 2.17 | 4.47 | 0.51 | 11.39 | 1.08 | 1.75 | 2.55 | 3.03 | 2.58 | 7.56 | 118.45 |
| **23** | 23 | country | 1.70 | 2.95 | 2.13 | 4.39 | 0.50 | 11.19 | 1.06 | 1.72 | 2.51 | 2.98 | 2.53 | 7.43 | 116.37 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{\mathrm{CC}}$** | **PBT$_{\mathrm{OD}}$** | **PBT$_{\mathrm{HT\_CE}}$** | **PBT$_{\mathrm{HT\_nCE}}$** | **PBT$_{\mathrm{PM}}$** | **PBT$_{\mathrm{IR\_hh}}$** | **PBT$_{\mathrm{POF}}$** | **PBT$_{\mathrm{AC}}$** | **PBT$_{\mathrm{ET}}$** | **PBT$_{\mathrm{EuF}}$** | **PBT$_{\mathrm{EuM}}$** | **PBT$_{\mathrm{Ec\_FW}}$** | **PBT$_{\mathrm{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23** | 23 | suburbs | 1.71 | 2.97 | 2.14 | 4.42 | 0.50 | 11.25 | 1.07 | 1.73 | 2.52 | 3.00 | 2.55 | 7.47 | 117.03 |
| **23** | 24 | cities | 2.21 | 3.84 | 2.76 | 5.71 | 0.64 | 14.64 | 1.38 | 2.24 | 3.26 | 3.87 | 3.29 | 9.70 | 151.68 |
| **23** | 24 | country | 2.13 | 3.70 | 2.66 | 5.50 | 0.62 | 14.07 | 1.33 | 2.15 | 3.14 | 3.73 | 3.16 | 9.33 | 145.96 |
| **23** | 24 | suburbs | 2.16 | 3.75 | 2.70 | 5.58 | 0.63 | 14.28 | 1.35 | 2.19 | 3.19 | 3.79 | 3.21 | 9.47 | 148.18 |
| **24** | 9 | cities | 1.03 | 1.54 | 1.14 | 2.77 | 0.25 | 5.57 | 0.55 | 1.06 | 1.38 | 1.90 | 1.41 | 4.36 | 59.36 |
| **24** | 9 | country | 0.98 | 1.46 | 1.08 | 2.63 | 0.24 | 5.28 | 0.52 | 1.01 | 1.31 | 1.80 | 1.33 | 4.13 | 56.22 |
| **24** | 9 | suburbs | 1.01 | 1.49 | 1.11 | 2.69 | 0.25 | 5.42 | 0.53 | 1.03 | 1.34 | 1.85 | 1.37 | 4.24 | 57.67 |
| **24** | 10 | cities | 1.04 | 1.55 | 1.15 | 2.79 | 0.25 | 5.60 | 0.55 | 1.07 | 1.39 | 1.91 | 1.42 | 4.39 | 59.68 |
| **24** | 10 | country | 0.98 | 1.46 | 1.09 | 2.64 | 0.24 | 5.31 | 0.52 | 1.01 | 1.31 | 1.81 | 1.34 | 4.15 | 56.50 |
| **24** | 10 | suburbs | 1.01 | 1.50 | 1.12 | 2.71 | 0.25 | 5.44 | 0.54 | 1.04 | 1.35 | 1.86 | 1.38 | 4.26 | 57.96 |
| **24** | 11 | cities | 1.17 | 1.74 | 1.29 | 3.13 | 0.29 | 6.30 | 0.62 | 1.20 | 1.56 | 2.15 | 1.59 | 4.93 | 67.08 |
| **24** | 11 | country | 1.11 | 1.66 | 1.23 | 2.99 | 0.27 | 6.01 | 0.59 | 1.15 | 1.49 | 2.05 | 1.52 | 4.70 | 63.95 |
| **24** | 11 | suburbs | 1.14 | 1.69 | 1.26 | 3.05 | 0.28 | 6.14 | 0.60 | 1.17 | 1.52 | 2.09 | 1.55 | 4.80 | 65.37 |
| **24** | 12 | cities | 1.68 | 2.50 | 1.85 | 4.50 | 0.41 | 9.06 | 0.89 | 1.73 | 2.24 | 3.09 | 2.29 | 7.09 | 96.38 |
| **24** | 12 | country | 1.62 | 2.41 | 1.79 | 4.35 | 0.40 | 8.75 | 0.86 | 1.67 | 2.16 | 2.98 | 2.21 | 6.84 | 93.09 |
| **24** | 12 | suburbs | 1.65 | 2.45 | 1.82 | 4.42 | 0.40 | 8.90 | 0.87 | 1.70 | 2.20 | 3.03 | 2.25 | 6.97 | 94.73 |
| **24** | 21 | cities | 1.23 | 1.83 | 1.36 | 3.30 | 0.30 | 6.65 | 0.65 | 1.27 | 1.64 | 2.27 | 1.68 | 5.20 | 70.74 |
| **24** | 21 | country | 1.16 | 1.73 | 1.28 | 3.11 | 0.28 | 6.26 | 0.62 | 1.20 | 1.55 | 2.14 | 1.58 | 4.90 | 66.68 |
| **24** | 21 | suburbs | 1.19 | 1.77 | 1.32 | 3.20 | 0.29 | 6.43 | 0.63 | 1.23 | 1.59 | 2.19 | 1.62 | 5.03 | 68.48 |
| **24** | 22 | cities | 1.20 | 1.78 | 1.32 | 3.21 | 0.29 | 6.46 | 0.63 | 1.23 | 1.60 | 2.20 | 1.63 | 5.06 | 68.76 |
| **24** | 22 | country | 1.13 | 1.68 | 1.25 | 3.02 | 0.28 | 6.08 | 0.60 | 1.16 | 1.50 | 2.07 | 1.54 | 4.76 | 64.71 |
| **24** | 22 | suburbs | 1.16 | 1.72 | 1.28 | 3.11 | 0.28 | 6.25 | 0.61 | 1.19 | 1.55 | 2.13 | 1.58 | 4.89 | 66.57 |
| **24** | 23 | cities | 1.44 | 2.14 | 1.59 | 3.85 | 0.35 | 7.76 | 0.76 | 1.48 | 1.92 | 2.64 | 1.96 | 6.07 | 82.58 |
| **24** | 23 | country | 1.36 | 2.03 | 1.50 | 3.65 | 0.33 | 7.35 | 0.72 | 1.40 | 1.82 | 2.50 | 1.85 | 5.75 | 78.20 |
| **24** | 23 | suburbs | 1.40 | 2.08 | 1.54 | 3.75 | 0.34 | 7.54 | 0.74 | 1.44 | 1.86 | 2.57 | 1.90 | 5.90 | 80.24 |
| **24** | 24 | cities | 1.79 | 2.66 | 1.98 | 4.80 | 0.44 | 9.66 | 0.95 | 1.84 | 2.39 | 3.29 | 2.44 | 7.56 | 102.79 |
| **24** | 24 | country | 1.68 | 2.50 | 1.86 | 4.51 | 0.41 | 9.09 | 0.89 | 1.73 | 2.24 | 3.09 | 2.29 | 7.11 | 96.67 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **24** | 24 | suburbs | 1.73 | 2.58 | 1.91 | 4.64 | 0.42 | 9.35 | 0.92 | 1.78 | 2.31 | 3.18 | 2.36 | 7.32 | 99.49 |
| **25** | 9 | cities | 0.92 | 1.28 | 1.04 | 2.43 | 0.23 | 3.33 | 0.49 | 0.82 | 1.11 | 1.65 | 1.12 | 3.08 | 55.61 |
| **25** | 9 | country | 0.89 | 1.23 | 1.00 | 2.34 | 0.22 | 3.20 | 0.47 | 0.79 | 1.07 | 1.58 | 1.08 | 2.97 | 53.52 |
| **25** | 9 | suburbs | 0.90 | 1.25 | 1.01 | 2.38 | 0.23 | 3.25 | 0.47 | 0.80 | 1.08 | 1.61 | 1.10 | 3.01 | 54.36 |
| **25** | 10 | cities | 0.92 | 1.29 | 1.04 | 2.44 | 0.23 | 3.33 | 0.49 | 0.83 | 1.11 | 1.65 | 1.13 | 3.09 | 55.73 |
| **25** | 10 | country | 0.89 | 1.24 | 1.00 | 2.35 | 0.22 | 3.21 | 0.47 | 0.79 | 1.07 | 1.59 | 1.08 | 2.97 | 53.61 |
| **25** | 10 | suburbs | 0.90 | 1.26 | 1.02 | 2.38 | 0.23 | 3.26 | 0.47 | 0.81 | 1.09 | 1.61 | 1.10 | 3.02 | 54.43 |
| **25** | 11 | cities | 1.07 | 1.49 | 1.20 | 2.83 | 0.27 | 3.86 | 0.56 | 0.96 | 1.29 | 1.91 | 1.31 | 3.58 | 64.58 |
| **25** | 11 | country | 1.03 | 1.43 | 1.16 | 2.72 | 0.26 | 3.72 | 0.54 | 0.92 | 1.24 | 1.84 | 1.26 | 3.44 | 62.14 |
| **25** | 11 | suburbs | 1.05 | 1.46 | 1.18 | 2.76 | 0.26 | 3.77 | 0.55 | 0.93 | 1.26 | 1.87 | 1.28 | 3.50 | 63.10 |
| **25** | 12 | cities | 1.48 | 2.07 | 1.67 | 3.92 | 0.37 | 5.37 | 0.78 | 1.33 | 1.79 | 2.65 | 1.81 | 4.97 | 89.62 |
| **25** | 12 | country | 1.44 | 2.01 | 1.63 | 3.82 | 0.36 | 5.22 | 0.76 | 1.29 | 1.74 | 2.58 | 1.76 | 4.83 | 87.23 |
| **25** | 12 | suburbs | 1.46 | 2.04 | 1.65 | 3.86 | 0.37 | 5.29 | 0.77 | 1.31 | 1.76 | 2.61 | 1.78 | 4.89 | 88.29 |
| **25** | 21 | cities | 1.08 | 1.50 | 1.21 | 2.84 | 0.27 | 3.89 | 0.57 | 0.96 | 1.30 | 1.92 | 1.31 | 3.60 | 65.03 |
| **25** | 21 | country | 1.04 | 1.44 | 1.17 | 2.74 | 0.26 | 3.74 | 0.55 | 0.93 | 1.25 | 1.85 | 1.26 | 3.47 | 62.55 |
| **25** | 21 | suburbs | 1.05 | 1.47 | 1.18 | 2.78 | 0.26 | 3.80 | 0.55 | 0.94 | 1.27 | 1.88 | 1.28 | 3.52 | 63.54 |
| **25** | 22 | cities | 1.04 | 1.45 | 1.17 | 2.75 | 0.26 | 3.76 | 0.55 | 0.93 | 1.25 | 1.86 | 1.27 | 3.49 | 62.88 |
| **25** | 22 | country | 1.00 | 1.39 | 1.12 | 2.64 | 0.25 | 3.61 | 0.53 | 0.89 | 1.20 | 1.78 | 1.22 | 3.34 | 60.32 |
| **25** | 22 | suburbs | 1.02 | 1.41 | 1.14 | 2.68 | 0.25 | 3.67 | 0.53 | 0.91 | 1.22 | 1.81 | 1.24 | 3.40 | 61.31 |
| **25** | 23 | cities | 1.27 | 1.77 | 1.43 | 3.35 | 0.32 | 4.59 | 0.67 | 1.13 | 1.53 | 2.26 | 1.55 | 4.25 | 76.60 |
| **25** | 23 | country | 1.21 | 1.68 | 1.36 | 3.18 | 0.30 | 4.36 | 0.63 | 1.08 | 1.45 | 2.15 | 1.47 | 4.04 | 72.81 |
| **25** | 23 | suburbs | 1.23 | 1.72 | 1.39 | 3.26 | 0.31 | 4.46 | 0.65 | 1.10 | 1.49 | 2.20 | 1.51 | 4.13 | 74.49 |
| **25** | 24 | cities | 1.58 | 2.20 | 1.77 | 4.17 | 0.39 | 5.71 | 0.83 | 1.41 | 1.90 | 2.81 | 1.93 | 5.28 | 95.30 |
| **25** | 24 | country | 1.49 | 2.07 | 1.67 | 3.92 | 0.37 | 5.38 | 0.78 | 1.33 | 1.79 | 2.65 | 1.81 | 4.98 | 89.77 |
| **25** | 24 | suburbs | 1.53 | 2.13 | 1.72 | 4.03 | 0.38 | 5.52 | 0.80 | 1.36 | 1.84 | 2.72 | 1.86 | 5.11 | 92.18 |
| **26** | 9 | cities | 1.57 | 0.94 | 2.27 | 2.56 | 1.08 | 0.26 | 1.83 | 1.40 | 2.28 | 2.03 | 2.28 | 0.85 | 15.28 |
| **26** | 9 | country | 1.58 | 0.94 | 2.27 | 2.56 | 1.09 | 0.26 | 1.84 | 1.40 | 2.29 | 2.03 | 2.29 | 0.85 | 15.31 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26** | 9 | suburbs | 1.57 | 0.93 | 2.26 | 2.55 | 1.08 | 0.26 | 1.83 | 1.40 | 2.28 | 2.03 | 2.28 | 0.85 | 15.25 |
| **26** | 10 | cities | 1.58 | 0.94 | 2.28 | 2.57 | 1.09 | 0.26 | 1.84 | 1.40 | 2.29 | 2.04 | 2.29 | 0.86 | 15.34 |
| **26** | 10 | country | 1.58 | 0.94 | 2.28 | 2.57 | 1.09 | 0.26 | 1.84 | 1.41 | 2.29 | 2.04 | 2.29 | 0.86 | 15.35 |
| **26** | 10 | suburbs | 1.57 | 0.94 | 2.27 | 2.56 | 1.08 | 0.26 | 1.84 | 1.40 | 2.29 | 2.03 | 2.29 | 0.85 | 15.31 |
| **26** | 11 | cities | 1.82 | 1.08 | 2.63 | 2.97 | 1.26 | 0.30 | 2.13 | 1.62 | 2.65 | 2.35 | 2.64 | 0.99 | 17.71 |
| **26** | 11 | country | 1.82 | 1.09 | 2.63 | 2.97 | 1.26 | 0.30 | 2.13 | 1.62 | 2.65 | 2.36 | 2.65 | 0.99 | 17.72 |
| **26** | 11 | suburbs | 1.82 | 1.08 | 2.62 | 2.96 | 1.25 | 0.30 | 2.12 | 1.62 | 2.64 | 2.35 | 2.64 | 0.98 | 17.65 |
| **26** | 12 | cities | 2.44 | 1.46 | 3.53 | 3.99 | 1.68 | 0.41 | 2.85 | 2.17 | 3.54 | 3.16 | 3.54 | 1.34 | 23.95 |
| **26** | 12 | country | 2.46 | 1.47 | 3.55 | 4.01 | 1.69 | 0.41 | 2.87 | 2.19 | 3.57 | 3.18 | 3.57 | 1.34 | 24.08 |
| **26** | 12 | suburbs | 2.45 | 1.47 | 3.54 | 4.00 | 1.69 | 0.41 | 2.86 | 2.18 | 3.56 | 3.17 | 3.56 | 1.34 | 24.00 |
| **26** | 21 | cities | 1.71 | 1.02 | 2.46 | 2.78 | 1.17 | 0.28 | 1.99 | 1.52 | 2.48 | 2.20 | 2.48 | 0.93 | 16.65 |
| **26** | 21 | country | 1.75 | 1.04 | 2.53 | 2.85 | 1.20 | 0.29 | 2.04 | 1.56 | 2.54 | 2.26 | 2.54 | 0.95 | 17.06 |
| **26** | 21 | suburbs | 1.72 | 1.03 | 2.49 | 2.81 | 1.19 | 0.28 | 2.01 | 1.53 | 2.50 | 2.23 | 2.50 | 0.94 | 16.81 |
| **26** | 22 | cities | 1.64 | 0.98 | 2.37 | 2.68 | 1.13 | 0.27 | 1.92 | 1.46 | 2.39 | 2.12 | 2.39 | 0.89 | 16.05 |
| **26** | 22 | country | 1.68 | 1.00 | 2.43 | 2.74 | 1.16 | 0.28 | 1.96 | 1.50 | 2.44 | 2.17 | 2.44 | 0.91 | 16.40 |
| **26** | 22 | suburbs | 1.66 | 0.99 | 2.40 | 2.70 | 1.14 | 0.27 | 1.93 | 1.48 | 2.41 | 2.14 | 2.41 | 0.90 | 16.19 |
| **26** | 23 | cities | 1.90 | 1.14 | 2.74 | 3.10 | 1.31 | 0.31 | 2.21 | 1.69 | 2.76 | 2.45 | 2.76 | 1.04 | 18.57 |
| **26** | 23 | country | 1.94 | 1.16 | 2.80 | 3.16 | 1.33 | 0.32 | 2.26 | 1.73 | 2.81 | 2.51 | 2.81 | 1.06 | 18.98 |
| **26** | 23 | suburbs | 1.91 | 1.14 | 2.77 | 3.12 | 1.32 | 0.32 | 2.23 | 1.70 | 2.78 | 2.47 | 2.78 | 1.04 | 18.72 |
| **26** | 24 | cities | 2.30 | 1.38 | 3.32 | 3.75 | 1.58 | 0.38 | 2.68 | 2.05 | 3.34 | 2.97 | 3.34 | 1.26 | 22.54 |
| **26** | 24 | country | 2.30 | 1.38 | 3.33 | 3.76 | 1.59 | 0.38 | 2.69 | 2.05 | 3.35 | 2.98 | 3.35 | 1.26 | 22.61 |
| **26** | 24 | suburbs | 2.30 | 1.38 | 3.32 | 3.75 | 1.58 | 0.38 | 2.68 | 2.04 | 3.33 | 2.97 | 3.33 | 1.26 | 22.52 |
| **27** | 9 | cities | 0.78 | 0.61 | 1.13 | 1.76 | 0.35 | 0.26 | 0.67 | 0.89 | 1.22 | 1.26 | 1.26 | 0.86 | 14.08 |
| **27** | 9 | country | 0.74 | 0.58 | 1.06 | 1.65 | 0.33 | 0.24 | 0.63 | 0.83 | 1.14 | 1.19 | 1.18 | 0.81 | 13.23 |
| **27** | 9 | suburbs | 0.76 | 0.59 | 1.09 | 1.70 | 0.34 | 0.25 | 0.65 | 0.86 | 1.17 | 1.22 | 1.22 | 0.84 | 13.61 |
| **27** | 10 | cities | 0.79 | 0.62 | 1.14 | 1.77 | 0.35 | 0.26 | 0.68 | 0.89 | 1.22 | 1.27 | 1.27 | 0.87 | 14.16 |
| **27** | 10 | country | 0.74 | 0.58 | 1.07 | 1.66 | 0.33 | 0.24 | 0.64 | 0.84 | 1.15 | 1.19 | 1.19 | 0.82 | 13.29 |

## CELLULOSE FIBER

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **27** | 10 | suburbs | 0.76 | 0.59 | 1.10 | 1.70 | 0.34 | 0.25 | 0.65 | 0.86 | 1.18 | 1.23 | 1.22 | 0.84 | 13.68 |
| **27** | 11 | cities | 0.89 | 0.69 | 1.28 | 1.98 | 0.39 | 0.29 | 0.76 | 1.00 | 1.37 | 1.42 | 1.42 | 0.98 | 15.90 |
| **27** | 11 | country | 0.84 | 0.65 | 1.20 | 1.87 | 0.37 | 0.27 | 0.72 | 0.94 | 1.29 | 1.34 | 1.34 | 0.92 | 14.99 |
| **27** | 11 | suburbs | 0.86 | 0.67 | 1.24 | 1.92 | 0.38 | 0.28 | 0.74 | 0.97 | 1.33 | 1.38 | 1.38 | 0.94 | 15.39 |
| **27** | 12 | cities | 1.26 | 0.99 | 1.82 | 2.83 | 0.56 | 0.41 | 1.08 | 1.43 | 1.96 | 2.04 | 2.03 | 1.40 | 22.81 |
| **27** | 12 | country | 1.21 | 0.95 | 1.75 | 2.72 | 0.53 | 0.40 | 1.04 | 1.37 | 1.88 | 1.95 | 1.94 | 1.35 | 21.91 |
| **27** | 12 | suburbs | 1.24 | 0.97 | 1.78 | 2.77 | 0.55 | 0.41 | 1.06 | 1.40 | 1.91 | 1.99 | 1.98 | 1.37 | 22.32 |
| **27** | 21 | cities | 0.92 | 0.72 | 1.32 | 2.05 | 0.40 | 0.30 | 0.79 | 1.03 | 1.42 | 1.47 | 1.47 | 1.01 | 16.49 |
| **27** | 21 | country | 0.87 | 0.68 | 1.25 | 1.94 | 0.38 | 0.28 | 0.74 | 0.98 | 1.34 | 1.40 | 1.39 | 0.96 | 15.64 |
| **27** | 21 | suburbs | 0.89 | 0.69 | 1.28 | 1.99 | 0.39 | 0.29 | 0.76 | 1.00 | 1.37 | 1.43 | 1.42 | 0.98 | 16.01 |
| **27** | 22 | cities | 0.89 | 0.69 | 1.28 | 1.99 | 0.39 | 0.29 | 0.76 | 1.00 | 1.37 | 1.43 | 1.42 | 0.98 | 15.99 |
| **27** | 22 | country | 0.84 | 0.66 | 1.21 | 1.88 | 0.37 | 0.28 | 0.72 | 0.95 | 1.30 | 1.35 | 1.34 | 0.93 | 15.14 |
| **27** | 22 | suburbs | 0.86 | 0.67 | 1.24 | 1.93 | 0.38 | 0.28 | 0.74 | 0.97 | 1.33 | 1.38 | 1.38 | 0.95 | 15.51 |
| **27** | 23 | cities | 1.06 | 0.83 | 1.53 | 2.37 | 0.47 | 0.35 | 0.91 | 1.20 | 1.64 | 1.71 | 1.70 | 1.18 | 19.14 |
| **27** | 23 | country | 1.00 | 0.78 | 1.44 | 2.24 | 0.44 | 0.33 | 0.86 | 1.13 | 1.55 | 1.61 | 1.60 | 1.11 | 18.11 |
| **27** | 23 | suburbs | 1.03 | 0.80 | 1.48 | 2.30 | 0.45 | 0.34 | 0.88 | 1.16 | 1.59 | 1.65 | 1.64 | 1.14 | 18.56 |
| **27** | 24 | cities | 1.31 | 1.02 | 1.88 | 2.93 | 0.58 | 0.43 | 1.12 | 1.47 | 2.02 | 2.11 | 2.09 | 1.46 | 23.69 |
| **27** | 24 | country | 1.23 | 0.96 | 1.77 | 2.75 | 0.54 | 0.41 | 1.05 | 1.38 | 1.90 | 1.98 | 1.96 | 1.37 | 22.29 |
| **27** | 24 | suburbs | 1.26 | 0.99 | 1.82 | 2.83 | 0.56 | 0.42 | 1.08 | 1.42 | 1.95 | 2.04 | 2.02 | 1.41 | 22.92 |
| **28** | 5 | cities | 0.51 | 0.53 | 0.48 | 2.45 | 0.09 | 6.38 | 0.21 | 1.09 | 0.79 | 3.45 | 0.82 | 6.82 | 17.08 |
| **28** | 5 | country | 0.46 | 0.48 | 0.44 | 2.27 | 0.08 | 6.58 | 0.19 | 0.99 | 0.72 | 3.52 | 0.74 | 7.22 | 15.51 |
| **28** | 5 | suburbs | 0.48 | 0.50 | 0.46 | 2.25 | 0.09 | 5.51 | 0.20 | 1.01 | 0.75 | 2.99 | 0.77 | 5.81 | 15.97 |
| **28** | 6 | cities | 0.52 | 0.55 | 0.50 | 2.59 | 0.10 | 7.53 | 0.22 | 1.13 | 0.82 | 4.03 | 0.84 | 8.26 | 17.68 |
| **28** | 6 | country | 0.47 | 0.49 | 0.45 | 2.41 | 0.09 | 7.86 | 0.20 | 1.04 | 0.74 | 4.16 | 0.76 | 8.92 | 16.05 |
| **28** | 6 | suburbs | 0.49 | 0.51 | 0.47 | 2.38 | 0.09 | 6.35 | 0.21 | 1.05 | 0.77 | 3.43 | 0.79 | 6.83 | 16.51 |
| **28** | 7 | cities | 0.66 | 0.70 | 0.63 | 2.44 | 0.13 | 3.77 | 0.29 | 1.24 | 1.02 | 2.11 | 1.04 | 3.69 | 20.51 |
| **28** | 7 | country | 0.59 | 0.63 | 0.57 | 2.29 | 0.11 | 3.71 | 0.26 | 1.14 | 0.92 | 2.07 | 0.94 | 3.65 | 18.81 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **28** | 7 | suburbs | 0.62 | 0.66 | 0.60 | 2.33 | 0.12 | 3.63 | 0.27 | 1.18 | 0.96 | 2.03 | 0.98 | 3.55 | 19.48 |
| **28** | 8 | cities | 1.94 | 1.84 | 1.74 | (6.53) | 0.27 | (2.76) | 0.64 | (37.86) | 3.34 | (1.61) | 3.58 | (2.48) | 173.54 |
| **28** | 8 | country | 1.66 | 1.59 | 1.49 | (7.34) | 0.24 | (2.79) | 0.57 | 73.61 | 2.80 | (1.63) | 2.99 | (2.50) | 119.65 |
| **28** | 8 | suburbs | 1.76 | 1.69 | 1.59 | (7.40) | 0.26 | (2.88) | 0.60 | 192.56 | 3.00 | (1.68) | 3.20 | (2.58) | 132.05 |
| **28** | 17 | cities | 0.60 | 0.64 | 0.58 | 2.19 | 0.12 | 3.25 | 0.26 | 1.12 | 0.93 | 1.83 | 0.95 | 3.17 | 18.72 |
| **28** | 17 | country | 0.55 | 0.59 | 0.53 | 2.08 | 0.11 | 3.25 | 0.24 | 1.05 | 0.86 | 1.82 | 0.88 | 3.18 | 17.38 |
| **28** | 17 | suburbs | 0.58 | 0.61 | 0.55 | 2.12 | 0.11 | 3.22 | 0.25 | 1.08 | 0.89 | 1.81 | 0.91 | 3.15 | 17.95 |
| **28** | 18 | cities | 0.61 | 0.65 | 0.59 | 2.23 | 0.12 | 3.36 | 0.27 | 1.14 | 0.94 | 1.89 | 0.96 | 3.28 | 18.97 |
| **28** | 18 | country | 0.56 | 0.59 | 0.54 | 2.13 | 0.11 | 3.38 | 0.24 | 1.07 | 0.87 | 1.89 | 0.89 | 3.31 | 17.63 |
| **28** | 18 | suburbs | 0.58 | 0.62 | 0.56 | 2.16 | 0.11 | 3.32 | 0.25 | 1.10 | 0.90 | 1.86 | 0.92 | 3.25 | 18.18 |
| **28** | 19 | cities | 1.00 | 1.05 | 0.96 | 4.95 | 0.19 | 14.00 | 0.42 | 2.17 | 1.57 | 7.51 | 1.61 | 15.26 | 33.97 |
| **28** | 19 | country | 0.92 | 0.97 | 0.88 | 4.87 | 0.17 | 17.74 | 0.39 | 2.06 | 1.45 | 9.26 | 1.49 | 20.85 | 31.81 |
| **28** | 19 | suburbs | 0.96 | 1.00 | 0.91 | 4.80 | 0.18 | 14.27 | 0.40 | 2.09 | 1.50 | 7.61 | 1.54 | 15.76 | 32.52 |
| **28** | 20 | cities | 2.44 | 2.44 | 2.25 | (9.91) | 0.40 | (8.80) | 0.91 | 10.54 | 3.98 | (5.20) | 4.16 | (7.71) | 114.39 |
| **28** | 20 | country | 2.16 | 2.17 | 2.00 | (9.74) | 0.35 | (8.54) | 0.82 | 8.76 | 3.52 | (5.06) | 3.67 | (7.46) | 98.87 |
| **28** | 20 | suburbs | 2.27 | 2.28 | 2.10 | (9.59) | 0.37 | (9.07) | 0.86 | 9.10 | 3.69 | (5.37) | 3.85 | (7.91) | 103.27 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | cities | 2.09 | 1.34 | 7.99 | 11.80 | 2.11 | 6.76 | 1.81 | 1.56 | 2.35 | 24.52 | 1.77 | 2.19 | 12.29 |
| **1** | 1 | country | 1.72 | 1.10 | 6.53 | 9.69 | 1.73 | 5.57 | 1.49 | 1.28 | 1.94 | 20.08 | 1.46 | 1.81 | 10.06 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT}_{\mathbf{CC}}$ | $\mathbf{PBT}_{\mathbf{OD}}$ | $\mathbf{PBT}_{\mathbf{HT\_CE}}$ | $\mathbf{PBT}_{\mathbf{HT\_nCE}}$ | $\mathbf{PBT}_{\mathbf{PM}}$ | $\mathbf{PBT}_{\mathbf{IR\_hh}}$ | $\mathbf{PBT}_{\mathbf{POF}}$ | $\mathbf{PBT}_{\mathbf{AC}}$ | $\mathbf{PBT}_{\mathbf{ET}}$ | $\mathbf{PBT}_{\mathbf{EuF}}$ | $\mathbf{PBT}_{\mathbf{EuM}}$ | $\mathbf{PBT}_{\mathbf{Ec\_FW}}$ | $\mathbf{PBT}_{\mathbf{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | suburbs | 1.88 | 1.21 | 7.15 | 10.60 | 1.89 | 6.08 | 1.63 | 1.40 | 2.12 | 21.98 | 1.59 | 1.97 | 11.01 |
| **1** | 2 | cities | 2.09 | 1.34 | 7.99 | 11.80 | 2.11 | 6.76 | 1.81 | 1.56 | 2.35 | 24.52 | 1.77 | 2.19 | 12.29 |
| **1** | 2 | country | 1.72 | 1.10 | 6.53 | 9.69 | 1.73 | 5.57 | 1.49 | 1.28 | 1.94 | 20.08 | 1.46 | 1.81 | 10.06 |
| **1** | 2 | suburbs | 1.88 | 1.21 | 7.15 | 10.60 | 1.89 | 6.08 | 1.63 | 1.40 | 2.12 | 21.98 | 1.59 | 1.97 | 11.01 |
| **1** | 3 | cities | 1.68 | 1.07 | 6.45 | 9.47 | 1.69 | 5.41 | 1.45 | 1.24 | 1.88 | 19.75 | 1.41 | 1.75 | 9.91 |
| **1** | 3 | country | 1.44 | 0.92 | 5.51 | 8.11 | 1.45 | 4.63 | 1.24 | 1.07 | 1.61 | 16.88 | 1.21 | 1.50 | 8.46 |
| **1** | 3 | suburbs | 1.55 | 0.98 | 5.92 | 8.70 | 1.55 | 4.97 | 1.33 | 1.14 | 1.73 | 18.12 | 1.30 | 1.61 | 9.08 |
| **1** | 4 | cities | 3.89 | 2.52 | 14.78 | 22.02 | 3.91 | 12.68 | 3.39 | 2.93 | 4.42 | 45.54 | 3.32 | 4.12 | 22.79 |
| **1** | 4 | country | 3.04 | 1.97 | 11.53 | 17.22 | 3.06 | 9.93 | 2.65 | 2.29 | 3.46 | 35.57 | 2.60 | 3.22 | 17.79 |
| **1** | 4 | suburbs | 3.23 | 2.09 | 12.28 | 18.30 | 3.25 | 10.54 | 2.82 | 2.43 | 3.67 | 37.84 | 2.76 | 3.42 | 18.93 |
| **1** | 13 | cities | 2.77 | 1.74 | 10.68 | 15.51 | 2.79 | 8.79 | 2.37 | 2.02 | 3.05 | 32.52 | 2.29 | 2.85 | 16.34 |
| **1** | 13 | country | 2.27 | 1.43 | 8.72 | 12.73 | 2.28 | 7.24 | 1.94 | 1.66 | 2.51 | 26.61 | 1.89 | 2.34 | 13.36 |
| **1** | 13 | suburbs | 2.48 | 1.56 | 9.55 | 13.92 | 2.50 | 7.91 | 2.13 | 1.82 | 2.75 | 29.14 | 2.06 | 2.56 | 14.63 |
| **1** | 14 | cities | 2.57 | 1.61 | 9.90 | 14.39 | 2.58 | 8.16 | 2.19 | 1.87 | 2.83 | 30.16 | 2.13 | 2.64 | 15.15 |
| **1** | 14 | country | 2.11 | 1.33 | 8.11 | 11.85 | 2.12 | 6.74 | 1.81 | 1.55 | 2.34 | 24.76 | 1.76 | 2.18 | 12.43 |
| **1** | 14 | suburbs | 2.30 | 1.45 | 8.86 | 12.92 | 2.32 | 7.34 | 1.97 | 1.69 | 2.55 | 27.04 | 1.92 | 2.38 | 13.58 |
| **1** | 15 | cities | 2.75 | 1.73 | 10.63 | 15.43 | 2.77 | 8.74 | 2.35 | 2.01 | 3.04 | 32.36 | 2.28 | 2.83 | 16.26 |
| **1** | 15 | country | 2.24 | 1.41 | 8.62 | 12.56 | 2.25 | 7.14 | 1.92 | 1.64 | 2.48 | 26.29 | 1.86 | 2.31 | 13.20 |
| **1** | 15 | suburbs | 2.46 | 1.55 | 9.47 | 13.79 | 2.47 | 7.83 | 2.10 | 1.80 | 2.72 | 28.88 | 2.04 | 2.53 | 14.50 |
| **1** | 16 | cities | 7.20 | 4.70 | 27.22 | 40.83 | 7.24 | 23.61 | 6.30 | 5.46 | 8.23 | 84.14 | 6.19 | 7.67 | 42.05 |
| **1** | 16 | country | 6.86 | 4.52 | 25.79 | 39.00 | 6.89 | 22.67 | 6.04 | 5.26 | 7.91 | 80.01 | 5.95 | 7.37 | 39.93 |
| **1** | 16 | suburbs | 7.07 | 4.64 | 26.65 | 40.18 | 7.11 | 23.31 | 6.21 | 5.40 | 8.13 | 82.57 | 6.11 | 7.58 | 41.23 |
| **2** | 1 | cities | 2.27 | 1.30 | 7.84 | 9.74 | 3.22 | 6.05 | 2.81 | 2.52 | 3.79 | 22.76 | 2.93 | 3.29 | 9.79 |
| **2** | 1 | country | 2.05 | 1.17 | 7.02 | 8.71 | 3.03 | 5.40 | 2.68 | 2.46 | 3.70 | 20.38 | 2.86 | 3.28 | 8.74 |
| **2** | 1 | suburbs | 2.17 | 1.24 | 7.46 | 9.26 | 3.16 | 5.74 | 2.78 | 2.53 | 3.81 | 21.65 | 2.94 | 3.35 | 9.30 |
| **2** | 2 | cities | 2.27 | 1.30 | 7.84 | 9.74 | 3.22 | 6.05 | 2.81 | 2.52 | 3.79 | 22.76 | 2.93 | 3.29 | 9.79 |
| **2** | 2 | country | 2.05 | 1.17 | 7.02 | 8.71 | 3.03 | 5.40 | 2.68 | 2.46 | 3.70 | 20.38 | 2.86 | 3.28 | 8.74 |

## CORK SLAB

| Country | Arc | GL | $\mathrm{PBT}_{\mathrm{CC}}$ | $\mathrm{PBT}_{\mathrm{OD}}$ | $\mathrm{PBT}_{\mathrm{HT\_CE}}$ | $\mathrm{PBT}_{\mathrm{HT\_nCE}}$ | $\mathrm{PBT}_{\mathrm{PM}}$ | $\mathrm{PBT}_{\mathrm{IR\_hh}}$ | $\mathrm{PBT}_{\mathrm{POF}}$ | $\mathrm{PBT}_{\mathrm{AC}}$ | $\mathrm{PBT}_{\mathrm{ET}}$ | $\mathrm{PBT}_{\mathrm{EuF}}$ | $\mathrm{PBT}_{\mathrm{EuM}}$ | $\mathrm{PBT}_{\mathrm{Ec\_FW}}$ | $\mathrm{PBT}_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2** | 2 | suburbs | 2.17 | 1.24 | 7.46 | 9.26 | 3.16 | 5.74 | 2.78 | 2.53 | 3.81 | 21.65 | 2.94 | 3.35 | 9.30 |
| **2** | 3 | cities | 1.87 | 1.07 | 6.48 | 8.06 | 2.60 | 5.01 | 2.24 | 2.00 | 3.00 | 18.82 | 2.32 | 2.58 | 8.11 |
| **2** | 3 | country | 1.71 | 0.98 | 5.90 | 7.33 | 2.44 | 4.55 | 2.13 | 1.91 | 2.88 | 17.12 | 2.22 | 2.50 | 7.37 |
| **2** | 3 | suburbs | 1.80 | 1.03 | 6.23 | 7.73 | 2.54 | 4.81 | 2.21 | 1.98 | 2.98 | 18.07 | 2.30 | 2.57 | 7.78 |
| **2** | 4 | cities | 2.93 | 1.67 | 10.12 | 12.57 | 4.13 | 7.81 | 3.59 | 3.21 | 4.83 | 29.36 | 3.73 | 4.18 | 12.64 |
| **2** | 4 | country | 3.07 | 1.76 | 10.56 | 13.10 | 4.49 | 8.13 | 3.95 | 3.60 | 5.42 | 30.65 | 4.18 | 4.77 | 13.16 |
| **2** | 4 | suburbs | 3.06 | 1.75 | 10.54 | 13.08 | 4.39 | 8.12 | 3.84 | 3.47 | 5.22 | 30.58 | 4.03 | 4.55 | 13.15 |
| **2** | 13 | cities | 2.76 | 1.57 | 9.60 | 11.96 | 3.68 | 7.46 | 3.13 | 2.74 | 4.12 | 27.89 | 3.18 | 3.47 | 12.07 |
| **2** | 13 | country | 2.52 | 1.43 | 8.72 | 10.85 | 3.46 | 6.75 | 2.98 | 2.64 | 3.97 | 25.32 | 3.06 | 3.39 | 10.93 |
| **2** | 13 | suburbs | 2.65 | 1.51 | 9.19 | 11.44 | 3.60 | 7.12 | 3.08 | 2.71 | 4.09 | 26.69 | 3.15 | 3.47 | 11.53 |
| **2** | 14 | cities | 2.53 | 1.44 | 8.81 | 10.97 | 3.38 | 6.84 | 2.88 | 2.51 | 3.79 | 25.58 | 2.92 | 3.19 | 11.07 |
| **2** | 14 | country | 2.32 | 1.32 | 8.03 | 9.99 | 3.19 | 6.22 | 2.75 | 2.44 | 3.67 | 23.32 | 2.83 | 3.13 | 10.06 |
| **2** | 14 | suburbs | 2.43 | 1.38 | 8.44 | 10.50 | 3.30 | 6.54 | 2.83 | 2.50 | 3.76 | 24.50 | 2.90 | 3.19 | 10.58 |
| **2** | 15 | cities | 2.77 | 1.57 | 9.63 | 12.00 | 3.69 | 7.48 | 3.14 | 2.75 | 4.14 | 27.98 | 3.19 | 3.48 | 12.11 |
| **2** | 15 | country | 2.48 | 1.42 | 8.62 | 10.72 | 3.40 | 6.67 | 2.93 | 2.59 | 3.90 | 25.02 | 3.00 | 3.32 | 10.80 |
| **2** | 15 | suburbs | 2.63 | 1.50 | 9.14 | 11.37 | 3.57 | 7.08 | 3.06 | 2.69 | 4.05 | 26.53 | 3.12 | 3.43 | 11.46 |
| **2** | 16 | cities | 8.41 | 4.82 | 28.91 | 35.86 | 12.35 | 22.24 | 10.90 | 9.95 | 14.98 | 55.97 | 11.56 | 13.22 | 36.00 |
| **2** | 16 | country | 8.90 | 5.14 | 30.33 | 37.51 | 14.10 | 23.18 | 12.85 | 12.23 | 18.41 | 50.03 | 14.20 | 17.05 | 37.53 |
| **2** | 16 | suburbs | 9.00 | 5.19 | 30.76 | 38.08 | 13.92 | 23.56 | 12.54 | 11.77 | 17.71 | 53.06 | 13.66 | 16.13 | 38.14 |
| **3** | 1 | cities | 6.41 | 7.32 | 2.08 | 14.70 | 0.64 | 32.76 | 1.39 | 10.33 | 6.69 | 18.90 | 5.21 | 9.63 | 25.73 |
| **3** | 1 | country | 4.85 | 5.53 | 1.57 | 11.19 | 0.48 | 25.00 | 1.05 | 7.87 | 5.06 | 14.42 | 3.94 | 7.45 | 19.59 |
| **3** | 1 | suburbs | 5.47 | 6.24 | 1.77 | 12.59 | 0.54 | 28.09 | 1.19 | 8.85 | 5.71 | 16.21 | 4.45 | 8.32 | 22.04 |
| **3** | 2 | cities | 6.41 | 7.32 | 2.08 | 14.70 | 0.64 | 32.76 | 1.39 | 10.33 | 6.69 | 18.90 | 5.21 | 9.63 | 25.73 |
| **3** | 2 | country | 4.85 | 5.53 | 1.57 | 11.19 | 0.48 | 25.00 | 1.05 | 7.87 | 5.06 | 14.42 | 3.94 | 7.45 | 19.59 |
| **3** | 2 | suburbs | 5.47 | 6.24 | 1.77 | 12.59 | 0.54 | 28.09 | 1.19 | 8.85 | 5.71 | 16.21 | 4.45 | 8.32 | 22.04 |
| **3** | 3 | cities | 6.77 | 7.77 | 2.21 | 15.44 | 0.68 | 34.30 | 1.48 | 10.84 | 7.08 | 19.80 | 5.51 | 9.91 | 27.03 |
| **3** | 3 | country | 4.79 | 5.50 | 1.56 | 10.89 | 0.48 | 24.17 | 1.05 | 7.64 | 5.01 | 13.95 | 3.90 | 6.94 | 19.07 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{\text{CC}}$** | **PBT$_{\text{OD}}$** | **PBT$_{\text{HT\_CE}}$** | **PBT$_{\text{HT\_nCE}}$** | **PBT$_{\text{PM}}$** | **PBT$_{\text{IR\_hh}}$** | **PBT$_{\text{POF}}$** | **PBT$_{\text{AC}}$** | **PBT$_{\text{ET}}$** | **PBT$_{\text{EuF}}$** | **PBT$_{\text{EuM}}$** | **PBT$_{\text{Ec\_FW}}$** | **PBT$_{\text{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | 3 | suburbs | 5.56 | 6.38 | 1.82 | 12.66 | 0.56 | 28.11 | 1.22 | 8.89 | 5.82 | 16.22 | 4.53 | 8.09 | 22.16 |
| **3** | 4 | cities | 15.26 | 17.03 | 4.82 | 36.89 | 1.46 | 51.45 | 3.21 | 26.17 | 15.86 | 48.51 | 12.39 | 28.73 | 64.54 |
| **3** | 4 | country | 10.36 | 11.62 | 3.29 | 24.74 | 1.00 | 36.26 | 2.19 | 17.51 | 10.78 | 32.35 | 8.41 | 18.42 | 43.28 |
| **3** | 4 | suburbs | 12.32 | 13.77 | 3.90 | 29.60 | 1.18 | 42.16 | 2.60 | 20.98 | 12.81 | 38.83 | 10.00 | 22.58 | 51.79 |
| **3** | 13 | cities | 8.08 | 9.40 | 2.68 | 17.89 | 0.83 | 39.27 | 1.80 | 12.50 | 8.47 | 22.67 | 6.58 | 10.61 | 31.32 |
| **3** | 13 | country | 6.34 | 7.33 | 2.09 | 14.20 | 0.64 | 31.31 | 1.40 | 9.94 | 6.64 | 18.08 | 5.16 | 8.68 | 24.86 |
| **3** | 13 | suburbs | 7.03 | 8.15 | 2.32 | 15.70 | 0.71 | 34.57 | 1.56 | 10.98 | 7.37 | 19.96 | 5.73 | 9.50 | 27.49 |
| **3** | 14 | cities | 7.48 | 8.70 | 2.48 | 16.60 | 0.76 | 36.47 | 1.66 | 11.60 | 7.84 | 21.05 | 6.10 | 9.89 | 29.07 |
| **3** | 14 | country | 5.82 | 6.73 | 1.92 | 13.07 | 0.59 | 28.84 | 1.28 | 9.15 | 6.10 | 16.65 | 4.74 | 8.03 | 22.88 |
| **3** | 14 | suburbs | 6.50 | 7.53 | 2.14 | 14.53 | 0.66 | 32.02 | 1.44 | 10.17 | 6.81 | 18.48 | 5.29 | 8.83 | 25.44 |
| **3** | 15 | cities | 8.32 | 9.70 | 2.77 | 18.39 | 0.85 | 40.34 | 1.86 | 12.85 | 8.73 | 23.29 | 6.79 | 10.84 | 32.21 |
| **3** | 15 | country | 6.46 | 7.48 | 2.13 | 14.40 | 0.66 | 31.71 | 1.43 | 10.08 | 6.76 | 18.31 | 5.26 | 8.71 | 25.22 |
| **3** | 15 | suburbs | 7.19 | 8.35 | 2.38 | 15.98 | 0.73 | 35.15 | 1.59 | 11.18 | 7.53 | 20.29 | 5.86 | 9.59 | 27.99 |
| **3** | 16 | cities | 22.57 | 25.16 | 7.12 | 54.68 | 2.15 | 60.52 | 4.74 | 38.80 | 23.45 | 71.97 | 18.32 | 42.91 | 95.65 |
| **3** | 16 | country | 15.06 | 16.91 | 4.79 | 35.88 | 1.45 | 47.57 | 3.19 | 25.39 | 15.67 | 46.89 | 12.23 | 26.54 | 62.78 |
| **3** | 16 | suburbs | 17.82 | 19.95 | 5.65 | 42.74 | 1.71 | 52.72 | 3.76 | 30.27 | 18.53 | 56.00 | 14.47 | 32.34 | 74.77 |
| **4** | 1 | cities | 1.57 | 0.93 | 2.47 | 4.64 | 1.06 | 4.08 | 1.73 | 3.42 | 4.48 | 6.14 | 3.40 | 5.20 | 6.45 |
| **4** | 1 | country | 1.42 | 0.80 | 2.87 | 12.32 | 0.93 | 3.58 | 1.52 | 3.43 | 4.12 | (8.20) | 3.38 | 38.75 | 5.88 |
| **4** | 1 | suburbs | 1.47 | 0.85 | 2.58 | 6.21 | 0.98 | 3.78 | 1.60 | 3.37 | 4.24 | 23.86 | 3.33 | 8.10 | 6.08 |
| **4** | 2 | cities | 1.66 | 0.98 | 2.65 | 5.12 | 1.12 | 4.31 | 1.83 | 3.65 | 4.76 | 7.23 | 3.62 | 5.81 | 6.84 |
| **4** | 2 | country | 1.51 | 0.85 | 3.18 | 17.73 | 0.99 | 3.79 | 1.61 | 3.71 | 4.40 | (6.55) | 3.65 | 77.49 | 6.27 |
| **4** | 2 | suburbs | 1.56 | 0.90 | 2.80 | 7.21 | 1.04 | 4.00 | 1.69 | 3.61 | 4.52 | 67.47 | 3.57 | 9.90 | 6.47 |
| **4** | 3 | cities | 1.60 | 0.96 | 2.32 | 3.79 | 1.09 | 4.19 | 1.77 | 3.36 | 4.53 | 3.85 | 3.34 | 3.98 | 6.53 |
| **4** | 3 | country | 1.40 | 0.81 | 2.40 | 5.52 | 0.93 | 3.59 | 1.52 | 3.17 | 4.02 | 15.21 | 3.13 | 6.96 | 5.76 |
| **4** | 3 | suburbs | 1.48 | 0.87 | 2.31 | 4.31 | 1.00 | 3.84 | 1.62 | 3.21 | 4.21 | 5.62 | 3.19 | 4.81 | 6.06 |
| **4** | 4 | cities | 2.60 | 1.55 | 3.96 | 6.97 | 1.77 | 6.79 | 2.87 | 5.59 | 7.41 | 8.07 | 5.55 | 7.57 | 10.68 |
| **4** | 4 | country | 2.25 | 1.27 | 4.38 | 15.53 | 1.48 | 5.70 | 2.41 | 5.37 | 6.52 | (19.41) | 5.29 | 31.26 | 9.32 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 4 | suburbs | 2.38 | 1.39 | 4.00 | 8.70 | 1.60 | 6.14 | 2.60 | 5.35 | 6.84 | 18.11 | 5.29 | 10.58 | 9.81 |
| **4** | 13 | cities | 1.99 | 1.26 | 2.45 | 3.21 | 1.40 | 5.38 | 2.27 | 3.86 | 5.56 | 2.50 | 3.86 | 3.12 | 8.08 |
| **4** | 13 | country | 1.81 | 1.10 | 2.51 | 3.81 | 1.24 | 4.79 | 2.02 | 3.72 | 5.11 | 3.50 | 3.71 | 3.90 | 7.39 |
| **4** | 13 | suburbs | 1.89 | 1.17 | 2.48 | 3.53 | 1.31 | 5.04 | 2.13 | 3.79 | 5.31 | 2.98 | 3.78 | 3.52 | 7.69 |
| **4** | 14 | cities | 1.81 | 1.14 | 2.23 | 2.94 | 1.27 | 4.89 | 2.07 | 3.52 | 5.06 | 2.30 | 3.52 | 2.87 | 7.36 |
| **4** | 14 | country | 1.64 | 1.00 | 2.29 | 3.53 | 1.13 | 4.34 | 1.83 | 3.39 | 4.64 | 3.30 | 3.38 | 3.63 | 6.71 |
| **4** | 14 | suburbs | 1.72 | 1.06 | 2.27 | 3.24 | 1.19 | 4.58 | 1.93 | 3.45 | 4.83 | 2.76 | 3.44 | 3.24 | 6.99 |
| **4** | 15 | cities | 2.02 | 1.27 | 2.48 | 3.26 | 1.41 | 5.45 | 2.30 | 3.92 | 5.64 | 2.54 | 3.92 | 3.17 | 8.19 |
| **4** | 15 | country | 1.82 | 1.12 | 2.48 | 3.68 | 1.25 | 4.83 | 2.04 | 3.72 | 5.14 | 3.28 | 3.70 | 3.74 | 7.43 |
| **4** | 15 | suburbs | 1.91 | 1.18 | 2.48 | 3.49 | 1.32 | 5.10 | 2.15 | 3.81 | 5.35 | 2.91 | 3.80 | 3.47 | 7.76 |
| **4** | 16 | cities | 4.13 | 2.40 | 7.08 | 16.18 | 2.76 | 10.61 | 4.49 | 9.35 | 11.87 | 5.08 | 9.25 | 6.93 | 17.02 |
| **4** | 16 | country | 3.61 | 2.01 | 7.88 | 60.48 | 2.36 | 9.06 | 3.84 | 9.00 | 10.57 | (10.16) | 8.84 | (13.87) | 15.05 |
| **4** | 16 | suburbs | 3.85 | 2.18 | 7.58 | 28.09 | 2.54 | 9.74 | 4.13 | 9.22 | 11.18 | (5.82) | 9.08 | 6.93 | 15.96 |
| **5** | 1 | cities | 1.92 | 1.65 | 2.12 | 3.80 | 1.03 | 1.83 | 1.62 | 2.90 | 3.70 | 5.13 | 2.78 | 1.43 | 5.36 |
| **5** | 1 | country | 1.65 | 1.42 | 1.82 | 3.27 | 0.89 | 1.58 | 1.39 | 2.50 | 3.18 | 4.42 | 2.39 | 1.23 | 4.61 |
| **5** | 1 | suburbs | 1.76 | 1.52 | 1.96 | 3.50 | 0.95 | 1.69 | 1.50 | 2.68 | 3.41 | 4.73 | 2.56 | 1.31 | 4.94 |
| **5** | 2 | cities | 1.92 | 1.65 | 2.12 | 3.80 | 1.03 | 1.83 | 1.62 | 2.90 | 3.70 | 5.13 | 2.78 | 1.43 | 5.36 |
| **5** | 2 | country | 1.65 | 1.42 | 1.82 | 3.27 | 0.89 | 1.58 | 1.39 | 2.50 | 3.18 | 4.42 | 2.39 | 1.23 | 4.61 |
| **5** | 2 | suburbs | 1.76 | 1.52 | 1.96 | 3.50 | 0.95 | 1.69 | 1.50 | 2.68 | 3.41 | 4.73 | 2.56 | 1.31 | 4.94 |
| **5** | 3 | cities | 1.89 | 1.63 | 2.09 | 3.75 | 1.02 | 1.81 | 1.60 | 2.86 | 3.65 | 5.06 | 2.74 | 1.41 | 5.28 |
| **5** | 3 | country | 1.59 | 1.37 | 1.77 | 3.16 | 0.86 | 1.53 | 1.35 | 2.42 | 3.08 | 4.27 | 2.31 | 1.19 | 4.46 |
| **5** | 3 | suburbs | 1.72 | 1.49 | 1.91 | 3.42 | 0.93 | 1.65 | 1.46 | 2.61 | 3.33 | 4.62 | 2.50 | 1.28 | 4.82 |
| **5** | 4 | cities | 3.43 | 2.96 | 3.82 | 6.94 | 1.84 | 3.40 | 2.91 | 5.30 | 6.72 | 9.42 | 5.06 | 2.64 | 9.76 |
| **5** | 4 | country | 2.82 | 2.43 | 3.14 | 5.70 | 1.51 | 2.79 | 2.39 | 4.35 | 5.52 | 7.73 | 4.15 | 2.17 | 8.01 |
| **5** | 4 | suburbs | 3.08 | 2.65 | 3.42 | 6.21 | 1.65 | 3.04 | 2.61 | 4.74 | 6.02 | 8.42 | 4.53 | 2.36 | 8.74 |
| **5** | 13 | cities | 2.59 | 2.23 | 2.87 | 5.12 | 1.40 | 2.46 | 2.20 | 3.91 | 4.99 | 6.90 | 3.75 | 1.91 | 7.22 |
| **5** | 13 | country | 2.26 | 1.95 | 2.51 | 4.48 | 1.22 | 2.16 | 1.92 | 3.42 | 4.36 | 6.04 | 3.28 | 1.68 | 6.31 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5** | 13 | suburbs | 2.41 | 2.08 | 2.67 | 4.77 | 1.30 | 2.29 | 2.04 | 3.64 | 4.64 | 6.43 | 3.49 | 1.78 | 6.72 |
| **5** | 14 | cities | 2.35 | 2.02 | 2.60 | 4.64 | 1.27 | 2.23 | 1.99 | 3.54 | 4.52 | 6.25 | 3.40 | 1.73 | 6.54 |
| **5** | 14 | country | 2.05 | 1.77 | 2.27 | 4.06 | 1.11 | 1.96 | 1.74 | 3.10 | 3.96 | 5.48 | 2.97 | 1.52 | 5.73 |
| **5** | 14 | suburbs | 2.18 | 1.88 | 2.42 | 4.32 | 1.18 | 2.08 | 1.85 | 3.30 | 4.21 | 5.83 | 3.16 | 1.62 | 6.09 |
| **5** | 15 | cities | 2.64 | 2.27 | 2.92 | 5.20 | 1.43 | 2.50 | 2.23 | 3.98 | 5.07 | 7.02 | 3.81 | 1.95 | 7.34 |
| **5** | 15 | country | 2.30 | 1.98 | 2.54 | 4.54 | 1.24 | 2.19 | 1.95 | 3.47 | 4.42 | 6.13 | 3.33 | 1.70 | 6.40 |
| **5** | 15 | suburbs | 2.45 | 2.11 | 2.71 | 4.84 | 1.32 | 2.33 | 2.07 | 3.70 | 4.71 | 6.53 | 3.54 | 1.81 | 6.82 |
| **5** | 16 | cities | 4.73 | 4.08 | 5.26 | 9.55 | 2.54 | 4.67 | 4.00 | 7.29 | 9.25 | 12.95 | 6.96 | 3.63 | 13.43 |
| **5** | 16 | country | 4.17 | 3.60 | 4.64 | 8.45 | 2.23 | 4.15 | 3.53 | 6.46 | 8.18 | 11.47 | 6.15 | 3.22 | 11.88 |
| **5** | 16 | suburbs | 4.40 | 3.80 | 4.90 | 8.90 | 2.36 | 4.36 | 3.73 | 6.80 | 8.61 | 12.07 | 6.48 | 3.39 | 12.51 |
| **6** | 1 | cities | 1.14 | 1.20 | 1.63 | 5.11 | 0.57 | 12.23 | 1.02 | 4.63 | 3.94 | 9.65 | 2.90 | 6.04 | 5.78 |
| **6** | 1 | country | 1.06 | 1.12 | 1.51 | 4.84 | 0.52 | 12.28 | 0.94 | 4.46 | 3.80 | 9.37 | 2.72 | 6.60 | 5.47 |
| **6** | 1 | suburbs | 1.10 | 1.16 | 1.57 | 4.98 | 0.55 | 12.43 | 0.98 | 4.57 | 3.89 | 9.58 | 2.81 | 6.50 | 5.64 |
| **6** | 2 | cities | 1.14 | 1.20 | 1.63 | 5.11 | 0.57 | 12.23 | 1.02 | 4.63 | 3.94 | 9.65 | 2.90 | 6.04 | 5.78 |
| **6** | 2 | country | 1.06 | 1.12 | 1.51 | 4.84 | 0.52 | 12.28 | 0.94 | 4.46 | 3.80 | 9.37 | 2.72 | 6.60 | 5.47 |
| **6** | 2 | suburbs | 1.10 | 1.16 | 1.57 | 4.98 | 0.55 | 12.43 | 0.98 | 4.57 | 3.89 | 9.58 | 2.81 | 6.50 | 5.64 |
| **6** | 3 | cities | 1.07 | 1.13 | 1.53 | 4.73 | 0.54 | 10.91 | 0.96 | 4.23 | 3.60 | 8.79 | 2.71 | 5.13 | 5.35 |
| **6** | 3 | country | 1.00 | 1.05 | 1.43 | 4.48 | 0.50 | 10.69 | 0.89 | 4.05 | 3.44 | 8.44 | 2.54 | 5.25 | 5.06 |
| **6** | 3 | suburbs | 1.04 | 1.09 | 1.48 | 4.61 | 0.52 | 10.91 | 0.93 | 4.16 | 3.54 | 8.66 | 2.62 | 5.30 | 5.22 |
| **6** | 4 | cities | 1.62 | 1.70 | 2.31 | 7.21 | 0.81 | 17.06 | 1.45 | 6.50 | 5.53 | 13.54 | 4.10 | 8.29 | 8.15 |
| **6** | 4 | country | 1.49 | 1.57 | 2.12 | 6.76 | 0.74 | 16.84 | 1.33 | 6.20 | 5.27 | 12.98 | 3.81 | 8.80 | 7.64 |
| **6** | 4 | suburbs | 1.55 | 1.63 | 2.21 | 6.99 | 0.77 | 17.12 | 1.38 | 6.38 | 5.42 | 13.32 | 3.95 | 8.72 | 7.90 |
| **6** | 13 | cities | 1.50 | 1.57 | 2.12 | 6.42 | 0.76 | 13.83 | 1.34 | 5.60 | 4.77 | 11.55 | 3.72 | 6.03 | 7.25 |
| **6** | 13 | country | 1.40 | 1.47 | 1.99 | 6.11 | 0.70 | 13.70 | 1.26 | 5.41 | 4.60 | 11.20 | 3.51 | 6.23 | 6.90 |
| **6** | 13 | suburbs | 1.44 | 1.51 | 2.05 | 6.26 | 0.73 | 13.84 | 1.29 | 5.51 | 4.69 | 11.40 | 3.61 | 6.20 | 7.07 |
| **6** | 14 | cities | 1.34 | 1.41 | 1.91 | 5.77 | 0.68 | 12.48 | 1.21 | 5.05 | 4.29 | 10.41 | 3.34 | 5.45 | 6.52 |
| **6** | 14 | country | 1.26 | 1.32 | 1.79 | 5.49 | 0.63 | 12.34 | 1.13 | 4.86 | 4.14 | 10.07 | 3.15 | 5.64 | 6.20 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT}_{\mathbf{CC}}$ | $\mathbf{PBT}_{\mathbf{OD}}$ | $\mathbf{PBT}_{\mathbf{HT\_CE}}$ | $\mathbf{PBT}_{\mathbf{HT\_nCE}}$ | $\mathbf{PBT}_{\mathbf{PM}}$ | $\mathbf{PBT}_{\mathbf{IR\_hh}}$ | $\mathbf{PBT}_{\mathbf{POF}}$ | $\mathbf{PBT}_{\mathbf{AC}}$ | $\mathbf{PBT}_{\mathbf{ET}}$ | $\mathbf{PBT}_{\mathbf{EuF}}$ | $\mathbf{PBT}_{\mathbf{EuM}}$ | $\mathbf{PBT}_{\mathbf{Ec\_FW}}$ | $\mathbf{PBT}_{\mathbf{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6** | 14 | suburbs | 1.30 | 1.36 | 1.84 | 5.63 | 0.65 | 12.49 | 1.16 | 4.97 | 4.23 | 10.27 | 3.24 | 5.61 | 6.36 |
| **6** | 15 | cities | 1.49 | 1.56 | 2.12 | 6.39 | 0.75 | 13.73 | 1.34 | 5.57 | 4.74 | 11.49 | 3.71 | 5.96 | 7.22 |
| **6** | 15 | country | 1.40 | 1.47 | 1.99 | 6.07 | 0.70 | 13.48 | 1.25 | 5.36 | 4.56 | 11.08 | 3.50 | 6.07 | 6.86 |
| **6** | 15 | suburbs | 1.44 | 1.51 | 2.05 | 6.23 | 0.73 | 13.67 | 1.29 | 5.47 | 4.65 | 11.30 | 3.59 | 6.08 | 7.03 |
| **6** | 16 | cities | 2.33 | 2.45 | 3.32 | 10.48 | 1.16 | 25.38 | 2.08 | 9.52 | 8.10 | 19.88 | 5.93 | 12.73 | 11.85 |
| **6** | 16 | country | 2.17 | 2.28 | 3.09 | 9.84 | 1.07 | 24.69 | 1.93 | 9.05 | 7.70 | 18.96 | 5.54 | 13.02 | 11.13 |
| **6** | 16 | suburbs | 2.25 | 2.36 | 3.20 | 10.16 | 1.11 | 25.21 | 2.00 | 9.31 | 7.92 | 19.48 | 5.73 | 13.08 | 11.49 |
| **7** | 5 | cities | 1.48 | 0.92 | 1.76 | 4.26 | 0.77 | 0.78 | 1.35 | 3.59 | 4.01 | 7.35 | 2.98 | 1.60 | 4.04 |
| **7** | 5 | country | 1.33 | 0.83 | 1.59 | 3.83 | 0.70 | 0.70 | 1.22 | 3.23 | 3.61 | 6.61 | 2.68 | 1.43 | 3.62 |
| **7** | 5 | suburbs | 1.39 | 0.86 | 1.66 | 3.99 | 0.73 | 0.72 | 1.27 | 3.37 | 3.77 | 6.89 | 2.80 | 1.48 | 3.76 |
| **7** | 6 | cities | 1.53 | 0.96 | 1.83 | 4.42 | 0.80 | 0.81 | 1.40 | 3.71 | 4.15 | 7.62 | 3.09 | 1.66 | 4.19 |
| **7** | 6 | country | 1.37 | 0.85 | 1.64 | 3.95 | 0.72 | 0.72 | 1.25 | 3.33 | 3.72 | 6.81 | 2.77 | 1.48 | 3.73 |
| **7** | 6 | suburbs | 1.44 | 0.89 | 1.71 | 4.13 | 0.75 | 0.75 | 1.32 | 3.49 | 3.90 | 7.13 | 2.90 | 1.53 | 3.89 |
| **7** | 7 | cities | 1.83 | 1.12 | 2.17 | 5.20 | 0.96 | 0.91 | 1.68 | 4.43 | 4.96 | 9.00 | 3.68 | 1.89 | 4.86 |
| **7** | 7 | country | 1.68 | 1.03 | 1.99 | 4.78 | 0.88 | 0.85 | 1.54 | 4.06 | 4.54 | 8.26 | 3.37 | 1.75 | 4.48 |
| **7** | 7 | suburbs | 1.74 | 1.06 | 2.06 | 4.95 | 0.91 | 0.87 | 1.59 | 4.21 | 4.71 | 8.55 | 3.50 | 1.80 | 4.62 |
| **7** | 8 | cities | 4.37 | 2.73 | 5.22 | 12.61 | 2.29 | 2.33 | 3.99 | 10.60 | 11.85 | 21.75 | 8.81 | 4.75 | 11.97 |
| **7** | 8 | country | 3.79 | 2.37 | 4.53 | 10.96 | 1.98 | 2.04 | 3.47 | 9.20 | 10.28 | 18.91 | 7.65 | 4.16 | 10.43 |
| **7** | 8 | suburbs | 4.01 | 2.50 | 4.78 | 11.55 | 2.10 | 2.12 | 3.66 | 9.72 | 10.87 | 19.93 | 8.08 | 4.34 | 10.95 |
| **7** | 17 | cities | 1.75 | 1.07 | 2.07 | 4.97 | 0.92 | 0.88 | 1.60 | 4.22 | 4.73 | 8.59 | 3.51 | 1.81 | 4.65 |
| **7** | 17 | country | 1.61 | 1.01 | 1.93 | 4.66 | 0.84 | 0.87 | 1.47 | 3.90 | 4.36 | 8.04 | 3.25 | 1.77 | 4.44 |
| **7** | 17 | suburbs | 1.67 | 1.03 | 1.98 | 4.76 | 0.87 | 0.85 | 1.52 | 4.03 | 4.51 | 8.23 | 3.35 | 1.76 | 4.47 |
| **7** | 18 | cities | 1.79 | 1.09 | 2.11 | 5.08 | 0.94 | 0.90 | 1.63 | 4.31 | 4.83 | 8.78 | 3.58 | 1.85 | 4.75 |
| **7** | 18 | country | 1.63 | 1.02 | 1.95 | 4.72 | 0.85 | 0.88 | 1.49 | 3.96 | 4.43 | 8.15 | 3.30 | 1.80 | 4.50 |
| **7** | 18 | suburbs | 1.69 | 1.04 | 2.01 | 4.84 | 0.89 | 0.87 | 1.55 | 4.10 | 4.59 | 8.37 | 3.41 | 1.79 | 4.55 |
| **7** | 19 | cities | 2.85 | 1.75 | 3.37 | 8.11 | 1.49 | 1.44 | 2.60 | 6.88 | 7.70 | 14.01 | 5.72 | 2.97 | 7.60 |
| **7** | 19 | country | 2.58 | 1.60 | 3.07 | 7.40 | 1.35 | 1.34 | 2.36 | 6.25 | 6.99 | 12.78 | 5.19 | 2.75 | 6.98 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7** | 19 | suburbs | 2.69 | 1.66 | 3.19 | 7.69 | 1.41 | 1.38 | 2.46 | 6.51 | 7.29 | 13.29 | 5.41 | 2.83 | 7.23 |
| **7** | 20 | cities | 8.39 | 5.21 | 9.99 | 24.12 | 4.39 | 4.40 | 7.67 | 20.33 | 22.73 | 41.63 | 16.90 | 9.02 | 22.81 |
| **7** | 20 | country | 6.68 | 4.16 | 7.97 | 19.25 | 3.49 | 3.54 | 6.10 | 16.18 | 18.10 | 33.21 | 13.46 | 7.24 | 18.25 |
| **7** | 20 | suburbs | 7.43 | 4.62 | 8.86 | 21.38 | 3.89 | 3.91 | 6.80 | 18.01 | 20.14 | 36.91 | 14.98 | 8.01 | 20.23 |
| **8** | 5 | cities | 1.47 | 1.17 | 0.86 | 2.62 | 0.31 | 2.47 | 0.62 | 1.77 | 2.17 | 2.36 | 1.67 | 2.13 | 6.34 |
| **8** | 5 | country | 1.37 | 1.09 | 0.81 | 2.46 | 0.29 | 2.32 | 0.58 | 1.66 | 2.03 | 2.22 | 1.56 | 2.00 | 5.94 |
| **8** | 5 | suburbs | 1.42 | 1.13 | 0.84 | 2.54 | 0.30 | 2.39 | 0.60 | 1.71 | 2.09 | 2.28 | 1.61 | 2.06 | 6.13 |
| **8** | 6 | cities | 1.51 | 1.20 | 0.89 | 2.70 | 0.32 | 2.54 | 0.64 | 1.81 | 2.23 | 2.43 | 1.71 | 2.19 | 6.51 |
| **8** | 6 | country | 1.41 | 1.12 | 0.83 | 2.53 | 0.29 | 2.39 | 0.60 | 1.70 | 2.08 | 2.28 | 1.60 | 2.06 | 6.09 |
| **8** | 6 | suburbs | 1.46 | 1.16 | 0.86 | 2.60 | 0.30 | 2.45 | 0.62 | 1.75 | 2.15 | 2.35 | 1.65 | 2.12 | 6.29 |
| **8** | 7 | cities | 1.90 | 1.51 | 1.12 | 3.37 | 0.40 | 3.17 | 0.81 | 2.27 | 2.80 | 3.03 | 2.15 | 2.73 | 8.18 |
| **8** | 7 | country | 1.78 | 1.42 | 1.05 | 3.17 | 0.37 | 2.98 | 0.76 | 2.13 | 2.62 | 2.84 | 2.02 | 2.57 | 7.67 |
| **8** | 7 | suburbs | 1.84 | 1.46 | 1.08 | 3.27 | 0.38 | 3.07 | 0.78 | 2.20 | 2.71 | 2.93 | 2.08 | 2.65 | 7.92 |
| **8** | 8 | cities | 3.95 | 3.14 | 2.34 | 7.72 | 0.81 | 7.67 | 1.66 | 5.06 | 5.88 | 7.42 | 4.54 | 6.63 | 17.59 |
| **8** | 8 | country | 3.71 | 2.95 | 2.20 | 7.31 | 0.76 | 7.30 | 1.56 | 4.79 | 5.54 | 7.06 | 4.27 | 6.31 | 16.59 |
| **8** | 8 | suburbs | 3.83 | 3.04 | 2.27 | 7.47 | 0.79 | 7.41 | 1.61 | 4.90 | 5.70 | 7.17 | 4.40 | 6.41 | 17.04 |
| **8** | 17 | cities | 1.75 | 1.39 | 1.03 | 3.11 | 0.37 | 2.93 | 0.74 | 2.10 | 2.58 | 2.79 | 1.98 | 2.52 | 7.54 |
| **8** | 17 | country | 1.64 | 1.31 | 0.97 | 2.93 | 0.34 | 2.76 | 0.70 | 1.98 | 2.43 | 2.64 | 1.87 | 2.38 | 7.10 |
| **8** | 17 | suburbs | 1.70 | 1.35 | 1.00 | 3.02 | 0.35 | 2.84 | 0.72 | 2.03 | 2.50 | 2.71 | 1.92 | 2.45 | 7.31 |
| **8** | 18 | cities | 1.77 | 1.41 | 1.04 | 3.15 | 0.37 | 2.96 | 0.75 | 2.13 | 2.61 | 2.83 | 2.01 | 2.56 | 7.64 |
| **8** | 18 | country | 1.67 | 1.33 | 0.98 | 2.97 | 0.35 | 2.80 | 0.71 | 2.00 | 2.46 | 2.67 | 1.89 | 2.42 | 7.19 |
| **8** | 18 | suburbs | 1.72 | 1.37 | 1.01 | 3.06 | 0.36 | 2.88 | 0.73 | 2.06 | 2.53 | 2.75 | 1.95 | 2.48 | 7.40 |
| **8** | 19 | cities | 2.73 | 2.17 | 1.61 | 4.95 | 0.57 | 4.70 | 1.16 | 3.32 | 4.04 | 4.49 | 3.11 | 4.05 | 11.86 |
| **8** | 19 | country | 2.59 | 2.06 | 1.53 | 4.72 | 0.54 | 4.50 | 1.10 | 3.16 | 3.83 | 4.31 | 2.95 | 3.88 | 11.27 |
| **8** | 19 | suburbs | 2.66 | 2.12 | 1.57 | 4.82 | 0.55 | 4.58 | 1.13 | 3.23 | 3.93 | 4.39 | 3.03 | 3.95 | 11.55 |
| **8** | 20 | cities | 5.53 | 4.40 | 3.27 | 10.63 | 1.14 | 10.44 | 2.33 | 7.01 | 8.23 | 10.07 | 6.34 | 9.02 | 24.50 |
| **8** | 20 | country | 5.20 | 4.13 | 3.08 | 10.10 | 1.07 | 10.00 | 2.18 | 6.64 | 7.74 | 9.66 | 5.97 | 8.64 | 23.12 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **$\text{PBT}_{\text{CC}}$** | **$\text{PBT}_{\text{OD}}$** | **$\text{PBT}_{\text{HT\_CE}}$** | **$\text{PBT}_{\text{HT\_nCE}}$** | **$\text{PBT}_{\text{PM}}$** | **$\text{PBT}_{\text{IR\_hh}}$** | **$\text{PBT}_{\text{POF}}$** | **$\text{PBT}_{\text{AC}}$** | **$\text{PBT}_{\text{ET}}$** | **$\text{PBT}_{\text{EuF}}$** | **$\text{PBT}_{\text{EuM}}$** | **$\text{PBT}_{\text{Ec\_FW}}$** | **$\text{PBT}_{\text{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **8** | 20 | suburbs | 5.35 | 4.25 | 3.16 | 10.28 | 1.10 | 10.11 | 2.25 | 6.78 | 7.95 | 9.76 | 6.13 | 8.74 | 23.69 |
| **9** | 5 | cities | 0.90 | 1.06 | 0.94 | 1.97 | 0.40 | 2.10 | 0.73 | 1.93 | 2.21 | 1.85 | 1.63 | 1.55 | 4.53 |
| **9** | 5 | country | 0.82 | 0.97 | 0.85 | 1.80 | 0.37 | 1.92 | 0.66 | 1.76 | 2.02 | 1.70 | 1.49 | 1.42 | 4.13 |
| **9** | 5 | suburbs | 0.86 | 1.01 | 0.89 | 1.88 | 0.38 | 2.00 | 0.69 | 1.83 | 2.10 | 1.76 | 1.55 | 1.47 | 4.30 |
| **9** | 6 | cities | 0.92 | 1.08 | 0.95 | 2.01 | 0.41 | 2.14 | 0.74 | 1.96 | 2.25 | 1.89 | 1.67 | 1.58 | 4.61 |
| **9** | 6 | country | 0.84 | 0.99 | 0.87 | 1.84 | 0.37 | 1.96 | 0.68 | 1.79 | 2.05 | 1.73 | 1.52 | 1.44 | 4.21 |
| **9** | 6 | suburbs | 0.87 | 1.03 | 0.91 | 1.91 | 0.39 | 2.03 | 0.71 | 1.87 | 2.14 | 1.80 | 1.58 | 1.50 | 4.38 |
| **9** | 7 | cities | 1.20 | 1.42 | 1.25 | 2.62 | 0.54 | 2.78 | 0.97 | 2.57 | 2.95 | 2.46 | 2.18 | 2.05 | 6.03 |
| **9** | 7 | country | 1.10 | 1.30 | 1.15 | 2.41 | 0.49 | 2.56 | 0.89 | 2.36 | 2.70 | 2.26 | 2.00 | 1.89 | 5.54 |
| **9** | 7 | suburbs | 1.15 | 1.35 | 1.19 | 2.50 | 0.51 | 2.65 | 0.93 | 2.45 | 2.81 | 2.35 | 2.08 | 1.96 | 5.76 |
| **9** | 8 | cities | 2.24 | 2.65 | 2.33 | 4.95 | 1.00 | 5.34 | 1.81 | 4.80 | 5.50 | 4.68 | 4.07 | 3.90 | 11.29 |
| **9** | 8 | country | 2.05 | 2.42 | 2.14 | 4.55 | 0.91 | 4.93 | 1.65 | 4.39 | 5.03 | 4.31 | 3.73 | 3.59 | 10.35 |
| **9** | 8 | suburbs | 2.13 | 2.52 | 2.22 | 4.72 | 0.95 | 5.10 | 1.72 | 4.57 | 5.23 | 4.47 | 3.87 | 3.72 | 10.75 |
| **9** | 17 | cities | 1.13 | 1.33 | 1.17 | 2.47 | 0.51 | 2.61 | 0.91 | 2.42 | 2.77 | 2.31 | 2.05 | 1.93 | 5.67 |
| **9** | 17 | country | 1.04 | 1.23 | 1.08 | 2.28 | 0.47 | 2.41 | 0.84 | 2.23 | 2.55 | 2.14 | 1.89 | 1.78 | 5.23 |
| **9** | 17 | suburbs | 1.08 | 1.27 | 1.12 | 2.36 | 0.48 | 2.50 | 0.87 | 2.31 | 2.65 | 2.21 | 1.96 | 1.85 | 5.43 |
| **9** | 18 | cities | 1.14 | 1.34 | 1.18 | 2.49 | 0.51 | 2.63 | 0.92 | 2.43 | 2.79 | 2.33 | 2.07 | 1.95 | 5.72 |
| **9** | 18 | country | 1.05 | 1.24 | 1.09 | 2.29 | 0.47 | 2.43 | 0.85 | 2.24 | 2.57 | 2.15 | 1.90 | 1.80 | 5.27 |
| **9** | 18 | suburbs | 1.09 | 1.28 | 1.13 | 2.38 | 0.49 | 2.52 | 0.88 | 2.33 | 2.67 | 2.23 | 1.97 | 1.86 | 5.47 |
| **9** | 19 | cities | 1.74 | 2.05 | 1.81 | 3.80 | 0.78 | 4.03 | 1.41 | 3.71 | 4.26 | 3.57 | 3.15 | 2.98 | 8.73 |
| **9** | 19 | country | 1.62 | 1.91 | 1.68 | 3.54 | 0.72 | 3.77 | 1.31 | 3.46 | 3.96 | 3.33 | 2.93 | 2.78 | 8.13 |
| **9** | 19 | suburbs | 1.67 | 1.97 | 1.74 | 3.66 | 0.75 | 3.89 | 1.35 | 3.57 | 4.10 | 3.44 | 3.03 | 2.87 | 8.39 |
| **9** | 20 | cities | 3.44 | 4.06 | 3.58 | 7.56 | 1.53 | 8.09 | 2.78 | 7.36 | 8.43 | 7.12 | 6.24 | 5.94 | 17.30 |
| **9** | 20 | country | 3.15 | 3.73 | 3.29 | 6.95 | 1.41 | 7.47 | 2.55 | 6.75 | 7.74 | 6.57 | 5.73 | 5.48 | 15.89 |
| **9** | 20 | suburbs | 3.29 | 3.89 | 3.43 | 7.25 | 1.47 | 7.78 | 2.66 | 7.05 | 8.08 | 6.84 | 5.98 | 5.71 | 16.59 |
| **10** | 5 | cities | 1.60 | 2.22 | 0.95 | 3.55 | 0.32 | 7.70 | 0.66 | 2.47 | 2.45 | 3.52 | 1.86 | 3.33 | 9.57 |
| **10** | 5 | country | 1.51 | 2.09 | 0.90 | 3.43 | 0.30 | 7.84 | 0.62 | 2.33 | 2.31 | 3.47 | 1.76 | 3.28 | 9.13 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | 5 | suburbs | 1.55 | 2.14 | 0.92 | 3.47 | 0.31 | 7.73 | 0.64 | 2.38 | 2.36 | 3.47 | 1.80 | 3.28 | 9.29 |
| **10** | 6 | cities | 1.64 | 2.27 | 0.98 | 3.64 | 0.33 | 7.93 | 0.68 | 2.52 | 2.50 | 3.61 | 1.90 | 3.42 | 9.79 |
| **10** | 6 | country | 1.54 | 2.13 | 0.92 | 3.51 | 0.31 | 8.07 | 0.64 | 2.38 | 2.35 | 3.56 | 1.79 | 3.36 | 9.32 |
| **10** | 6 | suburbs | 1.58 | 2.19 | 0.94 | 3.55 | 0.32 | 7.96 | 0.65 | 2.43 | 2.41 | 3.56 | 1.84 | 3.37 | 9.49 |
| **10** | 7 | cities | 2.13 | 2.96 | 1.26 | 4.58 | 0.43 | 9.35 | 0.89 | 3.26 | 3.25 | 4.43 | 2.47 | 4.20 | 12.55 |
| **10** | 7 | country | 2.02 | 2.80 | 1.20 | 4.41 | 0.41 | 9.27 | 0.84 | 3.10 | 3.08 | 4.32 | 2.34 | 4.09 | 11.97 |
| **10** | 7 | suburbs | 2.06 | 2.86 | 1.22 | 4.47 | 0.42 | 9.27 | 0.86 | 3.15 | 3.14 | 4.35 | 2.39 | 4.12 | 12.17 |
| **10** | 8 | cities | 4.49 | 6.14 | 2.69 | 11.15 | 0.89 | 33.23 | 1.83 | 7.00 | 6.81 | 12.38 | 5.24 | 11.58 | 28.21 |
| **10** | 8 | country | 4.23 | 5.78 | 2.54 | 10.75 | 0.84 | 34.62 | 1.72 | 6.63 | 6.42 | 12.23 | 4.95 | 11.41 | 26.87 |
| **10** | 8 | suburbs | 4.33 | 5.92 | 2.60 | 10.84 | 0.86 | 33.17 | 1.76 | 6.76 | 6.57 | 12.14 | 5.06 | 11.34 | 27.29 |
| **10** | 17 | cities | 1.98 | 2.75 | 1.17 | 4.24 | 0.40 | 8.57 | 0.82 | 3.02 | 3.02 | 4.08 | 2.29 | 3.87 | 11.62 |
| **10** | 17 | country | 1.89 | 2.62 | 1.12 | 4.08 | 0.38 | 8.44 | 0.78 | 2.89 | 2.88 | 3.97 | 2.19 | 3.76 | 11.14 |
| **10** | 17 | suburbs | 1.92 | 2.67 | 1.14 | 4.14 | 0.39 | 8.48 | 0.80 | 2.94 | 2.93 | 4.01 | 2.23 | 3.80 | 11.33 |
| **10** | 18 | cities | 1.99 | 2.77 | 1.18 | 4.28 | 0.40 | 8.67 | 0.83 | 3.05 | 3.05 | 4.13 | 2.31 | 3.91 | 11.73 |
| **10** | 18 | country | 1.90 | 2.64 | 1.13 | 4.12 | 0.38 | 8.53 | 0.79 | 2.91 | 2.90 | 4.01 | 2.20 | 3.80 | 11.23 |
| **10** | 18 | suburbs | 1.94 | 2.69 | 1.15 | 4.18 | 0.39 | 8.57 | 0.81 | 2.97 | 2.96 | 4.05 | 2.25 | 3.84 | 11.43 |
| **10** | 19 | cities | 3.14 | 4.36 | 1.86 | 6.85 | 0.63 | 14.40 | 1.30 | 4.81 | 4.79 | 6.71 | 3.64 | 6.35 | 18.60 |
| **10** | 19 | country | 3.02 | 4.19 | 1.80 | 6.70 | 0.61 | 14.61 | 1.25 | 4.64 | 4.61 | 6.66 | 3.51 | 6.30 | 18.05 |
| **10** | 19 | suburbs | 3.07 | 4.26 | 1.83 | 6.76 | 0.62 | 14.45 | 1.27 | 4.71 | 4.68 | 6.66 | 3.56 | 6.30 | 18.27 |
| **10** | 20 | cities | 5.94 | 8.22 | 3.54 | 13.35 | 1.19 | 29.92 | 2.46 | 9.15 | 9.05 | 13.40 | 6.90 | 12.66 | 35.69 |
| **10** | 20 | country | 5.69 | 7.86 | 3.39 | 13.02 | 1.14 | 30.50 | 2.35 | 8.78 | 8.66 | 13.30 | 6.61 | 12.54 | 34.47 |
| **10** | 20 | suburbs | 5.79 | 8.01 | 3.45 | 13.12 | 1.16 | 29.99 | 2.39 | 8.93 | 8.83 | 13.28 | 6.73 | 12.53 | 34.95 |
| **11** | 5 | cities | 1.62 | 3.45 | 0.70 | 1.34 | 0.32 | 2.35 | 0.69 | 1.41 | 2.23 | 0.91 | 1.51 | 1.15 | 10.38 |
| **11** | 5 | country | 1.50 | 3.19 | 0.65 | 1.25 | 0.30 | 2.19 | 0.64 | 1.31 | 2.06 | 0.85 | 1.40 | 1.07 | 9.64 |
| **11** | 5 | suburbs | 1.55 | 3.31 | 0.67 | 1.29 | 0.31 | 2.26 | 0.66 | 1.36 | 2.14 | 0.88 | 1.45 | 1.10 | 9.97 |
| **11** | 6 | cities | 1.65 | 3.51 | 0.72 | 1.37 | 0.33 | 2.40 | 0.70 | 1.44 | 2.27 | 0.93 | 1.54 | 1.17 | 10.58 |
| **11** | 6 | country | 1.52 | 3.26 | 0.66 | 1.27 | 0.30 | 2.23 | 0.65 | 1.33 | 2.10 | 0.87 | 1.42 | 1.09 | 9.83 |

## CORK SLAB

| Country | Arc | GL | PBT$_{\text{CC}}$ | PBT$_{\text{OD}}$ | PBT$_{\text{HT\_CE}}$ | PBT$_{\text{HT\_nCE}}$ | PBT$_{\text{PM}}$ | PBT$_{\text{IR\_hh}}$ | PBT$_{\text{POF}}$ | PBT$_{\text{AC}}$ | PBT$_{\text{ET}}$ | PBT$_{\text{EuF}}$ | PBT$_{\text{EuM}}$ | PBT$_{\text{Ec\_FW}}$ | PBT$_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11** | 6 | suburbs | 1.58 | 3.37 | 0.69 | 1.31 | 0.32 | 2.31 | 0.67 | 1.38 | 2.18 | 0.90 | 1.48 | 1.13 | 10.17 |
| **11** | 7 | cities | 2.15 | 4.57 | 0.93 | 1.78 | 0.43 | 3.10 | 0.92 | 1.88 | 2.97 | 1.20 | 2.01 | 1.52 | 13.71 |
| **11** | 7 | country | 1.99 | 4.25 | 0.87 | 1.65 | 0.40 | 2.88 | 0.85 | 1.74 | 2.75 | 1.12 | 1.86 | 1.41 | 12.75 |
| **11** | 7 | suburbs | 2.06 | 4.40 | 0.90 | 1.71 | 0.41 | 2.98 | 0.88 | 1.81 | 2.85 | 1.16 | 1.93 | 1.46 | 13.19 |
| **11** | 8 | cities | 4.64 | 10.02 | 2.02 | 3.99 | 0.91 | 7.19 | 1.94 | 4.06 | 6.35 | 2.75 | 4.34 | 3.46 | 31.03 |
| **11** | 8 | country | 4.21 | 9.10 | 1.83 | 3.62 | 0.83 | 6.53 | 1.76 | 3.68 | 5.76 | 2.50 | 3.94 | 3.14 | 28.17 |
| **11** | 8 | suburbs | 4.40 | 9.52 | 1.91 | 3.79 | 0.86 | 6.85 | 1.84 | 3.85 | 6.02 | 2.62 | 4.12 | 3.29 | 29.52 |
| **11** | 17 | cities | 1.94 | 4.14 | 0.85 | 1.60 | 0.39 | 2.80 | 0.83 | 1.70 | 2.69 | 1.09 | 1.82 | 1.37 | 12.39 |
| **11** | 17 | country | 1.82 | 3.88 | 0.79 | 1.51 | 0.37 | 2.63 | 0.78 | 1.59 | 2.52 | 1.02 | 1.70 | 1.29 | 11.64 |
| **11** | 17 | suburbs | 1.88 | 4.00 | 0.82 | 1.55 | 0.38 | 2.71 | 0.80 | 1.64 | 2.60 | 1.05 | 1.76 | 1.33 | 11.98 |
| **11** | 18 | cities | 1.96 | 4.17 | 0.85 | 1.62 | 0.39 | 2.82 | 0.84 | 1.71 | 2.71 | 1.10 | 1.83 | 1.38 | 12.49 |
| **11** | 18 | country | 1.83 | 3.91 | 0.80 | 1.52 | 0.37 | 2.65 | 0.78 | 1.61 | 2.54 | 1.03 | 1.71 | 1.30 | 11.72 |
| **11** | 18 | suburbs | 1.89 | 4.03 | 0.82 | 1.56 | 0.38 | 2.73 | 0.81 | 1.65 | 2.61 | 1.06 | 1.77 | 1.33 | 12.07 |
| **11** | 19 | cities | 3.07 | 6.55 | 1.34 | 2.55 | 0.62 | 4.46 | 1.31 | 2.69 | 4.24 | 1.73 | 2.87 | 2.18 | 19.70 |
| **11** | 19 | country | 2.89 | 6.16 | 1.25 | 2.40 | 0.58 | 4.21 | 1.23 | 2.52 | 3.98 | 1.63 | 2.70 | 2.06 | 18.56 |
| **11** | 19 | suburbs | 2.97 | 6.35 | 1.29 | 2.47 | 0.60 | 4.33 | 1.27 | 2.60 | 4.11 | 1.68 | 2.78 | 2.12 | 19.11 |
| **11** | 20 | cities | 6.23 | 13.35 | 2.71 | 5.24 | 1.24 | 9.28 | 2.64 | 5.45 | 8.57 | 3.58 | 5.82 | 4.51 | 40.63 |
| **11** | 20 | country | 5.75 | 12.34 | 2.50 | 4.85 | 1.14 | 8.61 | 2.43 | 5.03 | 7.91 | 3.32 | 5.38 | 4.18 | 37.63 |
| **11** | 20 | suburbs | 5.96 | 12.79 | 2.59 | 5.03 | 1.18 | 8.91 | 2.52 | 5.22 | 8.20 | 3.44 | 5.58 | 4.33 | 38.97 |
| **12** | 5 | cities | 0.56 | 0.52 | 1.18 | 1.44 | 0.97 | 2.36 | 1.22 | 1.01 | 2.09 | 2.13 | 1.61 | 1.14 | 2.91 |
| **12** | 5 | country | 0.54 | 0.49 | 1.13 | 1.38 | 0.93 | 2.25 | 1.16 | 0.96 | 1.99 | 2.02 | 1.53 | 1.08 | 2.77 |
| **12** | 5 | suburbs | 0.55 | 0.50 | 1.15 | 1.40 | 0.94 | 2.29 | 1.19 | 0.98 | 2.03 | 2.06 | 1.56 | 1.10 | 2.83 |
| **12** | 6 | cities | 0.57 | 0.53 | 1.20 | 1.47 | 0.99 | 2.40 | 1.24 | 1.03 | 2.13 | 2.16 | 1.64 | 1.16 | 2.96 |
| **12** | 6 | country | 0.54 | 0.50 | 1.15 | 1.40 | 0.94 | 2.29 | 1.18 | 0.98 | 2.03 | 2.06 | 1.56 | 1.10 | 2.82 |
| **12** | 6 | suburbs | 0.56 | 0.51 | 1.17 | 1.43 | 0.96 | 2.33 | 1.21 | 1.00 | 2.07 | 2.10 | 1.59 | 1.12 | 2.88 |
| **12** | 7 | cities | 0.74 | 0.68 | 1.55 | 1.90 | 1.28 | 3.10 | 1.60 | 1.32 | 2.75 | 2.79 | 2.11 | 1.49 | 3.83 |
| **12** | 7 | country | 0.71 | 0.65 | 1.49 | 1.82 | 1.22 | 2.97 | 1.54 | 1.27 | 2.63 | 2.67 | 2.02 | 1.43 | 3.66 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{\text{CC}}$** | **PBT$_{\text{OD}}$** | **PBT$_{\text{HT\_CE}}$** | **PBT$_{\text{HT\_nCE}}$** | **PBT$_{\text{PM}}$** | **PBT$_{\text{IR\_hh}}$** | **PBT$_{\text{POF}}$** | **PBT$_{\text{AC}}$** | **PBT$_{\text{ET}}$** | **PBT$_{\text{EuF}}$** | **PBT$_{\text{EuM}}$** | **PBT$_{\text{Ec\_FW}}$** | **PBT$_{\text{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **12** | 7 | suburbs | 0.72 | 0.66 | 1.51 | 1.85 | 1.24 | 3.02 | 1.56 | 1.29 | 2.67 | 2.72 | 2.06 | 1.45 | 3.72 |
| **12** | 8 | cities | 1.51 | 1.39 | 3.19 | 3.89 | 2.61 | 6.35 | 3.29 | 2.71 | 5.64 | 5.73 | 4.33 | 3.08 | 7.85 |
| **12** | 8 | country | 1.43 | 1.32 | 3.02 | 3.69 | 2.48 | 6.01 | 3.11 | 2.57 | 5.35 | 5.43 | 4.11 | 2.92 | 7.43 |
| **12** | 8 | suburbs | 1.47 | 1.36 | 3.11 | 3.79 | 2.55 | 6.18 | 3.20 | 2.64 | 5.50 | 5.58 | 4.22 | 3.00 | 7.65 |
| **12** | 17 | cities | 0.72 | 0.66 | 1.51 | 1.84 | 1.24 | 3.01 | 1.56 | 1.28 | 2.67 | 2.71 | 2.05 | 1.45 | 3.71 |
| **12** | 17 | country | 0.69 | 0.64 | 1.45 | 1.77 | 1.20 | 2.90 | 1.50 | 1.24 | 2.57 | 2.61 | 1.98 | 1.40 | 3.58 |
| **12** | 17 | suburbs | 0.70 | 0.65 | 1.48 | 1.80 | 1.21 | 2.94 | 1.52 | 1.26 | 2.61 | 2.65 | 2.01 | 1.42 | 3.64 |
| **12** | 18 | cities | 0.72 | 0.66 | 1.52 | 1.85 | 1.25 | 3.03 | 1.57 | 1.29 | 2.69 | 2.73 | 2.07 | 1.46 | 3.74 |
| **12** | 18 | country | 0.69 | 0.64 | 1.46 | 1.78 | 1.20 | 2.91 | 1.51 | 1.24 | 2.59 | 2.63 | 1.99 | 1.40 | 3.60 |
| **12** | 18 | suburbs | 0.71 | 0.65 | 1.49 | 1.81 | 1.22 | 2.96 | 1.53 | 1.26 | 2.63 | 2.67 | 2.02 | 1.43 | 3.66 |
| **12** | 19 | cities | 1.19 | 1.10 | 2.51 | 3.06 | 2.06 | 5.00 | 2.59 | 2.14 | 4.44 | 4.51 | 3.41 | 2.41 | 6.18 |
| **12** | 19 | country | 1.14 | 1.05 | 2.39 | 2.92 | 1.96 | 4.76 | 2.47 | 2.03 | 4.23 | 4.29 | 3.25 | 2.29 | 5.88 |
| **12** | 19 | suburbs | 1.16 | 1.07 | 2.44 | 2.98 | 2.01 | 4.87 | 2.52 | 2.08 | 4.32 | 4.38 | 3.32 | 2.34 | 6.01 |
| **12** | 20 | cities | 2.78 | 2.55 | 5.85 | 7.14 | 4.80 | 11.65 | 6.03 | 4.98 | 10.35 | 10.51 | 7.95 | 5.64 | 14.39 |
| **12** | 20 | country | 2.54 | 2.33 | 5.34 | 6.53 | 4.38 | 10.64 | 5.51 | 4.55 | 9.46 | 9.61 | 7.27 | 5.17 | 13.16 |
| **12** | 20 | suburbs | 2.65 | 2.43 | 5.57 | 6.80 | 4.57 | 11.09 | 5.75 | 4.74 | 9.86 | 10.01 | 7.58 | 5.38 | 13.72 |
| **13** | 5 | cities | 1.23 | 1.40 | 4.91 | 5.41 | 3.81 | 13.50 | 3.02 | 5.53 | 6.09 | 8.69 | 4.73 | 4.15 | 6.20 |
| **13** | 5 | country | 1.16 | 1.32 | 4.63 | 5.10 | 3.58 | 12.76 | 2.84 | 5.21 | 5.74 | 8.21 | 4.45 | 3.92 | 5.84 |
| **13** | 5 | suburbs | 1.18 | 1.35 | 4.75 | 5.22 | 3.67 | 13.06 | 2.91 | 5.34 | 5.88 | 8.40 | 4.56 | 4.01 | 5.98 |
| **13** | 6 | cities | 1.25 | 1.43 | 5.01 | 5.51 | 3.88 | 13.77 | 3.08 | 5.63 | 6.20 | 8.86 | 4.82 | 4.23 | 6.32 |
| **13** | 6 | country | 1.18 | 1.34 | 4.72 | 5.20 | 3.65 | 13.00 | 2.89 | 5.30 | 5.84 | 8.36 | 4.54 | 4.00 | 5.95 |
| **13** | 6 | suburbs | 1.21 | 1.38 | 4.84 | 5.32 | 3.74 | 13.32 | 2.97 | 5.44 | 5.99 | 8.57 | 4.65 | 4.09 | 6.10 |
| **13** | 7 | cities | 1.60 | 1.83 | 6.40 | 7.04 | 4.96 | 17.51 | 3.94 | 7.20 | 7.92 | 11.26 | 6.16 | 5.37 | 8.08 |
| **13** | 7 | country | 1.52 | 1.73 | 6.06 | 6.67 | 4.70 | 16.62 | 3.73 | 6.83 | 7.51 | 10.69 | 5.84 | 5.10 | 7.66 |
| **13** | 7 | suburbs | 1.55 | 1.77 | 6.19 | 6.81 | 4.80 | 16.96 | 3.81 | 6.97 | 7.67 | 10.91 | 5.96 | 5.20 | 7.82 |
| **13** | 8 | cities | 3.33 | 3.80 | 13.54 | 14.96 | 10.29 | 38.37 | 8.19 | 15.09 | 16.72 | 24.73 | 12.91 | 11.89 | 16.91 |
| **13** | 8 | country | 3.12 | 3.56 | 12.68 | 14.01 | 9.64 | 35.95 | 7.66 | 14.13 | 15.66 | 23.17 | 12.09 | 11.14 | 15.83 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | 8 | suburbs | 3.21 | 3.66 | 13.03 | 14.40 | 9.91 | 36.93 | 7.88 | 14.53 | 16.10 | 23.80 | 12.43 | 11.45 | 16.28 |
| **13** | 17 | cities | 1.48 | 1.69 | 5.92 | 6.52 | 4.60 | 16.23 | 3.64 | 6.67 | 7.34 | 10.44 | 5.70 | 4.98 | 7.48 |
| **13** | 17 | country | 1.42 | 1.62 | 5.66 | 6.23 | 4.39 | 15.52 | 3.48 | 6.38 | 7.02 | 9.99 | 5.45 | 4.76 | 7.15 |
| **13** | 17 | suburbs | 1.44 | 1.65 | 5.77 | 6.35 | 4.48 | 15.82 | 3.55 | 6.50 | 7.15 | 10.18 | 5.55 | 4.86 | 7.29 |
| **13** | 18 | cities | 1.49 | 1.70 | 5.97 | 6.56 | 4.63 | 16.35 | 3.67 | 6.72 | 7.39 | 10.52 | 5.74 | 5.02 | 7.53 |
| **13** | 18 | country | 1.42 | 1.63 | 5.69 | 6.26 | 4.41 | 15.61 | 3.50 | 6.41 | 7.05 | 10.04 | 5.48 | 4.79 | 7.19 |
| **13** | 18 | suburbs | 1.45 | 1.66 | 5.80 | 6.38 | 4.50 | 15.90 | 3.56 | 6.53 | 7.18 | 10.23 | 5.58 | 4.88 | 7.32 |
| **13** | 19 | cities | 2.38 | 2.72 | 9.56 | 10.52 | 7.38 | 26.37 | 5.86 | 10.73 | 11.83 | 16.97 | 9.18 | 8.11 | 12.04 |
| **13** | 19 | country | 2.27 | 2.60 | 9.13 | 10.06 | 7.05 | 25.23 | 5.59 | 10.25 | 11.30 | 16.23 | 8.77 | 7.76 | 11.50 |
| **13** | 19 | suburbs | 2.31 | 2.64 | 9.30 | 10.24 | 7.18 | 25.68 | 5.69 | 10.44 | 11.51 | 16.52 | 8.93 | 7.90 | 11.71 |
| **13** | 20 | cities | 4.99 | 5.69 | 20.23 | 22.34 | 15.44 | 56.99 | 12.27 | 22.59 | 25.00 | 36.71 | 19.33 | 17.63 | 25.32 |
| **13** | 20 | country | 4.60 | 5.24 | 18.65 | 20.59 | 14.21 | 52.60 | 11.30 | 20.81 | 23.04 | 33.89 | 17.81 | 16.28 | 23.32 |
| **13** | 20 | suburbs | 4.76 | 5.43 | 19.31 | 21.32 | 14.72 | 54.43 | 11.70 | 21.55 | 23.86 | 35.07 | 18.44 | 16.84 | 24.15 |
| **14** | 5 | cities | 1.24 | 0.91 | 3.48 | 4.72 | 2.22 | 2.27 | 2.45 | 3.76 | 5.00 | 8.99 | 3.88 | 3.10 | 4.99 |
| **14** | 5 | country | 1.16 | 0.85 | 3.27 | 4.44 | 2.08 | 2.14 | 2.30 | 3.53 | 4.70 | 8.46 | 3.65 | 2.92 | 4.70 |
| **14** | 5 | suburbs | 1.19 | 0.88 | 3.35 | 4.55 | 2.14 | 2.19 | 2.36 | 3.62 | 4.82 | 8.67 | 3.74 | 2.99 | 4.81 |
| **14** | 6 | cities | 1.26 | 0.93 | 3.55 | 4.81 | 2.26 | 2.32 | 2.50 | 3.83 | 5.09 | 9.16 | 3.95 | 3.16 | 5.09 |
| **14** | 6 | country | 1.19 | 0.87 | 3.33 | 4.52 | 2.12 | 2.19 | 2.35 | 3.60 | 4.79 | 8.62 | 3.72 | 2.98 | 4.79 |
| **14** | 6 | suburbs | 1.22 | 0.89 | 3.42 | 4.64 | 2.18 | 2.23 | 2.41 | 3.69 | 4.91 | 8.83 | 3.81 | 3.04 | 4.91 |
| **14** | 7 | cities | 1.59 | 1.16 | 4.46 | 6.05 | 2.84 | 2.89 | 3.15 | 4.82 | 6.40 | 11.50 | 4.97 | 3.94 | 6.39 |
| **14** | 7 | country | 1.50 | 1.10 | 4.22 | 5.72 | 2.69 | 2.74 | 2.98 | 4.56 | 6.06 | 10.89 | 4.71 | 3.74 | 6.05 |
| **14** | 7 | suburbs | 1.54 | 1.13 | 4.31 | 5.85 | 2.75 | 2.79 | 3.04 | 4.66 | 6.19 | 11.12 | 4.81 | 3.82 | 6.18 |
| **14** | 8 | cities | 3.46 | 2.55 | 9.80 | 13.29 | 6.17 | 6.73 | 6.84 | 10.50 | 14.02 | 25.47 | 10.87 | 9.06 | 14.11 |
| **14** | 8 | country | 3.24 | 2.39 | 9.18 | 12.45 | 5.79 | 6.28 | 6.41 | 9.85 | 13.14 | 23.86 | 10.19 | 8.46 | 13.22 |
| **14** | 8 | suburbs | 3.33 | 2.45 | 9.43 | 12.79 | 5.95 | 6.44 | 6.59 | 10.12 | 13.49 | 24.49 | 10.46 | 8.68 | 13.57 |
| **14** | 17 | cities | 1.43 | 1.05 | 4.01 | 5.44 | 2.56 | 2.60 | 2.83 | 4.34 | 5.76 | 10.35 | 4.48 | 3.55 | 5.75 |
| **14** | 17 | country | 1.38 | 1.01 | 3.86 | 5.24 | 2.46 | 2.52 | 2.72 | 4.17 | 5.55 | 9.98 | 4.31 | 3.43 | 5.54 |

## CORK SLAB

| Country | Arc | GL | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **14** | 17 | suburbs | 1.40 | 1.02 | 3.92 | 5.32 | 2.50 | 2.54 | 2.77 | 4.24 | 5.63 | 10.12 | 4.37 | 3.47 | 5.62 |
| **14** | 18 | cities | 1.44 | 1.05 | 4.03 | 5.46 | 2.57 | 2.61 | 2.84 | 4.35 | 5.79 | 10.39 | 4.49 | 3.56 | 5.78 |
| **14** | 18 | country | 1.38 | 1.01 | 3.88 | 5.26 | 2.47 | 2.53 | 2.73 | 4.19 | 5.57 | 10.01 | 4.32 | 3.44 | 5.56 |
| **14** | 18 | suburbs | 1.40 | 1.03 | 3.94 | 5.34 | 2.51 | 2.55 | 2.78 | 4.25 | 5.65 | 10.16 | 4.39 | 3.49 | 5.65 |
| **14** | 19 | cities | 2.36 | 1.74 | 6.65 | 9.02 | 4.23 | 4.37 | 4.68 | 7.17 | 9.54 | 17.19 | 7.41 | 5.94 | 9.55 |
| **14** | 19 | country | 2.25 | 1.65 | 6.34 | 8.60 | 4.03 | 4.17 | 4.46 | 6.84 | 9.10 | 16.39 | 7.07 | 5.67 | 9.10 |
| **14** | 19 | suburbs | 2.30 | 1.69 | 6.47 | 8.78 | 4.12 | 4.25 | 4.55 | 6.98 | 9.28 | 16.72 | 7.21 | 5.78 | 9.29 |
| **14** | 20 | cities | 4.76 | 3.50 | 13.46 | 18.25 | 8.51 | 9.08 | 9.42 | 14.46 | 19.28 | 34.90 | 14.95 | 12.28 | 19.36 |
| **14** | 20 | country | 4.49 | 3.30 | 12.69 | 17.21 | 8.02 | 8.59 | 8.88 | 13.63 | 18.17 | 32.92 | 14.09 | 11.61 | 18.25 |
| **14** | 20 | suburbs | 4.66 | 3.43 | 13.18 | 17.87 | 8.33 | 8.90 | 9.23 | 14.16 | 18.88 | 34.18 | 14.64 | 12.03 | 18.95 |
| **15** | 5 | cities | 0.71 | 0.54 | 2.37 | 2.51 | 1.93 | 2.34 | 1.67 | 2.26 | 2.78 | 3.36 | 2.32 | 2.13 | 3.10 |
| **15** | 5 | country | 0.65 | 0.49 | 2.16 | 2.29 | 1.76 | 2.13 | 1.52 | 2.06 | 2.54 | 3.06 | 2.12 | 1.94 | 2.83 |
| **15** | 5 | suburbs | 0.68 | 0.51 | 2.25 | 2.38 | 1.83 | 2.22 | 1.58 | 2.14 | 2.64 | 3.18 | 2.20 | 2.02 | 2.94 |
| **15** | 6 | cities | 0.72 | 0.55 | 2.41 | 2.55 | 1.96 | 2.38 | 1.70 | 2.30 | 2.83 | 3.41 | 2.36 | 2.16 | 3.15 |
| **15** | 6 | country | 0.66 | 0.50 | 2.20 | 2.32 | 1.78 | 2.16 | 1.55 | 2.09 | 2.58 | 3.11 | 2.15 | 1.97 | 2.87 |
| **15** | 6 | suburbs | 0.69 | 0.52 | 2.29 | 2.42 | 1.86 | 2.25 | 1.61 | 2.18 | 2.68 | 3.24 | 2.24 | 2.05 | 2.99 |
| **15** | 7 | cities | 0.94 | 0.72 | 3.14 | 3.33 | 2.56 | 3.10 | 2.21 | 2.99 | 3.69 | 4.45 | 3.08 | 2.82 | 4.11 |
| **15** | 7 | country | 0.87 | 0.66 | 2.89 | 3.06 | 2.35 | 2.85 | 2.04 | 2.75 | 3.39 | 4.09 | 2.83 | 2.59 | 3.78 |
| **15** | 7 | suburbs | 0.90 | 0.68 | 3.00 | 3.17 | 2.44 | 2.95 | 2.11 | 2.85 | 3.52 | 4.24 | 2.93 | 2.69 | 3.92 |
| **15** | 8 | cities | 1.60 | 1.21 | 5.35 | 5.67 | 4.33 | 5.28 | 3.75 | 5.08 | 6.27 | 7.63 | 5.22 | 4.82 | 6.98 |
| **15** | 8 | country | 1.50 | 1.14 | 5.01 | 5.32 | 4.05 | 4.95 | 3.51 | 4.76 | 5.88 | 7.21 | 4.89 | 4.54 | 6.53 |
| **15** | 8 | suburbs | 1.54 | 1.17 | 5.16 | 5.47 | 4.17 | 5.10 | 3.61 | 4.90 | 6.05 | 7.39 | 5.04 | 4.67 | 6.72 |
| **15** | 17 | cities | 0.90 | 0.68 | 2.98 | 3.16 | 2.42 | 2.94 | 2.10 | 2.84 | 3.50 | 4.22 | 2.92 | 2.68 | 3.90 |
| **15** | 17 | country | 0.82 | 0.62 | 2.73 | 2.89 | 2.22 | 2.69 | 1.92 | 2.60 | 3.21 | 3.87 | 2.68 | 2.45 | 3.58 |
| **15** | 17 | suburbs | 0.85 | 0.65 | 2.84 | 3.00 | 2.31 | 2.79 | 2.00 | 2.70 | 3.33 | 4.01 | 2.78 | 2.55 | 3.71 |
| **15** | 18 | cities | 0.90 | 0.69 | 3.01 | 3.18 | 2.44 | 2.96 | 2.12 | 2.86 | 3.53 | 4.25 | 2.95 | 2.70 | 3.93 |
| **15** | 18 | country | 0.83 | 0.63 | 2.76 | 2.92 | 2.24 | 2.71 | 1.94 | 2.62 | 3.23 | 3.90 | 2.70 | 2.47 | 3.60 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **15** | 18 | suburbs | 0.86 | 0.65 | 2.86 | 3.03 | 2.33 | 2.82 | 2.01 | 2.72 | 3.36 | 4.05 | 2.80 | 2.57 | 3.74 |
| **15** | 19 | cities | 1.37 | 1.04 | 4.57 | 4.83 | 3.71 | 4.50 | 3.21 | 4.35 | 5.36 | 6.46 | 4.47 | 4.10 | 5.97 |
| **15** | 19 | country | 1.27 | 0.96 | 4.24 | 4.50 | 3.44 | 4.18 | 2.98 | 4.04 | 4.98 | 6.04 | 4.15 | 3.82 | 5.54 |
| **15** | 19 | suburbs | 1.32 | 1.00 | 4.39 | 4.64 | 3.56 | 4.32 | 3.08 | 4.17 | 5.15 | 6.22 | 4.29 | 3.94 | 5.73 |
| **15** | 20 | cities | 2.69 | 2.04 | 8.98 | 9.53 | 7.26 | 8.87 | 6.29 | 8.53 | 10.54 | 12.87 | 8.77 | 8.12 | 11.71 |
| **15** | 20 | country | 2.51 | 1.90 | 8.49 | 9.04 | 6.77 | 8.43 | 5.87 | 8.00 | 9.94 | 12.54 | 8.22 | 7.83 | 10.96 |
| **15** | 20 | suburbs | 2.59 | 1.96 | 8.70 | 9.25 | 6.99 | 8.61 | 6.06 | 8.23 | 10.20 | 12.63 | 8.47 | 7.93 | 11.30 |
| **16** | 5 | cities | 0.95 | 1.17 | 2.43 | 2.56 | 2.79 | 5.62 | 2.08 | 2.36 | 3.41 | 3.50 | 2.54 | 1.44 | 4.61 |
| **16** | 5 | country | 0.82 | 1.02 | 2.11 | 2.23 | 2.43 | 4.89 | 1.81 | 2.06 | 2.97 | 3.05 | 2.21 | 1.25 | 4.02 |
| **16** | 5 | suburbs | 0.88 | 1.08 | 2.24 | 2.36 | 2.58 | 5.20 | 1.92 | 2.19 | 3.16 | 3.24 | 2.35 | 1.33 | 4.27 |
| **16** | 6 | cities | 0.97 | 1.20 | 2.49 | 2.62 | 2.86 | 5.77 | 2.13 | 2.43 | 3.51 | 3.60 | 2.61 | 1.48 | 4.73 |
| **16** | 6 | country | 0.85 | 1.05 | 2.17 | 2.29 | 2.49 | 5.03 | 1.86 | 2.11 | 3.05 | 3.13 | 2.27 | 1.29 | 4.12 |
| **16** | 6 | suburbs | 0.90 | 1.11 | 2.30 | 2.43 | 2.65 | 5.34 | 1.97 | 2.24 | 3.24 | 3.33 | 2.41 | 1.37 | 4.38 |
| **16** | 7 | cities | 1.23 | 1.52 | 3.14 | 3.31 | 3.62 | 7.28 | 2.69 | 3.06 | 4.42 | 4.54 | 3.29 | 1.86 | 5.98 |
| **16** | 7 | country | 1.07 | 1.33 | 2.74 | 2.89 | 3.15 | 6.35 | 2.35 | 2.67 | 3.86 | 3.96 | 2.87 | 1.62 | 5.21 |
| **16** | 7 | suburbs | 1.14 | 1.41 | 2.92 | 3.07 | 3.35 | 6.75 | 2.50 | 2.84 | 4.10 | 4.21 | 3.05 | 1.73 | 5.55 |
| **16** | 8 | cities | 2.75 | 3.30 | 7.50 | 7.94 | 8.16 | 17.48 | 6.16 | 7.34 | 10.48 | 11.22 | 7.80 | 4.68 | 13.48 |
| **16** | 8 | country | 2.38 | 2.90 | 6.31 | 6.67 | 7.04 | 14.66 | 5.28 | 6.16 | 8.85 | 9.29 | 6.58 | 3.84 | 11.63 |
| **16** | 8 | suburbs | 2.53 | 3.07 | 6.80 | 7.19 | 7.50 | 15.82 | 5.65 | 6.64 | 9.52 | 10.07 | 7.09 | 4.18 | 12.40 |
| **16** | 17 | cities | 1.15 | 1.43 | 2.96 | 3.11 | 3.40 | 6.84 | 2.53 | 2.88 | 4.16 | 4.27 | 3.10 | 1.75 | 5.62 |
| **16** | 17 | country | 1.02 | 1.26 | 2.61 | 2.75 | 3.00 | 6.04 | 2.23 | 2.54 | 3.67 | 3.77 | 2.73 | 1.55 | 4.96 |
| **16** | 17 | suburbs | 1.08 | 1.33 | 2.75 | 2.90 | 3.17 | 6.38 | 2.36 | 2.68 | 3.88 | 3.98 | 2.88 | 1.63 | 5.24 |
| **16** | 18 | cities | 1.17 | 1.45 | 3.00 | 3.16 | 3.45 | 6.94 | 2.57 | 2.92 | 4.22 | 4.33 | 3.14 | 1.78 | 5.70 |
| **16** | 18 | country | 1.03 | 1.28 | 2.65 | 2.79 | 3.04 | 6.13 | 2.26 | 2.58 | 3.72 | 3.82 | 2.77 | 1.57 | 5.03 |
| **16** | 18 | suburbs | 1.09 | 1.35 | 2.79 | 2.94 | 3.21 | 6.47 | 2.39 | 2.72 | 3.93 | 4.03 | 2.93 | 1.65 | 5.31 |
| **16** | 19 | cities | 1.90 | 2.34 | 4.93 | 5.19 | 5.61 | 11.42 | 4.19 | 4.80 | 6.92 | 7.15 | 5.15 | 2.94 | 9.27 |
| **16** | 19 | country | 1.70 | 2.09 | 4.36 | 4.59 | 4.99 | 10.09 | 3.72 | 4.25 | 6.13 | 6.31 | 4.56 | 2.59 | 8.26 |

## CORK SLAB

| Country | Arc | GL | $\mathrm{PBT}_{\mathrm{CC}}$ | $\mathrm{PBT}_{\mathrm{OD}}$ | $\mathrm{PBT}_{\mathrm{HT\_CE}}$ | $\mathrm{PBT}_{\mathrm{HT\_nCE}}$ | $\mathrm{PBT}_{\mathrm{PM}}$ | $\mathrm{PBT}_{\mathrm{IR\_hh}}$ | $\mathrm{PBT}_{\mathrm{POF}}$ | $\mathrm{PBT}_{\mathrm{AC}}$ | $\mathrm{PBT}_{\mathrm{ET}}$ | $\mathrm{PBT}_{\mathrm{EuF}}$ | $\mathrm{PBT}_{\mathrm{EuM}}$ | $\mathrm{PBT}_{\mathrm{Ec\_FW}}$ | $\mathrm{PBT}_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16** | 19 | suburbs | 1.78 | 2.20 | 4.59 | 4.84 | 5.25 | 10.63 | 3.91 | 4.47 | 6.45 | 6.65 | 4.80 | 2.73 | 8.68 |
| **16** | 20 | cities | 4.40 | 5.32 | 11.85 | 12.54 | 13.04 | 27.59 | 9.82 | 11.58 | 16.58 | 17.60 | 12.35 | 7.32 | 21.53 |
| **16** | 20 | country | 3.82 | 4.66 | 10.10 | 10.66 | 11.29 | 23.45 | 8.47 | 9.85 | 14.16 | 14.83 | 10.54 | 6.13 | 18.66 |
| **16** | 20 | suburbs | 4.06 | 4.93 | 10.81 | 11.43 | 12.01 | 25.14 | 9.03 | 10.56 | 15.15 | 15.96 | 11.28 | 6.61 | 19.85 |
| **17** | 5 | cities | 1.60 | 1.97 | 3.54 | 3.91 | 2.90 | 4.55 | 3.10 | 2.99 | 4.93 | 3.80 | 3.61 | 3.25 | 9.22 |
| **17** | 5 | country | 1.49 | 1.83 | 3.29 | 3.63 | 2.69 | 4.23 | 2.87 | 2.78 | 4.57 | 3.53 | 3.35 | 3.02 | 8.56 |
| **17** | 5 | suburbs | 1.54 | 1.89 | 3.40 | 3.75 | 2.78 | 4.37 | 2.97 | 2.87 | 4.73 | 3.65 | 3.46 | 3.12 | 8.85 |
| **17** | 6 | cities | 1.64 | 2.02 | 3.62 | 3.99 | 2.96 | 4.65 | 3.16 | 3.06 | 5.03 | 3.88 | 3.68 | 3.32 | 9.42 |
| **17** | 6 | country | 1.52 | 1.87 | 3.36 | 3.71 | 2.75 | 4.32 | 2.93 | 2.83 | 4.67 | 3.60 | 3.42 | 3.09 | 8.74 |
| **17** | 6 | suburbs | 1.57 | 1.93 | 3.47 | 3.83 | 2.84 | 4.47 | 3.03 | 2.93 | 4.83 | 3.73 | 3.53 | 3.19 | 9.04 |
| **17** | 7 | cities | 2.11 | 2.60 | 4.66 | 5.14 | 3.82 | 5.97 | 4.08 | 3.94 | 6.49 | 4.99 | 4.75 | 4.27 | 12.14 |
| **17** | 7 | country | 1.97 | 2.43 | 4.35 | 4.80 | 3.57 | 5.58 | 3.80 | 3.68 | 6.05 | 4.66 | 4.43 | 3.99 | 11.33 |
| **17** | 7 | suburbs | 2.03 | 2.50 | 4.48 | 4.95 | 3.68 | 5.75 | 3.92 | 3.79 | 6.24 | 4.81 | 4.57 | 4.11 | 11.68 |
| **17** | 8 | cities | 4.16 | 5.14 | 9.31 | 10.33 | 7.54 | 12.43 | 8.05 | 7.81 | 12.85 | 10.16 | 9.42 | 8.71 | 24.16 |
| **17** | 8 | country | 3.89 | 4.80 | 8.68 | 9.63 | 7.04 | 11.55 | 7.52 | 7.29 | 11.99 | 9.47 | 8.79 | 8.11 | 22.55 |
| **17** | 8 | suburbs | 4.01 | 4.96 | 8.97 | 9.95 | 7.27 | 11.98 | 7.76 | 7.53 | 12.38 | 9.80 | 9.08 | 8.39 | 23.29 |
| **17** | 17 | cities | 1.94 | 2.38 | 4.27 | 4.71 | 3.50 | 5.47 | 3.74 | 3.61 | 5.94 | 4.57 | 4.35 | 3.92 | 11.12 |
| **17** | 17 | country | 1.82 | 2.24 | 4.02 | 4.44 | 3.30 | 5.16 | 3.52 | 3.40 | 5.60 | 4.31 | 4.10 | 3.69 | 10.47 |
| **17** | 17 | suburbs | 1.87 | 2.30 | 4.13 | 4.56 | 3.39 | 5.30 | 3.61 | 3.49 | 5.75 | 4.43 | 4.21 | 3.79 | 10.76 |
| **17** | 18 | cities | 1.95 | 2.41 | 4.31 | 4.76 | 3.54 | 5.53 | 3.77 | 3.65 | 6.00 | 4.62 | 4.39 | 3.95 | 11.23 |
| **17** | 18 | country | 1.83 | 2.26 | 4.05 | 4.47 | 3.32 | 5.20 | 3.54 | 3.42 | 5.64 | 4.34 | 4.13 | 3.72 | 10.55 |
| **17** | 18 | suburbs | 1.89 | 2.32 | 4.16 | 4.59 | 3.41 | 5.34 | 3.64 | 3.52 | 5.79 | 4.46 | 4.24 | 3.82 | 10.84 |
| **17** | 19 | cities | 3.02 | 3.71 | 6.67 | 7.36 | 5.46 | 8.60 | 5.82 | 5.63 | 9.27 | 7.16 | 6.78 | 6.13 | 17.35 |
| **17** | 19 | country | 2.87 | 3.54 | 6.36 | 7.03 | 5.20 | 8.22 | 5.55 | 5.37 | 8.84 | 6.84 | 6.47 | 5.86 | 16.56 |
| **17** | 19 | suburbs | 2.94 | 3.62 | 6.50 | 7.18 | 5.31 | 8.39 | 5.67 | 5.48 | 9.03 | 6.99 | 6.61 | 5.98 | 16.91 |
| **17** | 20 | cities | 5.89 | 7.27 | 13.11 | 14.51 | 10.67 | 17.22 | 11.39 | 11.03 | 18.15 | 14.21 | 13.30 | 12.17 | 34.07 |
| **17** | 20 | country | 5.49 | 6.78 | 12.22 | 13.52 | 9.94 | 16.05 | 10.61 | 10.28 | 16.91 | 13.24 | 12.39 | 11.34 | 31.75 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17** | 20 | suburbs | 5.70 | 7.03 | 12.67 | 14.03 | 10.31 | 16.67 | 11.01 | 10.66 | 17.54 | 13.74 | 12.86 | 11.77 | 32.94 |
| **18** | 5 | cities | 1.04 | 0.97 | 1.80 | 2.35 | 1.12 | 3.56 | 1.58 | 2.34 | 2.66 | 2.09 | 2.44 | 1.79 | 4.57 |
| **18** | 5 | country | 0.96 | 0.89 | 1.66 | 2.18 | 1.03 | 3.30 | 1.45 | 2.16 | 2.46 | 1.96 | 2.25 | 1.67 | 4.22 |
| **18** | 5 | suburbs | 0.99 | 0.92 | 1.72 | 2.25 | 1.07 | 3.40 | 1.50 | 2.23 | 2.54 | 2.01 | 2.33 | 1.71 | 4.37 |
| **18** | 6 | cities | 1.06 | 0.99 | 1.83 | 2.39 | 1.14 | 3.62 | 1.61 | 2.38 | 2.71 | 2.13 | 2.49 | 1.82 | 4.65 |
| **18** | 6 | country | 0.97 | 0.91 | 1.69 | 2.22 | 1.05 | 3.37 | 1.48 | 2.20 | 2.51 | 2.00 | 2.30 | 1.70 | 4.30 |
| **18** | 6 | suburbs | 1.01 | 0.94 | 1.75 | 2.29 | 1.09 | 3.47 | 1.53 | 2.27 | 2.59 | 2.05 | 2.37 | 1.75 | 4.45 |
| **18** | 7 | cities | 1.38 | 1.29 | 2.38 | 3.09 | 1.49 | 4.69 | 2.10 | 3.10 | 3.51 | 2.74 | 3.24 | 2.34 | 6.05 |
| **18** | 7 | country | 1.28 | 1.19 | 2.21 | 2.88 | 1.38 | 4.36 | 1.94 | 2.88 | 3.27 | 2.56 | 3.00 | 2.19 | 5.62 |
| **18** | 7 | suburbs | 1.32 | 1.23 | 2.28 | 2.97 | 1.42 | 4.50 | 2.01 | 2.97 | 3.37 | 2.63 | 3.10 | 2.25 | 5.80 |
| **18** | 8 | cities | 2.54 | 2.35 | 4.51 | 6.04 | 2.71 | 9.09 | 3.83 | 5.78 | 6.71 | 5.59 | 6.04 | 4.73 | 11.39 |
| **18** | 8 | country | 2.39 | 2.21 | 4.30 | 5.83 | 2.54 | 8.74 | 3.60 | 5.47 | 6.42 | 5.50 | 5.72 | 4.62 | 10.83 |
| **18** | 8 | suburbs | 2.45 | 2.26 | 4.38 | 5.91 | 2.61 | 8.88 | 3.69 | 5.59 | 6.53 | 5.53 | 5.84 | 4.66 | 11.05 |
| **18** | 17 | cities | 1.30 | 1.22 | 2.25 | 2.93 | 1.41 | 4.44 | 1.99 | 2.93 | 3.33 | 2.59 | 3.06 | 2.22 | 5.73 |
| **18** | 17 | country | 1.21 | 1.14 | 2.10 | 2.74 | 1.31 | 4.15 | 1.85 | 2.74 | 3.11 | 2.44 | 2.86 | 2.08 | 5.35 |
| **18** | 17 | suburbs | 1.25 | 1.17 | 2.16 | 2.82 | 1.35 | 4.27 | 1.91 | 2.82 | 3.20 | 2.50 | 2.94 | 2.14 | 5.50 |
| **18** | 18 | cities | 1.31 | 1.23 | 2.27 | 2.95 | 1.42 | 4.47 | 2.00 | 2.95 | 3.35 | 2.61 | 3.08 | 2.23 | 5.77 |
| **18** | 18 | country | 1.22 | 1.14 | 2.12 | 2.76 | 1.32 | 4.19 | 1.86 | 2.76 | 3.13 | 2.46 | 2.88 | 2.10 | 5.39 |
| **18** | 18 | suburbs | 1.26 | 1.18 | 2.18 | 2.84 | 1.36 | 4.31 | 1.92 | 2.84 | 3.22 | 2.52 | 2.96 | 2.16 | 5.55 |
| **18** | 19 | cities | 2.04 | 1.90 | 3.54 | 4.63 | 2.20 | 7.01 | 3.10 | 4.60 | 5.24 | 4.14 | 4.80 | 3.53 | 8.99 |
| **18** | 19 | country | 1.91 | 1.78 | 3.33 | 4.39 | 2.05 | 6.63 | 2.89 | 4.31 | 4.94 | 3.96 | 4.51 | 3.37 | 8.46 |
| **18** | 19 | suburbs | 1.97 | 1.83 | 3.43 | 4.50 | 2.11 | 6.81 | 2.99 | 4.44 | 5.08 | 4.04 | 4.64 | 3.45 | 8.70 |
| **18** | 20 | cities | 4.01 | 3.73 | 7.06 | 9.37 | 4.30 | 14.14 | 6.07 | 9.10 | 10.49 | 8.55 | 9.51 | 7.26 | 17.88 |
| **18** | 20 | country | 3.75 | 3.47 | 6.68 | 8.99 | 3.99 | 13.51 | 5.65 | 8.55 | 9.96 | 8.37 | 8.93 | 7.06 | 16.86 |
| **18** | 20 | suburbs | 3.85 | 3.57 | 6.83 | 9.15 | 4.11 | 13.77 | 5.81 | 8.77 | 10.17 | 8.45 | 9.16 | 7.15 | 17.27 |
| **19** | 5 | cities | 0.90 | 0.81 | 0.82 | 1.70 | 0.36 | 2.46 | 0.66 | 1.55 | 1.67 | 1.57 | 1.41 | 1.00 | 3.64 |
| **19** | 5 | country | 0.83 | 0.75 | 0.76 | 1.58 | 0.33 | 2.28 | 0.61 | 1.43 | 1.54 | 1.45 | 1.30 | 0.92 | 3.37 |

## CORK SLAB

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **19** | 5 | suburbs | 0.86 | 0.78 | 0.79 | 1.64 | 0.35 | 2.37 | 0.64 | 1.49 | 1.60 | 1.51 | 1.35 | 0.96 | 3.50 |
| **19** | 6 | cities | 0.91 | 0.82 | 0.84 | 1.73 | 0.37 | 2.50 | 0.67 | 1.57 | 1.69 | 1.59 | 1.43 | 1.01 | 3.70 |
| **19** | 6 | country | 0.84 | 0.76 | 0.78 | 1.60 | 0.34 | 2.32 | 0.62 | 1.46 | 1.57 | 1.47 | 1.32 | 0.94 | 3.43 |
| **19** | 6 | suburbs | 0.88 | 0.79 | 0.81 | 1.66 | 0.35 | 2.41 | 0.65 | 1.52 | 1.63 | 1.53 | 1.38 | 0.98 | 3.56 |
| **19** | 7 | cities | 1.22 | 1.10 | 1.12 | 2.32 | 0.49 | 3.35 | 0.90 | 2.11 | 2.27 | 2.13 | 1.92 | 1.36 | 4.97 |
| **19** | 7 | country | 1.13 | 1.03 | 1.04 | 2.15 | 0.45 | 3.11 | 0.84 | 1.96 | 2.11 | 1.98 | 1.78 | 1.26 | 4.61 |
| **19** | 7 | suburbs | 1.18 | 1.06 | 1.08 | 2.23 | 0.47 | 3.23 | 0.87 | 2.04 | 2.19 | 2.06 | 1.85 | 1.31 | 4.79 |
| **19** | 8 | cities | 2.27 | 2.04 | 2.09 | 4.34 | 0.91 | 6.28 | 1.67 | 3.92 | 4.23 | 4.02 | 3.56 | 2.57 | 9.26 |
| **19** | 8 | country | 2.11 | 1.90 | 1.94 | 4.03 | 0.84 | 5.83 | 1.55 | 3.65 | 3.93 | 3.73 | 3.31 | 2.38 | 8.60 |
| **19** | 8 | suburbs | 2.18 | 1.97 | 2.01 | 4.18 | 0.87 | 6.04 | 1.61 | 3.78 | 4.07 | 3.86 | 3.43 | 2.47 | 8.92 |
| **19** | 17 | cities | 1.14 | 1.03 | 1.05 | 2.17 | 0.46 | 3.14 | 0.84 | 1.98 | 2.13 | 2.00 | 1.79 | 1.27 | 4.65 |
| **19** | 17 | country | 1.07 | 0.97 | 0.98 | 2.03 | 0.43 | 2.93 | 0.79 | 1.85 | 1.99 | 1.87 | 1.68 | 1.19 | 4.34 |
| **19** | 17 | suburbs | 1.10 | 1.00 | 1.02 | 2.09 | 0.44 | 3.03 | 0.82 | 1.91 | 2.05 | 1.93 | 1.73 | 1.23 | 4.49 |
| **19** | 18 | cities | 1.15 | 1.04 | 1.06 | 2.18 | 0.46 | 3.16 | 0.85 | 1.99 | 2.14 | 2.01 | 1.81 | 1.28 | 4.68 |
| **19** | 18 | country | 1.08 | 0.97 | 0.99 | 2.04 | 0.43 | 2.95 | 0.79 | 1.86 | 2.00 | 1.88 | 1.69 | 1.20 | 4.37 |
| **19** | 18 | suburbs | 1.11 | 1.00 | 1.02 | 2.11 | 0.45 | 3.05 | 0.82 | 1.92 | 2.07 | 1.94 | 1.75 | 1.24 | 4.52 |
| **19** | 19 | cities | 1.75 | 1.58 | 1.61 | 3.33 | 0.70 | 4.82 | 1.29 | 3.03 | 3.26 | 3.07 | 2.75 | 1.96 | 7.14 |
| **19** | 19 | country | 1.64 | 1.48 | 1.51 | 3.12 | 0.66 | 4.52 | 1.21 | 2.84 | 3.06 | 2.88 | 2.58 | 1.84 | 6.68 |
| **19** | 19 | suburbs | 1.69 | 1.53 | 1.56 | 3.22 | 0.68 | 4.66 | 1.25 | 2.93 | 3.15 | 2.97 | 2.66 | 1.89 | 6.90 |
| **19** | 20 | cities | 3.41 | 3.08 | 3.15 | 6.53 | 1.36 | 9.44 | 2.52 | 5.91 | 6.36 | 6.04 | 5.36 | 3.85 | 13.94 |
| **19** | 20 | country | 3.19 | 2.88 | 2.94 | 6.10 | 1.28 | 8.82 | 2.35 | 5.52 | 5.95 | 5.64 | 5.01 | 3.60 | 13.02 |
| **19** | 20 | suburbs | 3.30 | 2.98 | 3.04 | 6.30 | 1.32 | 9.12 | 2.43 | 5.71 | 6.15 | 5.83 | 5.18 | 3.72 | 13.47 |
| **20** | 5 | cities | 0.73 | 1.24 | 0.65 | 1.02 | 0.35 | 2.00 | 0.64 | 0.99 | 1.63 | 0.80 | 1.14 | 0.93 | 4.85 |
| **20** | 5 | country | 0.68 | 1.15 | 0.61 | 0.95 | 0.32 | 1.87 | 0.60 | 0.92 | 1.52 | 0.74 | 1.07 | 0.87 | 4.52 |
| **20** | 5 | suburbs | 0.70 | 1.19 | 0.62 | 0.98 | 0.33 | 1.93 | 0.62 | 0.95 | 1.56 | 0.77 | 1.10 | 0.89 | 4.66 |
| **20** | 6 | cities | 0.74 | 1.26 | 0.66 | 1.04 | 0.35 | 2.04 | 0.65 | 1.01 | 1.66 | 0.81 | 1.16 | 0.95 | 4.93 |
| **20** | 6 | country | 0.69 | 1.17 | 0.62 | 0.97 | 0.33 | 1.90 | 0.61 | 0.94 | 1.55 | 0.76 | 1.08 | 0.88 | 4.60 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **20** | 6 | suburbs | 0.71 | 1.21 | 0.63 | 1.00 | 0.34 | 1.96 | 0.63 | 0.97 | 1.59 | 0.78 | 1.12 | 0.91 | 4.74 |
| **20** | 7 | cities | 0.96 | 1.63 | 0.86 | 1.34 | 0.46 | 2.64 | 0.85 | 1.30 | 2.15 | 1.05 | 1.51 | 1.22 | 6.39 |
| **20** | 7 | country | 0.90 | 1.53 | 0.80 | 1.26 | 0.43 | 2.48 | 0.79 | 1.22 | 2.02 | 0.99 | 1.41 | 1.15 | 6.00 |
| **20** | 7 | suburbs | 0.92 | 1.57 | 0.82 | 1.29 | 0.44 | 2.54 | 0.82 | 1.26 | 2.07 | 1.01 | 1.45 | 1.18 | 6.16 |
| **20** | 8 | cities | 1.91 | 3.26 | 1.71 | 2.71 | 0.91 | 5.38 | 1.69 | 2.60 | 4.30 | 2.13 | 3.02 | 2.48 | 12.84 |
| **20** | 8 | country | 1.78 | 3.04 | 1.60 | 2.53 | 0.85 | 5.01 | 1.58 | 2.43 | 4.01 | 1.99 | 2.81 | 2.31 | 11.98 |
| **20** | 8 | suburbs | 1.84 | 3.13 | 1.65 | 2.60 | 0.88 | 5.15 | 1.62 | 2.50 | 4.13 | 2.04 | 2.90 | 2.38 | 12.34 |
| **20** | 17 | cities | 0.86 | 1.46 | 0.77 | 1.21 | 0.41 | 2.37 | 0.76 | 1.17 | 1.93 | 0.94 | 1.35 | 1.10 | 5.74 |
| **20** | 17 | country | 0.81 | 1.39 | 0.73 | 1.14 | 0.39 | 2.25 | 0.72 | 1.11 | 1.83 | 0.89 | 1.28 | 1.04 | 5.44 |
| **20** | 17 | suburbs | 0.83 | 1.42 | 0.75 | 1.17 | 0.40 | 2.30 | 0.74 | 1.14 | 1.87 | 0.92 | 1.31 | 1.07 | 5.57 |
| **20** | 18 | cities | 0.86 | 1.47 | 0.77 | 1.21 | 0.41 | 2.38 | 0.76 | 1.18 | 1.94 | 0.95 | 1.36 | 1.10 | 5.77 |
| **20** | 18 | country | 0.82 | 1.39 | 0.73 | 1.15 | 0.39 | 2.26 | 0.72 | 1.11 | 1.84 | 0.90 | 1.29 | 1.04 | 5.46 |
| **20** | 18 | suburbs | 0.84 | 1.43 | 0.75 | 1.18 | 0.40 | 2.31 | 0.74 | 1.14 | 1.88 | 0.92 | 1.32 | 1.07 | 5.59 |
| **20** | 19 | cities | 1.37 | 2.33 | 1.23 | 1.93 | 0.66 | 3.79 | 1.21 | 1.87 | 3.08 | 1.51 | 2.16 | 1.76 | 9.16 |
| **20** | 19 | country | 1.30 | 2.22 | 1.17 | 1.83 | 0.63 | 3.61 | 1.15 | 1.78 | 2.93 | 1.44 | 2.05 | 1.67 | 8.72 |
| **20** | 19 | suburbs | 1.33 | 2.27 | 1.19 | 1.87 | 0.64 | 3.69 | 1.18 | 1.82 | 2.99 | 1.47 | 2.10 | 1.71 | 8.91 |
| **20** | 20 | cities | 2.60 | 4.44 | 2.33 | 3.68 | 1.25 | 7.28 | 2.30 | 3.55 | 5.85 | 2.89 | 4.10 | 3.36 | 17.45 |
| **20** | 20 | country | 2.45 | 4.18 | 2.19 | 3.46 | 1.17 | 6.85 | 2.16 | 3.34 | 5.51 | 2.72 | 3.86 | 3.16 | 16.43 |
| **20** | 20 | suburbs | 2.52 | 4.29 | 2.26 | 3.56 | 1.21 | 7.04 | 2.23 | 3.43 | 5.66 | 2.79 | 3.97 | 3.25 | 16.89 |
| **21** | 5 | cities | 0.78 | 2.03 | 0.76 | 1.31 | 0.41 | 10.60 | 0.84 | 0.81 | 2.02 | 1.41 | 1.47 | 1.81 | 11.99 |
| **21** | 5 | country | 0.71 | 1.85 | 0.69 | 1.19 | 0.38 | 9.63 | 0.77 | 0.73 | 1.84 | 1.28 | 1.34 | 1.65 | 10.88 |
| **21** | 5 | suburbs | 0.74 | 1.93 | 0.72 | 1.24 | 0.39 | 10.04 | 0.80 | 0.76 | 1.92 | 1.34 | 1.39 | 1.72 | 11.35 |
| **21** | 6 | cities | 0.80 | 2.07 | 0.78 | 1.33 | 0.42 | 10.80 | 0.86 | 0.82 | 2.06 | 1.44 | 1.50 | 1.85 | 12.21 |
| **21** | 6 | country | 0.72 | 1.88 | 0.71 | 1.21 | 0.38 | 9.80 | 0.78 | 0.75 | 1.87 | 1.30 | 1.36 | 1.68 | 11.08 |
| **21** | 6 | suburbs | 0.75 | 1.96 | 0.74 | 1.26 | 0.40 | 10.22 | 0.81 | 0.78 | 1.95 | 1.36 | 1.42 | 1.75 | 11.56 |
| **21** | 7 | cities | 1.04 | 2.71 | 1.02 | 1.74 | 0.55 | 14.13 | 1.12 | 1.08 | 2.70 | 1.88 | 1.96 | 2.41 | 15.97 |
| **21** | 7 | country | 0.96 | 2.49 | 0.93 | 1.59 | 0.51 | 12.94 | 1.03 | 0.99 | 2.47 | 1.72 | 1.79 | 2.20 | 14.62 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **21** | 7 | suburbs | 0.99 | 2.58 | 0.97 | 1.66 | 0.53 | 13.46 | 1.07 | 1.02 | 2.57 | 1.78 | 1.87 | 2.29 | 15.20 |
| **21** | 8 | cities | 1.86 | 4.83 | 1.82 | 3.13 | 0.98 | 25.29 | 2.00 | 1.92 | 4.82 | 3.40 | 3.51 | 4.37 | 28.67 |
| **21** | 8 | country | 1.73 | 4.48 | 1.69 | 2.90 | 0.91 | 23.45 | 1.86 | 1.78 | 4.47 | 3.15 | 3.25 | 4.06 | 26.59 |
| **21** | 8 | suburbs | 1.80 | 4.66 | 1.76 | 3.03 | 0.95 | 24.43 | 1.94 | 1.86 | 4.66 | 3.28 | 3.39 | 4.23 | 27.70 |
| **21** | 17 | cities | 0.97 | 2.52 | 0.94 | 1.62 | 0.51 | 13.12 | 1.04 | 1.00 | 2.51 | 1.74 | 1.82 | 2.24 | 14.83 |
| **21** | 17 | country | 0.89 | 2.32 | 0.87 | 1.49 | 0.47 | 12.07 | 0.96 | 0.92 | 2.30 | 1.60 | 1.67 | 2.06 | 13.63 |
| **21** | 17 | suburbs | 0.92 | 2.40 | 0.90 | 1.54 | 0.49 | 12.52 | 1.00 | 0.95 | 2.39 | 1.66 | 1.74 | 2.13 | 14.14 |
| **21** | 18 | cities | 0.98 | 2.54 | 0.95 | 1.63 | 0.52 | 13.23 | 1.05 | 1.01 | 2.53 | 1.76 | 1.83 | 2.26 | 14.95 |
| **21** | 18 | country | 0.90 | 2.33 | 0.87 | 1.50 | 0.48 | 12.15 | 0.97 | 0.92 | 2.32 | 1.61 | 1.68 | 2.07 | 13.73 |
| **21** | 18 | suburbs | 0.93 | 2.42 | 0.91 | 1.55 | 0.49 | 12.60 | 1.00 | 0.96 | 2.41 | 1.67 | 1.75 | 2.15 | 14.24 |
| **21** | 19 | cities | 1.49 | 3.87 | 1.45 | 2.49 | 0.79 | 20.18 | 1.60 | 1.54 | 3.85 | 2.69 | 2.80 | 3.46 | 22.83 |
| **21** | 19 | country | 1.38 | 3.59 | 1.35 | 2.31 | 0.73 | 18.73 | 1.49 | 1.43 | 3.58 | 2.50 | 2.60 | 3.21 | 21.19 |
| **21** | 19 | suburbs | 1.43 | 3.71 | 1.39 | 2.39 | 0.76 | 19.37 | 1.54 | 1.47 | 3.70 | 2.58 | 2.69 | 3.32 | 21.91 |
| **21** | 20 | cities | 2.91 | 7.56 | 2.84 | 4.89 | 1.54 | 39.52 | 3.13 | 3.01 | 7.54 | 5.29 | 5.48 | 6.81 | 44.77 |
| **21** | 20 | country | 2.70 | 7.00 | 2.63 | 4.53 | 1.43 | 36.59 | 2.90 | 2.78 | 6.98 | 4.90 | 5.07 | 6.31 | 41.45 |
| **21** | 20 | suburbs | 2.79 | 7.22 | 2.72 | 4.67 | 1.47 | 37.78 | 3.00 | 2.87 | 7.21 | 5.06 | 5.24 | 6.51 | 42.80 |
| **22** | 5 | cities | 1.51 | 1.85 | 1.63 | 3.52 | 0.67 | 8.30 | 1.18 | 1.77 | 2.54 | 3.86 | 1.98 | 3.66 | 11.81 |
| **22** | 5 | country | 1.37 | 1.68 | 1.47 | 3.14 | 0.61 | 7.26 | 1.08 | 1.60 | 2.29 | 3.42 | 1.79 | 3.06 | 10.36 |
| **22** | 5 | suburbs | 1.42 | 1.75 | 1.54 | 3.28 | 0.64 | 7.63 | 1.12 | 1.67 | 2.39 | 3.58 | 1.86 | 3.25 | 10.88 |
| **22** | 6 | cities | 1.55 | 1.90 | 1.68 | 3.62 | 0.69 | 8.56 | 1.21 | 1.81 | 2.61 | 3.98 | 2.03 | 3.80 | 12.18 |
| **22** | 6 | country | 1.40 | 1.72 | 1.51 | 3.22 | 0.63 | 7.46 | 1.10 | 1.64 | 2.35 | 3.51 | 1.84 | 3.15 | 10.65 |
| **22** | 6 | suburbs | 1.46 | 1.79 | 1.58 | 3.37 | 0.65 | 7.85 | 1.15 | 1.71 | 2.45 | 3.68 | 1.91 | 3.36 | 11.20 |
| **22** | 7 | cities | 1.90 | 2.34 | 2.05 | 4.35 | 0.85 | 10.07 | 1.49 | 2.22 | 3.18 | 4.74 | 2.49 | 4.23 | 14.37 |
| **22** | 7 | country | 1.74 | 2.15 | 1.87 | 3.97 | 0.78 | 9.15 | 1.37 | 2.04 | 2.91 | 4.32 | 2.28 | 3.80 | 13.07 |
| **22** | 7 | suburbs | 1.80 | 2.22 | 1.94 | 4.12 | 0.81 | 9.50 | 1.42 | 2.11 | 3.02 | 4.48 | 2.36 | 3.96 | 13.57 |
| **22** | 8 | cities | 4.11 | 4.98 | 4.46 | 9.78 | 1.81 | 23.76 | 3.18 | 4.78 | 6.93 | 10.87 | 5.35 | 11.38 | 33.68 |
| **22** | 8 | country | 3.77 | 4.59 | 4.09 | 8.88 | 1.67 | 21.23 | 2.93 | 4.40 | 6.35 | 9.80 | 4.92 | 9.73 | 30.16 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **22** | 8 | suburbs | 3.91 | 4.75 | 4.23 | 9.24 | 1.72 | 22.23 | 3.03 | 4.55 | 6.58 | 10.23 | 5.09 | 10.38 | 31.55 |
| **22** | 17 | cities | 1.69 | 2.08 | 1.82 | 3.87 | 0.76 | 8.95 | 1.33 | 1.98 | 2.83 | 4.21 | 2.21 | 3.76 | 12.78 |
| **22** | 17 | country | 1.56 | 1.92 | 1.68 | 3.56 | 0.70 | 8.21 | 1.23 | 1.83 | 2.61 | 3.88 | 2.05 | 3.42 | 11.73 |
| **22** | 17 | suburbs | 1.61 | 1.99 | 1.74 | 3.69 | 0.73 | 8.51 | 1.27 | 1.89 | 2.70 | 4.01 | 2.11 | 3.55 | 12.15 |
| **22** | 18 | cities | 1.71 | 2.10 | 1.84 | 3.91 | 0.77 | 9.05 | 1.34 | 1.99 | 2.86 | 4.26 | 2.23 | 3.81 | 12.92 |
| **22** | 18 | country | 1.58 | 1.94 | 1.69 | 3.59 | 0.71 | 8.29 | 1.24 | 1.84 | 2.63 | 3.91 | 2.06 | 3.45 | 11.84 |
| **22** | 18 | suburbs | 1.63 | 2.00 | 1.75 | 3.72 | 0.73 | 8.60 | 1.28 | 1.91 | 2.73 | 4.05 | 2.13 | 3.59 | 12.28 |
| **22** | 19 | cities | 2.68 | 3.28 | 2.89 | 6.18 | 1.20 | 14.47 | 2.09 | 3.13 | 4.49 | 6.77 | 3.50 | 6.25 | 20.62 |
| **22** | 19 | country | 2.51 | 3.09 | 2.71 | 5.78 | 1.13 | 13.43 | 1.97 | 2.94 | 4.21 | 6.31 | 3.29 | 5.71 | 19.16 |
| **22** | 19 | suburbs | 2.58 | 3.16 | 2.78 | 5.94 | 1.15 | 13.84 | 2.02 | 3.01 | 4.32 | 6.49 | 3.37 | 5.92 | 19.73 |
| **22** | 20 | cities | 5.19 | 6.35 | 5.61 | 12.08 | 2.31 | 28.49 | 4.05 | 6.06 | 8.72 | 13.26 | 6.78 | 12.57 | 40.55 |
| **22** | 20 | country | 4.77 | 5.85 | 5.15 | 11.05 | 2.13 | 25.91 | 3.73 | 5.58 | 8.00 | 12.10 | 6.24 | 11.25 | 36.91 |
| **22** | 20 | suburbs | 4.93 | 6.04 | 5.33 | 11.44 | 2.20 | 26.89 | 3.86 | 5.76 | 8.28 | 12.55 | 6.45 | 11.75 | 38.30 |
| **23** | 9 | cities | 4.66 | 8.36 | 2.90 | 8.98 | 1.05 | 38.78 | 2.13 | 4.50 | 6.18 | 9.49 | 4.76 | 11.07 | 53.97 |
| **23** | 9 | country | 4.55 | 8.16 | 2.83 | 8.77 | 1.02 | 37.84 | 2.08 | 4.39 | 6.03 | 9.26 | 4.64 | 10.80 | 52.66 |
| **23** | 9 | suburbs | 4.59 | 8.23 | 2.86 | 8.85 | 1.03 | 38.17 | 2.09 | 4.43 | 6.09 | 9.34 | 4.68 | 10.90 | 53.13 |
| **23** | 10 | cities | 4.69 | 8.41 | 2.92 | 9.04 | 1.05 | 39.02 | 2.14 | 4.53 | 6.22 | 9.55 | 4.78 | 11.14 | 54.30 |
| **23** | 10 | country | 4.57 | 8.19 | 2.85 | 8.80 | 1.03 | 38.00 | 2.08 | 4.41 | 6.06 | 9.30 | 4.66 | 10.85 | 52.88 |
| **23** | 10 | suburbs | 4.61 | 8.27 | 2.87 | 8.89 | 1.04 | 38.36 | 2.10 | 4.45 | 6.12 | 9.39 | 4.71 | 10.95 | 53.39 |
| **23** | 11 | cities | 5.74 | 10.29 | 3.57 | 11.06 | 1.29 | 47.67 | 2.62 | 5.54 | 7.61 | 11.68 | 5.85 | 13.61 | 66.38 |
| **23** | 11 | country | 5.59 | 10.01 | 3.48 | 10.76 | 1.25 | 46.40 | 2.55 | 5.39 | 7.40 | 11.36 | 5.70 | 13.25 | 64.60 |
| **23** | 11 | suburbs | 5.64 | 10.11 | 3.51 | 10.87 | 1.27 | 46.87 | 2.57 | 5.45 | 7.48 | 11.48 | 5.75 | 13.38 | 65.26 |
| **23** | 12 | cities | 7.79 | 13.99 | 4.84 | 15.00 | 1.75 | 65.46 | 3.55 | 7.51 | 10.32 | 15.85 | 7.94 | 18.63 | 90.59 |
| **23** | 12 | country | 7.69 | 13.81 | 4.78 | 14.81 | 1.72 | 64.51 | 3.50 | 7.42 | 10.19 | 15.64 | 7.84 | 18.37 | 89.36 |
| **23** | 12 | suburbs | 7.72 | 13.87 | 4.80 | 14.88 | 1.73 | 64.81 | 3.52 | 7.45 | 10.23 | 15.71 | 7.87 | 18.45 | 89.75 |
| **23** | 21 | cities | 5.23 | 9.38 | 3.25 | 10.07 | 1.17 | 43.74 | 2.38 | 5.04 | 6.93 | 10.63 | 5.33 | 12.46 | 60.66 |
| **23** | 21 | country | 5.12 | 9.18 | 3.18 | 9.85 | 1.15 | 42.82 | 2.33 | 4.94 | 6.78 | 10.41 | 5.22 | 12.20 | 59.39 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23** | 21 | suburbs | 5.16 | 9.25 | 3.21 | 9.93 | 1.16 | 43.12 | 2.35 | 4.97 | 6.83 | 10.49 | 5.26 | 12.29 | 59.83 |
| **23** | 22 | cities | 5.06 | 9.07 | 3.14 | 9.74 | 1.13 | 42.35 | 2.30 | 4.88 | 6.70 | 10.29 | 5.15 | 12.06 | 58.71 |
| **23** | 22 | country | 4.94 | 8.87 | 3.07 | 9.51 | 1.11 | 41.37 | 2.25 | 4.76 | 6.54 | 10.05 | 5.03 | 11.78 | 57.35 |
| **23** | 22 | suburbs | 4.98 | 8.95 | 3.10 | 9.60 | 1.12 | 41.71 | 2.27 | 4.81 | 6.60 | 10.14 | 5.08 | 11.89 | 57.85 |
| **23** | 23 | cities | 6.60 | 11.85 | 4.10 | 12.71 | 1.48 | 55.46 | 3.01 | 6.37 | 8.75 | 13.43 | 6.73 | 15.79 | 76.76 |
| **23** | 23 | country | 6.48 | 11.65 | 4.03 | 12.49 | 1.45 | 54.48 | 2.95 | 6.26 | 8.59 | 13.20 | 6.61 | 15.51 | 75.41 |
| **23** | 23 | suburbs | 6.52 | 11.72 | 4.06 | 12.57 | 1.46 | 54.77 | 2.97 | 6.29 | 8.65 | 13.27 | 6.65 | 15.59 | 75.84 |
| **23** | 24 | cities | 8.42 | 15.15 | 5.23 | 16.23 | 1.89 | 71.28 | 3.83 | 8.12 | 11.16 | 17.14 | 8.58 | 20.25 | 98.29 |
| **23** | 24 | country | 8.11 | 14.59 | 5.04 | 15.63 | 1.82 | 68.53 | 3.69 | 7.82 | 10.75 | 16.51 | 8.27 | 19.48 | 94.59 |
| **23** | 24 | suburbs | 8.24 | 14.81 | 5.12 | 15.87 | 1.85 | 69.56 | 3.75 | 7.94 | 10.91 | 16.76 | 8.39 | 19.77 | 96.03 |
| **24** | 9 | cities | 3.95 | 6.07 | 2.17 | 7.88 | 0.74 | 27.15 | 1.52 | 3.87 | 4.72 | 8.41 | 3.68 | 9.11 | 38.47 |
| **24** | 9 | country | 3.74 | 5.75 | 2.05 | 7.46 | 0.70 | 25.71 | 1.44 | 3.66 | 4.47 | 7.97 | 3.48 | 8.63 | 36.43 |
| **24** | 9 | suburbs | 3.83 | 5.90 | 2.10 | 7.66 | 0.72 | 26.38 | 1.48 | 3.76 | 4.59 | 8.17 | 3.57 | 8.85 | 37.37 |
| **24** | 10 | cities | 3.97 | 6.10 | 2.18 | 7.92 | 0.74 | 27.30 | 1.53 | 3.89 | 4.75 | 8.46 | 3.70 | 9.16 | 38.68 |
| **24** | 10 | country | 3.76 | 5.78 | 2.06 | 7.50 | 0.71 | 25.84 | 1.45 | 3.68 | 4.49 | 8.01 | 3.50 | 8.67 | 36.61 |
| **24** | 10 | suburbs | 3.85 | 5.93 | 2.11 | 7.70 | 0.72 | 26.51 | 1.49 | 3.77 | 4.61 | 8.21 | 3.59 | 8.90 | 37.56 |
| **24** | 11 | cities | 4.80 | 7.39 | 2.64 | 9.59 | 0.90 | 33.04 | 1.85 | 4.70 | 5.75 | 10.24 | 4.48 | 11.09 | 46.81 |
| **24** | 11 | country | 4.58 | 7.04 | 2.51 | 9.14 | 0.86 | 31.50 | 1.77 | 4.49 | 5.48 | 9.76 | 4.27 | 10.57 | 44.63 |
| **24** | 11 | suburbs | 4.68 | 7.20 | 2.57 | 9.35 | 0.88 | 32.20 | 1.81 | 4.58 | 5.60 | 9.98 | 4.36 | 10.81 | 45.62 |
| **24** | 12 | cities | 6.41 | 9.85 | 3.51 | 12.79 | 1.20 | 44.10 | 2.47 | 6.28 | 7.67 | 13.66 | 5.97 | 14.80 | 62.46 |
| **24** | 12 | country | 6.19 | 9.52 | 3.39 | 12.36 | 1.16 | 42.60 | 2.39 | 6.06 | 7.40 | 13.19 | 5.77 | 14.29 | 60.32 |
| **24** | 12 | suburbs | 6.30 | 9.69 | 3.45 | 12.57 | 1.18 | 43.35 | 2.43 | 6.17 | 7.53 | 13.42 | 5.87 | 14.55 | 61.39 |
| **24** | 21 | cities | 4.39 | 6.75 | 2.41 | 8.76 | 0.82 | 30.21 | 1.69 | 4.30 | 5.25 | 9.36 | 4.09 | 10.14 | 42.78 |
| **24** | 21 | country | 4.14 | 6.36 | 2.27 | 8.26 | 0.78 | 28.48 | 1.60 | 4.05 | 4.95 | 8.82 | 3.86 | 9.56 | 40.33 |
| **24** | 21 | suburbs | 4.25 | 6.53 | 2.33 | 8.48 | 0.80 | 29.24 | 1.64 | 4.16 | 5.08 | 9.06 | 3.96 | 9.81 | 41.42 |
| **24** | 22 | cities | 4.24 | 6.53 | 2.33 | 8.48 | 0.80 | 29.21 | 1.64 | 4.16 | 5.08 | 9.05 | 3.96 | 9.80 | 41.38 |
| **24** | 22 | country | 3.99 | 6.14 | 2.19 | 7.98 | 0.75 | 27.50 | 1.54 | 3.91 | 4.78 | 8.51 | 3.72 | 9.23 | 38.94 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **24** | 22 | suburbs | 4.11 | 6.32 | 2.25 | 8.21 | 0.77 | 28.28 | 1.58 | 4.02 | 4.92 | 8.76 | 3.83 | 9.49 | 40.06 |
| **24** | 23 | cities | 5.49 | 8.44 | 3.01 | 10.96 | 1.03 | 37.79 | 2.12 | 5.38 | 6.57 | 11.70 | 5.12 | 12.68 | 53.51 |
| **24** | 23 | country | 5.20 | 8.00 | 2.85 | 10.38 | 0.98 | 35.79 | 2.00 | 5.09 | 6.22 | 11.08 | 4.84 | 12.01 | 50.68 |
| **24** | 23 | suburbs | 5.33 | 8.20 | 2.93 | 10.65 | 1.00 | 36.72 | 2.06 | 5.22 | 6.38 | 11.37 | 4.97 | 12.32 | 52.00 |
| **24** | 24 | cities | 6.83 | 10.51 | 3.75 | 13.64 | 1.28 | 47.05 | 2.63 | 6.69 | 8.17 | 14.56 | 6.37 | 15.79 | 66.61 |
| **24** | 24 | country | 6.42 | 9.88 | 3.52 | 12.83 | 1.21 | 44.25 | 2.48 | 6.29 | 7.69 | 13.69 | 5.99 | 14.85 | 62.64 |
| **24** | 24 | suburbs | 6.61 | 10.17 | 3.63 | 13.20 | 1.24 | 45.54 | 2.55 | 6.48 | 7.91 | 14.09 | 6.16 | 15.28 | 64.47 |
| **25** | 9 | cities | 3.51 | 5.06 | 1.97 | 6.92 | 0.67 | 16.20 | 1.35 | 2.99 | 3.80 | 7.28 | 2.94 | 6.44 | 36.04 |
| **25** | 9 | country | 3.38 | 4.87 | 1.89 | 6.66 | 0.65 | 15.59 | 1.30 | 2.88 | 3.66 | 7.01 | 2.83 | 6.19 | 34.68 |
| **25** | 9 | suburbs | 3.43 | 4.95 | 1.92 | 6.77 | 0.66 | 15.84 | 1.32 | 2.92 | 3.72 | 7.12 | 2.87 | 6.29 | 35.23 |
| **25** | 10 | cities | 3.52 | 5.07 | 1.97 | 6.94 | 0.68 | 16.24 | 1.35 | 3.00 | 3.81 | 7.30 | 2.94 | 6.45 | 36.11 |
| **25** | 10 | country | 3.39 | 4.88 | 1.89 | 6.67 | 0.65 | 15.62 | 1.30 | 2.88 | 3.66 | 7.02 | 2.83 | 6.20 | 34.74 |
| **25** | 10 | suburbs | 3.44 | 4.96 | 1.92 | 6.77 | 0.66 | 15.86 | 1.32 | 2.93 | 3.72 | 7.13 | 2.88 | 6.30 | 35.27 |
| **25** | 11 | cities | 4.39 | 6.33 | 2.46 | 8.66 | 0.84 | 20.26 | 1.68 | 3.74 | 4.75 | 9.11 | 3.67 | 8.05 | 45.06 |
| **25** | 11 | country | 4.23 | 6.09 | 2.37 | 8.33 | 0.81 | 19.49 | 1.62 | 3.60 | 4.57 | 8.76 | 3.54 | 7.74 | 43.37 |
| **25** | 11 | suburbs | 4.29 | 6.19 | 2.40 | 8.46 | 0.82 | 19.80 | 1.65 | 3.65 | 4.65 | 8.90 | 3.59 | 7.86 | 44.03 |
| **25** | 12 | cities | 5.66 | 8.16 | 3.16 | 11.14 | 1.09 | 26.14 | 2.17 | 4.82 | 6.12 | 11.72 | 4.73 | 10.37 | 58.08 |
| **25** | 12 | country | 5.51 | 7.94 | 3.08 | 10.85 | 1.06 | 25.43 | 2.11 | 4.69 | 5.96 | 11.41 | 4.61 | 10.10 | 56.53 |
| **25** | 12 | suburbs | 5.57 | 8.04 | 3.12 | 10.98 | 1.07 | 25.74 | 2.14 | 4.74 | 6.03 | 11.55 | 4.66 | 10.22 | 57.21 |
| **25** | 21 | cities | 3.83 | 5.53 | 2.14 | 7.55 | 0.74 | 17.69 | 1.47 | 3.26 | 4.15 | 7.94 | 3.21 | 7.03 | 39.33 |
| **25** | 21 | country | 3.69 | 5.32 | 2.06 | 7.26 | 0.71 | 17.01 | 1.41 | 3.14 | 3.99 | 7.64 | 3.08 | 6.76 | 37.83 |
| **25** | 21 | suburbs | 3.74 | 5.40 | 2.09 | 7.38 | 0.72 | 17.29 | 1.44 | 3.19 | 4.05 | 7.76 | 3.13 | 6.86 | 38.43 |
| **25** | 22 | cities | 3.69 | 5.32 | 2.06 | 7.26 | 0.71 | 17.02 | 1.41 | 3.14 | 3.99 | 7.64 | 3.08 | 6.76 | 37.84 |
| **25** | 22 | country | 3.54 | 5.10 | 1.98 | 6.97 | 0.68 | 16.33 | 1.36 | 3.01 | 3.83 | 7.33 | 2.96 | 6.48 | 36.30 |
| **25** | 22 | suburbs | 3.59 | 5.18 | 2.01 | 7.08 | 0.69 | 16.59 | 1.38 | 3.06 | 3.89 | 7.45 | 3.01 | 6.59 | 36.89 |
| **25** | 23 | cities | 4.84 | 6.98 | 2.70 | 9.52 | 0.93 | 22.34 | 1.85 | 4.12 | 5.23 | 10.02 | 4.04 | 8.87 | 49.64 |
| **25** | 23 | country | 4.60 | 6.63 | 2.57 | 9.05 | 0.88 | 21.23 | 1.76 | 3.91 | 4.97 | 9.52 | 3.84 | 8.43 | 47.18 |

## CORK SLAB

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **25** | 23 | suburbs | 4.70 | 6.78 | 2.63 | 9.26 | 0.90 | 21.72 | 1.80 | 4.00 | 5.09 | 9.74 | 3.93 | 8.62 | 48.27 |
| **25** | 24 | cities | 6.01 | 8.68 | 3.36 | 11.84 | 1.15 | 27.81 | 2.30 | 5.12 | 6.51 | 12.45 | 5.03 | 11.03 | 61.76 |
| **25** | 24 | country | 5.67 | 8.17 | 3.17 | 11.16 | 1.09 | 26.18 | 2.17 | 4.82 | 6.13 | 11.74 | 4.74 | 10.39 | 58.17 |
| **25** | 24 | suburbs | 5.82 | 8.39 | 3.25 | 11.46 | 1.12 | 26.89 | 2.23 | 4.95 | 6.30 | 12.05 | 4.87 | 10.67 | 59.74 |
| **26** | 9 | cities | 5.99 | 3.69 | 4.30 | 7.27 | 3.17 | 1.26 | 5.09 | 5.08 | 7.81 | 8.98 | 5.96 | 1.78 | 9.90 |
| **26** | 9 | country | 6.01 | 3.70 | 4.31 | 7.29 | 3.18 | 1.26 | 5.10 | 5.10 | 7.83 | 9.00 | 5.97 | 1.78 | 9.92 |
| **26** | 9 | suburbs | 5.99 | 3.69 | 4.29 | 7.26 | 3.17 | 1.26 | 5.09 | 5.08 | 7.81 | 8.97 | 5.95 | 1.78 | 9.89 |
| **26** | 10 | cities | 6.01 | 3.71 | 4.31 | 7.30 | 3.18 | 1.26 | 5.11 | 5.10 | 7.84 | 9.01 | 5.98 | 1.79 | 9.94 |
| **26** | 10 | country | 6.02 | 3.71 | 4.32 | 7.31 | 3.18 | 1.26 | 5.11 | 5.11 | 7.85 | 9.02 | 5.99 | 1.79 | 9.95 |
| **26** | 10 | suburbs | 6.01 | 3.70 | 4.30 | 7.29 | 3.18 | 1.26 | 5.10 | 5.10 | 7.83 | 9.00 | 5.97 | 1.78 | 9.92 |
| **26** | 11 | cities | 7.48 | 4.61 | 5.36 | 9.08 | 3.96 | 1.57 | 6.36 | 6.35 | 9.76 | 11.21 | 7.44 | 2.22 | 12.36 |
| **26** | 11 | country | 7.49 | 4.61 | 5.37 | 9.09 | 3.96 | 1.57 | 6.36 | 6.35 | 9.77 | 11.22 | 7.45 | 2.22 | 12.37 |
| **26** | 11 | suburbs | 7.46 | 4.60 | 5.35 | 9.05 | 3.95 | 1.57 | 6.34 | 6.33 | 9.73 | 11.18 | 7.42 | 2.21 | 12.32 |
| **26** | 12 | cities | 9.30 | 5.77 | 6.69 | 11.34 | 4.92 | 1.97 | 7.90 | 7.89 | 12.14 | 13.97 | 9.26 | 2.79 | 15.52 |
| **26** | 12 | country | 9.37 | 5.81 | 6.74 | 11.41 | 4.95 | 1.99 | 7.96 | 7.95 | 12.22 | 14.07 | 9.32 | 2.80 | 15.60 |
| **26** | 12 | suburbs | 9.34 | 5.79 | 6.71 | 11.37 | 4.94 | 1.98 | 7.93 | 7.92 | 12.18 | 14.02 | 9.29 | 2.79 | 15.55 |
| **26** | 21 | cities | 6.07 | 3.75 | 4.36 | 7.38 | 3.21 | 1.28 | 5.16 | 5.15 | 7.92 | 9.10 | 6.04 | 1.81 | 10.07 |
| **26** | 21 | country | 6.22 | 3.84 | 4.47 | 7.56 | 3.29 | 1.31 | 5.28 | 5.28 | 8.12 | 9.33 | 6.19 | 1.85 | 10.32 |
| **26** | 21 | suburbs | 6.13 | 3.79 | 4.40 | 7.45 | 3.24 | 1.29 | 5.21 | 5.20 | 8.00 | 9.20 | 6.10 | 1.83 | 10.17 |
| **26** | 22 | cities | 5.82 | 3.60 | 4.18 | 7.07 | 3.08 | 1.23 | 4.94 | 4.94 | 7.59 | 8.73 | 5.79 | 1.74 | 9.66 |
| **26** | 22 | country | 5.94 | 3.67 | 4.27 | 7.23 | 3.14 | 1.25 | 5.05 | 5.04 | 7.75 | 8.92 | 5.91 | 1.77 | 9.87 |
| **26** | 22 | suburbs | 5.87 | 3.63 | 4.21 | 7.14 | 3.10 | 1.24 | 4.99 | 4.98 | 7.66 | 8.81 | 5.84 | 1.75 | 9.74 |
| **26** | 23 | cities | 7.23 | 4.48 | 5.20 | 8.81 | 3.82 | 1.53 | 6.14 | 6.14 | 9.44 | 10.86 | 7.20 | 2.16 | 12.04 |
| **26** | 23 | country | 7.39 | 4.58 | 5.31 | 8.99 | 3.90 | 1.56 | 6.27 | 6.27 | 9.64 | 11.09 | 7.35 | 2.21 | 12.30 |
| **26** | 23 | suburbs | 7.29 | 4.52 | 5.24 | 8.88 | 3.85 | 1.54 | 6.19 | 6.19 | 9.51 | 10.95 | 7.25 | 2.18 | 12.13 |
| **26** | 24 | cities | 8.76 | 5.43 | 6.30 | 10.67 | 4.63 | 1.86 | 7.44 | 7.43 | 11.42 | 13.15 | 8.71 | 2.62 | 14.61 |
| **26** | 24 | country | 8.78 | 5.45 | 6.32 | 10.70 | 4.64 | 1.86 | 7.46 | 7.45 | 11.46 | 13.19 | 8.74 | 2.63 | 14.65 |

## CORK SLAB

| Country | Arc | GL | PBT$_{\text{CC}}$ | PBT$_{\text{OD}}$ | PBT$_{\text{HT\_CE}}$ | PBT$_{\text{HT\_nCE}}$ | PBT$_{\text{PM}}$ | PBT$_{\text{IR\_hh}}$ | PBT$_{\text{POF}}$ | PBT$_{\text{AC}}$ | PBT$_{\text{ET}}$ | PBT$_{\text{EuF}}$ | PBT$_{\text{EuM}}$ | PBT$_{\text{Ec\_FW}}$ | PBT$_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26** | 24 | suburbs | 8.75 | 5.43 | 6.30 | 10.66 | 4.63 | 1.86 | 7.43 | 7.42 | 11.42 | 13.14 | 8.71 | 2.62 | 14.59 |
| **27** | 9 | cities | 2.99 | 2.42 | 2.14 | 4.99 | 1.02 | 1.24 | 1.87 | 3.22 | 4.16 | 5.58 | 3.29 | 1.81 | 9.12 |
| **27** | 9 | country | 2.81 | 2.27 | 2.01 | 4.69 | 0.96 | 1.17 | 1.76 | 3.03 | 3.91 | 5.24 | 3.09 | 1.70 | 8.57 |
| **27** | 9 | suburbs | 2.89 | 2.34 | 2.07 | 4.82 | 0.98 | 1.20 | 1.81 | 3.11 | 4.02 | 5.39 | 3.18 | 1.74 | 8.82 |
| **27** | 10 | cities | 3.01 | 2.43 | 2.15 | 5.02 | 1.02 | 1.25 | 1.88 | 3.24 | 4.18 | 5.61 | 3.31 | 1.81 | 9.17 |
| **27** | 10 | country | 2.82 | 2.28 | 2.02 | 4.71 | 0.96 | 1.17 | 1.77 | 3.04 | 3.93 | 5.27 | 3.10 | 1.70 | 8.61 |
| **27** | 10 | suburbs | 2.91 | 2.35 | 2.08 | 4.85 | 0.99 | 1.21 | 1.82 | 3.13 | 4.04 | 5.42 | 3.19 | 1.75 | 8.86 |
| **27** | 11 | cities | 3.64 | 2.94 | 2.61 | 6.07 | 1.24 | 1.51 | 2.28 | 3.92 | 5.06 | 6.79 | 4.00 | 2.19 | 11.09 |
| **27** | 11 | country | 3.43 | 2.77 | 2.46 | 5.72 | 1.17 | 1.43 | 2.15 | 3.70 | 4.77 | 6.40 | 3.77 | 2.07 | 10.46 |
| **27** | 11 | suburbs | 3.52 | 2.85 | 2.52 | 5.88 | 1.20 | 1.46 | 2.21 | 3.79 | 4.90 | 6.57 | 3.87 | 2.13 | 10.74 |
| **27** | 12 | cities | 4.82 | 3.90 | 3.45 | 8.05 | 1.63 | 2.02 | 3.01 | 5.19 | 6.70 | 9.01 | 5.29 | 2.93 | 14.78 |
| **27** | 12 | country | 4.62 | 3.74 | 3.31 | 7.73 | 1.56 | 1.94 | 2.88 | 4.97 | 6.42 | 8.64 | 5.07 | 2.81 | 14.20 |
| **27** | 12 | suburbs | 4.71 | 3.82 | 3.37 | 7.88 | 1.60 | 1.98 | 2.94 | 5.07 | 6.55 | 8.81 | 5.17 | 2.87 | 14.47 |
| **27** | 21 | cities | 3.26 | 2.64 | 2.33 | 5.44 | 1.11 | 1.36 | 2.04 | 3.51 | 4.53 | 6.09 | 3.58 | 1.97 | 9.97 |
| **27** | 21 | country | 3.08 | 2.50 | 2.21 | 5.15 | 1.05 | 1.29 | 1.93 | 3.32 | 4.29 | 5.76 | 3.39 | 1.87 | 9.46 |
| **27** | 21 | suburbs | 3.16 | 2.56 | 2.26 | 5.28 | 1.07 | 1.32 | 1.97 | 3.40 | 4.39 | 5.91 | 3.47 | 1.92 | 9.68 |
| **27** | 22 | cities | 3.14 | 2.54 | 2.25 | 5.25 | 1.07 | 1.31 | 1.96 | 3.38 | 4.37 | 5.87 | 3.45 | 1.91 | 9.62 |
| **27** | 22 | country | 2.97 | 2.40 | 2.13 | 4.96 | 1.01 | 1.24 | 1.85 | 3.19 | 4.13 | 5.55 | 3.26 | 1.81 | 9.11 |
| **27** | 22 | suburbs | 3.04 | 2.46 | 2.18 | 5.09 | 1.03 | 1.27 | 1.90 | 3.28 | 4.23 | 5.69 | 3.34 | 1.85 | 9.33 |
| **27** | 23 | cities | 4.04 | 3.27 | 2.89 | 6.75 | 1.37 | 1.69 | 2.52 | 4.35 | 5.61 | 7.55 | 4.43 | 2.46 | 12.40 |
| **27** | 23 | country | 3.81 | 3.09 | 2.73 | 6.38 | 1.29 | 1.60 | 2.38 | 4.10 | 5.30 | 7.14 | 4.19 | 2.33 | 11.74 |
| **27** | 23 | suburbs | 3.91 | 3.17 | 2.80 | 6.54 | 1.33 | 1.64 | 2.44 | 4.21 | 5.44 | 7.32 | 4.29 | 2.38 | 12.03 |
| **27** | 24 | cities | 4.98 | 4.04 | 3.57 | 8.34 | 1.68 | 2.10 | 3.11 | 5.35 | 6.92 | 9.32 | 5.46 | 3.04 | 15.35 |
| **27** | 24 | country | 4.67 | 3.80 | 3.35 | 7.83 | 1.58 | 1.98 | 2.91 | 5.02 | 6.49 | 8.75 | 5.13 | 2.87 | 14.45 |
| **27** | 24 | suburbs | 4.81 | 3.91 | 3.44 | 8.06 | 1.63 | 2.03 | 3.00 | 5.17 | 6.69 | 9.01 | 5.28 | 2.95 | 14.85 |
| **28** | 5 | cities | 1.94 | 2.10 | 0.92 | 6.95 | 0.28 | 31.06 | 0.59 | 3.95 | 2.72 | 15.25 | 2.13 | 14.24 | 11.07 |
| **28** | 5 | country | 1.74 | 1.89 | 0.83 | 6.47 | 0.25 | 32.05 | 0.53 | 3.61 | 2.46 | 15.58 | 1.92 | 15.07 | 10.05 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **28** | 5 | suburbs | 1.82 | 1.98 | 0.86 | 6.40 | 0.26 | 26.85 | 0.56 | 3.68 | 2.56 | 13.25 | 2.00 | 12.14 | 10.35 |
| **28** | 6 | cities | 1.99 | 2.16 | 0.94 | 7.37 | 0.28 | 36.65 | 0.61 | 4.12 | 2.80 | 17.81 | 2.19 | 17.25 | 11.46 |
| **28** | 6 | country | 1.79 | 1.94 | 0.85 | 6.85 | 0.25 | 38.29 | 0.55 | 3.76 | 2.52 | 18.39 | 1.98 | 18.62 | 10.40 |
| **28** | 6 | suburbs | 1.87 | 2.03 | 0.88 | 6.76 | 0.27 | 30.95 | 0.57 | 3.83 | 2.63 | 15.16 | 2.05 | 14.27 | 10.70 |
| **28** | 7 | cities | 2.50 | 2.75 | 1.19 | 6.94 | 0.37 | 18.35 | 0.79 | 4.50 | 3.48 | 9.35 | 2.71 | 7.70 | 13.29 |
| **28** | 7 | country | 2.27 | 2.49 | 1.08 | 6.52 | 0.34 | 18.07 | 0.72 | 4.16 | 3.16 | 9.18 | 2.46 | 7.63 | 12.19 |
| **28** | 7 | suburbs | 2.37 | 2.60 | 1.13 | 6.62 | 0.35 | 17.67 | 0.75 | 4.28 | 3.30 | 8.99 | 2.57 | 7.42 | 12.62 |
| **28** | 8 | cities | 7.41 | 7.26 | 3.29 | (18.57) | 0.80 | (13.42) | 1.79 | 9.00 | 11.43 | (7.11) | 9.35 | (5.17) | 26.58 |
| **28** | 8 | country | 6.31 | 6.28 | 2.83 | (20.88) | 0.71 | (13.59) | 1.57 | 8.32 | 9.61 | (7.22) | 7.80 | (5.22) | 24.38 |
| **28** | 8 | suburbs | 6.73 | 6.67 | 3.01 | (21.03) | 0.75 | (14.01) | 1.67 | 8.56 | 10.26 | (7.43) | 8.35 | (5.38) | 25.24 |
| **28** | 17 | cities | 2.30 | 2.53 | 1.10 | 6.22 | 0.34 | 15.84 | 0.73 | 4.08 | 3.20 | 8.08 | 2.49 | 6.61 | 12.13 |
| **28** | 17 | country | 2.11 | 2.32 | 1.01 | 5.92 | 0.31 | 15.82 | 0.67 | 3.82 | 2.94 | 8.05 | 2.29 | 6.65 | 11.26 |
| **28** | 17 | suburbs | 2.19 | 2.42 | 1.05 | 6.03 | 0.33 | 15.70 | 0.70 | 3.93 | 3.05 | 8.00 | 2.38 | 6.57 | 11.63 |
| **28** | 18 | cities | 2.32 | 2.56 | 1.11 | 6.34 | 0.35 | 16.37 | 0.74 | 4.15 | 3.23 | 8.34 | 2.51 | 6.85 | 12.29 |
| **28** | 18 | country | 2.14 | 2.35 | 1.02 | 6.05 | 0.32 | 16.44 | 0.68 | 3.89 | 2.97 | 8.36 | 2.32 | 6.92 | 11.43 |
| **28** | 18 | suburbs | 2.22 | 2.44 | 1.06 | 6.14 | 0.33 | 16.19 | 0.70 | 3.99 | 3.08 | 8.25 | 2.40 | 6.79 | 11.78 |
| **28** | 19 | cities | 3.82 | 4.15 | 1.81 | 14.08 | 0.55 | 24.55 | 1.17 | 7.90 | 5.39 | 33.22 | 4.21 | 31.86 | 22.01 |
| **28** | 19 | country | 3.53 | 3.82 | 1.67 | 13.84 | 0.50 | 24.66 | 1.07 | 7.49 | 4.98 | 40.97 | 3.90 | 43.54 | 20.61 |
| **28** | 19 | suburbs | 3.65 | 3.96 | 1.73 | 13.64 | 0.52 | 24.28 | 1.12 | 7.59 | 5.14 | 33.69 | 4.02 | 32.92 | 21.08 |
| **28** | 20 | cities | 9.29 | 9.62 | 4.27 | (28.17) | 1.16 | (36.82) | 2.54 | 15.80 | 13.62 | (23.01) | 10.85 | (16.10) | 44.02 |
| **28** | 20 | country | 8.24 | 8.56 | 3.80 | (27.69) | 1.04 | (36.99) | 2.27 | 14.98 | 12.05 | (22.38) | 9.59 | (15.57) | 41.23 |
| **28** | 20 | suburbs | 8.64 | 8.98 | 3.98 | (27.27) | 1.09 | (36.43) | 2.38 | 15.17 | 12.62 | (23.77) | 10.05 | (16.53) | 42.15 |

## Table C 2 PBT scenario II

### PV SYSTEMS

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | cities | 1.10 | 0.58 | 23.30 | 16.36 | 1.37 | 1.47 | 0.97 | 0.83 | 0.87 | 31.09 | 0.98 | 15.25 | 1,315.00 |
| **1** | 1 | country | 1.10 | 0.58 | 23.30 | 16.36 | 1.37 | 1.47 | 0.97 | 0.83 | 0.87 | 31.09 | 0.98 | 15.25 | 1,315.00 |
| **1** | 1 | suburbs | 1.10 | 0.58 | 23.30 | 16.36 | 1.37 | 1.47 | 0.97 | 0.83 | 0.87 | 31.09 | 0.98 | 15.25 | 1,315.00 |
| **1** | 2 | cities | 1.10 | 0.58 | 23.30 | 16.36 | 1.37 | 1.47 | 0.97 | 0.83 | 0.87 | 31.09 | 0.98 | 15.25 | 1,315.00 |
| **1** | 2 | country | 1.10 | 0.58 | 23.30 | 16.36 | 1.37 | 1.47 | 0.97 | 0.83 | 0.87 | 31.09 | 0.98 | 15.25 | 1,315.00 |
| **1** | 2 | suburbs | 1.10 | 0.58 | 23.30 | 16.36 | 1.37 | 1.47 | 0.97 | 0.83 | 0.87 | 31.09 | 0.98 | 15.25 | 1,315.00 |
| **1** | 3 | cities | 1.10 | 0.58 | 23.30 | 16.36 | 1.37 | 1.47 | 0.97 | 0.83 | 0.87 | 31.09 | 0.98 | 15.25 | 1,315.00 |
| **1** | 3 | country | 1.10 | 0.58 | 23.30 | 16.36 | 1.37 | 1.47 | 0.97 | 0.83 | 0.87 | 31.09 | 0.98 | 15.25 | 1,315.00 |
| **1** | 3 | suburbs | 1.10 | 0.58 | 23.30 | 16.36 | 1.37 | 1.47 | 0.97 | 0.83 | 0.87 | 31.09 | 0.98 | 15.25 | 1,315.00 |
| **1** | 4 | cities | 1.09 | 0.57 | 23.05 | 14.89 | 1.33 | 1.45 | 0.96 | 0.82 | 0.85 | 30.62 | 0.96 | 15.25 | 1,314.84 |
| **1** | 4 | country | 1.09 | 0.57 | 23.05 | 14.89 | 1.33 | 1.45 | 0.96 | 0.82 | 0.85 | 30.62 | 0.96 | 15.25 | 1,314.84 |
| **1** | 4 | suburbs | 1.09 | 0.57 | 23.05 | 14.89 | 1.33 | 1.45 | 0.96 | 0.82 | 0.85 | 30.62 | 0.96 | 15.25 | 1,314.84 |
| **1** | 13 | cities | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 13 | country | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 13 | suburbs | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 14 | cities | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 14 | country | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 14 | suburbs | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 15 | cities | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 15 | country | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 15 | suburbs | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 16 | cities | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 16 | country | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |
| **1** | 16 | suburbs | 1.24 | 0.66 | 26.33 | 17.00 | 1.52 | 1.66 | 1.10 | 0.94 | 0.97 | 34.97 | 1.10 | 17.41 | 1,501.55 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | $\mathrm{PBT}_{\mathrm{CC}}$ | $\mathrm{PBT}_{\mathrm{OD}}$ | $\mathrm{PBT}_{\mathrm{HT\_CE}}$ | $\mathrm{PBT}_{\mathrm{HT\_nCE}}$ | $\mathrm{PBT}_{\mathrm{PM}}$ | $\mathrm{PBT}_{\mathrm{IR\_hh}}$ | $\mathrm{PBT}_{\mathrm{POF}}$ | $\mathrm{PBT}_{\mathrm{AC}}$ | $\mathrm{PBT}_{\mathrm{ET}}$ | $\mathrm{PBT}_{\mathrm{EuF}}$ | $\mathrm{PBT}_{\mathrm{EuM}}$ | $\mathrm{PBT}_{\mathrm{Ec\_FW}}$ | $\mathrm{PBT}_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2** | 1 | cities | 1.33 | 0.71 | 24.41 | 16.93 | 1.63 | 1.84 | 1.17 | 1.00 | 1.02 | 33.13 | 1.18 | 14.87 | 1,219.66 |
| **2** | 1 | country | 1.33 | 0.71 | 24.41 | 16.93 | 1.63 | 1.84 | 1.17 | 1.00 | 1.02 | 33.13 | 1.18 | 14.87 | 1,219.66 |
| **2** | 1 | suburbs | 1.33 | 0.71 | 24.41 | 16.93 | 1.63 | 1.84 | 1.17 | 1.00 | 1.02 | 33.13 | 1.18 | 14.87 | 1,219.66 |
| **2** | 2 | cities | 1.33 | 0.71 | 24.41 | 16.93 | 1.63 | 1.84 | 1.17 | 1.00 | 1.02 | 33.13 | 1.18 | 14.87 | 1,219.66 |
| **2** | 2 | country | 1.33 | 0.71 | 24.41 | 16.93 | 1.63 | 1.84 | 1.17 | 1.00 | 1.02 | 33.13 | 1.18 | 14.87 | 1,219.66 |
| **2** | 2 | suburbs | 1.33 | 0.71 | 24.41 | 16.93 | 1.63 | 1.84 | 1.17 | 1.00 | 1.02 | 33.13 | 1.18 | 14.87 | 1,219.66 |
| **2** | 3 | cities | 1.33 | 0.71 | 24.41 | 16.93 | 1.63 | 1.84 | 1.17 | 1.00 | 1.02 | 33.13 | 1.18 | 14.87 | 1,219.66 |
| **2** | 3 | country | 1.33 | 0.71 | 24.41 | 16.93 | 1.63 | 1.84 | 1.17 | 1.00 | 1.02 | 33.13 | 1.18 | 14.87 | 1,219.66 |
| **2** | 3 | suburbs | 1.33 | 0.71 | 24.41 | 16.93 | 1.63 | 1.84 | 1.17 | 1.00 | 1.02 | 33.13 | 1.18 | 14.87 | 1,219.66 |
| **2** | 4 | cities | 1.31 | 0.70 | 24.15 | 15.41 | 1.59 | 1.81 | 1.16 | 0.98 | 1.00 | 32.62 | 1.16 | 14.87 | 1,219.51 |
| **2** | 4 | country | 1.31 | 0.70 | 24.15 | 15.41 | 1.59 | 1.81 | 1.16 | 0.98 | 1.00 | 32.62 | 1.16 | 14.87 | 1,219.51 |
| **2** | 4 | suburbs | 1.31 | 0.70 | 24.15 | 15.41 | 1.59 | 1.81 | 1.16 | 0.98 | 1.00 | 32.62 | 1.16 | 14.87 | 1,219.51 |
| **2** | 13 | cities | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 13 | country | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 13 | suburbs | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 14 | cities | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 14 | country | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 14 | suburbs | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 15 | cities | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 15 | country | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 15 | suburbs | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 16 | cities | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 16 | country | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **2** | 16 | suburbs | 1.52 | 0.81 | 28.12 | 17.94 | 1.85 | 2.11 | 1.35 | 1.14 | 1.16 | 37.99 | 1.35 | 17.32 | 1,420.02 |
| **3** | 1 | cities | 3.34 | 9.45 | 18.76 | 10.40 | 6.74 | 3.20 | 4.06 | 2.90 | 3.45 | 9.27 | 3.76 | 14.34 | 1,282.91 |
| **3** | 1 | country | 3.34 | 9.45 | 18.76 | 10.40 | 6.74 | 3.20 | 4.06 | 2.90 | 3.45 | 9.27 | 3.76 | 14.34 | 1,282.91 |
| **3** | 1 | suburbs | 3.34 | 9.45 | 18.76 | 10.40 | 6.74 | 3.20 | 4.06 | 2.90 | 3.45 | 9.27 | 3.76 | 14.34 | 1,282.91 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | 2 | cities | 3.34 | 9.45 | 18.76 | 10.40 | 6.74 | 3.20 | 4.06 | 2.90 | 3.45 | 9.27 | 3.76 | 14.34 | 1,282.91 |
| **3** | 2 | country | 3.34 | 9.45 | 18.76 | 10.40 | 6.74 | 3.20 | 4.06 | 2.90 | 3.45 | 9.27 | 3.76 | 14.34 | 1,282.91 |
| **3** | 2 | suburbs | 3.34 | 9.45 | 18.76 | 10.40 | 6.74 | 3.20 | 4.06 | 2.90 | 3.45 | 9.27 | 3.76 | 14.34 | 1,282.91 |
| **3** | 3 | cities | 3.34 | 9.45 | 18.76 | 10.40 | 6.74 | 3.20 | 4.06 | 2.90 | 3.45 | 9.27 | 3.76 | 14.34 | 1,282.91 |
| **3** | 3 | country | 3.34 | 9.45 | 18.76 | 10.40 | 6.74 | 3.20 | 4.06 | 2.90 | 3.45 | 9.27 | 3.76 | 14.34 | 1,282.91 |
| **3** | 3 | suburbs | 3.34 | 9.45 | 18.76 | 10.40 | 6.74 | 3.20 | 4.06 | 2.90 | 3.45 | 9.27 | 3.76 | 14.34 | 1,282.91 |
| **3** | 4 | cities | 3.28 | 9.34 | 18.56 | 9.47 | 6.57 | 3.16 | 4.02 | 2.85 | 3.39 | 9.13 | 3.71 | 14.34 | 1,282.76 |
| **3** | 4 | country | 3.28 | 9.34 | 18.56 | 9.47 | 6.57 | 3.16 | 4.02 | 2.85 | 3.39 | 9.13 | 3.71 | 14.34 | 1,282.76 |
| **3** | 4 | suburbs | 3.28 | 9.34 | 18.56 | 9.47 | 6.57 | 3.16 | 4.02 | 2.85 | 3.39 | 9.13 | 3.71 | 14.34 | 1,282.76 |
| **3** | 13 | cities | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 13 | country | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 13 | suburbs | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 14 | cities | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 14 | country | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 14 | suburbs | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 15 | cities | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 15 | country | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 15 | suburbs | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 16 | cities | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 16 | country | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **3** | 16 | suburbs | 3.84 | 10.92 | 21.72 | 11.08 | 7.68 | 3.70 | 4.70 | 3.33 | 3.96 | 10.69 | 4.34 | 16.78 | 1,500.68 |
| **4** | 1 | cities | 1.89 | 3.89 | 3.49 | 1.43 | 2.66 | 4.10 | 3.99 | 1.99 | 3.43 | 0.67 | 2.09 | 6.81 | 1,296.59 |
| **4** | 1 | country | 1.89 | 3.89 | 3.49 | 1.43 | 2.66 | 4.10 | 3.99 | 1.99 | 3.43 | 0.67 | 2.09 | 6.81 | 1,296.59 |
| **4** | 1 | suburbs | 1.89 | 3.89 | 3.49 | 1.43 | 2.66 | 4.10 | 3.99 | 1.99 | 3.43 | 0.67 | 2.09 | 6.81 | 1,296.59 |
| **4** | 2 | cities | 1.89 | 3.89 | 3.49 | 1.43 | 2.66 | 4.10 | 3.99 | 1.99 | 3.43 | 0.67 | 2.09 | 6.81 | 1,296.59 |
| **4** | 2 | country | 1.89 | 3.89 | 3.49 | 1.43 | 2.66 | 4.10 | 3.99 | 1.99 | 3.43 | 0.67 | 2.09 | 6.81 | 1,296.59 |
| **4** | 2 | suburbs | 1.89 | 3.89 | 3.49 | 1.43 | 2.66 | 4.10 | 3.99 | 1.99 | 3.43 | 0.67 | 2.09 | 6.81 | 1,296.59 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 3 | cities | 1.89 | 3.89 | 3.49 | 1.43 | 2.66 | 4.10 | 3.99 | 1.99 | 3.43 | 0.67 | 2.09 | 6.81 | 1,296.59 |
| **4** | 3 | country | 1.89 | 3.89 | 3.49 | 1.43 | 2.66 | 4.10 | 3.99 | 1.99 | 3.43 | 0.67 | 2.09 | 6.81 | 1,296.59 |
| **4** | 3 | suburbs | 1.89 | 3.89 | 3.49 | 1.43 | 2.66 | 4.10 | 3.99 | 1.99 | 3.43 | 0.67 | 2.09 | 6.81 | 1,296.59 |
| **4** | 4 | cities | 1.86 | 3.85 | 3.45 | 1.31 | 2.59 | 4.05 | 3.95 | 1.95 | 3.37 | 0.66 | 2.06 | 6.81 | 1,296.44 |
| **4** | 4 | country | 1.86 | 3.85 | 3.45 | 1.31 | 2.59 | 4.05 | 3.95 | 1.95 | 3.37 | 0.66 | 2.06 | 6.81 | 1,296.44 |
| **4** | 4 | suburbs | 1.86 | 3.85 | 3.45 | 1.31 | 2.59 | 4.05 | 3.95 | 1.95 | 3.37 | 0.66 | 2.06 | 6.81 | 1,296.44 |
| **4** | 13 | cities | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 13 | country | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 13 | suburbs | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 14 | cities | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 14 | country | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 14 | suburbs | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 15 | cities | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 15 | country | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 15 | suburbs | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 16 | cities | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 16 | country | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **4** | 16 | suburbs | 2.13 | 4.41 | 3.96 | 1.50 | 2.97 | 4.64 | 4.52 | 2.24 | 3.86 | 0.76 | 2.36 | 7.80 | 1,486.19 |
| **5** | 1 | cities | 3.83 | 2.99 | 17.22 | 9.66 | 5.93 | 0.56 | 4.01 | 3.21 | 3.23 | 9.73 | 3.57 | 14.11 | 1,019.02 |
| **5** | 1 | country | 3.83 | 2.99 | 17.22 | 9.66 | 5.93 | 0.56 | 4.01 | 3.21 | 3.23 | 9.73 | 3.57 | 14.11 | 1,019.02 |
| **5** | 1 | suburbs | 3.83 | 2.99 | 17.22 | 9.66 | 5.93 | 0.56 | 4.01 | 3.21 | 3.23 | 9.73 | 3.57 | 14.11 | 1,019.02 |
| **5** | 2 | cities | 3.83 | 2.99 | 17.22 | 9.66 | 5.93 | 0.56 | 4.01 | 3.21 | 3.23 | 9.73 | 3.57 | 14.11 | 1,019.02 |
| **5** | 2 | country | 3.83 | 2.99 | 17.22 | 9.66 | 5.93 | 0.56 | 4.01 | 3.21 | 3.23 | 9.73 | 3.57 | 14.11 | 1,019.02 |
| **5** | 2 | suburbs | 3.83 | 2.99 | 17.22 | 9.66 | 5.93 | 0.56 | 4.01 | 3.21 | 3.23 | 9.73 | 3.57 | 14.11 | 1,019.02 |
| **5** | 3 | cities | 3.83 | 2.99 | 17.22 | 9.66 | 5.93 | 0.56 | 4.01 | 3.21 | 3.23 | 9.73 | 3.57 | 14.11 | 1,019.02 |
| **5** | 3 | country | 3.83 | 2.99 | 17.22 | 9.66 | 5.93 | 0.56 | 4.01 | 3.21 | 3.23 | 9.73 | 3.57 | 14.11 | 1,019.02 |
| **5** | 3 | suburbs | 3.83 | 2.99 | 17.22 | 9.66 | 5.93 | 0.56 | 4.01 | 3.21 | 3.23 | 9.73 | 3.57 | 14.11 | 1,019.02 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | $\mathbf{PBT}_{\mathbf{CC}}$ | $\mathbf{PBT}_{\mathbf{OD}}$ | $\mathbf{PBT}_{\mathbf{HT\_CE}}$ | $\mathbf{PBT}_{\mathbf{HT\_nCE}}$ | $\mathbf{PBT}_{\mathbf{PM}}$ | $\mathbf{PBT}_{\mathbf{IR\_hh}}$ | $\mathbf{PBT}_{\mathbf{POF}}$ | $\mathbf{PBT}_{\mathbf{AC}}$ | $\mathbf{PBT}_{\mathbf{ET}}$ | $\mathbf{PBT}_{\mathbf{EuF}}$ | $\mathbf{PBT}_{\mathbf{EuM}}$ | $\mathbf{PBT}_{\mathbf{Ec\_FW}}$ | $\mathbf{PBT}_{\mathbf{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5** | 4 | cities | 3.77 | 2.96 | 17.03 | 8.79 | 5.78 | 0.55 | 3.97 | 3.15 | 3.18 | 9.58 | 3.52 | 14.11 | 1,018.90 |
| **5** | 4 | country | 3.77 | 2.96 | 17.03 | 8.79 | 5.78 | 0.55 | 3.97 | 3.15 | 3.18 | 9.58 | 3.52 | 14.11 | 1,018.90 |
| **5** | 4 | suburbs | 3.77 | 2.96 | 17.03 | 8.79 | 5.78 | 0.55 | 3.97 | 3.15 | 3.18 | 9.58 | 3.52 | 14.11 | 1,018.90 |
| **5** | 13 | cities | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 13 | country | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 13 | suburbs | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 14 | cities | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 14 | country | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 14 | suburbs | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 15 | cities | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 15 | country | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 15 | suburbs | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 16 | cities | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 16 | country | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **5** | 16 | suburbs | 4.53 | 3.55 | 20.45 | 10.56 | 6.94 | 0.66 | 4.77 | 3.79 | 3.81 | 11.50 | 4.23 | 16.94 | 1,223.30 |
| **6** | 1 | cities | 3.79 | 3.46 | 25.71 | 15.20 | 9.26 | 2.12 | 7.03 | 3.62 | 2.08 | 13.21 | 5.87 | 18.07 | 1,185.28 |
| **6** | 1 | country | 3.79 | 3.46 | 25.71 | 15.20 | 9.26 | 2.12 | 7.03 | 3.62 | 2.08 | 13.21 | 5.87 | 18.07 | 1,185.28 |
| **6** | 1 | suburbs | 3.79 | 3.46 | 25.71 | 15.20 | 9.26 | 2.12 | 7.03 | 3.62 | 2.08 | 13.21 | 5.87 | 18.07 | 1,185.28 |
| **6** | 2 | cities | 3.79 | 3.46 | 25.71 | 15.20 | 9.26 | 2.12 | 7.03 | 3.62 | 2.08 | 13.21 | 5.87 | 18.07 | 1,185.28 |
| **6** | 2 | country | 3.79 | 3.46 | 25.71 | 15.20 | 9.26 | 2.12 | 7.03 | 3.62 | 2.08 | 13.21 | 5.87 | 18.07 | 1,185.28 |
| **6** | 2 | suburbs | 3.79 | 3.46 | 25.71 | 15.20 | 9.26 | 2.12 | 7.03 | 3.62 | 2.08 | 13.21 | 5.87 | 18.07 | 1,185.28 |
| **6** | 3 | cities | 3.79 | 3.46 | 25.71 | 15.20 | 9.26 | 2.12 | 7.03 | 3.62 | 2.08 | 13.21 | 5.87 | 18.07 | 1,185.28 |
| **6** | 3 | country | 3.79 | 3.46 | 25.71 | 15.20 | 9.26 | 2.12 | 7.03 | 3.62 | 2.08 | 13.21 | 5.87 | 18.07 | 1,185.28 |
| **6** | 3 | suburbs | 3.79 | 3.46 | 25.71 | 15.20 | 9.26 | 2.12 | 7.03 | 3.62 | 2.08 | 13.21 | 5.87 | 18.07 | 1,185.28 |
| **6** | 4 | cities | 3.72 | 3.42 | 25.43 | 13.83 | 9.03 | 2.09 | 6.96 | 3.56 | 2.05 | 13.01 | 5.79 | 18.07 | 1,185.14 |
| **6** | 4 | country | 3.72 | 3.42 | 25.43 | 13.83 | 9.03 | 2.09 | 6.96 | 3.56 | 2.05 | 13.01 | 5.79 | 18.07 | 1,185.14 |
| **6** | 4 | suburbs | 3.72 | 3.42 | 25.43 | 13.83 | 9.03 | 2.09 | 6.96 | 3.56 | 2.05 | 13.01 | 5.79 | 18.07 | 1,185.14 |

## PV SYSTEMS

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6** | 13 | cities | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 13 | country | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 13 | suburbs | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 14 | cities | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 14 | country | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 14 | suburbs | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 15 | cities | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 15 | country | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 15 | suburbs | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 16 | cities | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 16 | country | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **6** | 16 | suburbs | 4.41 | 4.05 | 30.13 | 16.39 | 10.70 | 2.48 | 8.24 | 4.22 | 2.43 | 15.41 | 6.86 | 21.41 | 1,404.25 |
| **7** | 5 | cities | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 5 | country | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 5 | suburbs | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 6 | cities | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 6 | country | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 6 | suburbs | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 7 | cities | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 7 | country | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 7 | suburbs | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 8 | cities | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 8 | country | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 8 | suburbs | 32.05 | 1.87 | 35.78 | 32.21 | 46.22 | 0.27 | 44.87 | 35.62 | 30.94 | 54.06 | 24.00 | 21.94 | 1,121.60 |
| **7** | 17 | cities | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **7** | 17 | country | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **7** | 17 | suburbs | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | $\mathrm{PBT}_{\mathrm{CC}}$ | $\mathrm{PBT}_{\mathrm{OD}}$ | $\mathrm{PBT}_{\mathrm{HT\_CE}}$ | $\mathrm{PBT}_{\mathrm{HT\_nCE}}$ | $\mathrm{PBT}_{\mathrm{PM}}$ | $\mathrm{PBT}_{\mathrm{IR\_hh}}$ | $\mathrm{PBT}_{\mathrm{POF}}$ | $\mathrm{PBT}_{\mathrm{AC}}$ | $\mathrm{PBT}_{\mathrm{ET}}$ | $\mathrm{PBT}_{\mathrm{EuF}}$ | $\mathrm{PBT}_{\mathrm{EuM}}$ | $\mathrm{PBT}_{\mathrm{Ec\_FW}}$ | $\mathrm{PBT}_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7** | 18 | cities | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **7** | 18 | country | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **7** | 18 | suburbs | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **7** | 19 | cities | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **7** | 19 | country | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **7** | 19 | suburbs | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **7** | 20 | cities | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **7** | 20 | country | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **7** | 20 | suburbs | 37.48 | 2.19 | 42.08 | 34.85 | 53.56 | 0.32 | 52.80 | 41.59 | 36.14 | 63.28 | 28.11 | 26.08 | 1,333.13 |
| **8** | 5 | cities | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 5 | country | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 5 | suburbs | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 6 | cities | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 6 | country | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 6 | suburbs | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 7 | cities | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 7 | country | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 7 | suburbs | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 8 | cities | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 8 | country | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 8 | suburbs | 5.27 | 4.45 | 13.29 | 5.96 | 5.47 | 0.67 | 6.09 | 2.22 | 4.60 | 3.00 | 4.95 | 18.52 | 2,015.37 |
| **8** | 17 | cities | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **8** | 17 | country | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **8** | 17 | suburbs | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **8** | 18 | cities | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **8** | 18 | country | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **8** | 18 | suburbs | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **8** | 19 | cities | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **8** | 19 | country | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **8** | 19 | suburbs | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **8** | 20 | cities | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **8** | 20 | country | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **8** | 20 | suburbs | 5.72 | 4.85 | 14.50 | 5.98 | 5.89 | 0.73 | 6.65 | 2.41 | 4.98 | 3.25 | 5.37 | 20.42 | 2,222.14 |
| **9** | 5 | cities | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 5 | country | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 5 | suburbs | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 6 | cities | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 6 | country | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 6 | suburbs | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 7 | cities | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 7 | country | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 7 | suburbs | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 8 | cities | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 8 | country | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 8 | suburbs | 2.74 | 1.84 | 7.91 | 3.79 | 7.94 | 0.33 | 5.10 | 3.98 | 3.71 | 2.03 | 3.39 | 11.47 | 1,120.77 |
| **9** | 17 | cities | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **9** | 17 | country | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **9** | 17 | suburbs | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **9** | 18 | cities | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **9** | 18 | country | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **9** | 18 | suburbs | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **9** | 19 | cities | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **9** | 19 | country | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **9** | 19 | suburbs | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **9** | 20 | cities | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **9** | 20 | country | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **9** | 20 | suburbs | 3.34 | 2.25 | 9.69 | 4.28 | 9.60 | 0.40 | 6.26 | 4.85 | 4.52 | 2.48 | 4.14 | 14.21 | 1,388.84 |
| **10** | 5 | cities | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 5 | country | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 5 | suburbs | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 6 | cities | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 6 | country | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 6 | suburbs | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 7 | cities | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 7 | country | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 7 | suburbs | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 8 | cities | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 8 | country | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 8 | suburbs | 3.27 | 10.97 | 7.12 | 3.26 | 3.38 | 0.42 | 5.76 | 3.50 | 5.19 | 1.58 | 3.56 | 10.13 | 1,120.17 |
| **10** | 17 | cities | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 17 | country | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 17 | suburbs | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 18 | cities | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 18 | country | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 18 | suburbs | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 19 | cities | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 19 | country | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 19 | suburbs | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 20 | cities | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 20 | country | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |
| **10** | 20 | suburbs | 3.92 | 13.19 | 8.57 | 3.61 | 4.01 | 0.51 | 6.93 | 4.18 | 6.20 | 1.90 | 4.26 | 12.32 | 1,362.79 |

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11** | 5 | cities | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 5 | country | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 5 | suburbs | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 6 | cities | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 6 | country | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 6 | suburbs | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 7 | cities | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 7 | country | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 7 | suburbs | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 8 | cities | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 8 | country | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 8 | suburbs | 2.54 | 3.44 | 5.53 | 2.51 | 4.17 | 0.51 | 4.68 | 2.68 | 4.19 | 1.18 | 2.80 | 9.60 | 1,216.59 |
| **11** | 17 | cities | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 17 | country | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 17 | suburbs | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 18 | cities | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 18 | country | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 18 | suburbs | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 19 | cities | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 19 | country | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 19 | suburbs | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 20 | cities | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 20 | country | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **11** | 20 | suburbs | 2.86 | 3.89 | 6.25 | 2.61 | 4.64 | 0.57 | 5.29 | 3.00 | 4.70 | 1.33 | 3.15 | 10.96 | 1,389.43 |
| **12** | 5 | cities | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 5 | country | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 5 | suburbs | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |

## PV SYSTEMS

| Country | Arc | GL | PBT$_{\text{CC}}$ | PBT$_{\text{OD}}$ | PBT$_{\text{HT\_CE}}$ | PBT$_{\text{HT\_nCE}}$ | PBT$_{\text{PM}}$ | PBT$_{\text{IR\_hh}}$ | PBT$_{\text{POF}}$ | PBT$_{\text{AC}}$ | PBT$_{\text{ET}}$ | PBT$_{\text{EuF}}$ | PBT$_{\text{EuM}}$ | PBT$_{\text{Ec\_FW}}$ | PBT$_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **12** | 6 | cities | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 6 | country | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 6 | suburbs | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 7 | cities | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 7 | country | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 7 | suburbs | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 8 | cities | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 8 | country | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 8 | suburbs | 3.53 | 10.36 | 27.87 | 15.40 | 14.56 | 7.80 | 7.95 | 5.96 | 5.28 | 17.72 | 7.17 | 22.54 | 2,260.17 |
| **12** | 17 | cities | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 17 | country | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 17 | suburbs | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 18 | cities | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 18 | country | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 18 | suburbs | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 19 | cities | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 19 | country | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 19 | suburbs | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 20 | cities | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 20 | country | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **12** | 20 | suburbs | 4.07 | 11.99 | 32.29 | 16.42 | 16.63 | 9.02 | 9.22 | 6.86 | 6.08 | 20.45 | 8.27 | 26.40 | 2,647.22 |
| **13** | 5 | cities | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 5 | country | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 5 | suburbs | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 6 | cities | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 6 | country | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 6 | suburbs | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | 7 | cities | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 7 | country | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 7 | suburbs | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 8 | cities | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 8 | country | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 8 | suburbs | 3.96 | 7.42 | 28.03 | 14.31 | 38.05 | 2.97 | 14.40 | 13.29 | 6.39 | 9.25 | 10.45 | 25.34 | 2,607.68 |
| **13** | 17 | cities | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 17 | country | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 17 | suburbs | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 18 | cities | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 18 | country | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 18 | suburbs | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 19 | cities | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 19 | country | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 19 | suburbs | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 20 | cities | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 20 | country | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **13** | 20 | suburbs | 4.54 | 8.54 | 32.29 | 15.17 | 43.19 | 3.42 | 16.60 | 15.19 | 7.31 | 10.61 | 11.99 | 29.50 | 3,035.83 |
| **14** | 5 | cities | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 5 | country | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 5 | suburbs | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 6 | cities | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 6 | country | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 6 | suburbs | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 7 | cities | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 7 | country | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 7 | suburbs | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **14** | 8 | cities | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 8 | country | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 8 | suburbs | 8.69 | 2.84 | 39.54 | 30.62 | 44.06 | 0.50 | 23.84 | 22.23 | 12.35 | 32.51 | 17.88 | 27.57 | 1,716.49 |
| **14** | 17 | cities | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 17 | country | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 17 | suburbs | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 18 | cities | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 18 | country | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 18 | suburbs | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 19 | cities | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 19 | country | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 19 | suburbs | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 20 | cities | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 20 | country | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **14** | 20 | suburbs | 9.92 | 3.26 | 45.36 | 32.32 | 49.81 | 0.57 | 27.37 | 25.32 | 14.07 | 37.13 | 20.43 | 31.97 | 1,990.37 |
| **15** | 5 | cities | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 5 | country | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 5 | suburbs | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 6 | cities | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 6 | country | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 6 | suburbs | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 7 | cities | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 7 | country | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 7 | suburbs | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 8 | cities | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 8 | country | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |
| **15** | 8 | suburbs | 4.21 | 5.22 | 17.35 | 7.70 | 26.57 | 1.14 | 16.62 | 8.21 | 3.55 | 3.85 | 8.14 | 21.06 | 2,181.73 |

## PV SYSTEMS

| Country | Arc | GL | PBT$_{\mathrm{CC}}$ | PBT$_{\mathrm{OD}}$ | PBT$_{\mathrm{HT\_CE}}$ | PBT$_{\mathrm{HT\_nCE}}$ | PBT$_{\mathrm{PM}}$ | PBT$_{\mathrm{IR\_hh}}$ | PBT$_{\mathrm{POF}}$ | PBT$_{\mathrm{AC}}$ | PBT$_{\mathrm{ET}}$ | PBT$_{\mathrm{EuF}}$ | PBT$_{\mathrm{EuM}}$ | PBT$_{\mathrm{Ec\_FW}}$ | PBT$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **15** | 17 | cities | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 17 | country | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 17 | suburbs | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 18 | cities | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 18 | country | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 18 | suburbs | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 19 | cities | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 19 | country | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 19 | suburbs | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 20 | cities | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 20 | country | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **15** | 20 | suburbs | 4.83 | 6.01 | 19.98 | 8.16 | 30.15 | 1.32 | 19.15 | 9.38 | 4.06 | 4.41 | 9.34 | 24.52 | 2,539.95 |
| **16** | 5 | cities | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 5 | country | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 5 | suburbs | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 6 | cities | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 6 | country | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 6 | suburbs | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 7 | cities | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 7 | country | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 7 | suburbs | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 8 | cities | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 8 | country | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 8 | suburbs | 2.24 | 6.97 | 15.13 | 8.35 | 7.89 | 3.10 | 4.44 | 3.37 | 3.63 | 7.89 | 4.02 | 19.06 | 2,123.96 |
| **16** | 17 | cities | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **16** | 17 | country | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **16** | 17 | suburbs | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16** | 18 | cities | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **16** | 18 | country | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **16** | 18 | suburbs | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **16** | 19 | cities | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **16** | 19 | country | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **16** | 19 | suburbs | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **16** | 20 | cities | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **16** | 20 | country | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **16** | 20 | suburbs | 2.65 | 8.29 | 18.00 | 9.14 | 9.25 | 3.68 | 5.28 | 3.98 | 4.29 | 9.34 | 4.76 | 22.92 | 2,555.03 |
| **17** | 5 | cities | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 5 | country | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 5 | suburbs | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 6 | cities | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 6 | country | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 6 | suburbs | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 7 | cities | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 7 | country | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 7 | suburbs | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 8 | cities | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 8 | country | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 8 | suburbs | 3.88 | 2.70 | 11.38 | 5.37 | 7.17 | 0.42 | 6.68 | 4.09 | 5.16 | 2.80 | 4.60 | 15.16 | 1,432.33 |
| **17** | 17 | cities | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **17** | 17 | country | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **17** | 17 | suburbs | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **17** | 18 | cities | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **17** | 18 | country | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **17** | 18 | suburbs | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |

## PV SYSTEMS

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17** | 19 | cities | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **17** | 19 | country | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **17** | 19 | suburbs | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **17** | 20 | cities | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **17** | 20 | country | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **17** | 20 | suburbs | 4.49 | 3.14 | 13.24 | 5.74 | 8.22 | 0.49 | 7.78 | 4.72 | 5.96 | 3.25 | 5.33 | 17.83 | 1,684.43 |
| **18** | 5 | cities | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 5 | country | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 5 | suburbs | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 6 | cities | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 6 | country | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 6 | suburbs | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 7 | cities | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 7 | country | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 7 | suburbs | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 8 | cities | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 8 | country | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 8 | suburbs | 2.84 | 6.30 | 10.31 | 4.50 | 16.12 | 1.29 | 11.48 | 4.92 | 2.12 | 2.19 | 5.13 | 13.45 | 1,189.64 |
| **18** | 17 | cities | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **18** | 17 | country | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **18** | 17 | suburbs | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **18** | 18 | cities | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **18** | 18 | country | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **18** | 18 | suburbs | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **18** | 19 | cities | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **18** | 19 | country | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **18** | 19 | suburbs | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **PBT**$_{CC}$ | **PBT**$_{OD}$ | **PBT**$_{HT\_CE}$ | **PBT**$_{HT\_nCE}$ | **PBT**$_{PM}$ | **PBT**$_{IR\_hh}$ | **PBT**$_{POF}$ | **PBT**$_{AC}$ | **PBT**$_{ET}$ | **PBT**$_{EuF}$ | **PBT**$_{EuM}$ | **PBT**$_{Ec\_FW}$ | **PBT**$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **18** | 20 | cities | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **18** | 20 | country | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **18** | 20 | suburbs | 3.25 | 7.25 | 11.87 | 4.77 | 18.29 | 1.48 | 13.22 | 5.62 | 2.42 | 2.51 | 5.89 | 15.65 | 1,384.16 |
| **19** | 5 | cities | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 5 | country | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 5 | suburbs | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 6 | cities | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 6 | country | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 6 | suburbs | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 7 | cities | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 7 | country | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 7 | suburbs | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 8 | cities | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 8 | country | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 8 | suburbs | 5.93 | 9.86 | 20.79 | 10.02 | 27.21 | 2.48 | 16.19 | 10.04 | 5.49 | 5.50 | 9.80 | 20.45 | 2,126.06 |
| **19** | 17 | cities | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 17 | country | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 17 | suburbs | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 18 | cities | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 18 | country | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 18 | suburbs | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 19 | cities | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 19 | country | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 19 | suburbs | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 20 | cities | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 20 | country | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |
| **19** | 20 | suburbs | 6.87 | 11.46 | 24.19 | 10.72 | 31.20 | 2.88 | 18.85 | 11.60 | 6.35 | 6.37 | 11.36 | 24.06 | 2,500.81 |

## PV SYSTEMS

| Country | Arc | GL | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **20** | 5 | cities | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 5 | country | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 5 | suburbs | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 6 | cities | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 6 | country | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 6 | suburbs | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 7 | cities | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 7 | country | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 7 | suburbs | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 8 | cities | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 8 | country | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 8 | suburbs | 2.35 | 3.87 | 7.26 | 3.06 | 10.15 | 0.59 | 4.76 | 3.91 | 3.53 | 1.47 | 2.89 | 11.48 | 1,337.73 |
| **20** | 17 | cities | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 17 | country | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 17 | suburbs | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 18 | cities | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 18 | country | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 18 | suburbs | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 19 | cities | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 19 | country | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 19 | suburbs | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 20 | cities | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 20 | country | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **20** | 20 | suburbs | 2.72 | 4.50 | 8.44 | 3.28 | 11.63 | 0.68 | 5.53 | 4.52 | 4.08 | 1.71 | 3.34 | 13.50 | 1,571.82 |
| **21** | 5 | cities | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 5 | country | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 5 | suburbs | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **21** | 6 | cities | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 6 | country | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 6 | suburbs | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 7 | cities | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 7 | country | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 7 | suburbs | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 8 | cities | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 8 | country | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 8 | suburbs | 1.77 | 20.74 | 6.00 | 2.81 | 4.72 | 6.91 | 3.33 | 2.02 | 2.71 | 1.50 | 2.44 | 11.59 | 2,093.58 |
| **21** | 17 | cities | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 17 | country | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 17 | suburbs | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 18 | cities | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 18 | country | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 18 | suburbs | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 19 | cities | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 19 | country | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 19 | suburbs | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 20 | cities | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 20 | country | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **21** | 20 | suburbs | 2.08 | 24.51 | 7.10 | 3.06 | 5.50 | 8.16 | 3.95 | 2.37 | 3.18 | 1.77 | 2.87 | 13.86 | 2,503.24 |
| **22** | 5 | cities | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 5 | country | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 5 | suburbs | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 6 | cities | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 6 | country | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 6 | suburbs | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **22** | 7 | cities | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 7 | country | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 7 | suburbs | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 8 | cities | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 8 | country | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 8 | suburbs | 3.08 | 11.87 | 16.55 | 10.02 | 15.31 | 2.31 | 10.39 | 6.88 | 4.21 | 7.18 | 7.81 | 15.44 | 1,444.06 |
| **22** | 17 | cities | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 17 | country | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 17 | suburbs | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 18 | cities | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 18 | country | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 18 | suburbs | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 19 | cities | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 19 | country | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 19 | suburbs | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 20 | cities | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 20 | country | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **22** | 20 | suburbs | 4.08 | 15.79 | 22.04 | 12.28 | 20.08 | 3.07 | 13.84 | 9.09 | 5.57 | 9.52 | 10.36 | 20.78 | 1,943.15 |
| **23** | 9 | cities | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 9 | country | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 9 | suburbs | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 10 | cities | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 10 | country | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 10 | suburbs | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 11 | cities | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 11 | country | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 11 | suburbs | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |

## PV SYSTEMS

| Country | Arc | GL | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23** | 12 | cities | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 12 | country | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 12 | suburbs | 2.93 | 2.71 | 27.26 | 16.81 | 6.33 | 2.02 | 5.07 | 5.04 | 3.67 | 15.06 | 4.87 | 24.15 | 2,037.40 |
| **23** | 21 | cities | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 21 | country | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 21 | suburbs | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 22 | cities | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 22 | country | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 22 | suburbs | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 23 | cities | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 23 | country | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 23 | suburbs | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 24 | cities | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 24 | country | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **23** | 24 | suburbs | 3.42 | 3.17 | 31.84 | 19.64 | 7.39 | 2.36 | 5.92 | 5.88 | 4.28 | 17.59 | 5.69 | 28.21 | 2,379.78 |
| **24** | 9 | cities | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 9 | country | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 9 | suburbs | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 10 | cities | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 10 | country | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 10 | suburbs | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 11 | cities | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 11 | country | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 11 | suburbs | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 12 | cities | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 12 | country | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |
| **24** | 12 | suburbs | 2.54 | 1.83 | 28.05 | 20.91 | 4.16 | 1.72 | 3.44 | 2.84 | 2.05 | 20.63 | 3.28 | 24.43 | 2,122.04 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **24** | 21 | cities | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 21 | country | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 21 | suburbs | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 22 | cities | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 22 | country | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 22 | suburbs | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 23 | cities | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 23 | country | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 23 | suburbs | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 24 | cities | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 24 | country | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **24** | 24 | suburbs | 3.03 | 2.18 | 33.45 | 24.93 | 4.96 | 2.05 | 4.10 | 3.39 | 2.45 | 24.61 | 3.91 | 29.13 | 2,530.51 |
| **25** | 9 | cities | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 9 | country | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 9 | suburbs | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 10 | cities | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 10 | country | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 10 | suburbs | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 11 | cities | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 11 | country | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 11 | suburbs | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 12 | cities | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 12 | country | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 12 | suburbs | 2.32 | 1.36 | 29.93 | 26.37 | 3.05 | 1.25 | 2.32 | 2.03 | 1.98 | 39.69 | 2.29 | 25.07 | 2,022.19 |
| **25** | 21 | cities | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **25** | 21 | country | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **25** | 21 | suburbs | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **25** | 22 | cities | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **25** | 22 | country | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **25** | 22 | suburbs | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **25** | 23 | cities | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **25** | 23 | country | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **25** | 23 | suburbs | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **25** | 24 | cities | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **25** | 24 | country | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **25** | 24 | suburbs | 2.86 | 1.68 | 36.99 | 32.59 | 3.76 | 1.54 | 2.86 | 2.51 | 2.45 | 49.05 | 2.84 | 30.98 | 2,499.10 |
| **26** | 9 | cities | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 9 | country | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 9 | suburbs | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 10 | cities | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 10 | country | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 10 | suburbs | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 11 | cities | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 11 | country | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 11 | suburbs | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 12 | cities | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 12 | country | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 12 | suburbs | 27.58 | 4.74 | 47.46 | 41.44 | 69.23 | 0.55 | 65.97 | 59.66 | 37.45 | 62.98 | 41.29 | 27.44 | 1,888.81 |
| **26** | 21 | cities | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **26** | 21 | country | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **26** | 21 | suburbs | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **26** | 22 | cities | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **26** | 22 | country | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **26** | 22 | suburbs | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **PBT**$_{\mathrm{CC}}$ | **PBT**$_{\mathrm{OD}}$ | **PBT**$_{\mathrm{HT\_CE}}$ | **PBT**$_{\mathrm{HT\_nCE}}$ | **PBT**$_{\mathrm{PM}}$ | **PBT**$_{\mathrm{IR\_hh}}$ | **PBT**$_{\mathrm{POF}}$ | **PBT**$_{\mathrm{AC}}$ | **PBT**$_{\mathrm{ET}}$ | **PBT**$_{\mathrm{EuF}}$ | **PBT**$_{\mathrm{EuM}}$ | **PBT**$_{\mathrm{Ec\_FW}}$ | **PBT**$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26** | 23 | cities | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **26** | 23 | country | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **26** | 23 | suburbs | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **26** | 24 | cities | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **26** | 24 | country | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **26** | 24 | suburbs | 34.52 | 5.93 | 59.41 | 51.87 | 86.65 | 0.69 | 82.58 | 74.67 | 46.87 | 78.83 | 51.68 | 34.34 | 2,364.22 |
| **27** | 9 | cities | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 9 | country | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 9 | suburbs | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 10 | cities | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 10 | country | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 10 | suburbs | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 11 | cities | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 11 | country | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 11 | suburbs | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 12 | cities | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 12 | country | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 12 | suburbs | 8.13 | 4.91 | 38.51 | 32.11 | 29.36 | 0.60 | 22.24 | 19.71 | 14.19 | 31.39 | 18.21 | 31.53 | 2,286.51 |
| **27** | 21 | cities | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **27** | 21 | country | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **27** | 21 | suburbs | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **27** | 22 | cities | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **27** | 22 | country | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **27** | 22 | suburbs | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **27** | 23 | cities | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **27** | 23 | country | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **27** | 23 | suburbs | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |

## PV SYSTEMS

| **Country** | **Arc** | **GL** | **PBT$_{\mathrm{CC}}$** | **PBT$_{\mathrm{OD}}$** | **PBT$_{\mathrm{HT\_CE}}$** | **PBT$_{\mathrm{HT\_nCE}}$** | **PBT$_{\mathrm{PM}}$** | **PBT$_{\mathrm{IR\_hh}}$** | **PBT$_{\mathrm{POF}}$** | **PBT$_{\mathrm{AC}}$** | **PBT$_{\mathrm{ET}}$** | **PBT$_{\mathrm{EuF}}$** | **PBT$_{\mathrm{EuM}}$** | **PBT$_{\mathrm{Ec\_FW}}$** | **PBT$_{\mathrm{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **27** | 24 | cities | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **27** | 24 | country | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **27** | 24 | suburbs | 10.15 | 6.13 | 48.11 | 40.11 | 36.67 | 0.75 | 27.78 | 24.62 | 17.73 | 39.21 | 22.75 | 39.39 | 2,856.42 |
| **28** | 5 | cities | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 5 | country | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 5 | suburbs | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 6 | cities | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 6 | country | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 6 | suburbs | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 7 | cities | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 7 | country | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 7 | suburbs | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 8 | cities | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 8 | country | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 8 | suburbs | 4.14 | 6.38 | 12.60 | 5.76 | 5.36 | 1.20 | 5.40 | 2.68 | 4.00 | 3.14 | 4.31 | 15.32 | 1,804.83 |
| **28** | 17 | cities | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 17 | country | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 17 | suburbs | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 18 | cities | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 18 | country | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 18 | suburbs | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 19 | cities | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 19 | country | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 19 | suburbs | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 20 | cities | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 20 | country | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |
| **28** | 20 | suburbs | 4.66 | 7.22 | 14.26 | 6.00 | 5.98 | 1.36 | 6.11 | 3.01 | 4.49 | 3.54 | 4.86 | 17.52 | 2,064.41 |

## SOLAR COLLECTOR SYSTEMS

| **Country** | Arc | GL | PBT$_{\text{CC}}$ | PBT$_{\text{OD}}$ | PBT$_{\text{HT\_CE}}$ | PBT$_{\text{HT\_nCE}}$ | PBT$_{\text{PM}}$ | PBT$_{\text{IR\_hh}}$ | PBT$_{\text{POF}}$ | PBT$_{\text{AC}}$ | PBT$_{\text{ET}}$ | PBT$_{\text{EuF}}$ | PBT$_{\text{EuM}}$ | PBT$_{\text{Ec\_FW}}$ | PBT$_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | cities | 0.67 | 0.27 | 32.53 | 30.05 | 1.23 | 0.60 | 0.71 | 0.92 | 0.70 | 31.98 | 0.79 | 6.75 | 28.22 |
| **1** | 1 | country | 0.67 | 0.27 | 32.53 | 30.05 | 1.23 | 0.60 | 0.71 | 0.92 | 0.70 | 31.98 | 0.79 | 6.75 | 28.22 |
| **1** | 1 | suburbs | 0.67 | 0.27 | 32.53 | 30.05 | 1.23 | 0.60 | 0.71 | 0.92 | 0.70 | 31.98 | 0.79 | 6.75 | 28.22 |
| **1** | 2 | cities | 0.65 | 0.26 | 31.28 | 28.90 | 1.18 | 0.57 | 0.68 | 0.89 | 0.68 | 30.75 | 0.76 | 6.50 | 27.14 |
| **1** | 2 | country | 0.65 | 0.26 | 31.38 | 29.00 | 1.19 | 0.58 | 0.69 | 0.89 | 0.68 | 30.85 | 0.76 | 6.52 | 27.23 |
| **1** | 2 | suburbs | 0.65 | 0.26 | 31.34 | 28.96 | 1.19 | 0.58 | 0.69 | 0.89 | 0.68 | 30.81 | 0.76 | 6.51 | 27.19 |
| **1** | 3 | cities | 0.65 | 0.26 | 31.24 | 28.86 | 1.18 | 0.57 | 0.68 | 0.89 | 0.68 | 30.71 | 0.76 | 6.49 | 27.10 |
| **1** | 3 | country | 0.65 | 0.26 | 31.37 | 28.99 | 1.19 | 0.58 | 0.69 | 0.89 | 0.68 | 30.84 | 0.76 | 6.51 | 27.22 |
| **1** | 3 | suburbs | 0.65 | 0.26 | 31.27 | 28.89 | 1.18 | 0.57 | 0.68 | 0.89 | 0.68 | 30.74 | 0.76 | 6.49 | 27.13 |
| **1** | 4 | cities | 0.65 | 0.26 | 31.20 | 28.82 | 1.18 | 0.57 | 0.68 | 0.89 | 0.68 | 30.67 | 0.76 | 6.48 | 27.07 |
| **1** | 4 | country | 0.65 | 0.26 | 31.26 | 28.88 | 1.18 | 0.57 | 0.68 | 0.89 | 0.68 | 30.73 | 0.76 | 6.49 | 27.12 |
| **1** | 4 | suburbs | 0.65 | 0.26 | 31.17 | 28.80 | 1.18 | 0.57 | 0.68 | 0.88 | 0.68 | 30.64 | 0.76 | 6.47 | 27.04 |
| **1** | 13 | cities | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 13 | country | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 13 | suburbs | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 14 | cities | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 14 | country | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 14 | suburbs | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 15 | cities | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 15 | country | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 15 | suburbs | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 16 | cities | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 16 | country | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |
| **1** | 16 | suburbs | 0.80 | 0.38 | 46.90 | 29.69 | 1.52 | 0.73 | 0.88 | 1.27 | 0.88 | 45.72 | 1.02 | 9.56 | 37.77 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2** | 1 | cities | 3.24 | 1.35 | 41.34 | 52.87 | 5.65 | 2.64 | 3.43 | 4.30 | 3.29 | 40.66 | 3.76 | 18.85 | 39.44 |
| **2** | 1 | country | 3.24 | 1.35 | 41.34 | 52.87 | 5.65 | 2.64 | 3.43 | 4.30 | 3.29 | 40.66 | 3.76 | 18.85 | 39.44 |
| **2** | 1 | suburbs | 3.24 | 1.35 | 41.34 | 52.87 | 5.65 | 2.64 | 3.43 | 4.30 | 3.29 | 40.66 | 3.76 | 18.85 | 39.44 |
| **2** | 2 | cities | 3.14 | 1.31 | 40.09 | 51.27 | 5.48 | 2.56 | 3.32 | 4.17 | 3.19 | 39.43 | 3.65 | 18.28 | 38.24 |
| **2** | 2 | country | 3.15 | 1.31 | 40.15 | 51.34 | 5.49 | 2.57 | 3.33 | 4.18 | 3.19 | 39.48 | 3.65 | 18.30 | 38.30 |
| **2** | 2 | suburbs | 3.14 | 1.31 | 40.08 | 51.25 | 5.48 | 2.56 | 3.32 | 4.17 | 3.19 | 39.41 | 3.64 | 18.27 | 38.23 |
| **2** | 3 | cities | 3.14 | 1.31 | 40.03 | 51.19 | 5.47 | 2.56 | 3.32 | 4.16 | 3.18 | 39.37 | 3.64 | 18.25 | 38.18 |
| **2** | 3 | country | 3.14 | 1.31 | 40.02 | 51.18 | 5.47 | 2.56 | 3.32 | 4.16 | 3.18 | 39.36 | 3.64 | 18.24 | 38.18 |
| **2** | 3 | suburbs | 3.13 | 1.31 | 39.97 | 51.11 | 5.46 | 2.55 | 3.31 | 4.16 | 3.18 | 39.31 | 3.63 | 18.22 | 38.12 |
| **2** | 4 | cities | 3.13 | 1.31 | 39.98 | 51.13 | 5.47 | 2.56 | 3.31 | 4.16 | 3.18 | 39.32 | 3.64 | 18.23 | 38.14 |
| **2** | 4 | country | 3.13 | 1.31 | 39.96 | 51.10 | 5.46 | 2.55 | 3.31 | 4.16 | 3.18 | 39.30 | 3.63 | 18.22 | 38.11 |
| **2** | 4 | suburbs | 3.13 | 1.30 | 39.93 | 51.07 | 5.46 | 2.55 | 3.31 | 4.15 | 3.17 | 39.27 | 3.63 | 18.20 | 38.09 |
| **2** | 13 | cities | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 13 | country | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 13 | suburbs | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 14 | cities | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 14 | country | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 14 | suburbs | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 15 | cities | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 15 | country | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 15 | suburbs | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 16 | cities | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 16 | country | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **2** | 16 | suburbs | 3.82 | 1.86 | 59.31 | 51.96 | 6.93 | 3.23 | 4.20 | 5.87 | 4.08 | 57.84 | 4.81 | 26.53 | 52.51 |
| **3** | 1 | cities | 2.65 | 3.04 | 18.10 | 42.52 | 0.87 | 2.92 | 1.29 | 7.07 | 3.62 | 25.30 | 4.11 | 18.78 | 56.88 |
| **3** | 1 | country | 2.65 | 3.04 | 18.10 | 42.52 | 0.87 | 2.92 | 1.29 | 7.07 | 3.62 | 25.30 | 4.11 | 18.78 | 56.88 |
| **3** | 1 | suburbs | 2.65 | 3.04 | 18.10 | 42.52 | 0.87 | 2.92 | 1.29 | 7.07 | 3.62 | 25.30 | 4.11 | 18.78 | 56.88 |
| **3** | 2 | cities | 2.55 | 2.92 | 17.41 | 40.91 | 0.84 | 2.81 | 1.24 | 6.80 | 3.48 | 24.34 | 3.95 | 18.07 | 54.73 |
| **3** | 2 | country | 2.57 | 2.95 | 17.58 | 41.30 | 0.84 | 2.83 | 1.25 | 6.87 | 3.52 | 24.57 | 3.99 | 18.24 | 55.24 |
| **3** | 2 | suburbs | 2.55 | 2.93 | 17.46 | 41.03 | 0.84 | 2.82 | 1.25 | 6.82 | 3.49 | 24.41 | 3.97 | 18.13 | 54.89 |
| **3** | 3 | cities | 2.55 | 2.92 | 17.41 | 40.90 | 0.84 | 2.81 | 1.24 | 6.80 | 3.48 | 24.34 | 3.95 | 18.07 | 54.72 |
| **3** | 3 | country | 2.57 | 2.95 | 17.57 | 41.28 | 0.84 | 2.83 | 1.25 | 6.86 | 3.51 | 24.56 | 3.99 | 18.24 | 55.22 |
| **3** | 3 | suburbs | 2.55 | 2.93 | 17.46 | 41.03 | 0.84 | 2.82 | 1.25 | 6.82 | 3.49 | 24.41 | 3.97 | 18.13 | 54.89 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | 4 | cities | 2.54 | 2.91 | 17.35 | 40.76 | 0.83 | 2.80 | 1.24 | 6.78 | 3.47 | 24.25 | 3.94 | 18.01 | 54.53 |
| **3** | 4 | country | 2.55 | 2.93 | 17.45 | 40.99 | 0.84 | 2.81 | 1.24 | 6.82 | 3.49 | 24.39 | 3.96 | 18.11 | 54.84 |
| **3** | 4 | suburbs | 2.54 | 2.91 | 17.34 | 40.75 | 0.83 | 2.80 | 1.24 | 6.78 | 3.47 | 24.25 | 3.94 | 18.00 | 54.51 |
| **3** | 13 | cities | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 13 | country | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 13 | suburbs | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 14 | cities | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 14 | country | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 14 | suburbs | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 15 | cities | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 15 | country | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 15 | suburbs | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 16 | cities | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 16 | country | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **3** | 16 | suburbs | 3.18 | 4.27 | 26.50 | 42.67 | 1.09 | 3.65 | 1.62 | 9.85 | 4.59 | 36.74 | 5.37 | 27.00 | 77.34 |
| **4** | 1 | cities | 1.37 | 1.67 | 7.40 | 3.87 | 2.86 | 1.82 | 3.36 | 2.80 | 3.40 | 1.11 | 2.16 | 4.10 | 33.33 |
| **4** | 1 | country | 1.37 | 1.67 | 7.40 | 3.87 | 2.86 | 1.82 | 3.36 | 2.80 | 3.40 | 1.11 | 2.16 | 4.10 | 33.33 |
| **4** | 1 | suburbs | 1.37 | 1.67 | 7.40 | 3.87 | 2.86 | 1.82 | 3.36 | 2.80 | 3.40 | 1.11 | 2.16 | 4.10 | 33.33 |
| **4** | 2 | cities | 1.34 | 1.64 | 7.24 | 3.78 | 2.80 | 1.78 | 3.29 | 2.74 | 3.33 | 1.09 | 2.12 | 4.01 | 32.60 |
| **4** | 2 | country | 1.35 | 1.64 | 7.25 | 3.79 | 2.80 | 1.78 | 3.29 | 2.75 | 3.33 | 1.09 | 2.12 | 4.02 | 32.66 |
| **4** | 2 | suburbs | 1.34 | 1.64 | 7.25 | 3.79 | 2.80 | 1.78 | 3.29 | 2.74 | 3.33 | 1.09 | 2.12 | 4.02 | 32.64 |
| **4** | 3 | cities | 1.34 | 1.64 | 7.25 | 3.79 | 2.80 | 1.78 | 3.29 | 2.74 | 3.33 | 1.09 | 2.12 | 4.01 | 32.62 |
| **4** | 3 | country | 1.35 | 1.64 | 7.28 | 3.80 | 2.81 | 1.79 | 3.30 | 2.75 | 3.34 | 1.09 | 2.13 | 4.03 | 32.76 |
| **4** | 3 | suburbs | 1.35 | 1.64 | 7.25 | 3.79 | 2.80 | 1.78 | 3.29 | 2.75 | 3.33 | 1.09 | 2.12 | 4.02 | 32.66 |
| **4** | 4 | cities | 1.34 | 1.63 | 7.20 | 3.76 | 2.78 | 1.77 | 3.27 | 2.73 | 3.31 | 1.08 | 2.11 | 3.99 | 32.43 |
| **4** | 4 | country | 1.34 | 1.63 | 7.22 | 3.77 | 2.79 | 1.78 | 3.28 | 2.73 | 3.32 | 1.08 | 2.11 | 4.00 | 32.52 |
| **4** | 4 | suburbs | 1.34 | 1.63 | 7.22 | 3.77 | 2.79 | 1.77 | 3.28 | 2.73 | 3.32 | 1.08 | 2.11 | 4.00 | 32.50 |
| **4** | 13 | cities | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **4** | 13 | country | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **4** | 13 | suburbs | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **4** | 14 | cities | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **4** | 14 | country | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **4** | 14 | suburbs | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 15 | cities | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **4** | 15 | country | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **4** | 15 | suburbs | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **4** | 16 | cities | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **4** | 16 | country | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **4** | 16 | suburbs | 1.67 | 2.37 | 10.93 | 3.91 | 3.61 | 2.29 | 4.24 | 3.94 | 4.35 | 1.63 | 2.85 | 5.94 | 45.68 |
| **5** | 1 | cities | 1.71 | 1.23 | 33.64 | 32.01 | 2.97 | 0.51 | 2.81 | 6.06 | 4.04 | 21.84 | 4.51 | 14.02 | 35.27 |
| **5** | 1 | country | 1.71 | 1.23 | 33.64 | 32.01 | 2.97 | 0.51 | 2.81 | 6.06 | 4.04 | 21.84 | 4.51 | 14.02 | 35.27 |
| **5** | 1 | suburbs | 1.71 | 1.23 | 33.64 | 32.01 | 2.97 | 0.51 | 2.81 | 6.06 | 4.04 | 21.84 | 4.51 | 14.02 | 35.27 |
| **5** | 2 | cities | 1.64 | 1.18 | 32.29 | 30.73 | 2.85 | 0.49 | 2.69 | 5.81 | 3.88 | 20.97 | 4.33 | 13.46 | 33.86 |
| **5** | 2 | country | 1.65 | 1.19 | 32.41 | 30.84 | 2.86 | 0.49 | 2.70 | 5.84 | 3.89 | 21.04 | 4.35 | 13.51 | 33.99 |
| **5** | 2 | suburbs | 1.64 | 1.18 | 32.31 | 30.75 | 2.85 | 0.49 | 2.70 | 5.82 | 3.88 | 20.98 | 4.33 | 13.46 | 33.88 |
| **5** | 3 | cities | 1.64 | 1.18 | 32.24 | 30.68 | 2.85 | 0.49 | 2.69 | 5.80 | 3.87 | 20.93 | 4.32 | 13.43 | 33.80 |
| **5** | 3 | country | 1.64 | 1.19 | 32.34 | 30.78 | 2.86 | 0.49 | 2.70 | 5.82 | 3.89 | 21.00 | 4.34 | 13.48 | 33.92 |
| **5** | 3 | suburbs | 1.64 | 1.18 | 32.21 | 30.65 | 2.84 | 0.49 | 2.69 | 5.80 | 3.87 | 20.92 | 4.32 | 13.42 | 33.78 |
| **5** | 4 | cities | 1.63 | 1.17 | 32.01 | 30.46 | 2.83 | 0.48 | 2.67 | 5.76 | 3.85 | 20.79 | 4.29 | 13.34 | 33.57 |
| **5** | 4 | country | 1.63 | 1.18 | 32.04 | 30.49 | 2.83 | 0.48 | 2.67 | 5.77 | 3.85 | 20.81 | 4.30 | 13.35 | 33.60 |
| **5** | 4 | suburbs | 1.62 | 1.17 | 32.00 | 30.45 | 2.82 | 0.48 | 2.67 | 5.76 | 3.84 | 20.78 | 4.29 | 13.33 | 33.55 |
| **5** | 13 | cities | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 13 | country | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 13 | suburbs | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 14 | cities | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 14 | country | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 14 | suburbs | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 15 | cities | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 15 | country | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 15 | suburbs | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 16 | cities | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 16 | country | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **5** | 16 | suburbs | 2.03 | 1.71 | 48.70 | 31.76 | 3.67 | 0.63 | 3.48 | 8.34 | 5.07 | 31.36 | 5.83 | 19.92 | 47.41 |
| **6** | 1 | cities | 1.94 | 1.46 | 51.24 | 55.47 | 3.71 | 2.32 | 3.74 | 9.28 | 4.14 | 38.87 | 7.48 | 25.54 | 50.55 |
| **6** | 1 | country | 1.94 | 1.46 | 51.24 | 55.47 | 3.71 | 2.32 | 3.74 | 9.28 | 4.14 | 38.87 | 7.48 | 25.54 | 50.55 |
| **6** | 1 | suburbs | 1.94 | 1.46 | 51.24 | 55.47 | 3.71 | 2.32 | 3.74 | 9.28 | 4.14 | 38.87 | 7.48 | 25.54 | 50.55 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6** | 2 | cities | 1.87 | 1.41 | 49.40 | 53.48 | 3.58 | 2.24 | 3.61 | 8.95 | 3.99 | 37.47 | 7.21 | 24.62 | 48.74 |
| **6** | 2 | country | 1.87 | 1.41 | 49.40 | 53.49 | 3.58 | 2.24 | 3.61 | 8.95 | 3.99 | 37.48 | 7.21 | 24.63 | 48.75 |
| **6** | 2 | suburbs | 1.87 | 1.41 | 49.35 | 53.43 | 3.58 | 2.24 | 3.61 | 8.94 | 3.99 | 37.44 | 7.20 | 24.60 | 48.70 |
| **6** | 3 | cities | 1.87 | 1.40 | 49.31 | 53.38 | 3.57 | 2.24 | 3.60 | 8.93 | 3.98 | 37.40 | 7.19 | 24.58 | 48.65 |
| **6** | 3 | country | 1.87 | 1.40 | 49.29 | 53.36 | 3.57 | 2.23 | 3.60 | 8.93 | 3.98 | 37.39 | 7.19 | 24.57 | 48.63 |
| **6** | 3 | suburbs | 1.86 | 1.40 | 49.25 | 53.32 | 3.57 | 2.23 | 3.60 | 8.92 | 3.98 | 37.36 | 7.19 | 24.55 | 48.59 |
| **6** | 4 | cities | 1.87 | 1.41 | 49.41 | 53.49 | 3.58 | 2.24 | 3.61 | 8.95 | 3.99 | 37.48 | 7.21 | 24.63 | 48.75 |
| **6** | 4 | country | 1.86 | 1.40 | 49.27 | 53.34 | 3.57 | 2.23 | 3.60 | 8.93 | 3.98 | 37.37 | 7.19 | 24.56 | 48.61 |
| **6** | 4 | suburbs | 1.86 | 1.40 | 49.26 | 53.33 | 3.57 | 2.23 | 3.60 | 8.93 | 3.98 | 37.37 | 7.19 | 24.56 | 48.60 |
| **6** | 13 | cities | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 13 | country | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 13 | suburbs | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 14 | cities | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 14 | country | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 14 | suburbs | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 15 | cities | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 15 | country | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 15 | suburbs | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 16 | cities | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 16 | country | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **6** | 16 | suburbs | 2.38 | 2.09 | 76.36 | 56.65 | 4.73 | 2.95 | 4.77 | 13.16 | 5.34 | 57.44 | 9.94 | 37.36 | 69.94 |
| **7** | 5 | cities | 3.00 | 1.00 | 54.39 | 60.57 | 5.46 | 0.21 | 5.80 | 16.70 | 10.13 | 59.94 | 10.55 | 17.53 | 38.01 |
| **7** | 5 | country | 2.99 | 0.99 | 54.22 | 60.38 | 5.45 | 0.21 | 5.79 | 16.65 | 10.09 | 59.75 | 10.52 | 17.47 | 37.88 |
| **7** | 5 | suburbs | 3.00 | 1.00 | 54.31 | 60.48 | 5.45 | 0.21 | 5.80 | 16.67 | 10.11 | 59.85 | 10.54 | 17.50 | 37.95 |
| **7** | 6 | cities | 3.00 | 1.00 | 54.41 | 60.59 | 5.46 | 0.21 | 5.81 | 16.70 | 10.13 | 59.96 | 10.55 | 17.54 | 38.02 |
| **7** | 6 | country | 3.00 | 1.00 | 54.38 | 60.55 | 5.46 | 0.21 | 5.80 | 16.69 | 10.12 | 59.92 | 10.55 | 17.53 | 37.99 |
| **7** | 6 | suburbs | 3.00 | 1.00 | 54.38 | 60.55 | 5.46 | 0.21 | 5.80 | 16.69 | 10.12 | 59.92 | 10.55 | 17.53 | 38.00 |
| **7** | 7 | cities | 2.94 | 0.98 | 53.27 | 59.31 | 5.35 | 0.20 | 5.68 | 16.35 | 9.92 | 58.70 | 10.33 | 17.17 | 37.22 |
| **7** | 7 | country | 2.94 | 0.98 | 53.33 | 59.38 | 5.36 | 0.20 | 5.69 | 16.37 | 9.93 | 58.76 | 10.34 | 17.19 | 37.26 |
| **7** | 7 | suburbs | 2.94 | 0.98 | 53.30 | 59.35 | 5.35 | 0.20 | 5.69 | 16.36 | 9.92 | 58.73 | 10.34 | 17.18 | 37.24 |
| **7** | 8 | cities | 2.91 | 0.97 | 52.76 | 58.75 | 5.30 | 0.20 | 5.63 | 16.20 | 9.82 | 58.14 | 10.24 | 17.01 | 36.87 |
| **7** | 8 | country | 2.92 | 0.97 | 52.87 | 58.87 | 5.31 | 0.20 | 5.64 | 16.23 | 9.84 | 58.26 | 10.26 | 17.04 | 36.94 |
| **7** | 8 | suburbs | 2.92 | 0.97 | 52.79 | 58.79 | 5.30 | 0.20 | 5.63 | 16.21 | 9.83 | 58.18 | 10.24 | 17.02 | 36.89 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7** | 17 | cities | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 17 | country | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 17 | suburbs | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 18 | cities | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 18 | country | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 18 | suburbs | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 19 | cities | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 19 | country | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 19 | suburbs | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 20 | cities | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 20 | country | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **7** | 20 | suburbs | 4.05 | 1.51 | 88.52 | 63.48 | 7.68 | 0.27 | 8.09 | 26.26 | 14.35 | 96.97 | 15.48 | 28.05 | 58.05 |
| **8** | 5 | cities | 3.74 | 2.34 | 32.53 | 30.69 | 2.17 | 0.80 | 3.00 | 5.94 | 5.75 | 11.19 | 6.44 | 25.04 | 91.69 |
| **8** | 5 | country | 3.74 | 2.34 | 32.49 | 30.66 | 2.17 | 0.80 | 3.00 | 5.93 | 5.74 | 11.17 | 6.44 | 25.01 | 91.59 |
| **8** | 5 | suburbs | 3.73 | 2.34 | 32.48 | 30.65 | 2.17 | 0.80 | 3.00 | 5.93 | 5.74 | 11.17 | 6.43 | 25.01 | 91.57 |
| **8** | 6 | cities | 3.74 | 2.34 | 32.53 | 30.69 | 2.17 | 0.80 | 3.00 | 5.94 | 5.75 | 11.19 | 6.44 | 25.04 | 91.69 |
| **8** | 6 | country | 3.74 | 2.34 | 32.51 | 30.67 | 2.17 | 0.80 | 3.00 | 5.94 | 5.74 | 11.18 | 6.44 | 25.02 | 91.63 |
| **8** | 6 | suburbs | 3.74 | 2.34 | 32.51 | 30.67 | 2.17 | 0.80 | 3.00 | 5.94 | 5.74 | 11.18 | 6.44 | 25.03 | 91.64 |
| **8** | 7 | cities | 3.71 | 2.32 | 32.25 | 30.43 | 2.15 | 0.80 | 2.98 | 5.89 | 5.70 | 11.09 | 6.39 | 24.83 | 90.92 |
| **8** | 7 | country | 3.71 | 2.32 | 32.25 | 30.43 | 2.15 | 0.80 | 2.98 | 5.89 | 5.70 | 11.09 | 6.39 | 24.83 | 90.92 |
| **8** | 7 | suburbs | 3.71 | 2.32 | 32.26 | 30.43 | 2.15 | 0.80 | 2.98 | 5.89 | 5.70 | 11.09 | 6.39 | 24.83 | 90.93 |
| **8** | 8 | cities | 3.70 | 2.32 | 32.22 | 30.40 | 2.15 | 0.80 | 2.98 | 5.88 | 5.69 | 11.08 | 6.38 | 24.80 | 90.82 |
| **8** | 8 | country | 3.71 | 2.32 | 32.25 | 30.42 | 2.15 | 0.80 | 2.98 | 5.89 | 5.70 | 11.09 | 6.39 | 24.82 | 90.90 |
| **8** | 8 | suburbs | 3.70 | 2.32 | 32.22 | 30.40 | 2.15 | 0.80 | 2.98 | 5.88 | 5.69 | 11.08 | 6.38 | 24.81 | 90.83 |
| **8** | 17 | cities | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **8** | 17 | country | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **8** | 17 | suburbs | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **8** | 18 | cities | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **8** | 18 | country | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **8** | 18 | suburbs | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **8** | 19 | cities | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **8** | 19 | country | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **8** | 19 | suburbs | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **8** | 20 | cities | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **8** | 20 | country | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **8** | 20 | suburbs | 5.03 | 3.55 | 52.83 | 32.10 | 3.05 | 1.05 | 4.18 | 9.32 | 8.13 | 18.06 | 9.43 | 39.98 | 139.76 |
| **9** | 5 | cities | 1.39 | 0.96 | 19.08 | 12.84 | 2.78 | 0.27 | 2.57 | 5.51 | 3.51 | 4.84 | 3.51 | 9.93 | 36.21 |
| **9** | 5 | country | 1.39 | 0.96 | 19.06 | 12.83 | 2.78 | 0.27 | 2.57 | 5.51 | 3.51 | 4.83 | 3.51 | 9.92 | 36.18 |
| **9** | 5 | suburbs | 1.39 | 0.96 | 19.07 | 12.83 | 2.78 | 0.27 | 2.57 | 5.51 | 3.51 | 4.83 | 3.51 | 9.93 | 36.19 |
| **9** | 6 | cities | 1.39 | 0.96 | 19.13 | 12.87 | 2.79 | 0.27 | 2.58 | 5.53 | 3.52 | 4.85 | 3.52 | 9.96 | 36.31 |
| **9** | 6 | country | 1.39 | 0.96 | 19.07 | 12.83 | 2.78 | 0.27 | 2.57 | 5.51 | 3.51 | 4.83 | 3.51 | 9.92 | 36.19 |
| **9** | 6 | suburbs | 1.39 | 0.96 | 19.09 | 12.84 | 2.78 | 0.27 | 2.57 | 5.51 | 3.51 | 4.84 | 3.51 | 9.93 | 36.22 |
| **9** | 7 | cities | 1.36 | 0.94 | 18.72 | 12.60 | 2.73 | 0.26 | 2.52 | 5.41 | 3.45 | 4.75 | 3.44 | 9.74 | 35.53 |
| **9** | 7 | country | 1.37 | 0.94 | 18.80 | 12.65 | 2.74 | 0.26 | 2.53 | 5.43 | 3.46 | 4.76 | 3.46 | 9.78 | 35.67 |
| **9** | 7 | suburbs | 1.37 | 0.94 | 18.78 | 12.63 | 2.74 | 0.26 | 2.53 | 5.42 | 3.46 | 4.76 | 3.45 | 9.77 | 35.63 |
| **9** | 8 | cities | 1.36 | 0.94 | 18.63 | 12.53 | 2.72 | 0.26 | 2.51 | 5.38 | 3.43 | 4.72 | 3.43 | 9.70 | 35.35 |
| **9** | 8 | country | 1.36 | 0.94 | 18.65 | 12.55 | 2.72 | 0.26 | 2.51 | 5.39 | 3.43 | 4.73 | 3.43 | 9.71 | 35.39 |
| **9** | 8 | suburbs | 1.36 | 0.94 | 18.63 | 12.53 | 2.72 | 0.26 | 2.51 | 5.38 | 3.43 | 4.72 | 3.43 | 9.69 | 35.35 |
| **9** | 17 | cities | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 17 | country | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 17 | suburbs | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 18 | cities | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 18 | country | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 18 | suburbs | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 19 | cities | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 19 | country | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 19 | suburbs | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 20 | cities | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 20 | country | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **9** | 20 | suburbs | 1.87 | 1.46 | 31.09 | 13.47 | 3.92 | 0.35 | 3.59 | 8.68 | 4.98 | 7.83 | 5.15 | 15.90 | 55.37 |
| **10** | 5 | cities | 2.21 | 2.47 | 18.26 | 28.13 | 0.91 | 1.16 | 1.39 | 7.35 | 3.88 | 11.28 | 4.16 | 26.02 | 80.38 |
| **10** | 5 | country | 2.21 | 2.47 | 18.28 | 28.16 | 0.91 | 1.16 | 1.39 | 7.36 | 3.89 | 11.29 | 4.16 | 26.05 | 80.47 |
| **10** | 5 | suburbs | 2.21 | 2.47 | 18.28 | 28.15 | 0.91 | 1.16 | 1.39 | 7.35 | 3.88 | 11.29 | 4.16 | 26.04 | 80.45 |
| **10** | 6 | cities | 2.21 | 2.47 | 18.28 | 28.15 | 0.91 | 1.16 | 1.39 | 7.35 | 3.88 | 11.28 | 4.16 | 26.04 | 80.44 |
| **10** | 6 | country | 2.21 | 2.48 | 18.30 | 28.18 | 0.91 | 1.16 | 1.39 | 7.36 | 3.89 | 11.30 | 4.17 | 26.07 | 80.53 |
| **10** | 6 | suburbs | 2.21 | 2.48 | 18.29 | 28.17 | 0.91 | 1.16 | 1.39 | 7.36 | 3.89 | 11.29 | 4.16 | 26.06 | 80.49 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | 7 | cities | 2.16 | 2.42 | 17.88 | 27.53 | 0.89 | 1.13 | 1.36 | 7.19 | 3.80 | 11.04 | 4.07 | 25.47 | 78.68 |
| **10** | 7 | country | 2.16 | 2.42 | 17.91 | 27.59 | 0.89 | 1.14 | 1.36 | 7.21 | 3.81 | 11.06 | 4.08 | 25.52 | 78.83 |
| **10** | 7 | suburbs | 2.16 | 2.43 | 17.92 | 27.60 | 0.89 | 1.14 | 1.36 | 7.21 | 3.81 | 11.06 | 4.08 | 25.53 | 78.87 |
| **10** | 8 | cities | 2.14 | 2.40 | 17.75 | 27.34 | 0.88 | 1.13 | 1.35 | 7.14 | 3.77 | 10.96 | 4.04 | 25.29 | 78.13 |
| **10** | 8 | country | 2.15 | 2.41 | 17.81 | 27.43 | 0.88 | 1.13 | 1.35 | 7.16 | 3.78 | 10.99 | 4.05 | 25.37 | 78.37 |
| **10** | 8 | suburbs | 2.15 | 2.41 | 17.78 | 27.39 | 0.88 | 1.13 | 1.35 | 7.16 | 3.78 | 10.98 | 4.05 | 25.34 | 78.28 |
| **10** | 17 | cities | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 17 | country | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 17 | suburbs | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 18 | cities | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 18 | country | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 18 | suburbs | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 19 | cities | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 19 | country | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 19 | suburbs | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 20 | cities | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 20 | country | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **10** | 20 | suburbs | 2.95 | 3.72 | 29.47 | 29.23 | 1.26 | 1.51 | 1.92 | 11.46 | 5.45 | 18.09 | 6.05 | 41.28 | 121.74 |
| **11** | 5 | cities | 1.39 | 1.58 | 8.93 | 5.23 | 1.79 | 0.23 | 2.11 | 2.69 | 2.77 | 1.59 | 2.07 | 4.81 | 32.19 |
| **11** | 5 | country | 1.39 | 1.58 | 8.92 | 5.23 | 1.78 | 0.23 | 2.11 | 2.69 | 2.77 | 1.59 | 2.07 | 4.80 | 32.17 |
| **11** | 5 | suburbs | 1.39 | 1.58 | 8.92 | 5.23 | 1.78 | 0.23 | 2.11 | 2.69 | 2.77 | 1.59 | 2.07 | 4.80 | 32.17 |
| **11** | 6 | cities | 1.39 | 1.58 | 8.94 | 5.24 | 1.79 | 0.23 | 2.11 | 2.70 | 2.77 | 1.59 | 2.08 | 4.81 | 32.24 |
| **11** | 6 | country | 1.39 | 1.58 | 8.93 | 5.24 | 1.79 | 0.23 | 2.11 | 2.70 | 2.77 | 1.59 | 2.07 | 4.81 | 32.21 |
| **11** | 6 | suburbs | 1.39 | 1.58 | 8.94 | 5.24 | 1.79 | 0.23 | 2.11 | 2.70 | 2.77 | 1.59 | 2.07 | 4.81 | 32.22 |
| **11** | 7 | cities | 1.37 | 1.56 | 8.81 | 5.16 | 1.76 | 0.23 | 2.08 | 2.66 | 2.73 | 1.57 | 2.05 | 4.74 | 31.76 |
| **11** | 7 | country | 1.37 | 1.56 | 8.82 | 5.17 | 1.76 | 0.23 | 2.09 | 2.66 | 2.74 | 1.57 | 2.05 | 4.75 | 31.81 |
| **11** | 7 | suburbs | 1.37 | 1.56 | 8.81 | 5.16 | 1.76 | 0.23 | 2.08 | 2.66 | 2.74 | 1.57 | 2.05 | 4.75 | 31.78 |
| **11** | 8 | cities | 1.37 | 1.55 | 8.78 | 5.15 | 1.76 | 0.22 | 2.08 | 2.65 | 2.72 | 1.56 | 2.04 | 4.73 | 31.66 |
| **11** | 8 | country | 1.37 | 1.55 | 8.78 | 5.15 | 1.76 | 0.22 | 2.08 | 2.65 | 2.73 | 1.56 | 2.04 | 4.73 | 31.67 |
| **11** | 8 | suburbs | 1.37 | 1.55 | 8.79 | 5.15 | 1.76 | 0.22 | 2.08 | 2.65 | 2.73 | 1.56 | 2.04 | 4.73 | 31.67 |
| **11** | 17 | cities | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **11** | 17 | country | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **11** | 17 | suburbs | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11** | 18 | cities | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **11** | 18 | country | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **11** | 18 | suburbs | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **11** | 19 | cities | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **11** | 19 | country | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **11** | 19 | suburbs | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **11** | 20 | cities | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **11** | 20 | country | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **11** | 20 | suburbs | 1.79 | 2.29 | 13.86 | 5.23 | 2.39 | 0.29 | 2.81 | 4.04 | 3.74 | 2.45 | 2.90 | 7.33 | 46.89 |
| **12** | 5 | cities | 1.80 | 1.56 | 50.85 | 36.09 | 7.38 | 2.50 | 5.29 | 6.87 | 5.57 | 28.10 | 6.93 | 19.91 | 61.19 |
| **12** | 5 | country | 1.80 | 1.56 | 50.75 | 36.02 | 7.36 | 2.49 | 5.28 | 6.85 | 5.56 | 28.05 | 6.92 | 19.87 | 61.08 |
| **12** | 5 | suburbs | 1.80 | 1.56 | 50.74 | 36.01 | 7.36 | 2.49 | 5.28 | 6.85 | 5.56 | 28.04 | 6.91 | 19.87 | 61.07 |
| **12** | 6 | cities | 1.80 | 1.57 | 50.90 | 36.13 | 7.39 | 2.50 | 5.30 | 6.87 | 5.58 | 28.13 | 6.94 | 19.93 | 61.26 |
| **12** | 6 | country | 1.80 | 1.57 | 50.86 | 36.10 | 7.38 | 2.50 | 5.29 | 6.87 | 5.58 | 28.11 | 6.93 | 19.92 | 61.21 |
| **12** | 6 | suburbs | 1.80 | 1.56 | 50.81 | 36.06 | 7.37 | 2.50 | 5.29 | 6.86 | 5.57 | 28.08 | 6.92 | 19.90 | 61.15 |
| **12** | 7 | cities | 1.79 | 1.56 | 50.53 | 35.86 | 7.33 | 2.48 | 5.26 | 6.82 | 5.54 | 27.93 | 6.89 | 19.79 | 60.81 |
| **12** | 7 | country | 1.79 | 1.56 | 50.57 | 35.89 | 7.34 | 2.49 | 5.26 | 6.83 | 5.54 | 27.95 | 6.89 | 19.80 | 60.86 |
| **12** | 7 | suburbs | 1.79 | 1.56 | 50.56 | 35.88 | 7.34 | 2.48 | 5.26 | 6.83 | 5.54 | 27.94 | 6.89 | 19.80 | 60.85 |
| **12** | 8 | cities | 1.76 | 1.53 | 49.84 | 35.37 | 7.23 | 2.45 | 5.19 | 6.73 | 5.46 | 27.55 | 6.79 | 19.52 | 59.98 |
| **12** | 8 | country | 1.77 | 1.54 | 49.91 | 35.42 | 7.24 | 2.45 | 5.19 | 6.74 | 5.47 | 27.58 | 6.80 | 19.54 | 60.06 |
| **12** | 8 | suburbs | 1.77 | 1.53 | 49.87 | 35.40 | 7.24 | 2.45 | 5.19 | 6.73 | 5.47 | 27.56 | 6.80 | 19.53 | 60.02 |
| **12** | 17 | cities | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 17 | country | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 17 | suburbs | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 18 | cities | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 18 | country | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 18 | suburbs | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 19 | cities | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 19 | country | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 19 | suburbs | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 20 | cities | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 20 | country | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |
| **12** | 20 | suburbs | 2.40 | 2.36 | 82.05 | 37.50 | 10.29 | 3.26 | 7.32 | 10.71 | 7.83 | 45.08 | 10.08 | 31.58 | 92.68 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | 5 | cities | 2.57 | 2.32 | 125.55 | 82.16 | 17.82 | 5.69 | 9.13 | 24.28 | 12.13 | 54.84 | 15.07 | 59.18 | 97.47 |
| **13** | 5 | country | 2.55 | 2.31 | 125.01 | 81.81 | 17.75 | 5.67 | 9.09 | 24.18 | 12.07 | 54.60 | 15.01 | 58.92 | 97.06 |
| **13** | 5 | suburbs | 2.57 | 2.33 | 125.60 | 82.20 | 17.83 | 5.69 | 9.13 | 24.29 | 12.13 | 54.86 | 15.08 | 59.20 | 97.51 |
| **13** | 6 | cities | 2.58 | 2.34 | 126.11 | 82.54 | 17.90 | 5.72 | 9.17 | 24.39 | 12.18 | 55.09 | 15.14 | 59.44 | 97.91 |
| **13** | 6 | country | 2.56 | 2.32 | 125.39 | 82.06 | 17.80 | 5.68 | 9.12 | 24.25 | 12.11 | 54.77 | 15.05 | 59.10 | 97.35 |
| **13** | 6 | suburbs | 2.57 | 2.33 | 125.60 | 82.20 | 17.83 | 5.69 | 9.14 | 24.29 | 12.13 | 54.86 | 15.08 | 59.20 | 97.52 |
| **13** | 7 | cities | 2.52 | 2.29 | 123.44 | 80.79 | 17.52 | 5.59 | 8.98 | 23.87 | 11.92 | 53.92 | 14.82 | 58.18 | 95.84 |
| **13** | 7 | country | 2.53 | 2.29 | 123.57 | 80.87 | 17.54 | 5.60 | 8.99 | 23.90 | 11.93 | 53.97 | 14.83 | 58.24 | 95.94 |
| **13** | 7 | suburbs | 2.52 | 2.29 | 123.54 | 80.85 | 17.54 | 5.60 | 8.99 | 23.89 | 11.93 | 53.96 | 14.83 | 58.23 | 95.92 |
| **13** | 8 | cities | 2.51 | 2.27 | 122.78 | 80.35 | 17.43 | 5.56 | 8.93 | 23.75 | 11.86 | 53.63 | 14.74 | 57.87 | 95.33 |
| **13** | 8 | country | 2.51 | 2.28 | 123.05 | 80.53 | 17.47 | 5.58 | 8.95 | 23.80 | 11.88 | 53.75 | 14.77 | 58.00 | 95.53 |
| **13** | 8 | suburbs | 2.51 | 2.28 | 122.93 | 80.45 | 17.45 | 5.57 | 8.94 | 23.78 | 11.87 | 53.70 | 14.76 | 57.94 | 95.44 |
| **13** | 17 | cities | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 17 | country | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 17 | suburbs | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 18 | cities | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 18 | country | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 18 | suburbs | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 19 | cities | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 19 | country | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 19 | suburbs | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 20 | cities | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 20 | country | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **13** | 20 | suburbs | 3.47 | 3.55 | 205.26 | 86.51 | 25.19 | 7.51 | 12.79 | 38.36 | 17.26 | 89.13 | 22.21 | 95.10 | 149.56 |
| **14** | 5 | cities | 2.52 | 1.25 | 92.09 | 74.38 | 11.90 | 0.61 | 7.67 | 17.31 | 9.97 | 69.57 | 12.15 | 34.71 | 61.00 |
| **14** | 5 | country | 2.51 | 1.24 | 91.88 | 74.21 | 11.87 | 0.61 | 7.65 | 17.27 | 9.95 | 69.41 | 12.12 | 34.63 | 60.85 |
| **14** | 5 | suburbs | 2.51 | 1.25 | 92.00 | 74.31 | 11.89 | 0.61 | 7.66 | 17.29 | 9.96 | 69.50 | 12.14 | 34.68 | 60.94 |
| **14** | 6 | cities | 2.52 | 1.25 | 92.26 | 74.51 | 11.92 | 0.61 | 7.68 | 17.34 | 9.99 | 69.69 | 12.17 | 34.77 | 61.10 |
| **14** | 6 | country | 2.51 | 1.25 | 92.06 | 74.35 | 11.90 | 0.61 | 7.67 | 17.31 | 9.97 | 69.54 | 12.14 | 34.70 | 60.97 |
| **14** | 6 | suburbs | 2.52 | 1.25 | 92.13 | 74.41 | 11.91 | 0.61 | 7.67 | 17.32 | 9.97 | 69.60 | 12.15 | 34.73 | 61.02 |
| **14** | 7 | cities | 2.46 | 1.22 | 90.04 | 72.72 | 11.64 | 0.60 | 7.50 | 16.93 | 9.75 | 68.02 | 11.88 | 33.94 | 59.64 |
| **14** | 7 | country | 2.47 | 1.22 | 90.25 | 72.89 | 11.66 | 0.60 | 7.52 | 16.97 | 9.77 | 68.18 | 11.91 | 34.02 | 59.78 |
| **14** | 7 | suburbs | 2.46 | 1.22 | 90.17 | 72.83 | 11.65 | 0.60 | 7.51 | 16.95 | 9.76 | 68.12 | 11.90 | 33.99 | 59.73 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **14** | 8 | cities | 2.45 | 1.21 | 89.67 | 72.42 | 11.59 | 0.60 | 7.47 | 16.86 | 9.71 | 67.74 | 11.83 | 33.80 | 59.39 |
| **14** | 8 | country | 2.46 | 1.22 | 90.01 | 72.70 | 11.63 | 0.60 | 7.50 | 16.92 | 9.75 | 68.00 | 11.87 | 33.93 | 59.62 |
| **14** | 8 | suburbs | 2.45 | 1.22 | 89.82 | 72.54 | 11.61 | 0.60 | 7.48 | 16.88 | 9.72 | 67.85 | 11.85 | 33.85 | 59.49 |
| **14** | 17 | cities | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 17 | country | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 17 | suburbs | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 18 | cities | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 18 | country | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 18 | suburbs | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 19 | cities | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 19 | country | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 19 | suburbs | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 20 | cities | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 20 | country | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **14** | 20 | suburbs | 3.39 | 1.90 | 150.15 | 78.10 | 16.77 | 0.80 | 10.71 | 27.28 | 14.16 | 112.76 | 17.85 | 55.63 | 93.34 |
| **15** | 5 | cities | 1.20 | 0.71 | 50.10 | 31.99 | 6.67 | 1.06 | 3.99 | 8.10 | 4.56 | 18.59 | 6.11 | 30.76 | 39.93 |
| **15** | 5 | country | 1.19 | 0.70 | 49.67 | 31.71 | 6.61 | 1.05 | 3.96 | 8.03 | 4.52 | 18.43 | 6.06 | 30.49 | 39.59 |
| **15** | 5 | suburbs | 1.19 | 0.71 | 49.82 | 31.81 | 6.63 | 1.05 | 3.97 | 8.05 | 4.54 | 18.48 | 6.08 | 30.58 | 39.70 |
| **15** | 6 | cities | 1.20 | 0.71 | 50.30 | 32.11 | 6.70 | 1.06 | 4.01 | 8.13 | 4.58 | 18.66 | 6.14 | 30.88 | 40.09 |
| **15** | 6 | country | 1.19 | 0.71 | 49.87 | 31.84 | 6.64 | 1.06 | 3.98 | 8.06 | 4.54 | 18.50 | 6.08 | 30.62 | 39.74 |
| **15** | 6 | suburbs | 1.20 | 0.71 | 50.00 | 31.92 | 6.66 | 1.06 | 3.99 | 8.08 | 4.55 | 18.55 | 6.10 | 30.69 | 39.85 |
| **15** | 7 | cities | 1.20 | 0.71 | 50.23 | 32.07 | 6.69 | 1.06 | 4.00 | 8.12 | 4.58 | 18.64 | 6.13 | 30.84 | 40.03 |
| **15** | 7 | country | 1.20 | 0.71 | 49.97 | 31.90 | 6.65 | 1.06 | 3.98 | 8.08 | 4.55 | 18.54 | 6.10 | 30.68 | 39.83 |
| **15** | 7 | suburbs | 1.20 | 0.71 | 49.98 | 31.91 | 6.65 | 1.06 | 3.99 | 8.08 | 4.55 | 18.54 | 6.10 | 30.69 | 39.83 |
| **15** | 8 | cities | 1.20 | 0.71 | 50.04 | 31.95 | 6.66 | 1.06 | 3.99 | 8.09 | 4.56 | 18.57 | 6.11 | 30.72 | 39.88 |
| **15** | 8 | country | 1.19 | 0.71 | 49.94 | 31.88 | 6.65 | 1.06 | 3.98 | 8.07 | 4.55 | 18.53 | 6.09 | 30.66 | 39.80 |
| **15** | 8 | suburbs | 1.19 | 0.71 | 49.80 | 31.79 | 6.63 | 1.05 | 3.97 | 8.05 | 4.54 | 18.48 | 6.08 | 30.57 | 39.69 |
| **15** | 17 | cities | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **15** | 17 | country | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **15** | 17 | suburbs | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **15** | 18 | cities | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **15** | 18 | country | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **15** | 18 | suburbs | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **15** | 19 | cities | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **15** | 19 | country | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **15** | 19 | suburbs | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **15** | 20 | cities | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **15** | 20 | country | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **15** | 20 | suburbs | 1.48 | 0.99 | 74.70 | 30.71 | 8.59 | 1.28 | 5.10 | 11.67 | 5.92 | 27.55 | 8.21 | 45.08 | 55.87 |
| **16** | 5 | cities | 1.68 | 1.70 | 58.07 | 37.05 | 11.34 | 2.86 | 5.12 | 8.49 | 6.04 | 26.25 | 6.73 | 24.84 | 63.99 |
| **16** | 5 | country | 1.68 | 1.71 | 58.21 | 37.14 | 11.37 | 2.87 | 5.14 | 8.51 | 6.06 | 26.31 | 6.75 | 24.90 | 64.15 |
| **16** | 5 | suburbs | 1.68 | 1.70 | 58.05 | 37.03 | 11.33 | 2.86 | 5.12 | 8.48 | 6.04 | 26.24 | 6.73 | 24.83 | 63.96 |
| **16** | 6 | cities | 1.68 | 1.70 | 58.08 | 37.05 | 11.34 | 2.86 | 5.12 | 8.49 | 6.04 | 26.25 | 6.73 | 24.84 | 64.00 |
| **16** | 6 | country | 1.68 | 1.71 | 58.28 | 37.18 | 11.38 | 2.87 | 5.14 | 8.52 | 6.06 | 26.34 | 6.76 | 24.93 | 64.22 |
| **16** | 6 | suburbs | 1.68 | 1.70 | 58.16 | 37.11 | 11.36 | 2.86 | 5.13 | 8.50 | 6.05 | 26.29 | 6.74 | 24.88 | 64.09 |
| **16** | 7 | cities | 1.64 | 1.66 | 56.55 | 36.08 | 11.04 | 2.79 | 4.99 | 8.27 | 5.88 | 25.56 | 6.56 | 24.19 | 62.32 |
| **16** | 7 | country | 1.64 | 1.66 | 56.68 | 36.16 | 11.07 | 2.79 | 5.00 | 8.28 | 5.90 | 25.62 | 6.57 | 24.24 | 62.45 |
| **16** | 7 | suburbs | 1.64 | 1.66 | 56.61 | 36.12 | 11.05 | 2.79 | 5.00 | 8.28 | 5.89 | 25.59 | 6.57 | 24.22 | 62.39 |
| **16** | 8 | cities | 1.63 | 1.65 | 56.27 | 35.90 | 10.99 | 2.77 | 4.96 | 8.23 | 5.85 | 25.44 | 6.53 | 24.07 | 62.01 |
| **16** | 8 | country | 1.63 | 1.65 | 56.39 | 35.98 | 11.01 | 2.78 | 4.98 | 8.24 | 5.87 | 25.49 | 6.54 | 24.12 | 62.14 |
| **16** | 8 | suburbs | 1.63 | 1.65 | 56.37 | 35.96 | 11.01 | 2.78 | 4.97 | 8.24 | 5.86 | 25.48 | 6.54 | 24.11 | 62.12 |
| **16** | 17 | cities | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 17 | country | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 17 | suburbs | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 18 | cities | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 18 | country | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 18 | suburbs | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 19 | cities | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 19 | country | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 19 | suburbs | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 20 | cities | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 20 | country | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **16** | 20 | suburbs | 2.26 | 2.58 | 94.40 | 38.78 | 15.93 | 3.75 | 7.14 | 13.34 | 8.55 | 42.42 | 9.87 | 39.69 | 97.63 |
| **17** | 5 | cities | 2.10 | 1.72 | 50.92 | 30.89 | 8.42 | 0.74 | 5.68 | 8.08 | 6.41 | 12.82 | 6.66 | 25.39 | 71.05 |
| **17** | 5 | country | 2.10 | 1.71 | 50.88 | 30.87 | 8.41 | 0.74 | 5.67 | 8.08 | 6.40 | 12.81 | 6.66 | 25.37 | 71.00 |
| **17** | 5 | suburbs | 2.10 | 1.72 | 50.92 | 30.89 | 8.42 | 0.74 | 5.68 | 8.08 | 6.41 | 12.82 | 6.66 | 25.39 | 71.06 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17** | 6 | cities | 2.10 | 1.72 | 51.03 | 30.96 | 8.43 | 0.74 | 5.69 | 8.10 | 6.42 | 12.85 | 6.68 | 25.45 | 71.21 |
| **17** | 6 | country | 2.10 | 1.72 | 50.97 | 30.92 | 8.42 | 0.74 | 5.68 | 8.09 | 6.41 | 12.83 | 6.67 | 25.41 | 71.12 |
| **17** | 6 | suburbs | 2.10 | 1.72 | 50.95 | 30.91 | 8.42 | 0.74 | 5.68 | 8.09 | 6.41 | 12.83 | 6.67 | 25.41 | 71.09 |
| **17** | 7 | cities | 2.03 | 1.66 | 49.22 | 29.86 | 8.13 | 0.71 | 5.49 | 7.81 | 6.19 | 12.39 | 6.44 | 24.54 | 68.68 |
| **17** | 7 | country | 2.04 | 1.66 | 49.39 | 29.96 | 8.16 | 0.71 | 5.50 | 7.84 | 6.22 | 12.44 | 6.46 | 24.63 | 68.92 |
| **17** | 7 | suburbs | 2.03 | 1.66 | 49.26 | 29.88 | 8.14 | 0.71 | 5.49 | 7.82 | 6.20 | 12.40 | 6.45 | 24.56 | 68.73 |
| **17** | 8 | cities | 2.03 | 1.66 | 49.22 | 29.86 | 8.13 | 0.71 | 5.49 | 7.81 | 6.19 | 12.39 | 6.44 | 24.54 | 68.68 |
| **17** | 8 | country | 2.03 | 1.66 | 49.29 | 29.90 | 8.15 | 0.71 | 5.49 | 7.82 | 6.20 | 12.41 | 6.45 | 24.58 | 68.77 |
| **17** | 8 | suburbs | 2.03 | 1.66 | 49.32 | 29.92 | 8.15 | 0.71 | 5.50 | 7.83 | 6.21 | 12.42 | 6.45 | 24.59 | 68.82 |
| **17** | 17 | cities | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 17 | country | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 17 | suburbs | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 18 | cities | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 18 | country | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 18 | suburbs | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 19 | cities | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 19 | country | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 19 | suburbs | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 20 | cities | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 20 | country | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **17** | 20 | suburbs | 2.76 | 2.54 | 80.88 | 31.60 | 11.55 | 0.94 | 7.72 | 12.41 | 8.86 | 20.24 | 9.54 | 39.64 | 105.92 |
| **18** | 5 | cities | 2.21 | 1.78 | 45.21 | 30.00 | 6.31 | 1.73 | 5.75 | 10.24 | 4.85 | 11.67 | 7.97 | 24.91 | 62.26 |
| **18** | 5 | country | 2.21 | 1.78 | 45.30 | 30.06 | 6.32 | 1.73 | 5.76 | 10.26 | 4.86 | 11.69 | 7.98 | 24.96 | 62.39 |
| **18** | 5 | suburbs | 2.21 | 1.78 | 45.19 | 29.99 | 6.30 | 1.73 | 5.74 | 10.24 | 4.85 | 11.66 | 7.96 | 24.90 | 62.23 |
| **18** | 6 | cities | 2.21 | 1.78 | 45.27 | 30.04 | 6.31 | 1.73 | 5.75 | 10.26 | 4.86 | 11.68 | 7.98 | 24.94 | 62.35 |
| **18** | 6 | country | 2.21 | 1.78 | 45.31 | 30.07 | 6.32 | 1.73 | 5.76 | 10.27 | 4.86 | 11.69 | 7.99 | 24.97 | 62.41 |
| **18** | 6 | suburbs | 2.21 | 1.78 | 45.28 | 30.05 | 6.31 | 1.73 | 5.75 | 10.26 | 4.86 | 11.68 | 7.98 | 24.95 | 62.36 |
| **18** | 7 | cities | 2.15 | 1.73 | 44.07 | 29.25 | 6.15 | 1.68 | 5.60 | 9.99 | 4.73 | 11.37 | 7.77 | 24.28 | 60.70 |
| **18** | 7 | country | 2.16 | 1.74 | 44.21 | 29.34 | 6.17 | 1.69 | 5.62 | 10.02 | 4.74 | 11.41 | 7.79 | 24.36 | 60.89 |
| **18** | 7 | suburbs | 2.16 | 1.74 | 44.15 | 29.30 | 6.16 | 1.69 | 5.61 | 10.00 | 4.74 | 11.39 | 7.78 | 24.32 | 60.80 |
| **18** | 8 | cities | 2.15 | 1.73 | 43.99 | 29.20 | 6.14 | 1.68 | 5.59 | 9.97 | 4.72 | 11.35 | 7.75 | 24.24 | 60.59 |
| **18** | 8 | country | 2.15 | 1.73 | 44.10 | 29.27 | 6.15 | 1.68 | 5.61 | 9.99 | 4.73 | 11.38 | 7.77 | 24.30 | 60.74 |
| **18** | 8 | suburbs | 2.15 | 1.73 | 44.09 | 29.26 | 6.15 | 1.68 | 5.60 | 9.99 | 4.73 | 11.38 | 7.77 | 24.29 | 60.72 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **18** | 17 | cities | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 17 | country | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 17 | suburbs | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 18 | cities | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 18 | country | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 18 | suburbs | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 19 | cities | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 19 | country | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 19 | suburbs | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 20 | cities | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 20 | country | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **18** | 20 | suburbs | 2.92 | 2.65 | 72.14 | 30.83 | 8.70 | 2.23 | 7.85 | 15.80 | 6.74 | 18.51 | 11.46 | 39.07 | 93.25 |
| **19** | 5 | cities | 3.57 | 2.85 | 43.02 | 36.71 | 4.55 | 1.99 | 5.33 | 12.82 | 6.35 | 15.17 | 9.09 | 21.31 | 71.43 |
| **19** | 5 | country | 3.57 | 2.84 | 42.90 | 36.61 | 4.53 | 1.99 | 5.32 | 12.79 | 6.33 | 15.13 | 9.07 | 21.25 | 71.24 |
| **19** | 5 | suburbs | 3.57 | 2.85 | 42.96 | 36.66 | 4.54 | 1.99 | 5.33 | 12.80 | 6.34 | 15.14 | 9.08 | 21.28 | 71.33 |
| **19** | 6 | cities | 3.58 | 2.85 | 43.03 | 36.72 | 4.55 | 1.99 | 5.34 | 12.82 | 6.35 | 15.17 | 9.10 | 21.32 | 71.45 |
| **19** | 6 | country | 3.57 | 2.85 | 42.99 | 36.68 | 4.54 | 1.99 | 5.33 | 12.81 | 6.35 | 15.16 | 9.09 | 21.30 | 71.38 |
| **19** | 6 | suburbs | 3.58 | 2.85 | 43.03 | 36.72 | 4.55 | 1.99 | 5.33 | 12.82 | 6.35 | 15.17 | 9.10 | 21.32 | 71.45 |
| **19** | 7 | cities | 3.53 | 2.82 | 42.54 | 36.30 | 4.50 | 1.97 | 5.27 | 12.68 | 6.28 | 15.00 | 8.99 | 21.07 | 70.63 |
| **19** | 7 | country | 3.54 | 2.82 | 42.58 | 36.34 | 4.50 | 1.97 | 5.28 | 12.69 | 6.29 | 15.01 | 9.00 | 21.10 | 70.71 |
| **19** | 7 | suburbs | 3.54 | 2.82 | 42.58 | 36.33 | 4.50 | 1.97 | 5.28 | 12.69 | 6.29 | 15.01 | 9.00 | 21.09 | 70.70 |
| **19** | 8 | cities | 3.53 | 2.82 | 42.50 | 36.27 | 4.49 | 1.97 | 5.27 | 12.67 | 6.28 | 14.98 | 8.99 | 21.05 | 70.57 |
| **19** | 8 | country | 3.53 | 2.82 | 42.50 | 36.26 | 4.49 | 1.97 | 5.27 | 12.67 | 6.27 | 14.98 | 8.98 | 21.05 | 70.57 |
| **19** | 8 | suburbs | 3.53 | 2.81 | 42.46 | 36.24 | 4.49 | 1.97 | 5.26 | 12.66 | 6.27 | 14.97 | 8.98 | 21.04 | 70.51 |
| **19** | 17 | cities | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **19** | 17 | country | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **19** | 17 | suburbs | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **19** | 18 | cities | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **19** | 18 | country | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **19** | 18 | suburbs | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **19** | 19 | cities | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **19** | 19 | country | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **19** | 19 | suburbs | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **19** | 20 | cities | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **19** | 20 | country | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **19** | 20 | suburbs | 4.79 | 4.31 | 69.68 | 38.30 | 6.37 | 2.61 | 7.40 | 20.07 | 8.96 | 24.42 | 13.28 | 33.93 | 108.60 |
| **20** | 5 | cities | 1.67 | 1.99 | 19.37 | 10.92 | 4.12 | 0.48 | 3.36 | 5.45 | 3.85 | 3.56 | 3.47 | 10.16 | 52.13 |
| **20** | 5 | country | 1.68 | 1.99 | 19.39 | 10.93 | 4.12 | 0.48 | 3.36 | 5.46 | 3.86 | 3.56 | 3.48 | 10.17 | 52.19 |
| **20** | 5 | suburbs | 1.68 | 1.99 | 19.39 | 10.93 | 4.12 | 0.48 | 3.36 | 5.46 | 3.86 | 3.56 | 3.48 | 10.17 | 52.19 |
| **20** | 6 | cities | 1.67 | 1.99 | 19.37 | 10.92 | 4.12 | 0.48 | 3.36 | 5.45 | 3.85 | 3.56 | 3.47 | 10.16 | 52.14 |
| **20** | 6 | country | 1.67 | 1.99 | 19.37 | 10.92 | 4.12 | 0.48 | 3.36 | 5.45 | 3.85 | 3.56 | 3.47 | 10.16 | 52.15 |
| **20** | 6 | suburbs | 1.67 | 1.99 | 19.37 | 10.92 | 4.12 | 0.48 | 3.36 | 5.45 | 3.85 | 3.56 | 3.47 | 10.16 | 52.14 |
| **20** | 7 | cities | 1.65 | 1.96 | 19.11 | 10.78 | 4.06 | 0.47 | 3.31 | 5.38 | 3.80 | 3.51 | 3.43 | 10.02 | 51.44 |
| **20** | 7 | country | 1.66 | 1.97 | 19.19 | 10.82 | 4.08 | 0.47 | 3.33 | 5.40 | 3.82 | 3.53 | 3.44 | 10.06 | 51.66 |
| **20** | 7 | suburbs | 1.65 | 1.97 | 19.14 | 10.79 | 4.07 | 0.47 | 3.32 | 5.39 | 3.81 | 3.52 | 3.43 | 10.04 | 51.52 |
| **20** | 8 | cities | 1.64 | 1.95 | 18.99 | 10.71 | 4.04 | 0.47 | 3.29 | 5.34 | 3.78 | 3.49 | 3.41 | 9.96 | 51.13 |
| **20** | 8 | country | 1.64 | 1.95 | 19.01 | 10.72 | 4.04 | 0.47 | 3.29 | 5.35 | 3.78 | 3.49 | 3.41 | 9.97 | 51.17 |
| **20** | 8 | suburbs | 1.64 | 1.95 | 18.99 | 10.71 | 4.04 | 0.47 | 3.29 | 5.34 | 3.78 | 3.49 | 3.41 | 9.96 | 51.12 |
| **20** | 17 | cities | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 17 | country | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 17 | suburbs | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 18 | cities | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 18 | country | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 18 | suburbs | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 19 | cities | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 19 | country | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 19 | suburbs | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 20 | cities | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 20 | country | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **20** | 20 | suburbs | 2.22 | 2.98 | 31.05 | 11.28 | 5.71 | 0.62 | 4.61 | 8.44 | 5.38 | 5.68 | 5.02 | 16.01 | 78.45 |
| **21** | 5 | cities | 2.05 | 4.32 | 28.24 | 27.37 | 2.19 | 8.40 | 3.18 | 4.85 | 5.73 | 13.75 | 6.09 | 40.91 | 196.86 |
| **21** | 5 | country | 2.05 | 4.33 | 28.28 | 27.40 | 2.19 | 8.41 | 3.18 | 4.85 | 5.74 | 13.76 | 6.10 | 40.96 | 197.10 |
| **21** | 5 | suburbs | 2.05 | 4.32 | 28.26 | 27.38 | 2.19 | 8.40 | 3.18 | 4.85 | 5.73 | 13.75 | 6.10 | 40.93 | 196.95 |
| **21** | 6 | cities | 2.06 | 4.33 | 28.33 | 27.45 | 2.20 | 8.42 | 3.19 | 4.86 | 5.75 | 13.79 | 6.11 | 41.03 | 197.46 |
| **21** | 6 | country | 2.06 | 4.34 | 28.36 | 27.49 | 2.20 | 8.43 | 3.19 | 4.87 | 5.76 | 13.81 | 6.12 | 41.08 | 197.70 |
| **21** | 6 | suburbs | 2.06 | 4.33 | 28.29 | 27.41 | 2.20 | 8.41 | 3.19 | 4.85 | 5.74 | 13.77 | 6.10 | 40.97 | 197.17 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **21** | 7 | cities | 1.98 | 4.18 | 27.30 | 26.46 | 2.12 | 8.12 | 3.07 | 4.68 | 5.54 | 13.29 | 5.89 | 39.55 | 190.31 |
| **21** | 7 | country | 2.00 | 4.21 | 27.53 | 26.68 | 2.14 | 8.19 | 3.10 | 4.72 | 5.59 | 13.40 | 5.94 | 39.87 | 191.88 |
| **21** | 7 | suburbs | 1.99 | 4.19 | 27.42 | 26.57 | 2.13 | 8.15 | 3.09 | 4.70 | 5.56 | 13.35 | 5.92 | 39.71 | 191.11 |
| **21** | 8 | cities | 1.98 | 4.16 | 27.19 | 26.35 | 2.11 | 8.09 | 3.06 | 4.67 | 5.52 | 13.24 | 5.87 | 39.39 | 189.55 |
| **21** | 8 | country | 1.98 | 4.17 | 27.29 | 26.45 | 2.12 | 8.12 | 3.07 | 4.68 | 5.54 | 13.29 | 5.89 | 39.53 | 190.25 |
| **21** | 8 | suburbs | 1.98 | 4.17 | 27.24 | 26.40 | 2.11 | 8.10 | 3.07 | 4.67 | 5.53 | 13.26 | 5.88 | 39.46 | 189.87 |
| **21** | 17 | cities | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 17 | country | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 17 | suburbs | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 18 | cities | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 18 | country | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 18 | suburbs | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 19 | cities | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 19 | country | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 19 | suburbs | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 20 | cities | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 20 | country | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **21** | 20 | suburbs | 2.71 | 6.44 | 45.13 | 28.16 | 3.03 | 10.84 | 4.35 | 7.48 | 7.97 | 21.84 | 8.77 | 64.25 | 295.21 |
| **22** | 5 | cities | 2.26 | 2.20 | 33.48 | 41.37 | 2.00 | 2.96 | 2.57 | 6.07 | 4.05 | 23.20 | 4.96 | 34.71 | 101.39 |
| **22** | 5 | country | 2.25 | 2.20 | 33.43 | 41.30 | 2.00 | 2.95 | 2.57 | 6.06 | 4.05 | 23.16 | 4.95 | 34.65 | 101.24 |
| **22** | 5 | suburbs | 2.25 | 2.20 | 33.42 | 41.30 | 2.00 | 2.95 | 2.57 | 6.06 | 4.04 | 23.16 | 4.95 | 34.65 | 101.23 |
| **22** | 6 | cities | 2.26 | 2.21 | 33.54 | 41.45 | 2.01 | 2.96 | 2.57 | 6.08 | 4.06 | 23.24 | 4.97 | 34.78 | 101.59 |
| **22** | 6 | country | 2.25 | 2.20 | 33.44 | 41.32 | 2.00 | 2.95 | 2.57 | 6.06 | 4.05 | 23.17 | 4.95 | 34.66 | 101.26 |
| **22** | 6 | suburbs | 2.26 | 2.20 | 33.47 | 41.35 | 2.00 | 2.96 | 2.57 | 6.07 | 4.05 | 23.19 | 4.96 | 34.70 | 101.36 |
| **22** | 7 | cities | 2.20 | 2.14 | 32.59 | 40.28 | 1.95 | 2.88 | 2.50 | 5.91 | 3.94 | 22.58 | 4.83 | 33.79 | 98.72 |
| **22** | 7 | country | 2.21 | 2.15 | 32.71 | 40.42 | 1.96 | 2.89 | 2.51 | 5.93 | 3.96 | 22.67 | 4.84 | 33.91 | 99.07 |
| **22** | 7 | suburbs | 2.20 | 2.15 | 32.67 | 40.37 | 1.95 | 2.88 | 2.51 | 5.93 | 3.95 | 22.64 | 4.84 | 33.87 | 98.95 |
| **22** | 8 | cities | 2.20 | 2.15 | 32.60 | 40.28 | 1.95 | 2.88 | 2.50 | 5.91 | 3.94 | 22.59 | 4.83 | 33.80 | 98.73 |
| **22** | 8 | country | 2.20 | 2.15 | 32.69 | 40.39 | 1.95 | 2.89 | 2.51 | 5.93 | 3.96 | 22.65 | 4.84 | 33.89 | 99.00 |
| **22** | 8 | suburbs | 2.20 | 2.15 | 32.64 | 40.33 | 1.95 | 2.88 | 2.51 | 5.92 | 3.95 | 22.62 | 4.83 | 33.84 | 98.86 |
| **22** | 17 | cities | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **22** | 17 | country | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **22** | 17 | suburbs | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **22** | 18 | cities | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **22** | 18 | country | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **22** | 18 | suburbs | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **22** | 19 | cities | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **22** | 19 | country | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **22** | 19 | suburbs | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **22** | 20 | cities | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **22** | 20 | country | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **22** | 20 | suburbs | 3.09 | 3.40 | 55.38 | 44.07 | 2.86 | 3.95 | 3.64 | 9.71 | 5.84 | 38.15 | 7.39 | 56.44 | 157.41 |
| **23** | 9 | cities | 4.06 | 4.38 | 42.49 | 71.86 | 2.08 | 4.80 | 2.98 | 9.57 | 5.98 | 41.43 | 7.13 | 59.52 | 224.77 |
| **23** | 9 | country | 4.06 | 4.38 | 42.50 | 71.88 | 2.08 | 4.80 | 2.98 | 9.58 | 5.98 | 41.44 | 7.13 | 59.54 | 224.84 |
| **23** | 9 | suburbs | 4.06 | 4.38 | 42.47 | 71.82 | 2.07 | 4.80 | 2.98 | 9.57 | 5.98 | 41.41 | 7.12 | 59.49 | 224.65 |
| **23** | 10 | cities | 4.06 | 4.38 | 42.47 | 71.82 | 2.07 | 4.80 | 2.98 | 9.57 | 5.98 | 41.41 | 7.12 | 59.49 | 224.64 |
| **23** | 10 | country | 4.07 | 4.39 | 42.58 | 72.01 | 2.08 | 4.81 | 2.99 | 9.59 | 5.99 | 41.52 | 7.14 | 59.64 | 225.24 |
| **23** | 10 | suburbs | 4.06 | 4.38 | 42.50 | 71.88 | 2.08 | 4.80 | 2.98 | 9.58 | 5.98 | 41.44 | 7.13 | 59.53 | 224.83 |
| **23** | 11 | cities | 4.50 | 4.86 | 47.15 | 79.75 | 2.30 | 5.33 | 3.31 | 10.62 | 6.63 | 45.98 | 7.91 | 66.05 | 249.43 |
| **23** | 11 | country | 4.52 | 4.89 | 47.37 | 80.11 | 2.31 | 5.35 | 3.33 | 10.67 | 6.66 | 46.18 | 7.95 | 66.35 | 250.57 |
| **23** | 11 | suburbs | 4.51 | 4.87 | 47.19 | 79.80 | 2.30 | 5.33 | 3.31 | 10.63 | 6.64 | 46.01 | 7.91 | 66.09 | 249.60 |
| **23** | 12 | cities | 4.54 | 4.90 | 47.51 | 80.35 | 2.32 | 5.37 | 3.34 | 10.70 | 6.69 | 46.33 | 7.97 | 66.55 | 251.33 |
| **23** | 12 | country | 4.56 | 4.92 | 47.72 | 80.71 | 2.33 | 5.39 | 3.35 | 10.75 | 6.71 | 46.53 | 8.00 | 66.85 | 252.45 |
| **23** | 12 | suburbs | 4.54 | 4.90 | 47.51 | 80.35 | 2.32 | 5.37 | 3.34 | 10.70 | 6.68 | 46.32 | 7.97 | 66.55 | 251.32 |
| **23** | 21 | cities | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 21 | country | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 21 | suburbs | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 22 | cities | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 22 | country | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 22 | suburbs | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 23 | cities | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 23 | country | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 23 | suburbs | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 24 | cities | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 24 | country | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |
| **23** | 24 | suburbs | 5.13 | 6.67 | 68.08 | 69.84 | 2.76 | 6.12 | 3.97 | 14.51 | 8.07 | 65.77 | 10.00 | 93.35 | 331.76 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **24** | 9 | cities | 5.11 | 5.43 | 40.55 | 95.59 | 1.76 | 8.70 | 2.69 | 11.36 | 6.47 | 56.24 | 7.76 | 115.17 | 338.30 |
| **24** | 9 | country | 5.12 | 5.44 | 40.65 | 95.84 | 1.77 | 8.73 | 2.69 | 11.39 | 6.49 | 56.38 | 7.78 | 115.47 | 339.19 |
| **24** | 9 | suburbs | 5.12 | 5.45 | 40.70 | 95.94 | 1.77 | 8.74 | 2.70 | 11.40 | 6.50 | 56.44 | 7.79 | 115.59 | 339.55 |
| **24** | 10 | cities | 5.11 | 5.43 | 40.54 | 95.57 | 1.76 | 8.70 | 2.69 | 11.36 | 6.47 | 56.23 | 7.76 | 115.15 | 338.26 |
| **24** | 10 | country | 5.13 | 5.45 | 40.71 | 95.98 | 1.77 | 8.74 | 2.70 | 11.40 | 6.50 | 56.47 | 7.80 | 115.64 | 339.69 |
| **24** | 10 | suburbs | 5.13 | 5.45 | 40.70 | 95.95 | 1.77 | 8.74 | 2.70 | 11.40 | 6.50 | 56.45 | 7.79 | 115.60 | 339.58 |
| **24** | 11 | cities | 5.69 | 6.05 | 45.22 | 106.59 | 1.97 | 9.71 | 3.00 | 12.67 | 7.22 | 62.71 | 8.66 | 128.43 | 377.25 |
| **24** | 11 | country | 5.71 | 6.07 | 45.31 | 106.83 | 1.97 | 9.73 | 3.00 | 12.69 | 7.23 | 62.85 | 8.68 | 128.71 | 378.08 |
| **24** | 11 | suburbs | 5.71 | 6.07 | 45.34 | 106.88 | 1.97 | 9.73 | 3.00 | 12.70 | 7.24 | 62.88 | 8.68 | 128.78 | 378.28 |
| **24** | 12 | cities | 5.76 | 6.13 | 45.77 | 107.90 | 1.99 | 9.83 | 3.03 | 12.82 | 7.31 | 63.48 | 8.76 | 130.00 | 381.87 |
| **24** | 12 | country | 5.76 | 6.13 | 45.76 | 107.89 | 1.99 | 9.83 | 3.03 | 12.82 | 7.31 | 63.47 | 8.76 | 129.99 | 381.84 |
| **24** | 12 | suburbs | 5.75 | 6.12 | 45.68 | 107.69 | 1.99 | 9.81 | 3.03 | 12.80 | 7.29 | 63.36 | 8.75 | 129.76 | 381.15 |
| **24** | 21 | cities | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 21 | country | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 21 | suburbs | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 22 | cities | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 22 | country | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 22 | suburbs | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 23 | cities | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 23 | country | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 23 | suburbs | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 24 | cities | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 24 | country | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **24** | 24 | suburbs | 6.06 | 7.76 | 60.99 | 87.23 | 2.20 | 10.42 | 3.35 | 16.16 | 8.20 | 83.82 | 10.23 | 169.59 | 468.83 |
| **25** | 9 | cities | 4.61 | 3.60 | 44.08 | 93.09 | 1.94 | 3.70 | 2.68 | 8.19 | 5.20 | 56.75 | 6.04 | 68.57 | 271.26 |
| **25** | 9 | country | 4.61 | 3.61 | 44.11 | 93.15 | 1.94 | 3.71 | 2.69 | 8.20 | 5.21 | 56.78 | 6.04 | 68.62 | 271.43 |
| **25** | 9 | suburbs | 4.61 | 3.60 | 44.08 | 93.09 | 1.94 | 3.70 | 2.68 | 8.19 | 5.20 | 56.75 | 6.04 | 68.57 | 271.26 |
| **25** | 10 | cities | 4.61 | 3.60 | 44.09 | 93.10 | 1.94 | 3.70 | 2.68 | 8.19 | 5.20 | 56.75 | 6.04 | 68.58 | 271.29 |
| **25** | 10 | country | 4.61 | 3.61 | 44.11 | 93.15 | 1.94 | 3.71 | 2.69 | 8.20 | 5.21 | 56.78 | 6.04 | 68.62 | 271.43 |
| **25** | 10 | suburbs | 4.60 | 3.60 | 44.04 | 93.00 | 1.94 | 3.70 | 2.68 | 8.18 | 5.20 | 56.69 | 6.03 | 68.51 | 271.00 |
| **25** | 11 | cities | 5.07 | 3.97 | 48.53 | 102.47 | 2.14 | 4.08 | 2.95 | 9.02 | 5.73 | 62.47 | 6.65 | 75.49 | 298.60 |
| **25** | 11 | country | 5.08 | 3.97 | 48.55 | 102.52 | 2.14 | 4.08 | 2.96 | 9.02 | 5.73 | 62.50 | 6.65 | 75.52 | 298.75 |
| **25** | 11 | suburbs | 5.07 | 3.97 | 48.54 | 102.50 | 2.14 | 4.08 | 2.96 | 9.02 | 5.73 | 62.48 | 6.65 | 75.50 | 298.68 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **25** | 12 | cities | 5.14 | 4.02 | 49.16 | 103.79 | 2.16 | 4.13 | 2.99 | 9.13 | 5.80 | 63.27 | 6.73 | 76.46 | 302.46 |
| **25** | 12 | country | 5.14 | 4.02 | 49.18 | 103.85 | 2.17 | 4.13 | 2.99 | 9.14 | 5.80 | 63.30 | 6.73 | 76.50 | 302.61 |
| **25** | 12 | suburbs | 5.14 | 4.02 | 49.14 | 103.77 | 2.16 | 4.13 | 2.99 | 9.13 | 5.80 | 63.26 | 6.73 | 76.44 | 302.39 |
| **25** | 21 | cities | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 21 | country | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 21 | suburbs | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 22 | cities | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 22 | country | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 22 | suburbs | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 23 | cities | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 23 | country | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 23 | suburbs | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 24 | cities | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 24 | country | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **25** | 24 | suburbs | 5.73 | 5.40 | 69.50 | 89.02 | 2.54 | 4.65 | 3.51 | 12.22 | 6.91 | 88.64 | 8.34 | 105.82 | 393.95 |
| **26** | 9 | cities | 8.17 | 2.57 | 64.84 | 69.25 | 7.92 | 0.32 | 9.36 | 15.47 | 11.01 | 51.01 | 12.54 | 17.13 | 64.30 |
| **26** | 9 | country | 8.17 | 2.57 | 64.79 | 69.19 | 7.91 | 0.32 | 9.36 | 15.45 | 11.00 | 50.97 | 12.53 | 17.12 | 64.25 |
| **26** | 9 | suburbs | 8.16 | 2.57 | 64.76 | 69.16 | 7.91 | 0.32 | 9.35 | 15.45 | 11.00 | 50.95 | 12.53 | 17.11 | 64.22 |
| **26** | 10 | cities | 8.18 | 2.58 | 64.91 | 69.32 | 7.93 | 0.32 | 9.38 | 15.48 | 11.02 | 51.07 | 12.56 | 17.15 | 64.37 |
| **26** | 10 | country | 8.16 | 2.57 | 64.73 | 69.13 | 7.90 | 0.32 | 9.35 | 15.44 | 10.99 | 50.92 | 12.52 | 17.10 | 64.19 |
| **26** | 10 | suburbs | 8.17 | 2.57 | 64.79 | 69.19 | 7.91 | 0.32 | 9.36 | 15.45 | 11.00 | 50.97 | 12.53 | 17.12 | 64.25 |
| **26** | 11 | cities | 9.03 | 2.84 | 71.65 | 76.52 | 8.75 | 0.35 | 10.35 | 17.09 | 12.17 | 56.37 | 13.86 | 18.93 | 71.05 |
| **26** | 11 | country | 9.00 | 2.83 | 71.40 | 76.25 | 8.72 | 0.35 | 10.31 | 17.03 | 12.12 | 56.17 | 13.81 | 18.86 | 70.81 |
| **26** | 11 | suburbs | 8.99 | 2.83 | 71.31 | 76.16 | 8.71 | 0.35 | 10.30 | 17.01 | 12.11 | 56.10 | 13.79 | 18.84 | 70.72 |
| **26** | 12 | cities | 9.08 | 2.86 | 72.01 | 76.90 | 8.79 | 0.35 | 10.40 | 17.18 | 12.23 | 56.65 | 13.93 | 19.02 | 71.41 |
| **26** | 12 | country | 9.08 | 2.86 | 72.05 | 76.94 | 8.80 | 0.35 | 10.41 | 17.19 | 12.23 | 56.68 | 13.93 | 19.03 | 71.45 |
| **26** | 12 | suburbs | 9.10 | 2.87 | 72.17 | 77.07 | 8.81 | 0.35 | 10.42 | 17.21 | 12.25 | 56.78 | 13.96 | 19.07 | 71.57 |
| **26** | 21 | cities | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **26** | 21 | country | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **26** | 21 | suburbs | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **26** | 22 | cities | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **26** | 22 | country | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **26** | 22 | suburbs | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26** | 23 | cities | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **26** | 23 | country | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **26** | 23 | suburbs | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **26** | 24 | cities | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **26** | 24 | country | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **26** | 24 | suburbs | 9.85 | 3.74 | 99.10 | 64.20 | 10.06 | 0.39 | 11.88 | 22.36 | 14.17 | 77.25 | 16.79 | 25.63 | 90.53 |
| **27** | 9 | cities | 8.05 | 4.10 | 81.20 | 105.08 | 6.34 | 0.65 | 8.17 | 20.56 | 12.47 | 64.64 | 15.04 | 36.62 | 134.27 |
| **27** | 9 | country | 8.12 | 4.13 | 81.88 | 105.96 | 6.39 | 0.65 | 8.24 | 20.73 | 12.57 | 65.18 | 15.17 | 36.92 | 135.39 |
| **27** | 9 | suburbs | 8.12 | 4.13 | 81.89 | 105.97 | 6.39 | 0.65 | 8.24 | 20.74 | 12.57 | 65.19 | 15.17 | 36.93 | 135.41 |
| **27** | 10 | cities | 8.05 | 4.10 | 81.21 | 105.10 | 6.34 | 0.65 | 8.17 | 20.57 | 12.47 | 64.65 | 15.05 | 36.62 | 134.29 |
| **27** | 10 | country | 8.08 | 4.11 | 81.51 | 105.48 | 6.36 | 0.65 | 8.20 | 20.64 | 12.51 | 64.88 | 15.10 | 36.76 | 134.78 |
| **27** | 10 | suburbs | 8.06 | 4.10 | 81.33 | 105.25 | 6.35 | 0.65 | 8.19 | 20.60 | 12.49 | 64.74 | 15.07 | 36.68 | 134.49 |
| **27** | 11 | cities | 9.45 | 4.81 | 95.38 | 123.43 | 7.45 | 0.76 | 9.60 | 24.15 | 14.65 | 75.93 | 17.67 | 43.01 | 157.72 |
| **27** | 11 | country | 9.49 | 4.83 | 95.78 | 123.95 | 7.48 | 0.76 | 9.64 | 24.25 | 14.71 | 76.24 | 17.75 | 43.19 | 158.38 |
| **27** | 11 | suburbs | 9.46 | 4.81 | 95.42 | 123.48 | 7.45 | 0.76 | 9.60 | 24.16 | 14.65 | 75.96 | 17.68 | 43.03 | 157.78 |
| **27** | 12 | cities | 9.68 | 4.93 | 97.68 | 126.40 | 7.62 | 0.78 | 9.83 | 24.73 | 15.00 | 77.75 | 18.10 | 44.05 | 161.51 |
| **27** | 12 | country | 9.68 | 4.93 | 97.70 | 126.44 | 7.63 | 0.78 | 9.83 | 24.74 | 15.00 | 77.78 | 18.10 | 44.06 | 161.56 |
| **27** | 12 | suburbs | 9.63 | 4.90 | 97.17 | 125.74 | 7.58 | 0.77 | 9.78 | 24.61 | 14.92 | 77.35 | 18.00 | 43.82 | 160.67 |
| **27** | 21 | cities | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 21 | country | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 21 | suburbs | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 22 | cities | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 22 | country | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 22 | suburbs | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 23 | cities | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 23 | country | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 23 | suburbs | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 24 | cities | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 24 | country | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **27** | 24 | suburbs | 9.66 | 5.92 | 123.49 | 96.94 | 8.01 | 0.78 | 10.32 | 29.58 | 15.97 | 97.40 | 20.04 | 54.51 | 188.11 |
| **28** | 5 | cities | 2.24 | 2.19 | 21.64 | 16.62 | 1.84 | 0.77 | 2.29 | 4.07 | 3.54 | 6.17 | 3.91 | 11.15 | 53.92 |
| **28** | 5 | country | 2.25 | 2.19 | 21.67 | 16.64 | 1.84 | 0.77 | 2.29 | 4.07 | 3.54 | 6.18 | 3.91 | 11.17 | 53.99 |
| **28** | 5 | suburbs | 2.25 | 2.19 | 21.66 | 16.63 | 1.84 | 0.77 | 2.29 | 4.07 | 3.54 | 6.18 | 3.91 | 11.16 | 53.96 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **28** | 6 | cities | 2.24 | 2.19 | 21.63 | 16.61 | 1.83 | 0.77 | 2.29 | 4.06 | 3.53 | 6.17 | 3.91 | 11.15 | 53.89 |
| **28** | 6 | country | 2.25 | 2.20 | 21.69 | 16.66 | 1.84 | 0.77 | 2.29 | 4.07 | 3.54 | 6.19 | 3.92 | 11.18 | 54.04 |
| **28** | 6 | suburbs | 2.24 | 2.19 | 21.64 | 16.62 | 1.84 | 0.77 | 2.29 | 4.07 | 3.54 | 6.17 | 3.91 | 11.15 | 53.92 |
| **28** | 7 | cities | 2.23 | 2.18 | 21.49 | 16.51 | 1.82 | 0.76 | 2.27 | 4.04 | 3.51 | 6.13 | 3.88 | 11.07 | 53.55 |
| **28** | 7 | country | 2.23 | 2.18 | 21.53 | 16.54 | 1.83 | 0.76 | 2.28 | 4.04 | 3.52 | 6.14 | 3.89 | 11.09 | 53.65 |
| **28** | 7 | suburbs | 2.23 | 2.18 | 21.51 | 16.52 | 1.82 | 0.76 | 2.28 | 4.04 | 3.51 | 6.13 | 3.88 | 11.08 | 53.58 |
| **28** | 8 | cities | 2.22 | 2.16 | 21.37 | 16.41 | 1.81 | 0.76 | 2.26 | 4.01 | 3.49 | 6.10 | 3.86 | 11.01 | 53.24 |
| **28** | 8 | country | 2.22 | 2.17 | 21.45 | 16.47 | 1.82 | 0.76 | 2.27 | 4.03 | 3.50 | 6.12 | 3.87 | 11.05 | 53.43 |
| **28** | 8 | suburbs | 2.22 | 2.17 | 21.39 | 16.43 | 1.81 | 0.76 | 2.26 | 4.02 | 3.49 | 6.10 | 3.86 | 11.02 | 53.30 |
| **28** | 17 | cities | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 17 | country | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 17 | suburbs | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 18 | cities | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 18 | country | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 18 | suburbs | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 19 | cities | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 19 | country | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 19 | suburbs | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 20 | cities | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 20 | country | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |
| **28** | 20 | suburbs | 2.97 | 3.27 | 34.65 | 17.14 | 2.54 | 0.99 | 3.14 | 6.29 | 4.93 | 9.83 | 5.64 | 17.55 | 81.02 |

**Table C 3 PBT scenario IV**

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### STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | cities | 0.58 | 0.37 | 2.08 | 3.17 | 0.61 | 1.41 | 0.82 | 0.75 | 0.93 | 5.29 | 0.60 | 0.70 | 2.24 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | country | 0.40 | 0.24 | 1.47 | 2.16 | 0.42 | 0.94 | 0.55 | 0.49 | 0.61 | 3.68 | 0.40 | 0.46 | 1.57 |
| **1** | 1 | suburbs | 0.47 | 0.29 | 1.72 | 2.55 | 0.50 | 1.11 | 0.65 | 0.59 | 0.73 | 4.32 | 0.47 | 0.55 | 1.84 |
| **1** | 2 | cities | 0.47 | 0.26 | 1.81 | 2.47 | 0.50 | 1.02 | 0.61 | 0.53 | 0.66 | 4.38 | 0.43 | 0.50 | 1.89 |
| **1** | 2 | country | 0.32 | 0.17 | 1.23 | 1.67 | 0.34 | 0.68 | 0.41 | 0.35 | 0.44 | 2.97 | 0.29 | 0.33 | 1.28 |
| **1** | 2 | suburbs | 0.38 | 0.21 | 1.46 | 1.99 | 0.40 | 0.82 | 0.49 | 0.42 | 0.53 | 3.54 | 0.34 | 0.40 | 1.53 |
| **1** | 3 | cities | 0.59 | 0.31 | 2.35 | 3.06 | 0.63 | 1.22 | 0.74 | 0.62 | 0.79 | 5.57 | 0.51 | 0.59 | 2.42 |
| **1** | 3 | country | 0.34 | 0.18 | 1.32 | 1.73 | 0.36 | 0.70 | 0.42 | 0.36 | 0.45 | 3.14 | 0.29 | 0.34 | 1.36 |
| **1** | 3 | suburbs | 0.42 | 0.22 | 1.64 | 2.15 | 0.44 | 0.86 | 0.52 | 0.44 | 0.56 | 3.90 | 0.36 | 0.42 | 1.69 |
| **1** | 4 | cities | 1.67 | 0.79 | 6.97 | 8.36 | 1.78 | 3.19 | 1.97 | 1.59 | 2.04 | 15.88 | 1.32 | 1.53 | 6.99 |
| **1** | 4 | country | 0.82 | 0.42 | 3.26 | 4.19 | 0.87 | 1.66 | 1.01 | 0.84 | 1.07 | 7.69 | 0.69 | 0.80 | 3.35 |
| **1** | 4 | suburbs | 1.06 | 0.53 | 4.26 | 5.39 | 1.12 | 2.12 | 1.29 | 1.07 | 1.36 | 9.95 | 0.88 | 1.02 | 4.34 |
| **1** | 13 | cities | 0.59 | 0.31 | 2.34 | 3.05 | 0.63 | 1.22 | 0.74 | 0.62 | 0.78 | 5.55 | 0.51 | 0.59 | 2.41 |
| **1** | 13 | country | 0.46 | 0.24 | 1.81 | 2.37 | 0.49 | 0.95 | 0.57 | 0.48 | 0.61 | 4.30 | 0.40 | 0.46 | 1.87 |
| **1** | 13 | suburbs | 0.52 | 0.27 | 2.05 | 2.67 | 0.55 | 1.07 | 0.65 | 0.54 | 0.69 | 4.85 | 0.45 | 0.52 | 2.11 |
| **1** | 14 | cities | 0.68 | 0.36 | 2.63 | 3.50 | 0.72 | 1.42 | 0.86 | 0.73 | 0.92 | 6.29 | 0.59 | 0.69 | 2.72 |
| **1** | 14 | country | 0.53 | 0.28 | 2.05 | 2.75 | 0.56 | 1.12 | 0.67 | 0.57 | 0.72 | 4.92 | 0.47 | 0.54 | 2.13 |
| **1** | 14 | suburbs | 0.59 | 0.32 | 2.30 | 3.08 | 0.63 | 1.25 | 0.75 | 0.64 | 0.81 | 5.52 | 0.52 | 0.61 | 2.39 |
| **1** | 15 | cities | 0.61 | 0.32 | 2.36 | 3.15 | 0.64 | 1.27 | 0.77 | 0.65 | 0.82 | 5.66 | 0.53 | 0.62 | 2.45 |
| **1** | 15 | country | 0.47 | 0.25 | 1.84 | 2.46 | 0.50 | 1.00 | 0.60 | 0.51 | 0.64 | 4.41 | 0.42 | 0.48 | 1.90 |
| **1** | 15 | suburbs | 0.53 | 0.28 | 2.07 | 2.76 | 0.56 | 1.12 | 0.67 | 0.57 | 0.72 | 4.95 | 0.47 | 0.54 | 2.14 |
| **1** | 16 | cities | 0.39 | 0.20 | 1.56 | 2.00 | 0.42 | 0.79 | 0.48 | 0.40 | 0.51 | 3.67 | 0.33 | 0.38 | 1.60 |
| **1** | 16 | country | 0.33 | 0.17 | 1.31 | 1.68 | 0.35 | 0.67 | 0.41 | 0.34 | 0.43 | 3.08 | 0.28 | 0.32 | 1.34 |
| **1** | 16 | suburbs | 0.35 | 0.18 | 1.41 | 1.81 | 0.38 | 0.72 | 0.44 | 0.36 | 0.46 | 3.32 | 0.30 | 0.35 | 1.45 |
| **2** | 1 | cities | 0.59 | 0.29 | 1.98 | 2.19 | 1.48 | 0.94 | 2.40 | 3.64 | 4.56 | 4.48 | 3.05 | 13.58 | 1.61 |
| **2** | 1 | country | 0.46 | 0.23 | 1.54 | 1.71 | 1.07 | 0.74 | 1.64 | 2.16 | 2.71 | 3.48 | 1.81 | 3.99 | 1.26 |
| **2** | 1 | suburbs | 0.52 | 0.25 | 1.73 | 1.91 | 1.23 | 0.83 | 1.92 | 2.63 | 3.29 | 3.91 | 2.20 | 5.59 | 1.41 |
| **2** | 2 | cities | 0.42 | 0.20 | 1.47 | 1.65 | 0.65 | 0.73 | 0.81 | 0.73 | 0.92 | 3.34 | 0.61 | 0.65 | 1.24 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT**$_{\mathrm{CC}}$ | **PBT**$_{\mathrm{OD}}$ | **PBT**$_{\mathrm{HT\_CE}}$ | **PBT**$_{\mathrm{HT\_nCE}}$ | **PBT**$_{\mathrm{PM}}$ | **PBT**$_{\mathrm{IR\_hh}}$ | **PBT**$_{\mathrm{POF}}$ | **PBT**$_{\mathrm{AC}}$ | **PBT**$_{\mathrm{ET}}$ | **PBT**$_{\mathrm{EuF}}$ | **PBT**$_{\mathrm{EuM}}$ | **PBT**$_{\mathrm{Ec\_FW}}$ | **PBT**$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2** | 2 | country | 0.32 | 0.16 | 1.14 | 1.27 | 0.51 | 0.56 | 0.62 | 0.57 | 0.71 | 2.58 | 0.47 | 0.51 | 0.95 |
| **2** | 2 | suburbs | 0.37 | 0.18 | 1.29 | 1.45 | 0.58 | 0.64 | 0.71 | 0.64 | 0.81 | 2.93 | 0.54 | 0.58 | 1.08 |
| **2** | 3 | cities | 0.69 | 0.33 | 2.44 | 2.74 | 1.04 | 1.21 | 1.26 | 1.12 | 1.41 | 5.54 | 0.93 | 0.98 | 2.06 |
| **2** | 3 | country | 0.43 | 0.20 | 1.50 | 1.69 | 0.64 | 0.74 | 0.78 | 0.70 | 0.87 | 3.41 | 0.58 | 0.61 | 1.26 |
| **2** | 3 | suburbs | 0.53 | 0.25 | 1.85 | 2.08 | 0.79 | 0.91 | 0.97 | 0.86 | 1.08 | 4.20 | 0.72 | 0.76 | 1.56 |
| **2** | 4 | cities | 1.14 | 0.53 | 4.16 | 4.74 | 1.31 | 2.12 | 1.46 | 1.18 | 1.48 | 9.47 | 0.98 | 0.94 | 3.61 |
| **2** | 4 | country | 0.75 | 0.35 | 2.67 | 3.02 | 0.98 | 1.34 | 1.14 | 0.96 | 1.21 | 6.07 | 0.80 | 0.80 | 2.28 |
| **2** | 4 | suburbs | 0.92 | 0.43 | 3.32 | 3.76 | 1.17 | 1.67 | 1.34 | 1.11 | 1.40 | 7.55 | 0.93 | 0.92 | 2.85 |
| **2** | 13 | cities | 0.54 | 0.25 | 1.91 | 2.15 | 0.72 | 0.95 | 0.85 | 0.72 | 0.90 | 4.33 | 0.60 | 0.61 | 1.62 |
| **2** | 13 | country | 0.46 | 0.22 | 1.63 | 1.84 | 0.63 | 0.81 | 0.75 | 0.64 | 0.81 | 3.70 | 0.53 | 0.54 | 1.38 |
| **2** | 13 | suburbs | 0.50 | 0.24 | 1.77 | 2.00 | 0.68 | 0.88 | 0.80 | 0.68 | 0.86 | 4.02 | 0.57 | 0.58 | 1.50 |
| **2** | 14 | cities | 0.55 | 0.26 | 1.96 | 2.21 | 0.77 | 0.98 | 0.90 | 0.78 | 0.98 | 4.45 | 0.65 | 0.66 | 1.66 |
| **2** | 14 | country | 0.48 | 0.23 | 1.71 | 1.92 | 0.69 | 0.85 | 0.82 | 0.72 | 0.90 | 3.87 | 0.60 | 0.62 | 1.44 |
| **2** | 14 | suburbs | 0.52 | 0.25 | 1.83 | 2.06 | 0.73 | 0.91 | 0.87 | 0.75 | 0.94 | 4.16 | 0.63 | 0.64 | 1.55 |
| **2** | 15 | cities | 0.58 | 0.27 | 2.04 | 2.30 | 0.84 | 1.01 | 1.00 | 0.88 | 1.10 | 4.64 | 0.73 | 0.76 | 1.73 |
| **2** | 15 | country | 0.51 | 0.24 | 1.79 | 2.01 | 0.76 | 0.88 | 0.93 | 0.82 | 1.04 | 4.05 | 0.69 | 0.73 | 1.51 |
| **2** | 15 | suburbs | 0.54 | 0.26 | 1.91 | 2.15 | 0.80 | 0.94 | 0.96 | 0.85 | 1.07 | 4.33 | 0.71 | 0.74 | 1.61 |
| **2** | 16 | cities | 0.37 | 0.17 | 1.32 | 1.49 | 0.48 | 0.66 | 0.56 | 0.47 | 0.59 | 2.99 | 0.39 | 0.39 | 1.13 |
| **2** | 16 | country | 0.34 | 0.16 | 1.20 | 1.36 | 0.45 | 0.60 | 0.53 | 0.45 | 0.56 | 2.73 | 0.37 | 0.38 | 1.02 |
| **2** | 16 | suburbs | 0.35 | 0.17 | 1.26 | 1.43 | 0.47 | 0.63 | 0.55 | 0.46 | 0.58 | 2.87 | 0.39 | 0.39 | 1.08 |
| **3** | 1 | cities | 0.90 | 0.79 | 0.27 | 2.28 | 0.08 | 3.95 | 0.26 | 2.62 | 1.11 | 2.77 | 0.75 | 4.15 | 2.97 |
| **3** | 1 | country | 0.63 | 0.56 | 0.19 | 1.51 | 0.06 | 2.52 | 0.19 | 1.71 | 0.78 | 1.77 | 0.53 | 1.75 | 1.96 |
| **3** | 1 | suburbs | 0.74 | 0.66 | 0.23 | 1.80 | 0.07 | 3.05 | 0.22 | 2.05 | 0.92 | 2.14 | 0.62 | 2.37 | 2.35 |
| **3** | 2 | cities | 0.93 | 0.87 | 0.30 | 2.03 | 0.09 | 3.26 | 0.29 | 2.27 | 1.17 | 2.30 | 0.78 | 1.60 | 2.65 |
| **3** | 2 | country | 0.64 | 0.60 | 0.21 | 1.38 | 0.07 | 2.19 | 0.20 | 1.53 | 0.81 | 1.54 | 0.54 | 1.01 | 1.80 |
| **3** | 2 | suburbs | 0.76 | 0.71 | 0.25 | 1.64 | 0.08 | 2.62 | 0.24 | 1.83 | 0.96 | 1.84 | 0.64 | 1.23 | 2.14 |
| **3** | 3 | cities | 1.64 | 1.53 | 0.53 | 3.57 | 0.17 | 5.72 | 0.51 | 3.98 | 2.06 | 4.03 | 1.38 | 2.77 | 4.66 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | 3 | country | 0.91 | 0.86 | 0.30 | 1.92 | 0.09 | 3.02 | 0.29 | 2.12 | 1.15 | 2.13 | 0.77 | 1.33 | 2.50 |
| **3** | 3 | suburbs | 1.16 | 1.10 | 0.38 | 2.48 | 0.12 | 3.92 | 0.37 | 2.75 | 1.47 | 2.76 | 0.99 | 1.77 | 3.23 |
| **3** | 4 | cities | 3.88 | 4.01 | 1.42 | 7.04 | 0.47 | 10.47 | 1.39 | 7.62 | 4.99 | 7.39 | 3.32 | 3.45 | 9.21 |
| **3** | 4 | country | 1.73 | 1.70 | 0.59 | 3.45 | 0.19 | 5.31 | 0.57 | 3.79 | 2.20 | 3.75 | 1.47 | 2.05 | 4.51 |
| **3** | 4 | suburbs | 2.37 | 2.37 | 0.83 | 4.59 | 0.27 | 6.99 | 0.81 | 5.01 | 3.03 | 4.93 | 2.02 | 2.55 | 6.00 |
| **3** | 13 | cities | 1.52 | 1.48 | 0.52 | 3.06 | 0.17 | 4.73 | 0.50 | 3.36 | 1.93 | 3.33 | 1.29 | 1.86 | 4.00 |
| **3** | 13 | country | 1.11 | 1.08 | 0.38 | 2.26 | 0.12 | 3.51 | 0.36 | 2.49 | 1.41 | 2.48 | 0.95 | 1.41 | 2.96 |
| **3** | 13 | suburbs | 1.28 | 1.25 | 0.44 | 2.60 | 0.14 | 4.03 | 0.42 | 2.86 | 1.63 | 2.84 | 1.09 | 1.61 | 3.40 |
| **3** | 14 | cities | 1.48 | 1.43 | 0.50 | 3.03 | 0.16 | 4.72 | 0.48 | 3.34 | 1.88 | 3.33 | 1.26 | 1.93 | 3.96 |
| **3** | 14 | country | 1.09 | 1.04 | 0.36 | 2.25 | 0.12 | 3.52 | 0.35 | 2.49 | 1.38 | 2.48 | 0.92 | 1.48 | 2.94 |
| **3** | 14 | suburbs | 1.25 | 1.20 | 0.42 | 2.58 | 0.13 | 4.04 | 0.40 | 2.85 | 1.59 | 2.85 | 1.06 | 1.68 | 3.37 |
| **3** | 15 | cities | 1.45 | 1.39 | 0.48 | 3.03 | 0.15 | 4.75 | 0.47 | 3.35 | 1.84 | 3.35 | 1.23 | 2.03 | 3.96 |
| **3** | 15 | country | 1.06 | 1.01 | 0.35 | 2.23 | 0.11 | 3.52 | 0.34 | 2.47 | 1.34 | 2.48 | 0.90 | 1.54 | 2.92 |
| **3** | 15 | suburbs | 1.22 | 1.17 | 0.41 | 2.57 | 0.13 | 4.05 | 0.39 | 2.85 | 1.55 | 2.85 | 1.04 | 1.76 | 3.36 |
| **3** | 16 | cities | 1.19 | 1.19 | 0.42 | 2.27 | 0.14 | 3.44 | 0.41 | 2.48 | 1.52 | 2.43 | 1.01 | 1.23 | 2.97 |
| **3** | 16 | country | 0.93 | 0.92 | 0.32 | 1.83 | 0.10 | 2.81 | 0.31 | 2.01 | 1.19 | 1.98 | 0.80 | 1.05 | 2.40 |
| **3** | 16 | suburbs | 1.03 | 1.02 | 0.36 | 2.00 | 0.12 | 3.05 | 0.35 | 2.18 | 1.31 | 2.15 | 0.88 | 1.12 | 2.61 |
| **4** | 1 | cities | 0.23 | 0.09 | (4.53) | (0.29) | 0.15 | 0.34 | 0.33 | 1.43 | 0.88 | (0.10) | 0.95 | (0.23) | 0.69 |
| **4** | 1 | country | 0.19 | 0.08 | (2.24) | (0.22) | 0.12 | 0.29 | 0.28 | 1.26 | 0.75 | (0.08) | 0.84 | (0.18) | 0.58 |
| **4** | 1 | suburbs | 0.21 | 0.08 | (6.14) | (0.27) | 0.13 | 0.31 | 0.30 | 1.26 | 0.79 | (0.09) | 0.84 | (0.21) | 0.62 |
| **4** | 2 | cities | 0.20 | 0.10 | 0.35 | 0.73 | 0.14 | 0.34 | 0.32 | 0.67 | 0.71 | 1.68 | 0.47 | 0.97 | 0.57 |
| **4** | 2 | country | 0.17 | 0.08 | 0.31 | 0.77 | 0.12 | 0.28 | 0.27 | 0.57 | 0.59 | (27.98) | 0.40 | (0.36) | 0.48 |
| **4** | 2 | suburbs | 0.18 | 0.09 | 0.32 | 0.69 | 0.13 | 0.31 | 0.29 | 0.60 | 0.64 | 1.91 | 0.43 | 0.94 | 0.52 |
| **4** | 3 | cities | 0.32 | 0.16 | 0.50 | 0.79 | 0.23 | 0.55 | 0.52 | 1.00 | 1.11 | 0.79 | 0.72 | 0.91 | 0.91 |
| **4** | 3 | country | 0.24 | 0.12 | 0.38 | 0.65 | 0.17 | 0.40 | 0.38 | 0.75 | 0.82 | 0.75 | 0.54 | 0.77 | 0.67 |
| **4** | 3 | suburbs | 0.27 | 0.13 | 0.42 | 0.68 | 0.19 | 0.46 | 0.44 | 0.85 | 0.94 | 0.70 | 0.61 | 0.79 | 0.77 |
| **4** | 4 | cities | 0.43 | 0.26 | 0.36 | 0.31 | 0.34 | 0.82 | 0.78 | 0.96 | 1.37 | 0.17 | 0.70 | 0.30 | 1.15 |

## STONE WOOL

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 4 | country | 0.30 | 0.17 | 0.31 | 0.31 | 0.23 | 0.54 | 0.51 | 0.75 | 0.98 | 0.18 | 0.54 | 0.30 | 0.81 |
| **4** | 4 | suburbs | 0.35 | 0.20 | 0.33 | 0.31 | 0.27 | 0.65 | 0.62 | 0.84 | 1.14 | 0.18 | 0.61 | 0.30 | 0.95 |
| **4** | 13 | cities | 0.31 | 0.17 | 0.35 | 0.38 | 0.23 | 0.55 | 0.52 | 0.82 | 1.02 | 0.24 | 0.59 | 0.38 | 0.85 |
| **4** | 13 | country | 0.26 | 0.14 | 0.32 | 0.36 | 0.19 | 0.46 | 0.44 | 0.72 | 0.88 | 0.24 | 0.52 | 0.37 | 0.72 |
| **4** | 13 | suburbs | 0.28 | 0.15 | 0.33 | 0.37 | 0.21 | 0.50 | 0.47 | 0.76 | 0.94 | 0.24 | 0.55 | 0.37 | 0.78 |
| **4** | 14 | cities | 0.31 | 0.16 | 0.38 | 0.44 | 0.23 | 0.54 | 0.51 | 0.85 | 1.03 | 0.29 | 0.61 | 0.46 | 0.85 |
| **4** | 14 | country | 0.27 | 0.14 | 0.36 | 0.48 | 0.19 | 0.46 | 0.44 | 0.78 | 0.91 | 0.37 | 0.56 | 0.52 | 0.74 |
| **4** | 14 | suburbs | 0.28 | 0.15 | 0.37 | 0.46 | 0.21 | 0.49 | 0.47 | 0.81 | 0.96 | 0.32 | 0.58 | 0.48 | 0.79 |
| **4** | 15 | cities | 0.32 | 0.16 | 0.43 | 0.58 | 0.23 | 0.55 | 0.52 | 0.93 | 1.08 | 0.44 | 0.67 | 0.62 | 0.88 |
| **4** | 15 | country | 0.28 | 0.14 | 0.45 | 0.78 | 0.20 | 0.47 | 0.45 | 0.89 | 0.97 | 0.92 | 0.63 | 0.93 | 0.79 |
| **4** | 15 | suburbs | 0.30 | 0.15 | 0.44 | 0.66 | 0.21 | 0.50 | 0.48 | 0.90 | 1.01 | 0.59 | 0.65 | 0.74 | 0.83 |
| **4** | 16 | cities | 0.25 | 0.14 | 0.24 | 0.24 | 0.19 | 0.45 | 0.43 | 0.61 | 0.81 | 0.88 | 0.44 | 1.47 | 0.67 |
| **4** | 16 | country | 0.22 | 0.12 | 0.23 | 0.24 | 0.17 | 0.40 | 0.38 | 0.57 | 0.73 | (1.76) | 0.41 | (2.95) | 0.61 |
| **4** | 16 | suburbs | 0.23 | 0.13 | 0.24 | 0.24 | 0.18 | 0.42 | 0.40 | 0.58 | 0.76 | (1.18) | 0.42 | 1.47 | 0.63 |
| **5** | 1 | cities | 0.22 | 0.15 | 0.24 | 0.40 | 0.12 | 0.14 | 0.27 | 0.48 | 0.51 | 0.47 | 0.33 | 0.16 | 0.42 |
| **5** | 1 | country | 0.18 | 0.13 | 0.21 | 0.34 | 0.10 | 0.12 | 0.23 | 0.41 | 0.43 | 0.40 | 0.28 | 0.14 | 0.36 |
| **5** | 1 | suburbs | 0.20 | 0.14 | 0.22 | 0.36 | 0.11 | 0.13 | 0.25 | 0.44 | 0.47 | 0.43 | 0.30 | 0.15 | 0.38 |
| **5** | 2 | cities | 0.23 | 0.16 | 0.26 | 0.42 | 0.13 | 0.14 | 0.29 | 0.51 | 0.54 | 0.49 | 0.35 | 0.17 | 0.44 |
| **5** | 2 | country | 0.19 | 0.14 | 0.22 | 0.35 | 0.11 | 0.12 | 0.24 | 0.43 | 0.45 | 0.41 | 0.29 | 0.14 | 0.37 |
| **5** | 2 | suburbs | 0.21 | 0.15 | 0.24 | 0.38 | 0.12 | 0.13 | 0.26 | 0.46 | 0.49 | 0.45 | 0.32 | 0.15 | 0.40 |
| **5** | 3 | cities | 0.39 | 0.28 | 0.45 | 0.72 | 0.22 | 0.25 | 0.49 | 0.87 | 0.92 | 0.84 | 0.60 | 0.29 | 0.76 |
| **5** | 3 | country | 0.30 | 0.21 | 0.34 | 0.54 | 0.17 | 0.19 | 0.37 | 0.65 | 0.69 | 0.63 | 0.45 | 0.22 | 0.57 |
| **5** | 3 | suburbs | 0.34 | 0.24 | 0.38 | 0.62 | 0.19 | 0.21 | 0.42 | 0.75 | 0.79 | 0.72 | 0.51 | 0.25 | 0.65 |
| **5** | 4 | cities | 0.82 | 0.58 | 0.90 | 1.37 | 0.48 | 0.44 | 1.02 | 1.66 | 1.80 | 1.57 | 1.16 | 0.52 | 1.46 |
| **5** | 4 | country | 0.53 | 0.38 | 0.60 | 0.95 | 0.31 | 0.32 | 0.67 | 1.14 | 1.22 | 1.09 | 0.79 | 0.37 | 1.00 |
| **5** | 4 | suburbs | 0.65 | 0.47 | 0.73 | 1.14 | 0.38 | 0.38 | 0.81 | 1.37 | 1.48 | 1.31 | 0.95 | 0.44 | 1.20 |
| **5** | 13 | cities | 0.42 | 0.30 | 0.47 | 0.76 | 0.24 | 0.26 | 0.52 | 0.91 | 0.97 | 0.88 | 0.63 | 0.30 | 0.79 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5** | 13 | country | 0.36 | 0.26 | 0.40 | 0.65 | 0.20 | 0.22 | 0.44 | 0.78 | 0.83 | 0.75 | 0.54 | 0.26 | 0.68 |
| **5** | 13 | suburbs | 0.38 | 0.28 | 0.43 | 0.70 | 0.22 | 0.24 | 0.48 | 0.84 | 0.89 | 0.81 | 0.58 | 0.28 | 0.73 |
| **5** | 14 | cities | 0.40 | 0.29 | 0.45 | 0.73 | 0.23 | 0.25 | 0.50 | 0.88 | 0.94 | 0.85 | 0.61 | 0.29 | 0.77 |
| **5** | 14 | country | 0.35 | 0.25 | 0.39 | 0.63 | 0.20 | 0.21 | 0.43 | 0.76 | 0.81 | 0.73 | 0.52 | 0.25 | 0.66 |
| **5** | 14 | suburbs | 0.37 | 0.27 | 0.42 | 0.68 | 0.21 | 0.23 | 0.46 | 0.82 | 0.87 | 0.79 | 0.56 | 0.27 | 0.71 |
| **5** | 15 | cities | 0.40 | 0.29 | 0.46 | 0.74 | 0.23 | 0.25 | 0.50 | 0.89 | 0.94 | 0.86 | 0.61 | 0.29 | 0.77 |
| **5** | 15 | country | 0.35 | 0.25 | 0.39 | 0.63 | 0.20 | 0.22 | 0.43 | 0.76 | 0.81 | 0.74 | 0.53 | 0.25 | 0.67 |
| **5** | 15 | suburbs | 0.37 | 0.27 | 0.42 | 0.68 | 0.21 | 0.23 | 0.46 | 0.82 | 0.87 | 0.79 | 0.56 | 0.27 | 0.72 |
| **5** | 16 | cities | 0.35 | 0.25 | 0.39 | 0.61 | 0.20 | 0.20 | 0.44 | 0.74 | 0.79 | 0.71 | 0.51 | 0.24 | 0.65 |
| **5** | 16 | country | 0.32 | 0.23 | 0.35 | 0.56 | 0.18 | 0.19 | 0.39 | 0.67 | 0.72 | 0.65 | 0.47 | 0.22 | 0.59 |
| **5** | 16 | suburbs | 0.33 | 0.24 | 0.37 | 0.59 | 0.19 | 0.20 | 0.41 | 0.71 | 0.76 | 0.68 | 0.49 | 0.23 | 0.62 |
| **6** | 1 | cities | 0.13 | 0.12 | 0.19 | 0.64 | 0.07 | 2.01 | 0.17 | 1.08 | 0.77 | 1.31 | 0.38 | (11.06) | 0.54 |
| **6** | 1 | country | 0.12 | 0.11 | 0.18 | 0.57 | 0.06 | 1.67 | 0.15 | 0.95 | 0.67 | 1.15 | 0.34 | 35.32 | 0.48 |
| **6** | 1 | suburbs | 0.13 | 0.11 | 0.19 | 0.61 | 0.06 | 1.90 | 0.16 | 1.03 | 0.73 | 1.24 | 0.36 | (12.25) | 0.52 |
| **6** | 2 | cities | 0.13 | 0.12 | 0.19 | 0.56 | 0.07 | 1.01 | 0.17 | 0.82 | 0.58 | 0.94 | 0.36 | 0.81 | 0.47 |
| **6** | 2 | country | 0.12 | 0.11 | 0.18 | 0.51 | 0.06 | 0.91 | 0.16 | 0.74 | 0.52 | 0.85 | 0.32 | 0.73 | 0.43 |
| **6** | 2 | suburbs | 0.13 | 0.11 | 0.19 | 0.54 | 0.07 | 0.97 | 0.17 | 0.78 | 0.56 | 0.90 | 0.34 | 0.78 | 0.45 |
| **6** | 3 | cities | 0.22 | 0.19 | 0.31 | 0.90 | 0.11 | 1.55 | 0.28 | 1.29 | 0.91 | 1.48 | 0.57 | 1.18 | 0.76 |
| **6** | 3 | country | 0.18 | 0.16 | 0.26 | 0.75 | 0.09 | 1.28 | 0.24 | 1.07 | 0.76 | 1.22 | 0.48 | 0.96 | 0.63 |
| **6** | 3 | suburbs | 0.20 | 0.17 | 0.29 | 0.82 | 0.10 | 1.42 | 0.26 | 1.18 | 0.84 | 1.35 | 0.52 | 1.08 | 0.69 |
| **6** | 4 | cities | 0.34 | 0.29 | 0.48 | 1.23 | 0.18 | 1.58 | 0.45 | 1.59 | 1.13 | 1.76 | 0.84 | 0.89 | 1.03 |
| **6** | 4 | country | 0.25 | 0.22 | 0.36 | 0.97 | 0.13 | 1.40 | 0.33 | 1.31 | 0.93 | 1.47 | 0.64 | 0.87 | 0.82 |
| **6** | 4 | suburbs | 0.29 | 0.25 | 0.41 | 1.09 | 0.15 | 1.53 | 0.38 | 1.45 | 1.03 | 1.63 | 0.73 | 0.92 | 0.92 |
| **6** | 13 | cities | 0.24 | 0.21 | 0.34 | 0.92 | 0.13 | 1.36 | 0.31 | 1.26 | 0.89 | 1.41 | 0.61 | 0.86 | 0.78 |
| **6** | 13 | country | 0.22 | 0.19 | 0.31 | 0.86 | 0.12 | 1.29 | 0.29 | 1.17 | 0.83 | 1.33 | 0.56 | 0.84 | 0.72 |
| **6** | 13 | suburbs | 0.23 | 0.20 | 0.33 | 0.89 | 0.12 | 1.34 | 0.30 | 1.22 | 0.86 | 1.37 | 0.59 | 0.86 | 0.75 |
| **6** | 14 | cities | 0.23 | 0.20 | 0.33 | 0.90 | 0.12 | 1.38 | 0.30 | 1.24 | 0.88 | 1.40 | 0.59 | 0.91 | 0.76 |

## STONE WOOL

| Country | Arc | GL | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6** | 14 | country | 0.21 | 0.18 | 0.30 | 0.84 | 0.11 | 1.34 | 0.28 | 1.18 | 0.83 | 1.33 | 0.55 | 0.91 | 0.71 |
| **6** | 14 | suburbs | 0.22 | 0.19 | 0.32 | 0.87 | 0.12 | 1.37 | 0.29 | 1.21 | 0.86 | 1.37 | 0.57 | 0.92 | 0.73 |
| **6** | 15 | cities | 0.23 | 0.20 | 0.33 | 0.92 | 0.12 | 1.47 | 0.30 | 1.28 | 0.91 | 1.46 | 0.60 | 1.01 | 0.77 |
| **6** | 15 | country | 0.21 | 0.18 | 0.31 | 0.86 | 0.11 | 1.44 | 0.28 | 1.22 | 0.87 | 1.40 | 0.56 | 1.04 | 0.73 |
| **6** | 15 | suburbs | 0.22 | 0.19 | 0.32 | 0.89 | 0.12 | 1.46 | 0.29 | 1.26 | 0.89 | 1.43 | 0.58 | 1.04 | 0.75 |
| **6** | 16 | cities | 0.16 | 0.14 | 0.24 | 0.62 | 0.09 | 0.86 | 0.22 | 0.83 | 0.59 | 0.92 | 0.42 | 0.51 | 0.52 |
| **6** | 16 | country | 0.16 | 0.14 | 0.23 | 0.61 | 0.08 | 0.87 | 0.21 | 0.81 | 0.58 | 0.91 | 0.40 | 0.53 | 0.51 |
| **6** | 16 | suburbs | 0.16 | 0.14 | 0.23 | 0.61 | 0.09 | 0.87 | 0.21 | 0.82 | 0.58 | 0.92 | 0.41 | 0.53 | 0.52 |
| **7** | 5 | cities | 0.21 | 0.13 | 0.27 | 0.62 | 0.11 | 0.14 | 0.28 | 0.75 | 0.69 | 0.91 | 0.45 | 0.37 | 0.51 |
| **7** | 5 | country | 0.18 | 0.11 | 0.23 | 0.53 | 0.10 | 0.11 | 0.24 | 0.64 | 0.60 | 0.78 | 0.39 | 0.30 | 0.43 |
| **7** | 5 | suburbs | 0.19 | 0.11 | 0.25 | 0.55 | 0.10 | 0.10 | 0.26 | 0.68 | 0.64 | 0.81 | 0.41 | 0.28 | 0.43 |
| **7** | 6 | cities | 0.22 | 0.14 | 0.29 | 0.67 | 0.12 | 0.15 | 0.30 | 0.80 | 0.75 | 0.98 | 0.49 | 0.40 | 0.56 |
| **7** | 6 | country | 0.19 | 0.12 | 0.25 | 0.57 | 0.10 | 0.13 | 0.25 | 0.69 | 0.64 | 0.84 | 0.42 | 0.33 | 0.47 |
| **7** | 6 | suburbs | 0.20 | 0.12 | 0.26 | 0.60 | 0.11 | 0.11 | 0.27 | 0.74 | 0.68 | 0.88 | 0.44 | 0.31 | 0.47 |
| **7** | 7 | cities | 0.20 | 0.14 | 0.28 | 0.67 | 0.11 | 0.43 | 0.27 | 0.74 | 0.68 | 0.96 | 0.45 | 0.67 | 0.64 |
| **7** | 7 | country | 0.18 | 0.16 | 0.27 | 0.69 | 0.10 | (0.20) | 0.23 | 0.67 | 0.62 | 0.96 | 0.42 | (3.22) | 0.94 |
| **7** | 7 | suburbs | 0.19 | 0.13 | 0.26 | 0.62 | 0.10 | 0.35 | 0.25 | 0.69 | 0.64 | 0.89 | 0.42 | 0.59 | 0.59 |
| **7** | 8 | cities | 0.26 | 0.14 | 0.32 | 0.70 | 0.14 | 0.10 | 0.35 | 0.92 | 0.85 | 1.04 | 0.55 | 0.29 | 0.51 |
| **7** | 8 | country | 0.22 | 0.12 | 0.27 | 0.60 | 0.12 | 0.08 | 0.29 | 0.78 | 0.72 | 0.89 | 0.47 | 0.25 | 0.43 |
| **7** | 8 | suburbs | 0.24 | 0.13 | 0.29 | 0.64 | 0.13 | 0.09 | 0.32 | 0.84 | 0.79 | 0.96 | 0.50 | 0.27 | 0.46 |
| **7** | 17 | cities | 0.32 | 0.19 | 0.41 | 0.92 | 0.18 | 0.17 | 0.43 | 1.15 | 1.07 | 1.36 | 0.69 | 0.46 | 0.72 |
| **7** | 17 | country | 0.28 | 0.32 | 0.46 | 1.25 | 0.15 | (0.15) | 0.37 | 1.09 | 1.00 | 1.70 | 0.68 | (0.86) | 2.96 |
| **7** | 17 | suburbs | 0.30 | 0.19 | 0.40 | 0.93 | 0.16 | 0.28 | 0.39 | 1.08 | 1.00 | 1.35 | 0.65 | 0.64 | 0.81 |
| **7** | 18 | cities | 0.34 | 0.19 | 0.43 | 0.96 | 0.19 | 0.16 | 0.45 | 1.21 | 1.12 | 1.42 | 0.73 | 0.47 | 0.74 |
| **7** | 18 | country | 0.29 | 0.27 | 0.45 | 1.16 | 0.16 | (0.31) | 0.39 | 1.12 | 1.03 | 1.61 | 0.69 | (3.96) | 1.62 |
| **7** | 18 | suburbs | 0.31 | 0.20 | 0.41 | 0.95 | 0.17 | 0.23 | 0.42 | 1.13 | 1.05 | 1.38 | 0.68 | 0.58 | 0.79 |
| **7** | 19 | cities | 0.35 | 0.19 | 0.43 | 0.95 | 0.20 | 0.13 | 0.48 | 1.25 | 1.17 | 1.41 | 0.75 | 0.38 | 0.67 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7** | 19 | country | 0.31 | 0.16 | 0.38 | 0.83 | 0.17 | 0.12 | 0.41 | 1.08 | 1.01 | 1.23 | 0.65 | 0.35 | 0.60 |
| **7** | 19 | suburbs | 0.33 | 0.17 | 0.40 | 0.88 | 0.18 | 0.12 | 0.44 | 1.15 | 1.08 | 1.31 | 0.69 | 0.36 | 0.63 |
| **7** | 20 | cities | 0.27 | 0.14 | 0.33 | 0.71 | 0.15 | 0.09 | 0.36 | 0.95 | 0.88 | 1.06 | 0.57 | 0.28 | 0.50 |
| **7** | 20 | country | 0.23 | 0.12 | 0.28 | 0.62 | 0.13 | 0.08 | 0.31 | 0.82 | 0.77 | 0.92 | 0.49 | 0.24 | 0.44 |
| **7** | 20 | suburbs | 0.25 | 0.13 | 0.30 | 0.66 | 0.14 | 0.08 | 0.34 | 0.88 | 0.82 | 0.98 | 0.52 | 0.26 | 0.46 |
| **8** | 5 | cities | 0.18 | 0.12 | 0.11 | 0.29 | 0.04 | 0.20 | 0.11 | 0.31 | 0.31 | 0.23 | 0.21 | 0.26 | 0.52 |
| **8** | 5 | country | 0.16 | 0.11 | 0.10 | 0.28 | 0.04 | 0.19 | 0.10 | 0.29 | 0.29 | 0.22 | 0.20 | 0.24 | 0.49 |
| **8** | 5 | suburbs | 0.17 | 0.11 | 0.10 | 0.28 | 0.04 | 0.19 | 0.11 | 0.30 | 0.30 | 0.22 | 0.20 | 0.25 | 0.51 |
| **8** | 6 | cities | 0.19 | 0.12 | 0.11 | 0.31 | 0.04 | 0.21 | 0.12 | 0.33 | 0.33 | 0.25 | 0.22 | 0.28 | 0.56 |
| **8** | 6 | country | 0.17 | 0.12 | 0.10 | 0.30 | 0.04 | 0.20 | 0.11 | 0.31 | 0.31 | 0.23 | 0.21 | 0.26 | 0.52 |
| **8** | 6 | suburbs | 0.18 | 0.12 | 0.11 | 0.30 | 0.04 | 0.20 | 0.11 | 0.32 | 0.32 | 0.24 | 0.21 | 0.26 | 0.54 |
| **8** | 7 | cities | 0.19 | 0.12 | 0.11 | 0.32 | 0.04 | 0.21 | 0.12 | 0.33 | 0.34 | 0.25 | 0.22 | 0.28 | 0.56 |
| **8** | 7 | country | 0.18 | 0.12 | 0.11 | 0.30 | 0.04 | 0.20 | 0.11 | 0.31 | 0.31 | 0.24 | 0.21 | 0.26 | 0.53 |
| **8** | 7 | suburbs | 0.18 | 0.12 | 0.11 | 0.30 | 0.04 | 0.21 | 0.11 | 0.32 | 0.32 | 0.24 | 0.22 | 0.27 | 0.54 |
| **8** | 8 | cities | 0.26 | 0.17 | 0.16 | 0.52 | 0.05 | 0.39 | 0.16 | 0.51 | 0.47 | 0.47 | 0.31 | 0.51 | 0.81 |
| **8** | 8 | country | 0.24 | 0.16 | 0.15 | 0.49 | 0.05 | 0.38 | 0.15 | 0.49 | 0.44 | 0.45 | 0.29 | 0.49 | 0.77 |
| **8** | 8 | suburbs | 0.25 | 0.16 | 0.15 | 0.49 | 0.05 | 0.37 | 0.15 | 0.49 | 0.45 | 0.44 | 0.30 | 0.48 | 0.78 |
| **8** | 17 | cities | 0.29 | 0.19 | 0.17 | 0.48 | 0.06 | 0.33 | 0.18 | 0.51 | 0.51 | 0.38 | 0.34 | 0.42 | 0.85 |
| **8** | 17 | country | 0.26 | 0.18 | 0.16 | 0.45 | 0.06 | 0.30 | 0.16 | 0.47 | 0.47 | 0.36 | 0.31 | 0.39 | 0.79 |
| **8** | 17 | suburbs | 0.27 | 0.18 | 0.16 | 0.46 | 0.06 | 0.31 | 0.17 | 0.49 | 0.49 | 0.37 | 0.33 | 0.41 | 0.82 |
| **8** | 18 | cities | 0.30 | 0.20 | 0.18 | 0.51 | 0.07 | 0.35 | 0.19 | 0.54 | 0.54 | 0.41 | 0.36 | 0.45 | 0.91 |
| **8** | 18 | country | 0.28 | 0.19 | 0.17 | 0.48 | 0.06 | 0.32 | 0.17 | 0.50 | 0.50 | 0.38 | 0.33 | 0.42 | 0.84 |
| **8** | 18 | suburbs | 0.29 | 0.19 | 0.17 | 0.49 | 0.06 | 0.33 | 0.18 | 0.52 | 0.52 | 0.39 | 0.35 | 0.43 | 0.87 |
| **8** | 19 | cities | 0.32 | 0.21 | 0.20 | 0.56 | 0.07 | 0.38 | 0.20 | 0.59 | 0.58 | 0.45 | 0.39 | 0.50 | 0.98 |
| **8** | 19 | country | 0.30 | 0.20 | 0.18 | 0.53 | 0.07 | 0.36 | 0.19 | 0.55 | 0.54 | 0.42 | 0.36 | 0.47 | 0.92 |
| **8** | 19 | suburbs | 0.31 | 0.21 | 0.19 | 0.54 | 0.07 | 0.37 | 0.19 | 0.57 | 0.56 | 0.43 | 0.37 | 0.48 | 0.94 |
| **8** | 20 | cities | 0.28 | 0.18 | 0.17 | 0.50 | 0.06 | 0.35 | 0.17 | 0.51 | 0.50 | 0.41 | 0.33 | 0.45 | 0.84 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **8** | 20 | country | 0.26 | 0.17 | 0.16 | 0.47 | 0.06 | 0.33 | 0.16 | 0.48 | 0.47 | 0.39 | 0.31 | 0.43 | 0.79 |
| **8** | 20 | suburbs | 0.27 | 0.18 | 0.16 | 0.48 | 0.06 | 0.34 | 0.16 | 0.49 | 0.48 | 0.40 | 0.32 | 0.44 | 0.81 |
| **9** | 5 | cities | 0.11 | 0.11 | 0.11 | 0.22 | 0.05 | 0.17 | 0.13 | 0.33 | 0.32 | 0.18 | 0.20 | 0.18 | 0.37 |
| **9** | 5 | country | 0.10 | 0.10 | 0.10 | 0.20 | 0.05 | 0.15 | 0.11 | 0.30 | 0.29 | 0.16 | 0.18 | 0.16 | 0.34 |
| **9** | 5 | suburbs | 0.10 | 0.10 | 0.11 | 0.21 | 0.05 | 0.16 | 0.12 | 0.32 | 0.30 | 0.17 | 0.19 | 0.17 | 0.35 |
| **9** | 6 | cities | 0.11 | 0.11 | 0.12 | 0.23 | 0.05 | 0.18 | 0.13 | 0.35 | 0.34 | 0.19 | 0.22 | 0.19 | 0.39 |
| **9** | 6 | country | 0.10 | 0.10 | 0.11 | 0.21 | 0.05 | 0.16 | 0.12 | 0.32 | 0.30 | 0.17 | 0.19 | 0.17 | 0.35 |
| **9** | 6 | suburbs | 0.11 | 0.11 | 0.11 | 0.22 | 0.05 | 0.17 | 0.13 | 0.33 | 0.32 | 0.18 | 0.20 | 0.18 | 0.37 |
| **9** | 7 | cities | 0.12 | 0.11 | 0.12 | 0.24 | 0.05 | 0.18 | 0.14 | 0.36 | 0.34 | 0.19 | 0.22 | 0.20 | 0.40 |
| **9** | 7 | country | 0.10 | 0.10 | 0.11 | 0.21 | 0.05 | 0.16 | 0.12 | 0.32 | 0.31 | 0.18 | 0.20 | 0.18 | 0.36 |
| **9** | 7 | suburbs | 0.11 | 0.11 | 0.12 | 0.22 | 0.05 | 0.17 | 0.13 | 0.34 | 0.33 | 0.18 | 0.21 | 0.19 | 0.38 |
| **9** | 8 | cities | 0.13 | 0.13 | 0.14 | 0.28 | 0.06 | 0.22 | 0.16 | 0.41 | 0.40 | 0.23 | 0.25 | 0.23 | 0.46 |
| **9** | 8 | country | 0.12 | 0.12 | 0.13 | 0.25 | 0.06 | 0.20 | 0.14 | 0.38 | 0.36 | 0.21 | 0.23 | 0.21 | 0.42 |
| **9** | 8 | suburbs | 0.13 | 0.12 | 0.13 | 0.26 | 0.06 | 0.21 | 0.15 | 0.39 | 0.38 | 0.22 | 0.24 | 0.22 | 0.44 |
| **9** | 17 | cities | 0.18 | 0.18 | 0.19 | 0.37 | 0.08 | 0.28 | 0.21 | 0.56 | 0.54 | 0.30 | 0.34 | 0.30 | 0.62 |
| **9** | 17 | country | 0.16 | 0.16 | 0.17 | 0.33 | 0.08 | 0.25 | 0.19 | 0.50 | 0.48 | 0.27 | 0.30 | 0.27 | 0.55 |
| **9** | 17 | suburbs | 0.17 | 0.17 | 0.18 | 0.34 | 0.08 | 0.26 | 0.20 | 0.53 | 0.50 | 0.28 | 0.32 | 0.29 | 0.59 |
| **9** | 18 | cities | 0.19 | 0.19 | 0.20 | 0.39 | 0.09 | 0.29 | 0.23 | 0.59 | 0.56 | 0.31 | 0.36 | 0.32 | 0.66 |
| **9** | 18 | country | 0.17 | 0.17 | 0.18 | 0.34 | 0.08 | 0.26 | 0.20 | 0.52 | 0.50 | 0.28 | 0.32 | 0.29 | 0.58 |
| **9** | 18 | suburbs | 0.18 | 0.18 | 0.19 | 0.36 | 0.08 | 0.28 | 0.21 | 0.55 | 0.53 | 0.30 | 0.34 | 0.30 | 0.62 |
| **9** | 19 | cities | 0.20 | 0.20 | 0.21 | 0.41 | 0.09 | 0.31 | 0.24 | 0.62 | 0.60 | 0.33 | 0.38 | 0.34 | 0.69 |
| **9** | 19 | country | 0.18 | 0.18 | 0.19 | 0.37 | 0.08 | 0.28 | 0.21 | 0.56 | 0.54 | 0.30 | 0.34 | 0.31 | 0.62 |
| **9** | 19 | suburbs | 0.19 | 0.19 | 0.20 | 0.38 | 0.09 | 0.29 | 0.23 | 0.59 | 0.56 | 0.31 | 0.36 | 0.32 | 0.66 |
| **9** | 20 | cities | 0.17 | 0.16 | 0.18 | 0.34 | 0.08 | 0.26 | 0.20 | 0.51 | 0.49 | 0.27 | 0.31 | 0.28 | 0.57 |
| **9** | 20 | country | 0.15 | 0.15 | 0.16 | 0.31 | 0.07 | 0.24 | 0.18 | 0.47 | 0.45 | 0.25 | 0.29 | 0.26 | 0.52 |
| **9** | 20 | suburbs | 0.16 | 0.15 | 0.17 | 0.32 | 0.07 | 0.24 | 0.19 | 0.49 | 0.47 | 0.26 | 0.30 | 0.27 | 0.54 |
| **10** | 5 | cities | 0.19 | 0.22 | 0.12 | 0.43 | 0.04 | 0.81 | 0.12 | 0.44 | 0.36 | 0.40 | 0.24 | 0.46 | 0.82 |

## STONE WOOL

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | 5 | country | 0.17 | 0.20 | 0.11 | 0.39 | 0.04 | 0.76 | 0.10 | 0.39 | 0.32 | 0.36 | 0.21 | 0.42 | 0.75 |
| **10** | 5 | suburbs | 0.18 | 0.21 | 0.11 | 0.41 | 0.04 | 0.78 | 0.11 | 0.41 | 0.34 | 0.38 | 0.22 | 0.44 | 0.78 |
| **10** | 6 | cities | 0.21 | 0.24 | 0.13 | 0.47 | 0.04 | 0.94 | 0.12 | 0.47 | 0.38 | 0.44 | 0.25 | 0.51 | 0.89 |
| **10** | 6 | country | 0.19 | 0.21 | 0.11 | 0.42 | 0.04 | 0.88 | 0.11 | 0.42 | 0.34 | 0.40 | 0.23 | 0.46 | 0.80 |
| **10** | 6 | suburbs | 0.20 | 0.22 | 0.12 | 0.44 | 0.04 | 0.90 | 0.12 | 0.45 | 0.36 | 0.42 | 0.24 | 0.48 | 0.85 |
| **10** | 7 | cities | 0.19 | 0.22 | 0.12 | 0.45 | 0.04 | 0.98 | 0.12 | 0.44 | 0.36 | 0.44 | 0.24 | 0.50 | 0.84 |
| **10** | 7 | country | 0.18 | 0.20 | 0.11 | 0.42 | 0.04 | 1.04 | 0.11 | 0.40 | 0.33 | 0.42 | 0.22 | 0.48 | 0.78 |
| **10** | 7 | suburbs | 0.19 | 0.21 | 0.11 | 0.43 | 0.04 | 1.00 | 0.11 | 0.42 | 0.34 | 0.43 | 0.23 | 0.49 | 0.81 |
| **10** | 8 | cities | 0.22 | 0.25 | 0.13 | 0.58 | 0.04 | 3.00 | 0.13 | 0.50 | 0.40 | 0.69 | 0.27 | 0.78 | 1.01 |
| **10** | 8 | country | 0.20 | 0.23 | 0.13 | 0.58 | 0.04 | 9.93 | 0.12 | 0.47 | 0.37 | 0.78 | 0.25 | 0.86 | 0.96 |
| **10** | 8 | suburbs | 0.21 | 0.24 | 0.13 | 0.58 | 0.04 | 4.05 | 0.12 | 0.49 | 0.39 | 0.72 | 0.26 | 0.80 | 0.98 |
| **10** | 17 | cities | 0.30 | 0.34 | 0.18 | 0.63 | 0.06 | 1.05 | 0.18 | 0.67 | 0.55 | 0.56 | 0.36 | 0.64 | 1.25 |
| **10** | 17 | country | 0.27 | 0.31 | 0.16 | 0.58 | 0.06 | 1.01 | 0.16 | 0.60 | 0.49 | 0.52 | 0.32 | 0.60 | 1.12 |
| **10** | 17 | suburbs | 0.28 | 0.32 | 0.17 | 0.60 | 0.06 | 1.02 | 0.17 | 0.63 | 0.52 | 0.54 | 0.34 | 0.62 | 1.18 |
| **10** | 18 | cities | 0.32 | 0.36 | 0.19 | 0.67 | 0.07 | 1.11 | 0.19 | 0.71 | 0.58 | 0.59 | 0.38 | 0.68 | 1.32 |
| **10** | 18 | country | 0.28 | 0.32 | 0.17 | 0.61 | 0.06 | 1.08 | 0.17 | 0.64 | 0.52 | 0.55 | 0.34 | 0.64 | 1.19 |
| **10** | 18 | suburbs | 0.30 | 0.34 | 0.18 | 0.64 | 0.06 | 1.09 | 0.18 | 0.67 | 0.55 | 0.57 | 0.36 | 0.66 | 1.25 |
| **10** | 19 | cities | 0.34 | 0.39 | 0.21 | 0.71 | 0.07 | 1.13 | 0.21 | 0.77 | 0.63 | 0.62 | 0.41 | 0.72 | 1.41 |
| **10** | 19 | country | 0.31 | 0.36 | 0.19 | 0.66 | 0.07 | 1.12 | 0.19 | 0.70 | 0.58 | 0.59 | 0.38 | 0.68 | 1.31 |
| **10** | 19 | suburbs | 0.33 | 0.38 | 0.20 | 0.68 | 0.07 | 1.12 | 0.20 | 0.73 | 0.60 | 0.60 | 0.40 | 0.70 | 1.36 |
| **10** | 20 | cities | 0.28 | 0.32 | 0.17 | 0.59 | 0.06 | 1.03 | 0.17 | 0.62 | 0.51 | 0.53 | 0.33 | 0.62 | 1.16 |
| **10** | 20 | country | 0.26 | 0.30 | 0.16 | 0.59 | 0.05 | 1.16 | 0.16 | 0.59 | 0.48 | 0.55 | 0.32 | 0.64 | 1.12 |
| **10** | 20 | suburbs | 0.27 | 0.31 | 0.16 | 0.59 | 0.06 | 1.08 | 0.16 | 0.60 | 0.49 | 0.54 | 0.32 | 0.62 | 1.13 |
| **11** | 5 | cities | 0.20 | 0.35 | 0.09 | 0.15 | 0.04 | 0.19 | 0.12 | 0.25 | 0.33 | 0.09 | 0.19 | 0.14 | 0.88 |
| **11** | 5 | country | 0.18 | 0.32 | 0.08 | 0.14 | 0.04 | 0.18 | 0.11 | 0.23 | 0.30 | 0.08 | 0.17 | 0.13 | 0.80 |
| **11** | 5 | suburbs | 0.19 | 0.34 | 0.08 | 0.15 | 0.04 | 0.18 | 0.12 | 0.24 | 0.31 | 0.09 | 0.18 | 0.13 | 0.84 |
| **11** | 6 | cities | 0.21 | 0.38 | 0.09 | 0.16 | 0.04 | 0.21 | 0.13 | 0.27 | 0.35 | 0.10 | 0.20 | 0.15 | 0.95 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11** | 6 | country | 0.19 | 0.34 | 0.08 | 0.15 | 0.04 | 0.19 | 0.12 | 0.24 | 0.32 | 0.09 | 0.19 | 0.14 | 0.86 |
| **11** | 6 | suburbs | 0.20 | 0.36 | 0.09 | 0.16 | 0.04 | 0.20 | 0.12 | 0.25 | 0.33 | 0.09 | 0.19 | 0.14 | 0.90 |
| **11** | 7 | cities | 0.20 | 0.36 | 0.09 | 0.16 | 0.04 | 0.20 | 0.12 | 0.26 | 0.34 | 0.09 | 0.20 | 0.15 | 0.92 |
| **11** | 7 | country | 0.18 | 0.33 | 0.08 | 0.15 | 0.04 | 0.18 | 0.11 | 0.23 | 0.31 | 0.09 | 0.18 | 0.13 | 0.84 |
| **11** | 7 | suburbs | 0.19 | 0.35 | 0.09 | 0.15 | 0.04 | 0.19 | 0.12 | 0.24 | 0.32 | 0.09 | 0.19 | 0.14 | 0.88 |
| **11** | 8 | cities | 0.24 | 0.43 | 0.10 | 0.19 | 0.05 | 0.25 | 0.14 | 0.30 | 0.39 | 0.12 | 0.23 | 0.18 | 1.13 |
| **11** | 8 | country | 0.22 | 0.39 | 0.10 | 0.18 | 0.04 | 0.24 | 0.13 | 0.27 | 0.35 | 0.11 | 0.21 | 0.17 | 1.04 |
| **11** | 8 | suburbs | 0.23 | 0.41 | 0.10 | 0.19 | 0.05 | 0.25 | 0.14 | 0.29 | 0.37 | 0.11 | 0.22 | 0.17 | 1.09 |
| **11** | 17 | cities | 0.32 | 0.56 | 0.14 | 0.24 | 0.07 | 0.31 | 0.20 | 0.40 | 0.53 | 0.14 | 0.31 | 0.22 | 1.41 |
| **11** | 17 | country | 0.28 | 0.51 | 0.13 | 0.22 | 0.06 | 0.28 | 0.18 | 0.36 | 0.47 | 0.13 | 0.28 | 0.20 | 1.28 |
| **11** | 17 | suburbs | 0.30 | 0.54 | 0.13 | 0.23 | 0.06 | 0.29 | 0.19 | 0.38 | 0.50 | 0.14 | 0.29 | 0.21 | 1.34 |
| **11** | 18 | cities | 0.33 | 0.60 | 0.15 | 0.26 | 0.07 | 0.32 | 0.21 | 0.42 | 0.56 | 0.15 | 0.33 | 0.24 | 1.49 |
| **11** | 18 | country | 0.30 | 0.54 | 0.13 | 0.23 | 0.06 | 0.29 | 0.19 | 0.38 | 0.50 | 0.14 | 0.29 | 0.21 | 1.35 |
| **11** | 18 | suburbs | 0.32 | 0.56 | 0.14 | 0.25 | 0.07 | 0.31 | 0.20 | 0.40 | 0.53 | 0.14 | 0.31 | 0.22 | 1.42 |
| **11** | 19 | cities | 0.36 | 0.64 | 0.16 | 0.28 | 0.08 | 0.35 | 0.22 | 0.46 | 0.60 | 0.16 | 0.35 | 0.25 | 1.60 |
| **11** | 19 | country | 0.33 | 0.58 | 0.14 | 0.25 | 0.07 | 0.32 | 0.20 | 0.41 | 0.54 | 0.15 | 0.32 | 0.23 | 1.46 |
| **11** | 19 | suburbs | 0.34 | 0.61 | 0.15 | 0.26 | 0.07 | 0.33 | 0.21 | 0.43 | 0.57 | 0.16 | 0.33 | 0.24 | 1.53 |
| **11** | 20 | cities | 0.29 | 0.52 | 0.13 | 0.23 | 0.06 | 0.28 | 0.18 | 0.37 | 0.48 | 0.13 | 0.28 | 0.21 | 1.31 |
| **11** | 20 | country | 0.27 | 0.48 | 0.12 | 0.21 | 0.06 | 0.27 | 0.17 | 0.34 | 0.44 | 0.13 | 0.26 | 0.19 | 1.22 |
| **11** | 20 | suburbs | 0.28 | 0.50 | 0.12 | 0.22 | 0.06 | 0.28 | 0.17 | 0.35 | 0.46 | 0.13 | 0.27 | 0.20 | 1.26 |
| **12** | 5 | cities | 0.07 | 0.06 | 0.16 | 0.18 | 0.14 | 0.20 | 0.24 | 0.19 | 0.34 | 0.23 | 0.22 | 0.15 | 0.27 |
| **12** | 5 | country | 0.07 | 0.05 | 0.15 | 0.16 | 0.12 | 0.19 | 0.22 | 0.18 | 0.31 | 0.20 | 0.20 | 0.13 | 0.24 |
| **12** | 5 | suburbs | 0.07 | 0.05 | 0.15 | 0.17 | 0.13 | 0.19 | 0.23 | 0.19 | 0.32 | 0.21 | 0.21 | 0.14 | 0.25 |
| **12** | 6 | cities | 0.08 | 0.06 | 0.17 | 0.19 | 0.14 | 0.21 | 0.25 | 0.20 | 0.35 | 0.24 | 0.23 | 0.16 | 0.28 |
| **12** | 6 | country | 0.07 | 0.05 | 0.15 | 0.17 | 0.13 | 0.19 | 0.23 | 0.19 | 0.32 | 0.21 | 0.21 | 0.14 | 0.25 |
| **12** | 6 | suburbs | 0.07 | 0.06 | 0.16 | 0.18 | 0.14 | 0.20 | 0.24 | 0.19 | 0.34 | 0.23 | 0.22 | 0.15 | 0.27 |
| **12** | 7 | cities | 0.08 | 0.06 | 0.17 | 0.18 | 0.14 | 0.21 | 0.25 | 0.20 | 0.35 | 0.23 | 0.23 | 0.15 | 0.27 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **12** | 7 | country | 0.07 | 0.05 | 0.15 | 0.17 | 0.13 | 0.19 | 0.22 | 0.18 | 0.32 | 0.21 | 0.21 | 0.14 | 0.25 |
| **12** | 7 | suburbs | 0.07 | 0.06 | 0.16 | 0.17 | 0.13 | 0.20 | 0.23 | 0.19 | 0.33 | 0.22 | 0.22 | 0.14 | 0.26 |
| **12** | 8 | cities | 0.10 | 0.07 | 0.21 | 0.23 | 0.18 | 0.26 | 0.31 | 0.25 | 0.44 | 0.29 | 0.29 | 0.19 | 0.35 |
| **12** | 8 | country | 0.09 | 0.07 | 0.19 | 0.20 | 0.16 | 0.24 | 0.28 | 0.22 | 0.39 | 0.26 | 0.26 | 0.17 | 0.31 |
| **12** | 8 | suburbs | 0.09 | 0.07 | 0.20 | 0.22 | 0.17 | 0.25 | 0.29 | 0.24 | 0.41 | 0.28 | 0.27 | 0.18 | 0.33 |
| **12** | 17 | cities | 0.12 | 0.09 | 0.26 | 0.29 | 0.23 | 0.34 | 0.39 | 0.32 | 0.56 | 0.37 | 0.37 | 0.24 | 0.44 |
| **12** | 17 | country | 0.11 | 0.08 | 0.24 | 0.26 | 0.20 | 0.30 | 0.35 | 0.29 | 0.50 | 0.33 | 0.33 | 0.22 | 0.39 |
| **12** | 17 | suburbs | 0.12 | 0.09 | 0.25 | 0.28 | 0.21 | 0.32 | 0.37 | 0.30 | 0.52 | 0.35 | 0.35 | 0.23 | 0.41 |
| **12** | 18 | cities | 0.13 | 0.10 | 0.28 | 0.31 | 0.24 | 0.35 | 0.41 | 0.34 | 0.58 | 0.39 | 0.39 | 0.26 | 0.46 |
| **12** | 18 | country | 0.12 | 0.09 | 0.25 | 0.27 | 0.21 | 0.32 | 0.37 | 0.30 | 0.52 | 0.35 | 0.34 | 0.23 | 0.41 |
| **12** | 18 | suburbs | 0.12 | 0.09 | 0.26 | 0.29 | 0.22 | 0.33 | 0.39 | 0.32 | 0.55 | 0.37 | 0.36 | 0.24 | 0.43 |
| **12** | 19 | cities | 0.14 | 0.11 | 0.31 | 0.34 | 0.26 | 0.39 | 0.45 | 0.37 | 0.64 | 0.43 | 0.43 | 0.28 | 0.51 |
| **12** | 19 | country | 0.13 | 0.10 | 0.28 | 0.31 | 0.24 | 0.35 | 0.41 | 0.34 | 0.58 | 0.39 | 0.39 | 0.26 | 0.46 |
| **12** | 19 | suburbs | 0.14 | 0.10 | 0.29 | 0.32 | 0.25 | 0.37 | 0.43 | 0.35 | 0.61 | 0.41 | 0.40 | 0.27 | 0.48 |
| **12** | 20 | cities | 0.11 | 0.08 | 0.23 | 0.26 | 0.20 | 0.30 | 0.34 | 0.28 | 0.49 | 0.33 | 0.32 | 0.21 | 0.39 |
| **12** | 20 | country | 0.10 | 0.08 | 0.22 | 0.24 | 0.19 | 0.28 | 0.33 | 0.27 | 0.46 | 0.31 | 0.30 | 0.20 | 0.36 |
| **12** | 20 | suburbs | 0.10 | 0.08 | 0.22 | 0.25 | 0.19 | 0.29 | 0.33 | 0.27 | 0.47 | 0.32 | 0.31 | 0.21 | 0.37 |
| **13** | 5 | cities | 0.15 | 0.15 | 0.64 | 0.64 | 0.50 | 1.15 | 0.56 | 1.01 | 0.94 | 0.90 | 0.62 | 0.53 | 0.54 |
| **13** | 5 | country | 0.14 | 0.13 | 0.56 | 0.56 | 0.44 | 1.01 | 0.49 | 0.89 | 0.83 | 0.80 | 0.55 | 0.47 | 0.47 |
| **13** | 5 | suburbs | 0.15 | 0.14 | 0.60 | 0.60 | 0.47 | 1.08 | 0.52 | 0.95 | 0.88 | 0.85 | 0.59 | 0.50 | 0.50 |
| **13** | 6 | cities | 0.16 | 0.15 | 0.67 | 0.67 | 0.53 | 1.22 | 0.59 | 1.07 | 0.99 | 0.96 | 0.66 | 0.56 | 0.57 |
| **13** | 6 | country | 0.14 | 0.14 | 0.60 | 0.60 | 0.47 | 1.08 | 0.52 | 0.95 | 0.88 | 0.85 | 0.58 | 0.50 | 0.50 |
| **13** | 6 | suburbs | 0.15 | 0.15 | 0.63 | 0.63 | 0.50 | 1.15 | 0.55 | 1.01 | 0.93 | 0.90 | 0.62 | 0.53 | 0.53 |
| **13** | 7 | cities | 0.16 | 0.15 | 0.66 | 0.66 | 0.52 | 1.19 | 0.58 | 1.05 | 0.97 | 0.94 | 0.64 | 0.55 | 0.56 |
| **13** | 7 | country | 0.14 | 0.13 | 0.59 | 0.59 | 0.46 | 1.06 | 0.51 | 0.93 | 0.86 | 0.84 | 0.57 | 0.49 | 0.49 |
| **13** | 7 | suburbs | 0.15 | 0.14 | 0.62 | 0.62 | 0.49 | 1.12 | 0.54 | 0.99 | 0.91 | 0.88 | 0.61 | 0.52 | 0.52 |
| **13** | 8 | cities | 0.20 | 0.19 | 0.85 | 0.86 | 0.66 | 1.60 | 0.73 | 1.34 | 1.25 | 1.26 | 0.83 | 0.75 | 0.71 |

## STONE WOOL

| **Country** | **Arc** | **GL** | $\mathbf{PBT}_{\mathbf{CC}}$ | $\mathbf{PBT}_{\mathbf{OD}}$ | $\mathbf{PBT}_{\mathbf{HT\_CE}}$ | $\mathbf{PBT}_{\mathbf{HT\_nCE}}$ | $\mathbf{PBT}_{\mathbf{PM}}$ | $\mathbf{PBT}_{\mathbf{IR\_hh}}$ | $\mathbf{PBT}_{\mathbf{POF}}$ | $\mathbf{PBT}_{\mathbf{AC}}$ | $\mathbf{PBT}_{\mathbf{ET}}$ | $\mathbf{PBT}_{\mathbf{EuF}}$ | $\mathbf{PBT}_{\mathbf{EuM}}$ | $\mathbf{PBT}_{\mathbf{Ec\_FW}}$ | $\mathbf{PBT}_{\mathbf{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | 8 | country | 0.18 | 0.17 | 0.74 | 0.75 | 0.57 | 1.39 | 0.64 | 1.17 | 1.09 | 1.10 | 0.72 | 0.65 | 0.62 |
| **13** | 8 | suburbs | 0.19 | 0.18 | 0.80 | 0.80 | 0.62 | 1.50 | 0.68 | 1.25 | 1.17 | 1.18 | 0.77 | 0.70 | 0.66 |
| **13** | 17 | cities | 0.24 | 0.23 | 1.00 | 1.00 | 0.79 | 1.79 | 0.87 | 1.59 | 1.47 | 1.40 | 0.98 | 0.83 | 0.84 |
| **13** | 17 | country | 0.21 | 0.20 | 0.87 | 0.87 | 0.69 | 1.56 | 0.76 | 1.39 | 1.28 | 1.22 | 0.85 | 0.72 | 0.74 |
| **13** | 17 | suburbs | 0.23 | 0.21 | 0.93 | 0.93 | 0.74 | 1.66 | 0.81 | 1.48 | 1.37 | 1.31 | 0.91 | 0.77 | 0.79 |
| **13** | 18 | cities | 0.25 | 0.24 | 1.05 | 1.04 | 0.83 | 1.88 | 0.92 | 1.67 | 1.54 | 1.47 | 1.03 | 0.87 | 0.89 |
| **13** | 18 | country | 0.22 | 0.21 | 0.92 | 0.91 | 0.73 | 1.64 | 0.80 | 1.46 | 1.35 | 1.29 | 0.90 | 0.76 | 0.78 |
| **13** | 18 | suburbs | 0.24 | 0.23 | 0.98 | 0.97 | 0.77 | 1.75 | 0.86 | 1.56 | 1.44 | 1.38 | 0.96 | 0.81 | 0.83 |
| **13** | 19 | cities | 0.28 | 0.26 | 1.13 | 1.13 | 0.90 | 2.03 | 0.99 | 1.81 | 1.67 | 1.60 | 1.11 | 0.94 | 0.96 |
| **13** | 19 | country | 0.25 | 0.23 | 1.01 | 1.01 | 0.80 | 1.82 | 0.89 | 1.62 | 1.49 | 1.43 | 0.99 | 0.84 | 0.86 |
| **13** | 19 | suburbs | 0.26 | 0.25 | 1.07 | 1.07 | 0.85 | 1.92 | 0.94 | 1.70 | 1.57 | 1.51 | 1.05 | 0.89 | 0.90 |
| **13** | 20 | cities | 0.21 | 0.20 | 0.88 | 0.88 | 0.70 | 1.59 | 0.77 | 1.40 | 1.30 | 1.25 | 0.86 | 0.74 | 0.74 |
| **13** | 20 | country | 0.20 | 0.19 | 0.83 | 0.83 | 0.65 | 1.50 | 0.72 | 1.32 | 1.22 | 1.18 | 0.81 | 0.69 | 0.70 |
| **13** | 20 | suburbs | 0.21 | 0.20 | 0.85 | 0.85 | 0.67 | 1.53 | 0.74 | 1.35 | 1.25 | 1.21 | 0.83 | 0.71 | 0.72 |
| **14** | 5 | cities | 0.16 | 0.10 | 0.45 | 0.55 | 0.29 | 0.20 | 0.45 | 0.69 | 0.77 | 0.92 | 0.51 | 0.40 | 0.44 |
| **14** | 5 | country | 0.14 | 0.09 | 0.40 | 0.49 | 0.26 | 0.18 | 0.40 | 0.61 | 0.68 | 0.81 | 0.46 | 0.36 | 0.39 |
| **14** | 5 | suburbs | 0.15 | 0.09 | 0.42 | 0.52 | 0.28 | 0.19 | 0.43 | 0.65 | 0.72 | 0.86 | 0.48 | 0.38 | 0.41 |
| **14** | 6 | cities | 0.16 | 0.10 | 0.48 | 0.58 | 0.31 | 0.21 | 0.48 | 0.73 | 0.81 | 0.97 | 0.54 | 0.42 | 0.46 |
| **14** | 6 | country | 0.15 | 0.09 | 0.42 | 0.52 | 0.28 | 0.19 | 0.43 | 0.65 | 0.72 | 0.86 | 0.48 | 0.38 | 0.41 |
| **14** | 6 | suburbs | 0.16 | 0.10 | 0.45 | 0.55 | 0.29 | 0.20 | 0.45 | 0.69 | 0.76 | 0.91 | 0.51 | 0.40 | 0.44 |
| **14** | 7 | cities | 0.16 | 0.10 | 0.46 | 0.57 | 0.30 | 0.21 | 0.46 | 0.70 | 0.79 | 0.95 | 0.52 | 0.43 | 0.45 |
| **14** | 7 | country | 0.14 | 0.09 | 0.42 | 0.51 | 0.27 | 0.20 | 0.41 | 0.63 | 0.70 | 0.85 | 0.47 | 0.39 | 0.41 |
| **14** | 7 | suburbs | 0.15 | 0.09 | 0.44 | 0.54 | 0.28 | 0.20 | 0.44 | 0.66 | 0.74 | 0.90 | 0.49 | 0.40 | 0.43 |
| **14** | 8 | cities | 0.21 | 0.13 | 0.62 | 0.76 | 0.40 | 0.29 | 0.61 | 0.94 | 1.05 | 1.26 | 0.70 | 0.57 | 0.60 |
| **14** | 8 | country | 0.18 | 0.11 | 0.53 | 0.65 | 0.34 | 0.25 | 0.53 | 0.81 | 0.90 | 1.09 | 0.60 | 0.49 | 0.52 |
| **14** | 8 | suburbs | 0.20 | 0.12 | 0.57 | 0.70 | 0.37 | 0.26 | 0.57 | 0.87 | 0.97 | 1.17 | 0.65 | 0.53 | 0.56 |
| **14** | 17 | cities | 0.24 | 0.14 | 0.68 | 0.83 | 0.44 | 0.29 | 0.68 | 1.04 | 1.15 | 1.37 | 0.77 | 0.60 | 0.66 |

## STONE WOOL

| Country | Arc | GL | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **14** | 17 | country | 0.21 | 0.13 | 0.61 | 0.74 | 0.39 | 0.28 | 0.60 | 0.92 | 1.03 | 1.24 | 0.68 | 0.56 | 0.59 |
| **14** | 17 | suburbs | 0.22 | 0.14 | 0.64 | 0.78 | 0.41 | 0.28 | 0.64 | 0.97 | 1.08 | 1.29 | 0.72 | 0.57 | 0.62 |
| **14** | 18 | cities | 0.25 | 0.15 | 0.71 | 0.87 | 0.46 | 0.31 | 0.72 | 1.09 | 1.21 | 1.44 | 0.81 | 0.62 | 0.69 |
| **14** | 18 | country | 0.22 | 0.13 | 0.63 | 0.78 | 0.41 | 0.29 | 0.63 | 0.96 | 1.08 | 1.29 | 0.72 | 0.58 | 0.62 |
| **14** | 18 | suburbs | 0.23 | 0.14 | 0.67 | 0.82 | 0.44 | 0.29 | 0.67 | 1.02 | 1.14 | 1.35 | 0.76 | 0.59 | 0.65 |
| **14** | 19 | cities | 0.27 | 0.17 | 0.78 | 0.96 | 0.51 | 0.34 | 0.79 | 1.20 | 1.33 | 1.58 | 0.89 | 0.68 | 0.76 |
| **14** | 19 | country | 0.24 | 0.15 | 0.70 | 0.86 | 0.46 | 0.30 | 0.71 | 1.08 | 1.20 | 1.42 | 0.80 | 0.62 | 0.68 |
| **14** | 19 | suburbs | 0.26 | 0.16 | 0.74 | 0.91 | 0.48 | 0.32 | 0.75 | 1.13 | 1.26 | 1.50 | 0.84 | 0.64 | 0.72 |
| **14** | 20 | cities | 0.21 | 0.13 | 0.59 | 0.73 | 0.39 | 0.26 | 0.60 | 0.91 | 1.01 | 1.20 | 0.67 | 0.52 | 0.58 |
| **14** | 20 | country | 0.20 | 0.12 | 0.56 | 0.69 | 0.37 | 0.24 | 0.57 | 0.86 | 0.96 | 1.14 | 0.64 | 0.49 | 0.55 |
| **14** | 20 | suburbs | 0.20 | 0.12 | 0.58 | 0.71 | 0.38 | 0.25 | 0.58 | 0.88 | 0.98 | 1.17 | 0.65 | 0.50 | 0.56 |
| **15** | 5 | cities | 0.08 | 0.05 | 0.28 | 0.27 | 0.24 | 0.18 | 0.28 | 0.38 | 0.39 | 0.32 | 0.28 | 0.24 | 0.25 |
| **15** | 5 | country | 0.07 | 0.05 | 0.25 | 0.24 | 0.21 | 0.16 | 0.25 | 0.34 | 0.35 | 0.28 | 0.25 | 0.22 | 0.22 |
| **15** | 5 | suburbs | 0.08 | 0.05 | 0.26 | 0.25 | 0.22 | 0.17 | 0.27 | 0.36 | 0.37 | 0.30 | 0.26 | 0.23 | 0.23 |
| **15** | 6 | cities | 0.09 | 0.05 | 0.29 | 0.28 | 0.25 | 0.19 | 0.30 | 0.40 | 0.41 | 0.33 | 0.29 | 0.26 | 0.26 |
| **15** | 6 | country | 0.08 | 0.05 | 0.26 | 0.25 | 0.22 | 0.16 | 0.26 | 0.35 | 0.36 | 0.29 | 0.26 | 0.23 | 0.23 |
| **15** | 6 | suburbs | 0.08 | 0.05 | 0.28 | 0.26 | 0.23 | 0.17 | 0.28 | 0.37 | 0.38 | 0.31 | 0.28 | 0.24 | 0.24 |
| **15** | 7 | cities | 0.10 | 0.06 | 0.33 | 0.32 | 0.28 | 0.21 | 0.34 | 0.45 | 0.46 | 0.37 | 0.33 | 0.29 | 0.29 |
| **15** | 7 | country | 0.09 | 0.05 | 0.29 | 0.28 | 0.24 | 0.18 | 0.30 | 0.40 | 0.41 | 0.33 | 0.29 | 0.25 | 0.26 |
| **15** | 7 | suburbs | 0.09 | 0.06 | 0.31 | 0.30 | 0.26 | 0.20 | 0.31 | 0.42 | 0.43 | 0.35 | 0.31 | 0.27 | 0.27 |
| **15** | 8 | cities | 0.13 | 0.08 | 0.43 | 0.42 | 0.36 | 0.27 | 0.43 | 0.58 | 0.60 | 0.49 | 0.43 | 0.38 | 0.38 |
| **15** | 8 | country | 0.11 | 0.07 | 0.38 | 0.37 | 0.32 | 0.24 | 0.38 | 0.51 | 0.53 | 0.44 | 0.38 | 0.34 | 0.33 |
| **15** | 8 | suburbs | 0.12 | 0.07 | 0.41 | 0.39 | 0.34 | 0.26 | 0.41 | 0.55 | 0.57 | 0.46 | 0.40 | 0.36 | 0.36 |
| **15** | 17 | cities | 0.15 | 0.09 | 0.50 | 0.48 | 0.42 | 0.32 | 0.51 | 0.68 | 0.70 | 0.56 | 0.50 | 0.43 | 0.44 |
| **15** | 17 | country | 0.13 | 0.08 | 0.44 | 0.42 | 0.37 | 0.28 | 0.44 | 0.59 | 0.61 | 0.49 | 0.44 | 0.38 | 0.38 |
| **15** | 17 | suburbs | 0.14 | 0.09 | 0.47 | 0.45 | 0.39 | 0.29 | 0.47 | 0.63 | 0.65 | 0.52 | 0.47 | 0.40 | 0.41 |
| **15** | 18 | cities | 0.16 | 0.10 | 0.53 | 0.51 | 0.44 | 0.33 | 0.53 | 0.72 | 0.74 | 0.59 | 0.53 | 0.46 | 0.47 |

## STONE WOOL

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **15** | 18 | country | 0.14 | 0.09 | 0.46 | 0.44 | 0.39 | 0.29 | 0.47 | 0.62 | 0.64 | 0.52 | 0.46 | 0.40 | 0.41 |
| **15** | 18 | suburbs | 0.14 | 0.09 | 0.49 | 0.47 | 0.41 | 0.31 | 0.50 | 0.66 | 0.68 | 0.55 | 0.49 | 0.42 | 0.43 |
| **15** | 19 | cities | 0.16 | 0.10 | 0.56 | 0.53 | 0.47 | 0.35 | 0.56 | 0.75 | 0.78 | 0.62 | 0.56 | 0.48 | 0.49 |
| **15** | 19 | country | 0.14 | 0.09 | 0.49 | 0.47 | 0.41 | 0.31 | 0.50 | 0.66 | 0.69 | 0.55 | 0.49 | 0.43 | 0.43 |
| **15** | 19 | suburbs | 0.15 | 0.10 | 0.52 | 0.50 | 0.44 | 0.33 | 0.53 | 0.70 | 0.73 | 0.58 | 0.52 | 0.45 | 0.46 |
| **15** | 20 | cities | 0.15 | 0.09 | 0.49 | 0.47 | 0.41 | 0.31 | 0.50 | 0.67 | 0.69 | 0.55 | 0.49 | 0.43 | 0.43 |
| **15** | 20 | country | 0.13 | 0.08 | 0.45 | 0.43 | 0.37 | 0.28 | 0.45 | 0.60 | 0.62 | 0.51 | 0.45 | 0.39 | 0.39 |
| **15** | 20 | suburbs | 0.14 | 0.09 | 0.47 | 0.45 | 0.39 | 0.30 | 0.47 | 0.63 | 0.65 | 0.53 | 0.47 | 0.41 | 0.41 |
| **16** | 5 | cities | 0.12 | 0.13 | 0.33 | 0.32 | 0.39 | 0.49 | 0.40 | 0.46 | 0.55 | 0.38 | 0.35 | 0.19 | 0.42 |
| **16** | 5 | country | 0.10 | 0.11 | 0.28 | 0.27 | 0.32 | 0.41 | 0.34 | 0.39 | 0.46 | 0.32 | 0.30 | 0.16 | 0.35 |
| **16** | 5 | suburbs | 0.11 | 0.12 | 0.30 | 0.29 | 0.35 | 0.45 | 0.37 | 0.42 | 0.50 | 0.34 | 0.32 | 0.17 | 0.38 |
| **16** | 6 | cities | 0.13 | 0.13 | 0.35 | 0.34 | 0.41 | 0.52 | 0.43 | 0.49 | 0.59 | 0.40 | 0.38 | 0.20 | 0.44 |
| **16** | 6 | country | 0.11 | 0.11 | 0.30 | 0.28 | 0.35 | 0.44 | 0.36 | 0.41 | 0.49 | 0.34 | 0.32 | 0.17 | 0.37 |
| **16** | 6 | suburbs | 0.12 | 0.12 | 0.32 | 0.30 | 0.37 | 0.47 | 0.39 | 0.44 | 0.53 | 0.36 | 0.34 | 0.18 | 0.40 |
| **16** | 7 | cities | 0.13 | 0.13 | 0.36 | 0.34 | 0.41 | 0.53 | 0.43 | 0.50 | 0.59 | 0.41 | 0.38 | 0.21 | 0.44 |
| **16** | 7 | country | 0.12 | 0.11 | 0.33 | 0.32 | 0.36 | 0.50 | 0.38 | 0.46 | 0.55 | 0.40 | 0.35 | 0.21 | 0.39 |
| **16** | 7 | suburbs | 0.12 | 0.12 | 0.34 | 0.33 | 0.39 | 0.51 | 0.41 | 0.48 | 0.57 | 0.40 | 0.37 | 0.21 | 0.41 |
| **16** | 8 | cities | 0.19 | 0.19 | 0.58 | 0.56 | 0.61 | 0.87 | 0.65 | 0.81 | 0.95 | 0.71 | 0.61 | 0.37 | 0.65 |
| **16** | 8 | country | 0.15 | 0.15 | 0.44 | 0.42 | 0.48 | 0.66 | 0.51 | 0.61 | 0.73 | 0.52 | 0.47 | 0.27 | 0.52 |
| **16** | 8 | suburbs | 0.17 | 0.17 | 0.50 | 0.48 | 0.54 | 0.75 | 0.57 | 0.70 | 0.83 | 0.60 | 0.53 | 0.31 | 0.58 |
| **16** | 17 | cities | 0.20 | 0.21 | 0.54 | 0.52 | 0.63 | 0.80 | 0.65 | 0.75 | 0.90 | 0.62 | 0.58 | 0.31 | 0.68 |
| **16** | 17 | country | 0.17 | 0.17 | 0.47 | 0.45 | 0.53 | 0.71 | 0.56 | 0.66 | 0.79 | 0.55 | 0.50 | 0.28 | 0.58 |
| **16** | 17 | suburbs | 0.18 | 0.19 | 0.49 | 0.47 | 0.57 | 0.73 | 0.59 | 0.68 | 0.82 | 0.56 | 0.52 | 0.28 | 0.61 |
| **16** | 18 | cities | 0.21 | 0.22 | 0.57 | 0.54 | 0.66 | 0.84 | 0.69 | 0.79 | 0.95 | 0.65 | 0.61 | 0.33 | 0.71 |
| **16** | 18 | country | 0.18 | 0.18 | 0.49 | 0.47 | 0.56 | 0.73 | 0.58 | 0.68 | 0.81 | 0.56 | 0.52 | 0.29 | 0.60 |
| **16** | 18 | suburbs | 0.19 | 0.20 | 0.51 | 0.49 | 0.60 | 0.76 | 0.62 | 0.71 | 0.86 | 0.59 | 0.55 | 0.30 | 0.64 |
| **16** | 19 | cities | 0.23 | 0.23 | 0.62 | 0.59 | 0.72 | 0.93 | 0.75 | 0.87 | 1.04 | 0.72 | 0.67 | 0.36 | 0.77 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **$\mathrm{PBT_{CC}}$** | **$\mathrm{PBT_{OD}}$** | **$\mathrm{PBT_{HT\_CE}}$** | **$\mathrm{PBT_{HT\_nCE}}$** | **$\mathrm{PBT_{PM}}$** | **$\mathrm{PBT_{IR\_hh}}$** | **$\mathrm{PBT_{POF}}$** | **$\mathrm{PBT_{AC}}$** | **$\mathrm{PBT_{ET}}$** | **$\mathrm{PBT_{EuF}}$** | **$\mathrm{PBT_{EuM}}$** | **$\mathrm{PBT_{Ec\_FW}}$** | **$\mathrm{PBT_{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16** | 19 | country | 0.19 | 0.20 | 0.51 | 0.49 | 0.60 | 0.76 | 0.63 | 0.71 | 0.86 | 0.58 | 0.55 | 0.30 | 0.65 |
| **16** | 19 | suburbs | 0.21 | 0.21 | 0.56 | 0.53 | 0.65 | 0.83 | 0.68 | 0.78 | 0.93 | 0.64 | 0.60 | 0.32 | 0.70 |
| **16** | 20 | cities | 0.19 | 0.19 | 0.51 | 0.49 | 0.58 | 0.76 | 0.61 | 0.71 | 0.84 | 0.59 | 0.54 | 0.30 | 0.62 |
| **16** | 20 | country | 0.16 | 0.17 | 0.44 | 0.42 | 0.51 | 0.65 | 0.53 | 0.61 | 0.73 | 0.50 | 0.47 | 0.25 | 0.55 |
| **16** | 20 | suburbs | 0.17 | 0.17 | 0.47 | 0.45 | 0.54 | 0.69 | 0.56 | 0.65 | 0.78 | 0.54 | 0.50 | 0.27 | 0.58 |
| **17** | 5 | cities | 0.19 | 0.19 | 0.43 | 0.43 | 0.36 | 0.36 | 0.54 | 0.51 | 0.71 | 0.36 | 0.45 | 0.38 | 0.75 |
| **17** | 5 | country | 0.17 | 0.18 | 0.39 | 0.39 | 0.33 | 0.33 | 0.49 | 0.47 | 0.65 | 0.33 | 0.41 | 0.35 | 0.69 |
| **17** | 5 | suburbs | 0.18 | 0.19 | 0.41 | 0.41 | 0.35 | 0.34 | 0.51 | 0.49 | 0.68 | 0.35 | 0.43 | 0.36 | 0.72 |
| **17** | 6 | cities | 0.20 | 0.21 | 0.45 | 0.45 | 0.38 | 0.38 | 0.57 | 0.54 | 0.75 | 0.38 | 0.47 | 0.40 | 0.79 |
| **17** | 6 | country | 0.18 | 0.19 | 0.41 | 0.41 | 0.35 | 0.35 | 0.52 | 0.50 | 0.68 | 0.35 | 0.43 | 0.37 | 0.73 |
| **17** | 6 | suburbs | 0.19 | 0.20 | 0.43 | 0.43 | 0.37 | 0.36 | 0.54 | 0.52 | 0.71 | 0.37 | 0.45 | 0.38 | 0.76 |
| **17** | 7 | cities | 0.20 | 0.21 | 0.46 | 0.46 | 0.39 | 0.39 | 0.58 | 0.55 | 0.76 | 0.39 | 0.48 | 0.41 | 0.81 |
| **17** | 7 | country | 0.19 | 0.19 | 0.42 | 0.42 | 0.36 | 0.35 | 0.53 | 0.51 | 0.70 | 0.36 | 0.44 | 0.38 | 0.74 |
| **17** | 7 | suburbs | 0.20 | 0.20 | 0.44 | 0.44 | 0.37 | 0.37 | 0.55 | 0.53 | 0.73 | 0.37 | 0.46 | 0.39 | 0.78 |
| **17** | 8 | cities | 0.25 | 0.26 | 0.58 | 0.59 | 0.48 | 0.52 | 0.72 | 0.69 | 0.95 | 0.51 | 0.60 | 0.54 | 1.02 |
| **17** | 8 | country | 0.23 | 0.24 | 0.53 | 0.54 | 0.44 | 0.47 | 0.66 | 0.63 | 0.86 | 0.46 | 0.55 | 0.49 | 0.93 |
| **17** | 8 | suburbs | 0.24 | 0.25 | 0.56 | 0.56 | 0.46 | 0.50 | 0.69 | 0.66 | 0.91 | 0.48 | 0.57 | 0.51 | 0.97 |
| **17** | 17 | cities | 0.31 | 0.31 | 0.69 | 0.69 | 0.58 | 0.57 | 0.87 | 0.83 | 1.14 | 0.58 | 0.72 | 0.61 | 1.21 |
| **17** | 17 | country | 0.28 | 0.28 | 0.63 | 0.63 | 0.53 | 0.52 | 0.79 | 0.75 | 1.03 | 0.53 | 0.65 | 0.55 | 1.10 |
| **17** | 17 | suburbs | 0.29 | 0.30 | 0.66 | 0.66 | 0.56 | 0.55 | 0.83 | 0.79 | 1.08 | 0.55 | 0.68 | 0.58 | 1.15 |
| **17** | 18 | cities | 0.32 | 0.33 | 0.73 | 0.73 | 0.62 | 0.61 | 0.92 | 0.88 | 1.20 | 0.61 | 0.76 | 0.65 | 1.28 |
| **17** | 18 | country | 0.29 | 0.30 | 0.66 | 0.66 | 0.56 | 0.55 | 0.83 | 0.79 | 1.09 | 0.56 | 0.69 | 0.58 | 1.16 |
| **17** | 18 | suburbs | 0.31 | 0.31 | 0.69 | 0.69 | 0.59 | 0.58 | 0.87 | 0.83 | 1.14 | 0.58 | 0.72 | 0.61 | 1.22 |
| **17** | 19 | cities | 0.35 | 0.35 | 0.78 | 0.78 | 0.66 | 0.65 | 0.98 | 0.94 | 1.29 | 0.66 | 0.81 | 0.69 | 1.37 |
| **17** | 19 | country | 0.32 | 0.32 | 0.71 | 0.71 | 0.60 | 0.60 | 0.90 | 0.86 | 1.18 | 0.60 | 0.74 | 0.63 | 1.25 |
| **17** | 19 | suburbs | 0.33 | 0.34 | 0.75 | 0.75 | 0.63 | 0.62 | 0.93 | 0.89 | 1.23 | 0.63 | 0.78 | 0.66 | 1.31 |
| **17** | 20 | cities | 0.28 | 0.29 | 0.65 | 0.65 | 0.54 | 0.55 | 0.80 | 0.77 | 1.06 | 0.55 | 0.67 | 0.58 | 1.13 |

## STONE WOOL

| **Country** | **Arc** | **GL** | $\mathrm{PBT}_{\mathrm{CC}}$ | $\mathrm{PBT}_{\mathrm{OD}}$ | $\mathrm{PBT}_{\mathrm{HT\_CE}}$ | $\mathrm{PBT}_{\mathrm{HT\_nCE}}$ | $\mathrm{PBT}_{\mathrm{PM}}$ | $\mathrm{PBT}_{\mathrm{IR\_hh}}$ | $\mathrm{PBT}_{\mathrm{POF}}$ | $\mathrm{PBT}_{\mathrm{AC}}$ | $\mathrm{PBT}_{\mathrm{ET}}$ | $\mathrm{PBT}_{\mathrm{EuF}}$ | $\mathrm{PBT}_{\mathrm{EuM}}$ | $\mathrm{PBT}_{\mathrm{Ec\_FW}}$ | $\mathrm{PBT}_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17** | 20 | country | 0.26 | 0.27 | 0.60 | 0.60 | 0.50 | 0.51 | 0.75 | 0.72 | 0.98 | 0.51 | 0.62 | 0.54 | 1.05 |
| **17** | 20 | suburbs | 0.27 | 0.28 | 0.62 | 0.62 | 0.52 | 0.53 | 0.77 | 0.74 | 1.02 | 0.53 | 0.64 | 0.56 | 1.09 |
| **18** | 5 | cities | 0.13 | 0.10 | 0.23 | 0.27 | 0.14 | 0.29 | 0.28 | 0.41 | 0.40 | 0.22 | 0.31 | 0.23 | 0.39 |
| **18** | 5 | country | 0.11 | 0.08 | 0.20 | 0.24 | 0.12 | 0.26 | 0.24 | 0.36 | 0.35 | 0.19 | 0.27 | 0.20 | 0.34 |
| **18** | 5 | suburbs | 0.12 | 0.09 | 0.21 | 0.26 | 0.13 | 0.27 | 0.26 | 0.39 | 0.37 | 0.20 | 0.29 | 0.21 | 0.36 |
| **18** | 6 | cities | 0.13 | 0.10 | 0.24 | 0.29 | 0.15 | 0.31 | 0.29 | 0.43 | 0.42 | 0.23 | 0.33 | 0.24 | 0.41 |
| **18** | 6 | country | 0.12 | 0.09 | 0.21 | 0.25 | 0.13 | 0.27 | 0.26 | 0.38 | 0.37 | 0.20 | 0.29 | 0.21 | 0.36 |
| **18** | 6 | suburbs | 0.12 | 0.09 | 0.22 | 0.27 | 0.14 | 0.29 | 0.27 | 0.41 | 0.39 | 0.22 | 0.31 | 0.22 | 0.38 |
| **18** | 7 | cities | 0.14 | 0.11 | 0.25 | 0.31 | 0.16 | 0.33 | 0.31 | 0.46 | 0.45 | 0.25 | 0.35 | 0.26 | 0.43 |
| **18** | 7 | country | 0.12 | 0.09 | 0.22 | 0.28 | 0.14 | 0.29 | 0.27 | 0.41 | 0.40 | 0.23 | 0.31 | 0.23 | 0.38 |
| **18** | 7 | suburbs | 0.13 | 0.10 | 0.24 | 0.29 | 0.15 | 0.31 | 0.29 | 0.43 | 0.42 | 0.24 | 0.32 | 0.24 | 0.40 |
| **18** | 8 | cities | 0.17 | 0.13 | 0.32 | 0.40 | 0.19 | 0.42 | 0.37 | 0.57 | 0.57 | 0.34 | 0.43 | 0.35 | 0.54 |
| **18** | 8 | country | 0.15 | 0.11 | 0.29 | 0.37 | 0.16 | 0.39 | 0.33 | 0.51 | 0.52 | 0.33 | 0.38 | 0.34 | 0.48 |
| **18** | 8 | suburbs | 0.16 | 0.12 | 0.30 | 0.39 | 0.18 | 0.41 | 0.35 | 0.54 | 0.54 | 0.34 | 0.40 | 0.34 | 0.51 |
| **18** | 17 | cities | 0.21 | 0.16 | 0.38 | 0.45 | 0.24 | 0.48 | 0.47 | 0.69 | 0.66 | 0.36 | 0.52 | 0.37 | 0.64 |
| **18** | 17 | country | 0.18 | 0.14 | 0.33 | 0.40 | 0.21 | 0.42 | 0.40 | 0.60 | 0.58 | 0.32 | 0.45 | 0.33 | 0.56 |
| **18** | 17 | suburbs | 0.19 | 0.15 | 0.35 | 0.42 | 0.22 | 0.45 | 0.43 | 0.64 | 0.62 | 0.34 | 0.48 | 0.35 | 0.60 |
| **18** | 18 | cities | 0.22 | 0.17 | 0.39 | 0.47 | 0.25 | 0.51 | 0.49 | 0.73 | 0.70 | 0.37 | 0.54 | 0.39 | 0.67 |
| **18** | 18 | country | 0.19 | 0.15 | 0.35 | 0.42 | 0.22 | 0.45 | 0.43 | 0.64 | 0.62 | 0.34 | 0.48 | 0.35 | 0.59 |
| **18** | 18 | suburbs | 0.21 | 0.16 | 0.37 | 0.45 | 0.23 | 0.48 | 0.45 | 0.68 | 0.65 | 0.35 | 0.51 | 0.37 | 0.63 |
| **18** | 19 | cities | 0.23 | 0.18 | 0.41 | 0.49 | 0.26 | 0.53 | 0.51 | 0.76 | 0.73 | 0.39 | 0.57 | 0.40 | 0.71 |
| **18** | 19 | country | 0.21 | 0.16 | 0.37 | 0.45 | 0.23 | 0.48 | 0.45 | 0.68 | 0.66 | 0.36 | 0.51 | 0.37 | 0.63 |
| **18** | 19 | suburbs | 0.22 | 0.17 | 0.39 | 0.47 | 0.24 | 0.50 | 0.48 | 0.72 | 0.69 | 0.37 | 0.54 | 0.39 | 0.67 |
| **18** | 20 | cities | 0.19 | 0.15 | 0.34 | 0.42 | 0.21 | 0.44 | 0.42 | 0.63 | 0.61 | 0.33 | 0.47 | 0.34 | 0.59 |
| **18** | 20 | country | 0.18 | 0.14 | 0.33 | 0.40 | 0.20 | 0.43 | 0.39 | 0.59 | 0.58 | 0.33 | 0.45 | 0.34 | 0.56 |
| **18** | 20 | suburbs | 0.18 | 0.14 | 0.33 | 0.41 | 0.21 | 0.43 | 0.41 | 0.61 | 0.59 | 0.33 | 0.46 | 0.34 | 0.57 |
| **19** | 5 | cities | 0.11 | 0.08 | 0.10 | 0.19 | 0.05 | 0.20 | 0.12 | 0.28 | 0.25 | 0.15 | 0.18 | 0.12 | 0.31 |

## STONE WOOL

| Country | Arc | GL | $\text{PBT}_{\text{CC}}$ | $\text{PBT}_{\text{OD}}$ | $\text{PBT}_{\text{HT\_CE}}$ | $\text{PBT}_{\text{HT\_nCE}}$ | $\text{PBT}_{\text{PM}}$ | $\text{PBT}_{\text{IR\_hh}}$ | $\text{PBT}_{\text{POF}}$ | $\text{PBT}_{\text{AC}}$ | $\text{PBT}_{\text{ET}}$ | $\text{PBT}_{\text{EuF}}$ | $\text{PBT}_{\text{EuM}}$ | $\text{PBT}_{\text{Ec\_FW}}$ | $\text{PBT}_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **19** | 5 | country | 0.10 | 0.08 | 0.10 | 0.18 | 0.04 | 0.18 | 0.11 | 0.26 | 0.23 | 0.14 | 0.17 | 0.11 | 0.29 |
| **19** | 5 | suburbs | 0.11 | 0.08 | 0.10 | 0.19 | 0.04 | 0.19 | 0.11 | 0.27 | 0.24 | 0.15 | 0.17 | 0.12 | 0.30 |
| **19** | 6 | cities | 0.12 | 0.09 | 0.11 | 0.20 | 0.05 | 0.21 | 0.13 | 0.29 | 0.26 | 0.16 | 0.19 | 0.13 | 0.33 |
| **19** | 6 | country | 0.11 | 0.08 | 0.10 | 0.19 | 0.05 | 0.19 | 0.12 | 0.27 | 0.25 | 0.15 | 0.18 | 0.12 | 0.30 |
| **19** | 6 | suburbs | 0.11 | 0.08 | 0.11 | 0.20 | 0.05 | 0.20 | 0.12 | 0.28 | 0.25 | 0.16 | 0.18 | 0.12 | 0.32 |
| **19** | 7 | cities | 0.12 | 0.09 | 0.11 | 0.20 | 0.05 | 0.21 | 0.13 | 0.29 | 0.26 | 0.16 | 0.19 | 0.13 | 0.32 |
| **19** | 7 | country | 0.11 | 0.08 | 0.10 | 0.19 | 0.05 | 0.19 | 0.12 | 0.27 | 0.24 | 0.15 | 0.18 | 0.12 | 0.30 |
| **19** | 7 | suburbs | 0.11 | 0.08 | 0.11 | 0.20 | 0.05 | 0.20 | 0.12 | 0.28 | 0.25 | 0.16 | 0.18 | 0.12 | 0.31 |
| **19** | 8 | cities | 0.12 | 0.09 | 0.11 | 0.21 | 0.05 | 0.21 | 0.13 | 0.29 | 0.27 | 0.17 | 0.19 | 0.13 | 0.33 |
| **19** | 8 | country | 0.11 | 0.08 | 0.10 | 0.19 | 0.05 | 0.20 | 0.12 | 0.28 | 0.25 | 0.16 | 0.18 | 0.12 | 0.31 |
| **19** | 8 | suburbs | 0.11 | 0.09 | 0.11 | 0.20 | 0.05 | 0.21 | 0.12 | 0.29 | 0.26 | 0.16 | 0.19 | 0.13 | 0.32 |
| **19** | 17 | cities | 0.19 | 0.14 | 0.17 | 0.33 | 0.08 | 0.33 | 0.20 | 0.47 | 0.42 | 0.26 | 0.30 | 0.20 | 0.52 |
| **19** | 17 | country | 0.17 | 0.13 | 0.16 | 0.30 | 0.07 | 0.31 | 0.19 | 0.43 | 0.39 | 0.24 | 0.28 | 0.19 | 0.48 |
| **19** | 17 | suburbs | 0.18 | 0.13 | 0.17 | 0.31 | 0.08 | 0.32 | 0.19 | 0.45 | 0.40 | 0.25 | 0.29 | 0.19 | 0.50 |
| **19** | 18 | cities | 0.20 | 0.15 | 0.18 | 0.34 | 0.08 | 0.35 | 0.21 | 0.49 | 0.44 | 0.27 | 0.32 | 0.21 | 0.55 |
| **19** | 18 | country | 0.18 | 0.14 | 0.17 | 0.32 | 0.08 | 0.32 | 0.19 | 0.45 | 0.41 | 0.25 | 0.29 | 0.20 | 0.50 |
| **19** | 18 | suburbs | 0.19 | 0.14 | 0.18 | 0.33 | 0.08 | 0.34 | 0.20 | 0.47 | 0.42 | 0.26 | 0.31 | 0.21 | 0.52 |
| **19** | 19 | cities | 0.20 | 0.15 | 0.19 | 0.36 | 0.09 | 0.37 | 0.22 | 0.51 | 0.46 | 0.29 | 0.33 | 0.22 | 0.57 |
| **19** | 19 | country | 0.19 | 0.14 | 0.18 | 0.33 | 0.08 | 0.34 | 0.20 | 0.47 | 0.43 | 0.26 | 0.31 | 0.21 | 0.53 |
| **19** | 19 | suburbs | 0.20 | 0.15 | 0.18 | 0.34 | 0.08 | 0.35 | 0.21 | 0.49 | 0.44 | 0.27 | 0.32 | 0.22 | 0.55 |
| **19** | 20 | cities | 0.16 | 0.12 | 0.15 | 0.29 | 0.07 | 0.29 | 0.18 | 0.41 | 0.37 | 0.23 | 0.27 | 0.18 | 0.46 |
| **19** | 20 | country | 0.15 | 0.11 | 0.14 | 0.27 | 0.06 | 0.27 | 0.16 | 0.38 | 0.34 | 0.21 | 0.25 | 0.17 | 0.42 |
| **19** | 20 | suburbs | 0.16 | 0.12 | 0.15 | 0.28 | 0.07 | 0.28 | 0.17 | 0.39 | 0.35 | 0.22 | 0.26 | 0.17 | 0.44 |
| **20** | 5 | cities | 0.09 | 0.12 | 0.08 | 0.11 | 0.04 | 0.16 | 0.11 | 0.17 | 0.23 | 0.08 | 0.14 | 0.11 | 0.39 |
| **20** | 5 | country | 0.08 | 0.11 | 0.07 | 0.10 | 0.04 | 0.14 | 0.10 | 0.15 | 0.21 | 0.07 | 0.13 | 0.10 | 0.35 |
| **20** | 5 | suburbs | 0.08 | 0.12 | 0.07 | 0.11 | 0.04 | 0.15 | 0.11 | 0.16 | 0.22 | 0.07 | 0.13 | 0.10 | 0.37 |
| **20** | 6 | cities | 0.09 | 0.13 | 0.08 | 0.12 | 0.05 | 0.16 | 0.12 | 0.18 | 0.24 | 0.08 | 0.15 | 0.11 | 0.41 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{\text{CC}}$** | **PBT$_{\text{OD}}$** | **PBT$_{\text{HT\_CE}}$** | **PBT$_{\text{HT\_nCE}}$** | **PBT$_{\text{PM}}$** | **PBT$_{\text{IR\_hh}}$** | **PBT$_{\text{POF}}$** | **PBT$_{\text{AC}}$** | **PBT$_{\text{ET}}$** | **PBT$_{\text{EuF}}$** | **PBT$_{\text{EuM}}$** | **PBT$_{\text{Ec\_FW}}$** | **PBT$_{\text{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **20** | 6 | country | 0.08 | 0.12 | 0.07 | 0.11 | 0.04 | 0.15 | 0.11 | 0.16 | 0.22 | 0.07 | 0.13 | 0.10 | 0.37 |
| **20** | 6 | suburbs | 0.09 | 0.12 | 0.08 | 0.11 | 0.04 | 0.15 | 0.11 | 0.17 | 0.23 | 0.08 | 0.14 | 0.11 | 0.39 |
| **20** | 7 | cities | 0.09 | 0.13 | 0.08 | 0.12 | 0.05 | 0.17 | 0.12 | 0.18 | 0.25 | 0.08 | 0.15 | 0.12 | 0.43 |
| **20** | 7 | country | 0.08 | 0.12 | 0.08 | 0.11 | 0.04 | 0.15 | 0.11 | 0.17 | 0.23 | 0.07 | 0.14 | 0.11 | 0.39 |
| **20** | 7 | suburbs | 0.09 | 0.13 | 0.08 | 0.11 | 0.04 | 0.16 | 0.11 | 0.17 | 0.24 | 0.08 | 0.15 | 0.11 | 0.41 |
| **20** | 8 | cities | 0.12 | 0.17 | 0.11 | 0.16 | 0.06 | 0.23 | 0.16 | 0.24 | 0.33 | 0.11 | 0.20 | 0.16 | 0.56 |
| **20** | 8 | country | 0.11 | 0.15 | 0.10 | 0.14 | 0.05 | 0.20 | 0.14 | 0.21 | 0.29 | 0.10 | 0.18 | 0.14 | 0.50 |
| **20** | 8 | suburbs | 0.11 | 0.16 | 0.10 | 0.15 | 0.06 | 0.21 | 0.15 | 0.23 | 0.31 | 0.10 | 0.19 | 0.15 | 0.53 |
| **20** | 17 | cities | 0.14 | 0.19 | 0.12 | 0.18 | 0.07 | 0.24 | 0.18 | 0.27 | 0.37 | 0.12 | 0.22 | 0.17 | 0.62 |
| **20** | 17 | country | 0.12 | 0.17 | 0.11 | 0.16 | 0.06 | 0.22 | 0.16 | 0.24 | 0.33 | 0.11 | 0.20 | 0.15 | 0.56 |
| **20** | 17 | suburbs | 0.13 | 0.18 | 0.12 | 0.17 | 0.06 | 0.23 | 0.17 | 0.25 | 0.35 | 0.11 | 0.21 | 0.16 | 0.59 |
| **20** | 18 | cities | 0.14 | 0.20 | 0.13 | 0.18 | 0.07 | 0.26 | 0.18 | 0.28 | 0.39 | 0.12 | 0.23 | 0.18 | 0.65 |
| **20** | 18 | country | 0.13 | 0.18 | 0.12 | 0.17 | 0.06 | 0.23 | 0.17 | 0.25 | 0.35 | 0.11 | 0.21 | 0.16 | 0.59 |
| **20** | 18 | suburbs | 0.13 | 0.19 | 0.12 | 0.17 | 0.07 | 0.24 | 0.17 | 0.27 | 0.37 | 0.12 | 0.22 | 0.17 | 0.62 |
| **20** | 19 | cities | 0.16 | 0.22 | 0.14 | 0.20 | 0.08 | 0.28 | 0.20 | 0.31 | 0.42 | 0.14 | 0.26 | 0.20 | 0.71 |
| **20** | 19 | country | 0.14 | 0.20 | 0.13 | 0.18 | 0.07 | 0.26 | 0.18 | 0.28 | 0.38 | 0.12 | 0.23 | 0.18 | 0.65 |
| **20** | 19 | suburbs | 0.15 | 0.21 | 0.13 | 0.19 | 0.07 | 0.27 | 0.19 | 0.29 | 0.40 | 0.13 | 0.24 | 0.19 | 0.68 |
| **20** | 20 | cities | 0.13 | 0.18 | 0.12 | 0.17 | 0.06 | 0.23 | 0.17 | 0.25 | 0.35 | 0.11 | 0.21 | 0.16 | 0.59 |
| **20** | 20 | country | 0.12 | 0.17 | 0.11 | 0.16 | 0.06 | 0.22 | 0.15 | 0.24 | 0.32 | 0.11 | 0.20 | 0.15 | 0.55 |
| **20** | 20 | suburbs | 0.12 | 0.17 | 0.11 | 0.16 | 0.06 | 0.22 | 0.16 | 0.24 | 0.34 | 0.11 | 0.20 | 0.16 | 0.57 |
| **21** | 5 | cities | 0.09 | 0.20 | 0.09 | 0.14 | 0.05 | 0.82 | 0.15 | 0.14 | 0.29 | 0.13 | 0.18 | 0.21 | 0.98 |
| **21** | 5 | country | 0.08 | 0.18 | 0.08 | 0.13 | 0.05 | 0.72 | 0.13 | 0.12 | 0.26 | 0.12 | 0.16 | 0.19 | 0.86 |
| **21** | 5 | suburbs | 0.09 | 0.19 | 0.09 | 0.13 | 0.05 | 0.77 | 0.14 | 0.13 | 0.27 | 0.13 | 0.17 | 0.20 | 0.92 |
| **21** | 6 | cities | 0.10 | 0.21 | 0.10 | 0.15 | 0.05 | 0.86 | 0.15 | 0.15 | 0.31 | 0.14 | 0.19 | 0.22 | 1.03 |
| **21** | 6 | country | 0.09 | 0.19 | 0.09 | 0.13 | 0.05 | 0.76 | 0.14 | 0.13 | 0.27 | 0.12 | 0.17 | 0.20 | 0.91 |
| **21** | 6 | suburbs | 0.09 | 0.20 | 0.09 | 0.14 | 0.05 | 0.81 | 0.14 | 0.14 | 0.29 | 0.13 | 0.18 | 0.21 | 0.97 |
| **21** | 7 | cities | 0.10 | 0.22 | 0.10 | 0.16 | 0.06 | 0.91 | 0.16 | 0.15 | 0.32 | 0.15 | 0.20 | 0.24 | 1.09 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **21** | 7 | country | 0.09 | 0.20 | 0.09 | 0.14 | 0.05 | 0.80 | 0.14 | 0.14 | 0.28 | 0.13 | 0.18 | 0.21 | 0.96 |
| **21** | 7 | suburbs | 0.10 | 0.21 | 0.10 | 0.15 | 0.05 | 0.85 | 0.15 | 0.14 | 0.30 | 0.14 | 0.19 | 0.22 | 1.02 |
| **21** | 8 | cities | 0.13 | 0.27 | 0.13 | 0.20 | 0.07 | 1.11 | 0.20 | 0.19 | 0.39 | 0.19 | 0.25 | 0.30 | 1.34 |
| **21** | 8 | country | 0.11 | 0.24 | 0.11 | 0.17 | 0.06 | 0.98 | 0.17 | 0.16 | 0.35 | 0.16 | 0.22 | 0.26 | 1.17 |
| **21** | 8 | suburbs | 0.12 | 0.25 | 0.12 | 0.18 | 0.07 | 1.04 | 0.18 | 0.18 | 0.37 | 0.17 | 0.23 | 0.28 | 1.25 |
| **21** | 17 | cities | 0.16 | 0.34 | 0.15 | 0.24 | 0.09 | 1.37 | 0.25 | 0.23 | 0.49 | 0.22 | 0.31 | 0.35 | 1.64 |
| **21** | 17 | country | 0.14 | 0.29 | 0.13 | 0.21 | 0.08 | 1.20 | 0.21 | 0.20 | 0.42 | 0.20 | 0.27 | 0.31 | 1.43 |
| **21** | 17 | suburbs | 0.14 | 0.31 | 0.14 | 0.22 | 0.08 | 1.28 | 0.23 | 0.22 | 0.45 | 0.21 | 0.28 | 0.33 | 1.52 |
| **21** | 18 | cities | 0.16 | 0.35 | 0.16 | 0.25 | 0.09 | 1.45 | 0.26 | 0.25 | 0.51 | 0.24 | 0.32 | 0.37 | 1.73 |
| **21** | 18 | country | 0.14 | 0.31 | 0.14 | 0.22 | 0.08 | 1.26 | 0.23 | 0.21 | 0.45 | 0.21 | 0.28 | 0.33 | 1.51 |
| **21** | 18 | suburbs | 0.15 | 0.33 | 0.15 | 0.24 | 0.08 | 1.35 | 0.24 | 0.23 | 0.48 | 0.22 | 0.30 | 0.35 | 1.61 |
| **21** | 19 | cities | 0.17 | 0.37 | 0.17 | 0.27 | 0.10 | 1.52 | 0.27 | 0.26 | 0.54 | 0.25 | 0.34 | 0.39 | 1.82 |
| **21** | 19 | country | 0.15 | 0.33 | 0.15 | 0.24 | 0.08 | 1.35 | 0.24 | 0.23 | 0.48 | 0.22 | 0.30 | 0.35 | 1.61 |
| **21** | 19 | suburbs | 0.16 | 0.35 | 0.16 | 0.25 | 0.09 | 1.43 | 0.25 | 0.24 | 0.51 | 0.23 | 0.32 | 0.37 | 1.70 |
| **21** | 20 | cities | 0.14 | 0.31 | 0.14 | 0.22 | 0.08 | 1.27 | 0.23 | 0.22 | 0.45 | 0.21 | 0.28 | 0.33 | 1.52 |
| **21** | 20 | country | 0.13 | 0.28 | 0.13 | 0.20 | 0.07 | 1.16 | 0.21 | 0.20 | 0.41 | 0.19 | 0.26 | 0.30 | 1.39 |
| **21** | 20 | suburbs | 0.14 | 0.29 | 0.14 | 0.21 | 0.08 | 1.21 | 0.22 | 0.20 | 0.43 | 0.20 | 0.27 | 0.31 | 1.44 |
| **22** | 5 | cities | 0.19 | 0.19 | 0.21 | 0.43 | 0.08 | 0.80 | 0.21 | 0.32 | 0.39 | 0.43 | 0.25 | 0.73 | 1.18 |
| **22** | 5 | country | 0.15 | 0.16 | 0.17 | 0.33 | 0.07 | 0.55 | 0.17 | 0.26 | 0.31 | 0.31 | 0.21 | 0.36 | 0.82 |
| **22** | 5 | suburbs | 0.17 | 0.17 | 0.18 | 0.36 | 0.08 | 0.62 | 0.19 | 0.28 | 0.34 | 0.35 | 0.23 | 0.44 | 0.93 |
| **22** | 6 | cities | 0.20 | 0.20 | 0.22 | 0.47 | 0.09 | 0.87 | 0.22 | 0.34 | 0.41 | 0.46 | 0.27 | 0.83 | 1.28 |
| **22** | 6 | country | 0.16 | 0.16 | 0.18 | 0.35 | 0.08 | 0.59 | 0.19 | 0.27 | 0.33 | 0.33 | 0.22 | 0.40 | 0.88 |
| **22** | 6 | suburbs | 0.18 | 0.18 | 0.20 | 0.39 | 0.08 | 0.67 | 0.20 | 0.30 | 0.36 | 0.38 | 0.24 | 0.49 | 1.00 |
| **22** | 7 | cities | 0.20 | 0.19 | 0.22 | 0.46 | 0.09 | 0.86 | 0.22 | 0.33 | 0.41 | 0.46 | 0.27 | 0.85 | 1.27 |
| **22** | 7 | country | 0.16 | 0.16 | 0.18 | 0.34 | 0.07 | 0.57 | 0.18 | 0.27 | 0.32 | 0.32 | 0.22 | 0.38 | 0.86 |
| **22** | 7 | suburbs | 0.17 | 0.18 | 0.19 | 0.38 | 0.08 | 0.65 | 0.20 | 0.29 | 0.36 | 0.37 | 0.24 | 0.46 | 0.98 |
| **22** | 8 | cities | 0.27 | 0.27 | 0.30 | 0.62 | 0.12 | 1.14 | 0.30 | 0.45 | 0.55 | 0.61 | 0.36 | 1.03 | 1.68 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **22** | 8 | country | 0.22 | 0.22 | 0.25 | 0.50 | 0.10 | 0.88 | 0.25 | 0.37 | 0.46 | 0.48 | 0.30 | 0.69 | 1.31 |
| **22** | 8 | suburbs | 0.24 | 0.24 | 0.27 | 0.55 | 0.11 | 0.99 | 0.27 | 0.41 | 0.50 | 0.54 | 0.33 | 0.83 | 1.47 |
| **22** | 17 | cities | 0.27 | 0.27 | 0.30 | 0.59 | 0.12 | 1.02 | 0.31 | 0.46 | 0.55 | 0.57 | 0.37 | 0.74 | 1.52 |
| **22** | 17 | country | 0.22 | 0.23 | 0.25 | 0.48 | 0.10 | 0.79 | 0.26 | 0.38 | 0.45 | 0.45 | 0.30 | 0.52 | 1.19 |
| **22** | 17 | suburbs | 0.24 | 0.25 | 0.27 | 0.52 | 0.11 | 0.88 | 0.28 | 0.41 | 0.49 | 0.50 | 0.33 | 0.59 | 1.31 |
| **22** | 18 | cities | 0.28 | 0.29 | 0.31 | 0.63 | 0.13 | 1.08 | 0.32 | 0.48 | 0.58 | 0.60 | 0.39 | 0.78 | 1.61 |
| **22** | 18 | country | 0.24 | 0.24 | 0.26 | 0.51 | 0.11 | 0.84 | 0.27 | 0.40 | 0.48 | 0.48 | 0.32 | 0.55 | 1.26 |
| **22** | 18 | suburbs | 0.26 | 0.26 | 0.28 | 0.55 | 0.12 | 0.93 | 0.29 | 0.44 | 0.52 | 0.53 | 0.35 | 0.63 | 1.40 |
| **22** | 19 | cities | 0.30 | 0.30 | 0.33 | 0.65 | 0.14 | 1.10 | 0.34 | 0.51 | 0.61 | 0.62 | 0.41 | 0.75 | 1.64 |
| **22** | 19 | country | 0.26 | 0.27 | 0.29 | 0.56 | 0.12 | 0.93 | 0.30 | 0.44 | 0.53 | 0.53 | 0.36 | 0.62 | 1.40 |
| **22** | 19 | suburbs | 0.28 | 0.28 | 0.31 | 0.60 | 0.13 | 1.00 | 0.32 | 0.47 | 0.57 | 0.57 | 0.38 | 0.67 | 1.50 |
| **22** | 20 | cities | 0.24 | 0.25 | 0.27 | 0.52 | 0.11 | 0.88 | 0.28 | 0.41 | 0.49 | 0.50 | 0.33 | 0.59 | 1.32 |
| **22** | 20 | country | 0.22 | 0.23 | 0.25 | 0.48 | 0.11 | 0.80 | 0.26 | 0.38 | 0.46 | 0.46 | 0.31 | 0.53 | 1.20 |
| **22** | 20 | suburbs | 0.23 | 0.24 | 0.26 | 0.50 | 0.11 | 0.83 | 0.27 | 0.39 | 0.47 | 0.47 | 0.32 | 0.55 | 1.25 |
| **23** | 9 | cities | 0.29 | 0.43 | 0.18 | 0.51 | 0.07 | 1.58 | 0.19 | 0.40 | 0.46 | 0.46 | 0.31 | 0.67 | 2.30 |
| **23** | 9 | country | 0.26 | 0.39 | 0.17 | 0.46 | 0.06 | 1.43 | 0.17 | 0.37 | 0.42 | 0.42 | 0.28 | 0.61 | 2.09 |
| **23** | 9 | suburbs | 0.27 | 0.41 | 0.17 | 0.49 | 0.06 | 1.50 | 0.18 | 0.38 | 0.44 | 0.44 | 0.29 | 0.64 | 2.19 |
| **23** | 10 | cities | 0.31 | 0.46 | 0.19 | 0.54 | 0.07 | 1.69 | 0.20 | 0.43 | 0.49 | 0.50 | 0.33 | 0.72 | 2.46 |
| **23** | 10 | country | 0.28 | 0.42 | 0.18 | 0.50 | 0.07 | 1.53 | 0.19 | 0.39 | 0.45 | 0.45 | 0.30 | 0.65 | 2.24 |
| **23** | 10 | suburbs | 0.29 | 0.44 | 0.19 | 0.52 | 0.07 | 1.61 | 0.20 | 0.41 | 0.47 | 0.47 | 0.31 | 0.69 | 2.34 |
| **23** | 11 | cities | 0.39 | 0.58 | 0.24 | 0.68 | 0.09 | 2.12 | 0.26 | 0.54 | 0.62 | 0.62 | 0.41 | 0.90 | 3.08 |
| **23** | 11 | country | 0.36 | 0.54 | 0.23 | 0.64 | 0.08 | 1.97 | 0.24 | 0.50 | 0.58 | 0.58 | 0.38 | 0.84 | 2.87 |
| **23** | 11 | suburbs | 0.37 | 0.56 | 0.24 | 0.66 | 0.09 | 2.04 | 0.25 | 0.52 | 0.60 | 0.60 | 0.40 | 0.87 | 2.98 |
| **23** | 12 | cities | 0.61 | 0.92 | 0.39 | 1.08 | 0.14 | 3.38 | 0.41 | 0.85 | 0.98 | 0.99 | 0.65 | 1.44 | 4.90 |
| **23** | 12 | country | 0.57 | 0.85 | 0.36 | 1.01 | 0.13 | 3.13 | 0.38 | 0.79 | 0.91 | 0.92 | 0.60 | 1.33 | 4.55 |
| **23** | 12 | suburbs | 0.59 | 0.88 | 0.37 | 1.04 | 0.14 | 3.25 | 0.39 | 0.82 | 0.94 | 0.95 | 0.63 | 1.38 | 4.72 |
| **23** | 21 | cities | 0.61 | 0.92 | 0.39 | 1.09 | 0.14 | 3.40 | 0.41 | 0.86 | 0.98 | 0.99 | 0.65 | 1.45 | 4.93 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT**$_{\mathrm{CC}}$ | **PBT**$_{\mathrm{OD}}$ | **PBT**$_{\mathrm{HT\_CE}}$ | **PBT**$_{\mathrm{HT\_nCE}}$ | **PBT**$_{\mathrm{PM}}$ | **PBT**$_{\mathrm{IR\_hh}}$ | **PBT**$_{\mathrm{POF}}$ | **PBT**$_{\mathrm{AC}}$ | **PBT**$_{\mathrm{ET}}$ | **PBT**$_{\mathrm{EuF}}$ | **PBT**$_{\mathrm{EuM}}$ | **PBT**$_{\mathrm{Ec\_FW}}$ | **PBT**$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23** | 21 | country | 0.55 | 0.83 | 0.35 | 0.98 | 0.13 | 3.05 | 0.37 | 0.77 | 0.89 | 0.90 | 0.59 | 1.30 | 4.44 |
| **23** | 21 | suburbs | 0.58 | 0.87 | 0.37 | 1.03 | 0.14 | 3.21 | 0.39 | 0.82 | 0.94 | 0.94 | 0.62 | 1.37 | 4.67 |
| **23** | 22 | cities | 0.65 | 0.98 | 0.41 | 1.16 | 0.15 | 3.59 | 0.44 | 0.91 | 1.05 | 1.05 | 0.69 | 1.53 | 5.22 |
| **23** | 22 | country | 0.60 | 0.89 | 0.38 | 1.06 | 0.14 | 3.27 | 0.40 | 0.83 | 0.95 | 0.96 | 0.63 | 1.39 | 4.76 |
| **23** | 22 | suburbs | 0.62 | 0.93 | 0.39 | 1.10 | 0.15 | 3.42 | 0.42 | 0.87 | 1.00 | 1.01 | 0.66 | 1.46 | 4.97 |
| **23** | 23 | cities | 0.83 | 1.24 | 0.52 | 1.47 | 0.20 | 4.58 | 0.55 | 1.16 | 1.33 | 1.34 | 0.88 | 1.95 | 6.64 |
| **23** | 23 | country | 0.75 | 1.13 | 0.48 | 1.34 | 0.18 | 4.16 | 0.50 | 1.05 | 1.21 | 1.22 | 0.80 | 1.77 | 6.04 |
| **23** | 23 | suburbs | 0.79 | 1.18 | 0.50 | 1.40 | 0.19 | 4.36 | 0.53 | 1.10 | 1.27 | 1.28 | 0.84 | 1.85 | 6.33 |
| **23** | 24 | cities | 1.97 | 2.97 | 1.24 | 3.50 | 0.46 | 11.18 | 1.31 | 2.75 | 3.16 | 3.19 | 2.09 | 4.72 | 16.01 |
| **23** | 24 | country | 1.81 | 2.72 | 1.14 | 3.21 | 0.43 | 10.20 | 1.20 | 2.53 | 2.90 | 2.93 | 1.92 | 4.32 | 14.65 |
| **23** | 24 | suburbs | 1.89 | 2.84 | 1.19 | 3.34 | 0.44 | 10.63 | 1.26 | 2.63 | 3.02 | 3.05 | 2.00 | 4.50 | 15.27 |
| **24** | 9 | cities | 0.24 | 0.31 | 0.13 | 0.44 | 0.05 | 1.07 | 0.13 | 0.34 | 0.35 | 0.40 | 0.23 | 0.54 | 1.60 |
| **24** | 9 | country | 0.22 | 0.28 | 0.12 | 0.40 | 0.04 | 0.97 | 0.12 | 0.31 | 0.31 | 0.37 | 0.21 | 0.49 | 1.45 |
| **24** | 9 | suburbs | 0.23 | 0.29 | 0.13 | 0.42 | 0.04 | 1.02 | 0.13 | 0.32 | 0.33 | 0.39 | 0.22 | 0.51 | 1.52 |
| **24** | 10 | cities | 0.25 | 0.33 | 0.14 | 0.47 | 0.05 | 1.14 | 0.14 | 0.36 | 0.37 | 0.43 | 0.25 | 0.57 | 1.71 |
| **24** | 10 | country | 0.23 | 0.30 | 0.13 | 0.43 | 0.05 | 1.04 | 0.13 | 0.33 | 0.34 | 0.39 | 0.22 | 0.52 | 1.55 |
| **24** | 10 | suburbs | 0.24 | 0.31 | 0.14 | 0.45 | 0.05 | 1.09 | 0.14 | 0.35 | 0.35 | 0.41 | 0.24 | 0.55 | 1.63 |
| **24** | 11 | cities | 0.31 | 0.40 | 0.17 | 0.58 | 0.06 | 1.41 | 0.18 | 0.45 | 0.45 | 0.53 | 0.30 | 0.71 | 2.10 |
| **24** | 11 | country | 0.29 | 0.37 | 0.16 | 0.53 | 0.06 | 1.30 | 0.16 | 0.41 | 0.42 | 0.49 | 0.28 | 0.66 | 1.95 |
| **24** | 11 | suburbs | 0.30 | 0.39 | 0.17 | 0.56 | 0.06 | 1.35 | 0.17 | 0.43 | 0.44 | 0.51 | 0.29 | 0.68 | 2.02 |
| **24** | 12 | cities | 0.50 | 0.64 | 0.28 | 0.92 | 0.10 | 2.24 | 0.28 | 0.71 | 0.72 | 0.85 | 0.48 | 1.13 | 3.34 |
| **24** | 12 | country | 0.46 | 0.59 | 0.26 | 0.85 | 0.09 | 2.08 | 0.26 | 0.66 | 0.67 | 0.79 | 0.45 | 1.05 | 3.10 |
| **24** | 12 | suburbs | 0.48 | 0.62 | 0.27 | 0.88 | 0.10 | 2.16 | 0.27 | 0.68 | 0.70 | 0.82 | 0.47 | 1.09 | 3.22 |
| **24** | 21 | cities | 0.50 | 0.64 | 0.28 | 0.91 | 0.10 | 2.23 | 0.28 | 0.71 | 0.72 | 0.84 | 0.48 | 1.12 | 3.32 |
| **24** | 21 | country | 0.45 | 0.57 | 0.25 | 0.82 | 0.09 | 2.00 | 0.25 | 0.63 | 0.65 | 0.76 | 0.43 | 1.01 | 2.98 |
| **24** | 21 | suburbs | 0.47 | 0.60 | 0.26 | 0.86 | 0.09 | 2.11 | 0.27 | 0.67 | 0.68 | 0.80 | 0.46 | 1.06 | 3.15 |
| **24** | 22 | cities | 0.54 | 0.69 | 0.30 | 0.99 | 0.11 | 2.40 | 0.30 | 0.76 | 0.78 | 0.91 | 0.52 | 1.21 | 3.59 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **24** | 22 | country | 0.48 | 0.62 | 0.27 | 0.89 | 0.10 | 2.18 | 0.27 | 0.69 | 0.70 | 0.82 | 0.47 | 1.09 | 3.25 |
| **24** | 22 | suburbs | 0.51 | 0.65 | 0.28 | 0.94 | 0.10 | 2.29 | 0.29 | 0.72 | 0.74 | 0.86 | 0.50 | 1.15 | 3.41 |
| **24** | 23 | cities | 0.66 | 0.85 | 0.37 | 1.22 | 0.13 | 2.97 | 0.37 | 0.94 | 0.96 | 1.12 | 0.64 | 1.49 | 4.43 |
| **24** | 23 | country | 0.60 | 0.77 | 0.34 | 1.10 | 0.12 | 2.70 | 0.34 | 0.85 | 0.87 | 1.02 | 0.58 | 1.36 | 4.02 |
| **24** | 23 | suburbs | 0.63 | 0.81 | 0.35 | 1.16 | 0.12 | 2.83 | 0.36 | 0.90 | 0.91 | 1.07 | 0.61 | 1.42 | 4.22 |
| **24** | 24 | cities | 1.53 | 1.96 | 0.85 | 2.81 | 0.30 | 6.86 | 0.86 | 2.17 | 2.21 | 2.59 | 1.48 | 3.45 | 10.23 |
| **24** | 24 | country | 1.41 | 1.80 | 0.78 | 2.58 | 0.28 | 6.32 | 0.79 | 2.00 | 2.04 | 2.38 | 1.37 | 3.18 | 9.42 |
| **24** | 24 | suburbs | 1.46 | 1.88 | 0.82 | 2.69 | 0.29 | 6.58 | 0.83 | 2.08 | 2.12 | 2.48 | 1.42 | 3.31 | 9.80 |
| **25** | 9 | cities | 0.21 | 0.25 | 0.12 | 0.37 | 0.04 | 0.62 | 0.12 | 0.26 | 0.27 | 0.34 | 0.18 | 0.37 | 1.46 |
| **25** | 9 | country | 0.18 | 0.22 | 0.10 | 0.33 | 0.04 | 0.55 | 0.10 | 0.23 | 0.24 | 0.30 | 0.16 | 0.33 | 1.29 |
| **25** | 9 | suburbs | 0.19 | 0.23 | 0.11 | 0.35 | 0.04 | 0.59 | 0.11 | 0.24 | 0.25 | 0.32 | 0.17 | 0.35 | 1.37 |
| **25** | 10 | cities | 0.22 | 0.26 | 0.13 | 0.40 | 0.04 | 0.66 | 0.12 | 0.27 | 0.29 | 0.36 | 0.19 | 0.39 | 1.55 |
| **25** | 10 | country | 0.20 | 0.24 | 0.11 | 0.35 | 0.04 | 0.59 | 0.11 | 0.24 | 0.26 | 0.32 | 0.17 | 0.35 | 1.38 |
| **25** | 10 | suburbs | 0.21 | 0.25 | 0.12 | 0.38 | 0.04 | 0.63 | 0.12 | 0.26 | 0.27 | 0.34 | 0.18 | 0.37 | 1.46 |
| **25** | 11 | cities | 0.28 | 0.34 | 0.16 | 0.51 | 0.06 | 0.85 | 0.16 | 0.35 | 0.37 | 0.46 | 0.24 | 0.50 | 1.98 |
| **25** | 11 | country | 0.26 | 0.31 | 0.15 | 0.46 | 0.05 | 0.77 | 0.14 | 0.32 | 0.33 | 0.42 | 0.22 | 0.46 | 1.80 |
| **25** | 11 | suburbs | 0.27 | 0.32 | 0.15 | 0.49 | 0.05 | 0.81 | 0.15 | 0.33 | 0.35 | 0.44 | 0.23 | 0.48 | 1.89 |
| **25** | 12 | cities | 0.43 | 0.52 | 0.24 | 0.78 | 0.09 | 1.30 | 0.24 | 0.53 | 0.56 | 0.71 | 0.38 | 0.77 | 3.04 |
| **25** | 12 | country | 0.39 | 0.47 | 0.22 | 0.71 | 0.08 | 1.18 | 0.22 | 0.48 | 0.51 | 0.65 | 0.34 | 0.70 | 2.77 |
| **25** | 12 | suburbs | 0.41 | 0.49 | 0.23 | 0.74 | 0.08 | 1.24 | 0.23 | 0.51 | 0.54 | 0.68 | 0.36 | 0.74 | 2.90 |
| **25** | 21 | cities | 0.42 | 0.51 | 0.24 | 0.77 | 0.09 | 1.27 | 0.24 | 0.52 | 0.55 | 0.70 | 0.37 | 0.76 | 2.98 |
| **25** | 21 | country | 0.37 | 0.45 | 0.21 | 0.67 | 0.08 | 1.12 | 0.21 | 0.46 | 0.49 | 0.61 | 0.32 | 0.66 | 2.62 |
| **25** | 21 | suburbs | 0.40 | 0.48 | 0.23 | 0.72 | 0.08 | 1.19 | 0.22 | 0.49 | 0.52 | 0.65 | 0.35 | 0.71 | 2.79 |
| **25** | 22 | cities | 0.46 | 0.55 | 0.26 | 0.83 | 0.09 | 1.38 | 0.26 | 0.56 | 0.60 | 0.75 | 0.40 | 0.82 | 3.22 |
| **25** | 22 | country | 0.41 | 0.49 | 0.23 | 0.74 | 0.08 | 1.22 | 0.23 | 0.50 | 0.53 | 0.67 | 0.35 | 0.73 | 2.87 |
| **25** | 22 | suburbs | 0.43 | 0.52 | 0.25 | 0.78 | 0.09 | 1.30 | 0.24 | 0.53 | 0.56 | 0.71 | 0.38 | 0.77 | 3.04 |
| **25** | 23 | cities | 0.57 | 0.68 | 0.32 | 1.03 | 0.11 | 1.71 | 0.32 | 0.70 | 0.74 | 0.93 | 0.49 | 1.02 | 4.00 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **25** | 23 | country | 0.50 | 0.60 | 0.29 | 0.91 | 0.10 | 1.52 | 0.28 | 0.62 | 0.66 | 0.83 | 0.44 | 0.90 | 3.55 |
| **25** | 23 | suburbs | 0.54 | 0.64 | 0.30 | 0.97 | 0.11 | 1.61 | 0.30 | 0.66 | 0.70 | 0.88 | 0.47 | 0.96 | 3.77 |
| **25** | 24 | cities | 1.32 | 1.59 | 0.75 | 2.39 | 0.27 | 3.99 | 0.74 | 1.63 | 1.72 | 2.17 | 1.15 | 2.36 | 9.30 |
| **25** | 24 | country | 1.19 | 1.43 | 0.68 | 2.16 | 0.24 | 3.60 | 0.67 | 1.47 | 1.56 | 1.96 | 1.04 | 2.14 | 8.41 |
| **25** | 24 | suburbs | 1.25 | 1.51 | 0.71 | 2.27 | 0.25 | 3.79 | 0.70 | 1.55 | 1.64 | 2.06 | 1.09 | 2.25 | 8.85 |
| **26** | 9 | cities | 0.37 | 0.19 | 0.27 | 0.42 | 0.21 | 0.05 | 0.46 | 0.46 | 0.59 | 0.44 | 0.39 | 0.11 | 0.43 |
| **26** | 9 | country | 0.35 | 0.18 | 0.26 | 0.40 | 0.20 | 0.05 | 0.44 | 0.43 | 0.56 | 0.42 | 0.37 | 0.10 | 0.40 |
| **26** | 9 | suburbs | 0.36 | 0.19 | 0.27 | 0.41 | 0.20 | 0.05 | 0.45 | 0.45 | 0.57 | 0.43 | 0.38 | 0.11 | 0.41 |
| **26** | 10 | cities | 0.40 | 0.21 | 0.29 | 0.45 | 0.22 | 0.05 | 0.49 | 0.49 | 0.63 | 0.47 | 0.41 | 0.12 | 0.46 |
| **26** | 10 | country | 0.38 | 0.19 | 0.28 | 0.42 | 0.21 | 0.05 | 0.47 | 0.46 | 0.59 | 0.45 | 0.39 | 0.11 | 0.43 |
| **26** | 10 | suburbs | 0.39 | 0.20 | 0.28 | 0.43 | 0.22 | 0.05 | 0.48 | 0.48 | 0.61 | 0.46 | 0.40 | 0.11 | 0.44 |
| **26** | 11 | cities | 0.50 | 0.26 | 0.37 | 0.56 | 0.28 | 0.07 | 0.62 | 0.62 | 0.79 | 0.60 | 0.52 | 0.15 | 0.57 |
| **26** | 11 | country | 0.48 | 0.25 | 0.35 | 0.54 | 0.27 | 0.07 | 0.60 | 0.59 | 0.76 | 0.58 | 0.50 | 0.14 | 0.55 |
| **26** | 11 | suburbs | 0.49 | 0.25 | 0.36 | 0.55 | 0.27 | 0.07 | 0.61 | 0.61 | 0.78 | 0.59 | 0.51 | 0.14 | 0.56 |
| **26** | 12 | cities | 0.73 | 0.38 | 0.54 | 0.82 | 0.41 | 0.10 | 0.91 | 0.90 | 1.16 | 0.88 | 0.76 | 0.22 | 0.85 |
| **26** | 12 | country | 0.71 | 0.37 | 0.52 | 0.79 | 0.39 | 0.10 | 0.88 | 0.87 | 1.12 | 0.85 | 0.73 | 0.21 | 0.81 |
| **26** | 12 | suburbs | 0.72 | 0.37 | 0.53 | 0.81 | 0.40 | 0.10 | 0.90 | 0.88 | 1.14 | 0.86 | 0.75 | 0.21 | 0.83 |
| **26** | 21 | cities | 0.73 | 0.38 | 0.54 | 0.82 | 0.41 | 0.10 | 0.91 | 0.90 | 1.16 | 0.88 | 0.76 | 0.21 | 0.84 |
| **26** | 21 | country | 0.70 | 0.36 | 0.51 | 0.78 | 0.39 | 0.10 | 0.87 | 0.86 | 1.10 | 0.83 | 0.72 | 0.20 | 0.80 |
| **26** | 21 | suburbs | 0.71 | 0.37 | 0.52 | 0.80 | 0.40 | 0.10 | 0.89 | 0.88 | 1.13 | 0.85 | 0.74 | 0.21 | 0.82 |
| **26** | 22 | cities | 0.77 | 0.40 | 0.57 | 0.87 | 0.43 | 0.11 | 0.97 | 0.95 | 1.22 | 0.93 | 0.80 | 0.23 | 0.89 |
| **26** | 22 | country | 0.75 | 0.38 | 0.55 | 0.84 | 0.41 | 0.10 | 0.93 | 0.92 | 1.18 | 0.89 | 0.77 | 0.22 | 0.85 |
| **26** | 22 | suburbs | 0.76 | 0.39 | 0.56 | 0.85 | 0.42 | 0.10 | 0.95 | 0.94 | 1.20 | 0.91 | 0.79 | 0.22 | 0.87 |
| **26** | 23 | cities | 0.93 | 0.48 | 0.68 | 1.05 | 0.52 | 0.13 | 1.16 | 1.15 | 1.47 | 1.11 | 0.97 | 0.27 | 1.07 |
| **26** | 23 | country | 0.90 | 0.47 | 0.66 | 1.01 | 0.50 | 0.12 | 1.12 | 1.10 | 1.42 | 1.07 | 0.93 | 0.26 | 1.03 |
| **26** | 23 | suburbs | 0.92 | 0.47 | 0.67 | 1.03 | 0.51 | 0.13 | 1.14 | 1.13 | 1.45 | 1.09 | 0.95 | 0.27 | 1.05 |
| **26** | 24 | cities | 2.05 | 1.07 | 1.51 | 2.32 | 1.14 | 0.29 | 2.55 | 2.52 | 3.24 | 2.46 | 2.13 | 0.61 | 2.39 |

## STONE WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26** | 24 | country | 1.99 | 1.04 | 1.47 | 2.25 | 1.11 | 0.28 | 2.48 | 2.45 | 3.15 | 2.39 | 2.07 | 0.59 | 2.32 |
| **26** | 24 | suburbs | 2.02 | 1.06 | 1.49 | 2.28 | 1.13 | 0.28 | 2.52 | 2.49 | 3.20 | 2.43 | 2.10 | 0.60 | 2.35 |
| **27** | 9 | cities | 0.18 | 0.12 | 0.13 | 0.28 | 0.06 | 0.05 | 0.17 | 0.28 | 0.31 | 0.27 | 0.21 | 0.11 | 0.38 |
| **27** | 9 | country | 0.17 | 0.11 | 0.12 | 0.25 | 0.06 | 0.05 | 0.15 | 0.26 | 0.28 | 0.25 | 0.19 | 0.10 | 0.35 |
| **27** | 9 | suburbs | 0.17 | 0.12 | 0.13 | 0.27 | 0.06 | 0.05 | 0.16 | 0.27 | 0.29 | 0.26 | 0.20 | 0.10 | 0.37 |
| **27** | 10 | cities | 0.19 | 0.13 | 0.14 | 0.30 | 0.07 | 0.05 | 0.18 | 0.30 | 0.33 | 0.29 | 0.22 | 0.12 | 0.41 |
| **27** | 10 | country | 0.18 | 0.12 | 0.13 | 0.27 | 0.06 | 0.05 | 0.16 | 0.28 | 0.30 | 0.26 | 0.20 | 0.11 | 0.37 |
| **27** | 10 | suburbs | 0.19 | 0.13 | 0.14 | 0.29 | 0.07 | 0.05 | 0.17 | 0.29 | 0.31 | 0.28 | 0.21 | 0.11 | 0.39 |
| **27** | 11 | cities | 0.24 | 0.16 | 0.18 | 0.37 | 0.09 | 0.07 | 0.22 | 0.38 | 0.41 | 0.36 | 0.28 | 0.14 | 0.51 |
| **27** | 11 | country | 0.23 | 0.15 | 0.16 | 0.35 | 0.08 | 0.06 | 0.21 | 0.35 | 0.38 | 0.34 | 0.26 | 0.13 | 0.48 |
| **27** | 11 | suburbs | 0.23 | 0.16 | 0.17 | 0.36 | 0.08 | 0.06 | 0.22 | 0.37 | 0.39 | 0.35 | 0.27 | 0.14 | 0.49 |
| **27** | 12 | cities | 0.38 | 0.26 | 0.28 | 0.58 | 0.13 | 0.10 | 0.35 | 0.59 | 0.64 | 0.56 | 0.43 | 0.23 | 0.80 |
| **27** | 12 | country | 0.35 | 0.24 | 0.26 | 0.54 | 0.13 | 0.10 | 0.32 | 0.55 | 0.59 | 0.52 | 0.40 | 0.21 | 0.75 |
| **27** | 12 | suburbs | 0.36 | 0.25 | 0.27 | 0.56 | 0.13 | 0.10 | 0.33 | 0.57 | 0.61 | 0.54 | 0.42 | 0.22 | 0.77 |
| **27** | 21 | cities | 0.37 | 0.25 | 0.27 | 0.56 | 0.13 | 0.10 | 0.34 | 0.57 | 0.62 | 0.55 | 0.42 | 0.22 | 0.78 |
| **27** | 21 | country | 0.33 | 0.22 | 0.24 | 0.51 | 0.12 | 0.09 | 0.30 | 0.52 | 0.56 | 0.49 | 0.38 | 0.20 | 0.70 |
| **27** | 21 | suburbs | 0.35 | 0.24 | 0.25 | 0.54 | 0.12 | 0.10 | 0.32 | 0.54 | 0.59 | 0.52 | 0.40 | 0.21 | 0.74 |
| **27** | 22 | cities | 0.40 | 0.27 | 0.29 | 0.61 | 0.14 | 0.11 | 0.36 | 0.62 | 0.67 | 0.59 | 0.45 | 0.24 | 0.84 |
| **27** | 22 | country | 0.36 | 0.24 | 0.26 | 0.56 | 0.13 | 0.10 | 0.33 | 0.56 | 0.61 | 0.54 | 0.41 | 0.22 | 0.77 |
| **27** | 22 | suburbs | 0.38 | 0.26 | 0.28 | 0.58 | 0.14 | 0.10 | 0.35 | 0.59 | 0.64 | 0.56 | 0.43 | 0.23 | 0.80 |
| **27** | 23 | cities | 0.49 | 0.33 | 0.35 | 0.75 | 0.17 | 0.13 | 0.45 | 0.76 | 0.82 | 0.73 | 0.56 | 0.29 | 1.03 |
| **27** | 23 | country | 0.44 | 0.30 | 0.32 | 0.69 | 0.16 | 0.12 | 0.41 | 0.69 | 0.75 | 0.66 | 0.51 | 0.27 | 0.94 |
| **27** | 23 | suburbs | 0.47 | 0.31 | 0.34 | 0.72 | 0.17 | 0.13 | 0.43 | 0.73 | 0.78 | 0.69 | 0.53 | 0.28 | 0.99 |
| **27** | 24 | cities | 1.13 | 0.77 | 0.82 | 1.75 | 0.40 | 0.32 | 1.03 | 1.76 | 1.90 | 1.69 | 1.29 | 0.69 | 2.43 |
| **27** | 24 | country | 1.04 | 0.71 | 0.76 | 1.62 | 0.37 | 0.30 | 0.95 | 1.62 | 1.75 | 1.56 | 1.19 | 0.64 | 2.25 |
| **27** | 24 | suburbs | 1.08 | 0.74 | 0.79 | 1.68 | 0.38 | 0.31 | 0.99 | 1.69 | 1.82 | 1.62 | 1.24 | 0.66 | 2.34 |
| **28** | 5 | cities | 0.30 | 0.26 | 0.14 | (1.67) | 0.04 | (0.58) | 0.12 | 3.35 | 0.55 | (0.38) | 0.38 | (0.33) | 2.03 |

## STONE WOOL

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **28** | 5 | country | 0.26 | 0.22 | 0.12 | (4.94) | 0.03 | (0.71) | 0.10 | 1.62 | 0.45 | (0.47) | 0.31 | (0.40) | 1.43 |
| **28** | 5 | suburbs | 0.27 | 0.24 | 0.13 | (3.26) | 0.04 | (0.69) | 0.11 | 1.95 | 0.49 | (0.45) | 0.34 | (0.39) | 1.60 |
| **28** | 6 | cities | 0.34 | 0.28 | 0.16 | (1.11) | 0.04 | (0.50) | 0.13 | 12.70 | 0.63 | (0.32) | 0.44 | (0.29) | 2.77 |
| **28** | 6 | country | 0.28 | 0.24 | 0.13 | (1.99) | 0.04 | (0.60) | 0.11 | 2.53 | 0.51 | (0.39) | 0.35 | (0.34) | 1.78 |
| **28** | 6 | suburbs | 0.30 | 0.26 | 0.14 | (1.65) | 0.04 | (0.58) | 0.12 | 3.42 | 0.55 | (0.37) | 0.38 | (0.33) | 2.04 |
| **28** | 7 | cities | 0.34 | 0.28 | 0.15 | (0.72) | 0.04 | (0.38) | 0.12 | (5.85) | 0.64 | (0.25) | 0.45 | (0.22) | 3.93 |
| **28** | 7 | country | 0.29 | 0.24 | 0.13 | (0.97) | 0.03 | (0.43) | 0.11 | 8.58 | 0.52 | (0.28) | 0.37 | (0.24) | 2.27 |
| **28** | 7 | suburbs | 0.31 | 0.25 | 0.14 | (0.94) | 0.04 | (0.43) | 0.11 | 16.90 | 0.56 | (0.28) | 0.39 | (0.25) | 2.56 |
| **28** | 8 | cities | 0.66 | 0.42 | 0.25 | (0.26) | 0.04 | (0.19) | 0.15 | (11.70) | 1.73 | (0.12) | 1.53 | (0.11) | 7.86 |
| **28** | 8 | country | 0.48 | 0.34 | 0.20 | (0.29) | 0.04 | (0.20) | 0.13 | 17.15 | 1.06 | (0.13) | 0.83 | (0.12) | 4.53 |
| **28** | 8 | suburbs | 0.53 | 0.36 | 0.21 | (0.29) | 0.04 | (0.20) | 0.13 | 33.80 | 1.20 | (0.13) | 0.96 | (0.12) | 5.11 |
| **28** | 17 | cities | 0.45 | 0.39 | 0.21 | 323.21 | 0.06 | (1.54) | 0.18 | 2.43 | 0.79 | (1.01) | 0.54 | (0.86) | 2.36 |
| **28** | 17 | country | 0.38 | 0.34 | 0.18 | 7.29 | 0.05 | (1.71) | 0.16 | 1.83 | 0.67 | (1.13) | 0.46 | (0.95) | 1.91 |
| **28** | 17 | suburbs | 0.41 | 0.36 | 0.19 | 9.54 | 0.06 | (1.73) | 0.17 | 2.00 | 0.72 | (1.15) | 0.49 | (0.96) | 2.07 |
| **28** | 18 | cities | 0.48 | 0.41 | 0.22 | (27.95) | 0.06 | (1.52) | 0.19 | 2.72 | 0.84 | (1.00) | 0.58 | (0.85) | 2.56 |
| **28** | 18 | country | 0.41 | 0.36 | 0.19 | 11.65 | 0.06 | (1.66) | 0.17 | 2.03 | 0.72 | (1.09) | 0.49 | (0.92) | 2.08 |
| **28** | 18 | suburbs | 0.44 | 0.38 | 0.21 | 17.15 | 0.06 | (1.68) | 0.18 | 2.22 | 0.77 | (1.11) | 0.53 | (0.94) | 2.24 |
| **28** | 19 | cities | 0.50 | 0.44 | 0.24 | 12.11 | 0.07 | (2.11) | 0.21 | 2.46 | 0.88 | (1.39) | 0.60 | (1.17) | 2.53 |
| **28** | 19 | country | 0.44 | 0.38 | 0.21 | 5.82 | 0.06 | (2.23) | 0.18 | 1.97 | 0.77 | (1.49) | 0.52 | (1.22) | 2.13 |
| **28** | 19 | suburbs | 0.46 | 0.41 | 0.22 | 6.51 | 0.06 | (2.32) | 0.19 | 2.11 | 0.81 | (1.54) | 0.56 | (1.27) | 2.27 |
| **28** | 20 | cities | 0.46 | 0.38 | 0.21 | (24.22) | 0.05 | (0.70) | 0.17 | 4.91 | 0.84 | (0.45) | 0.58 | (0.40) | 5.07 |
| **28** | 20 | country | 0.40 | 0.34 | 0.18 | (11.64) | 0.05 | (0.68) | 0.15 | 3.94 | 0.73 | (0.44) | 0.51 | (0.39) | 4.25 |
| **28** | 20 | suburbs | 0.42 | 0.35 | 0.19 | (13.02) | 0.05 | (0.71) | 0.16 | 4.22 | 0.77 | (0.46) | 0.54 | (0.41) | 4.54 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | cities | 5.18 | 2.75 | 12.53 | 19.88 | 2.15 | 9.65 | 4.80 | 2.59 | 5.37 | 23.04 | 5.19 | 3.74 | 22.31 |
| **1** | 1 | country | 3.58 | 1.81 | 8.85 | 13.58 | 1.49 | 6.43 | 3.23 | 1.71 | 3.56 | 16.04 | 3.44 | 2.48 | 15.61 |
| **1** | 1 | suburbs | 4.21 | 2.16 | 10.32 | 16.02 | 1.75 | 7.64 | 3.83 | 2.03 | 4.24 | 18.80 | 4.09 | 2.95 | 18.27 |
| **1** | 2 | cities | 4.21 | 1.93 | 10.86 | 15.52 | 1.76 | 6.99 | 3.59 | 1.81 | 3.83 | 19.07 | 3.70 | 2.67 | 18.78 |
| **1** | 2 | country | 2.86 | 1.29 | 7.41 | 10.48 | 1.19 | 4.69 | 2.41 | 1.21 | 2.57 | 12.95 | 2.48 | 1.79 | 12.77 |
| **1** | 2 | suburbs | 3.40 | 1.55 | 8.80 | 12.50 | 1.42 | 5.61 | 2.88 | 1.45 | 3.07 | 15.41 | 2.96 | 2.14 | 15.19 |
| **1** | 3 | cities | 5.31 | 2.29 | 14.11 | 19.21 | 2.22 | 8.40 | 4.36 | 2.15 | 4.57 | 24.23 | 4.41 | 3.19 | 24.05 |
| **1** | 3 | country | 3.00 | 1.31 | 7.94 | 10.88 | 1.25 | 4.78 | 2.48 | 1.23 | 2.60 | 13.67 | 2.51 | 1.81 | 13.56 |
| **1** | 3 | suburbs | 3.72 | 1.62 | 9.86 | 13.49 | 1.55 | 5.92 | 3.07 | 1.52 | 3.22 | 16.97 | 3.11 | 2.25 | 16.83 |
| **1** | 4 | cities | 14.95 | 5.87 | 41.93 | 52.45 | 6.26 | 21.87 | 11.58 | 5.49 | 11.80 | 69.13 | 11.38 | 8.23 | 69.61 |
| **1** | 4 | country | 7.32 | 3.11 | 19.63 | 26.32 | 3.06 | 11.40 | 5.95 | 2.91 | 6.20 | 33.46 | 5.98 | 4.32 | 33.30 |
| **1** | 4 | suburbs | 9.45 | 3.94 | 25.60 | 33.81 | 3.95 | 14.52 | 7.60 | 3.69 | 7.88 | 43.33 | 7.60 | 5.49 | 43.23 |
| **1** | 13 | cities | 4.63 | 2.00 | 12.33 | 16.74 | 1.93 | 7.31 | 3.80 | 1.87 | 3.98 | 21.14 | 3.84 | 2.77 | 20.99 |
| **1** | 13 | country | 3.59 | 1.56 | 9.53 | 13.00 | 1.50 | 5.69 | 2.95 | 1.46 | 3.10 | 16.38 | 2.99 | 2.16 | 16.25 |
| **1** | 13 | suburbs | 4.05 | 1.75 | 10.77 | 14.66 | 1.69 | 6.41 | 3.33 | 1.64 | 3.49 | 18.48 | 3.37 | 2.43 | 18.35 |
| **1** | 14 | cities | 5.60 | 2.48 | 14.68 | 20.41 | 2.33 | 9.04 | 4.67 | 2.33 | 4.93 | 25.44 | 4.76 | 3.44 | 25.17 |
| **1** | 14 | country | 4.38 | 1.95 | 11.44 | 16.00 | 1.83 | 7.11 | 3.67 | 1.83 | 3.88 | 19.89 | 3.75 | 2.71 | 19.66 |
| **1** | 14 | suburbs | 4.91 | 2.19 | 12.86 | 17.94 | 2.05 | 7.96 | 4.11 | 2.05 | 4.35 | 22.33 | 4.20 | 3.03 | 22.08 |
| **1** | 15 | cities | 4.96 | 2.20 | 13.03 | 18.09 | 2.07 | 8.01 | 4.14 | 2.06 | 4.37 | 22.58 | 4.22 | 3.05 | 22.34 |
| **1** | 15 | country | 3.87 | 1.72 | 10.12 | 14.13 | 1.61 | 6.27 | 3.24 | 1.62 | 3.42 | 17.58 | 3.31 | 2.39 | 17.38 |
| **1** | 15 | suburbs | 4.35 | 1.93 | 11.39 | 15.86 | 1.81 | 7.03 | 3.63 | 1.81 | 3.84 | 19.76 | 3.71 | 2.68 | 19.55 |
| **1** | 16 | cities | 3.49 | 1.48 | 9.39 | 12.54 | 1.46 | 5.42 | 2.83 | 1.38 | 2.95 | 15.98 | 2.84 | 2.05 | 15.91 |
| **1** | 16 | country | 2.93 | 1.25 | 7.86 | 10.55 | 1.22 | 4.57 | 2.38 | 1.17 | 2.49 | 13.40 | 2.40 | 1.73 | 13.34 |
| **1** | 16 | suburbs | 3.16 | 1.34 | 8.49 | 11.38 | 1.32 | 4.93 | 2.57 | 1.26 | 2.68 | 14.47 | 2.59 | 1.87 | 14.40 |
| **2** | 1 | cities | 5.28 | 2.18 | 11.91 | 13.75 | 5.20 | 6.48 | 14.11 | 12.55 | 26.46 | 19.49 | 26.33 | 72.98 | 16.04 |
| **2** | 1 | country | 4.09 | 1.68 | 9.27 | 10.71 | 3.75 | 5.06 | 9.64 | 7.46 | 15.73 | 15.17 | 15.63 | 21.45 | 12.53 |
| **2** | 1 | suburbs | 4.60 | 1.89 | 10.40 | 12.02 | 4.31 | 5.67 | 11.26 | 9.05 | 19.09 | 17.02 | 18.98 | 30.03 | 14.04 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2** | 2 | cities | 3.76 | 1.50 | 8.86 | 10.37 | 2.30 | 4.98 | 4.73 | 2.51 | 5.31 | 14.54 | 5.26 | 3.51 | 12.31 |
| **2** | 2 | country | 2.90 | 1.16 | 6.83 | 7.99 | 1.78 | 3.84 | 3.67 | 1.95 | 4.12 | 11.21 | 4.08 | 2.73 | 9.49 |
| **2** | 2 | suburbs | 3.30 | 1.31 | 7.77 | 9.09 | 2.02 | 4.36 | 4.17 | 2.21 | 4.68 | 12.74 | 4.64 | 3.10 | 10.79 |
| **2** | 3 | cities | 6.20 | 2.47 | 14.69 | 17.22 | 3.65 | 8.28 | 7.41 | 3.86 | 8.15 | 24.12 | 8.08 | 5.28 | 20.49 |
| **2** | 3 | country | 3.82 | 1.52 | 9.03 | 10.59 | 2.26 | 5.09 | 4.59 | 2.40 | 5.07 | 14.83 | 5.02 | 3.29 | 12.59 |
| **2** | 3 | suburbs | 4.71 | 1.87 | 11.14 | 13.05 | 2.79 | 6.28 | 5.67 | 2.96 | 6.26 | 18.29 | 6.20 | 4.07 | 15.52 |
| **2** | 4 | cities | 10.17 | 3.93 | 25.04 | 29.74 | 4.59 | 14.57 | 8.55 | 4.05 | 8.57 | 41.23 | 8.48 | 5.05 | 35.98 |
| **2** | 4 | country | 6.67 | 2.62 | 16.07 | 18.95 | 3.46 | 9.19 | 6.71 | 3.32 | 7.02 | 26.42 | 6.95 | 4.31 | 22.70 |
| **2** | 4 | suburbs | 8.24 | 3.22 | 19.98 | 23.59 | 4.11 | 11.47 | 7.87 | 3.84 | 8.12 | 32.85 | 8.04 | 4.93 | 28.34 |
| **2** | 13 | cities | 4.18 | 1.65 | 10.04 | 11.82 | 2.22 | 5.72 | 4.35 | 2.17 | 4.59 | 16.50 | 4.54 | 2.85 | 14.15 |
| **2** | 13 | country | 3.58 | 1.41 | 8.58 | 10.09 | 1.95 | 4.87 | 3.84 | 1.93 | 4.09 | 14.09 | 4.05 | 2.56 | 12.05 |
| **2** | 13 | suburbs | 3.89 | 1.53 | 9.32 | 10.96 | 2.09 | 5.30 | 4.12 | 2.07 | 4.37 | 15.31 | 4.32 | 2.72 | 13.11 |
| **2** | 14 | cities | 4.58 | 1.81 | 10.95 | 12.87 | 2.50 | 6.22 | 4.94 | 2.49 | 5.26 | 17.98 | 5.21 | 3.30 | 15.37 |
| **2** | 14 | country | 4.00 | 1.58 | 9.53 | 11.19 | 2.25 | 5.40 | 4.50 | 2.30 | 4.86 | 15.65 | 4.81 | 3.08 | 13.35 |
| **2** | 14 | suburbs | 4.29 | 1.70 | 10.23 | 12.02 | 2.38 | 5.80 | 4.74 | 2.40 | 5.08 | 16.81 | 5.03 | 3.21 | 14.35 |
| **2** | 15 | cities | 4.74 | 1.88 | 11.27 | 13.23 | 2.70 | 6.38 | 5.40 | 2.77 | 5.86 | 18.51 | 5.80 | 3.73 | 15.77 |
| **2** | 15 | country | 4.16 | 1.65 | 9.86 | 11.55 | 2.46 | 5.56 | 5.00 | 2.61 | 5.51 | 16.18 | 5.46 | 3.58 | 13.74 |
| **2** | 15 | suburbs | 4.44 | 1.76 | 10.53 | 12.35 | 2.58 | 5.94 | 5.20 | 2.69 | 5.68 | 17.29 | 5.63 | 3.66 | 14.70 |
| **2** | 16 | cities | 3.29 | 1.29 | 7.93 | 9.35 | 1.70 | 4.53 | 3.29 | 1.62 | 3.43 | 13.04 | 3.40 | 2.11 | 11.21 |
| **2** | 16 | country | 3.01 | 1.18 | 7.22 | 8.51 | 1.59 | 4.12 | 3.10 | 1.54 | 3.26 | 11.87 | 3.23 | 2.02 | 10.18 |
| **2** | 16 | suburbs | 3.16 | 1.24 | 7.59 | 8.95 | 1.65 | 4.33 | 3.22 | 1.60 | 3.37 | 12.48 | 3.34 | 2.08 | 10.71 |
| **3** | 1 | cities | 7.99 | 5.85 | 1.62 | 14.32 | 0.29 | 27.11 | 1.51 | 9.03 | 6.45 | 12.08 | 6.51 | 22.29 | 29.59 |
| **3** | 1 | country | 5.60 | 4.21 | 1.17 | 9.45 | 0.21 | 17.29 | 1.09 | 5.88 | 4.55 | 7.71 | 4.58 | 9.40 | 19.53 |
| **3** | 1 | suburbs | 6.58 | 4.90 | 1.36 | 11.32 | 0.24 | 20.93 | 1.27 | 7.07 | 5.33 | 9.33 | 5.37 | 12.73 | 23.39 |
| **3** | 2 | cities | 8.27 | 6.44 | 1.80 | 12.77 | 0.33 | 22.41 | 1.69 | 7.82 | 6.77 | 10.01 | 6.78 | 8.62 | 26.43 |
| **3** | 2 | country | 5.72 | 4.50 | 1.26 | 8.64 | 0.23 | 15.01 | 1.19 | 5.27 | 4.69 | 6.71 | 4.69 | 5.42 | 17.89 |
| **3** | 2 | suburbs | 6.77 | 5.32 | 1.49 | 10.30 | 0.27 | 17.96 | 1.40 | 6.29 | 5.55 | 8.02 | 5.56 | 6.61 | 21.33 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT**$_{\mathrm{CC}}$ | **PBT**$_{\mathrm{OD}}$ | **PBT**$_{\mathrm{HT\_CE}}$ | **PBT**$_{\mathrm{HT\_nCE}}$ | **PBT**$_{\mathrm{PM}}$ | **PBT**$_{\mathrm{IR\_hh}}$ | **PBT**$_{\mathrm{POF}}$ | **PBT**$_{\mathrm{AC}}$ | **PBT**$_{\mathrm{ET}}$ | **PBT**$_{\mathrm{EuF}}$ | **PBT**$_{\mathrm{EuM}}$ | **PBT**$_{\mathrm{Ec\_FW}}$ | **PBT**$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | 3 | cities | 14.59 | 11.41 | 3.19 | 22.42 | 0.59 | 39.26 | 3.00 | 13.72 | 11.95 | 17.53 | 11.97 | 14.86 | 46.42 |
| **3** | 3 | country | 8.09 | 6.43 | 1.80 | 12.02 | 0.33 | 20.73 | 1.70 | 7.31 | 6.65 | 9.26 | 6.65 | 7.15 | 24.89 |
| **3** | 3 | suburbs | 10.37 | 8.20 | 2.30 | 15.54 | 0.42 | 26.92 | 2.16 | 9.47 | 8.51 | 12.02 | 8.52 | 9.50 | 32.18 |
| **3** | 4 | cities | 34.60 | 29.88 | 8.52 | 44.18 | 1.64 | 71.88 | 8.14 | 26.25 | 28.92 | 32.17 | 28.68 | 18.52 | 91.63 |
| **3** | 4 | country | 15.45 | 12.64 | 3.57 | 21.66 | 0.67 | 36.48 | 3.38 | 13.05 | 12.77 | 16.31 | 12.74 | 11.03 | 44.88 |
| **3** | 4 | suburbs | 21.19 | 17.63 | 4.99 | 28.81 | 0.94 | 47.96 | 4.74 | 17.28 | 17.58 | 21.45 | 17.50 | 13.69 | 59.72 |
| **3** | 13 | cities | 11.88 | 9.67 | 2.73 | 16.79 | 0.51 | 28.39 | 2.58 | 10.13 | 9.81 | 12.69 | 9.79 | 8.74 | 34.80 |
| **3** | 13 | country | 8.69 | 7.04 | 1.98 | 12.43 | 0.37 | 21.10 | 1.87 | 7.51 | 7.17 | 9.43 | 7.16 | 6.65 | 25.75 |
| **3** | 13 | suburbs | 10.02 | 8.13 | 2.29 | 14.28 | 0.43 | 24.20 | 2.17 | 8.62 | 8.27 | 10.82 | 8.26 | 7.57 | 29.58 |
| **3** | 14 | cities | 12.27 | 9.90 | 2.78 | 17.66 | 0.52 | 30.07 | 2.63 | 10.69 | 10.11 | 13.44 | 10.10 | 9.63 | 36.59 |
| **3** | 14 | country | 8.99 | 7.21 | 2.03 | 13.12 | 0.38 | 22.46 | 1.91 | 7.96 | 7.41 | 10.04 | 7.40 | 7.41 | 27.17 |
| **3** | 14 | suburbs | 10.36 | 8.32 | 2.34 | 15.06 | 0.43 | 25.73 | 2.21 | 9.12 | 8.54 | 11.50 | 8.53 | 8.41 | 31.19 |
| **3** | 15 | cities | 11.89 | 9.50 | 2.67 | 17.43 | 0.49 | 29.90 | 2.52 | 10.58 | 9.78 | 13.36 | 9.77 | 9.98 | 36.09 |
| **3** | 15 | country | 8.67 | 6.89 | 1.93 | 12.86 | 0.36 | 22.16 | 1.82 | 7.82 | 7.12 | 9.90 | 7.13 | 7.61 | 26.62 |
| **3** | 15 | suburbs | 10.00 | 7.96 | 2.24 | 14.79 | 0.41 | 25.47 | 2.11 | 8.99 | 8.22 | 11.38 | 8.22 | 8.69 | 30.64 |
| **3** | 16 | cities | 10.61 | 8.88 | 2.52 | 14.25 | 0.48 | 23.63 | 2.39 | 8.53 | 8.81 | 10.57 | 8.76 | 6.60 | 29.55 |
| **3** | 16 | country | 8.33 | 6.87 | 1.94 | 11.51 | 0.36 | 19.28 | 1.84 | 6.92 | 6.90 | 8.62 | 6.88 | 5.66 | 23.86 |
| **3** | 16 | suburbs | 9.17 | 7.60 | 2.15 | 12.54 | 0.41 | 20.93 | 2.04 | 7.53 | 7.60 | 9.36 | 7.57 | 6.04 | 26.00 |
| **4** | 1 | cities | 2.07 | 0.69 | (27.25) | (1.80) | 0.51 | 2.36 | 1.94 | 4.91 | 5.12 | (0.44) | 8.23 | (1.24) | 6.88 |
| **4** | 1 | country | 1.74 | 0.57 | (13.49) | (1.40) | 0.43 | 1.97 | 1.62 | 4.35 | 4.32 | (0.35) | 7.23 | (0.97) | 5.80 |
| **4** | 1 | suburbs | 1.87 | 0.62 | (36.93) | (1.68) | 0.46 | 2.14 | 1.75 | 4.33 | 4.60 | (0.41) | 7.27 | (1.15) | 6.19 |
| **4** | 2 | cities | 1.81 | 0.73 | 2.13 | 4.59 | 0.50 | 2.33 | 1.90 | 2.30 | 4.09 | 7.29 | 4.10 | 5.23 | 5.72 |
| **4** | 2 | country | 1.50 | 0.60 | 1.88 | 4.80 | 0.41 | 1.92 | 1.57 | 1.96 | 3.42 | (121.78) | 3.48 | (1.94) | 4.76 |
| **4** | 2 | suburbs | 1.63 | 0.66 | 1.95 | 4.32 | 0.45 | 2.10 | 1.72 | 2.08 | 3.70 | 8.33 | 3.72 | 5.04 | 5.17 |
| **4** | 3 | cities | 2.88 | 1.19 | 3.00 | 4.97 | 0.81 | 3.77 | 3.08 | 3.46 | 6.45 | 3.42 | 6.20 | 4.89 | 9.05 |
| **4** | 3 | country | 2.12 | 0.87 | 2.29 | 4.08 | 0.59 | 2.76 | 2.25 | 2.59 | 4.76 | 3.26 | 4.63 | 4.16 | 6.66 |
| **4** | 3 | suburbs | 2.43 | 1.00 | 2.55 | 4.29 | 0.68 | 3.17 | 2.59 | 2.93 | 5.44 | 3.04 | 5.24 | 4.25 | 7.63 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 4 | cities | 3.82 | 1.96 | 2.14 | 1.96 | 1.21 | 5.65 | 4.58 | 3.30 | 7.96 | 0.73 | 6.03 | 1.61 | 11.49 |
| **4** | 4 | country | 2.64 | 1.23 | 1.84 | 1.93 | 0.79 | 3.70 | 3.01 | 2.59 | 5.67 | 0.79 | 4.70 | 1.63 | 8.09 |
| **4** | 4 | suburbs | 3.12 | 1.51 | 1.99 | 1.96 | 0.95 | 4.46 | 3.62 | 2.91 | 6.62 | 0.77 | 5.30 | 1.64 | 9.49 |
| **4** | 13 | cities | 2.39 | 1.08 | 1.84 | 2.08 | 0.70 | 3.28 | 2.67 | 2.47 | 5.19 | 0.90 | 4.47 | 1.80 | 7.37 |
| **4** | 13 | country | 2.04 | 0.90 | 1.66 | 2.00 | 0.59 | 2.77 | 2.26 | 2.18 | 4.46 | 0.90 | 3.93 | 1.75 | 6.31 |
| **4** | 13 | suburbs | 2.19 | 0.98 | 1.74 | 2.03 | 0.64 | 3.00 | 2.44 | 2.30 | 4.78 | 0.90 | 4.16 | 1.76 | 6.78 |
| **4** | 14 | cities | 2.53 | 1.11 | 2.11 | 2.58 | 0.74 | 3.43 | 2.79 | 2.73 | 5.55 | 1.19 | 4.93 | 2.27 | 7.85 |
| **4** | 14 | country | 2.20 | 0.94 | 2.04 | 2.81 | 0.63 | 2.93 | 2.39 | 2.50 | 4.88 | 1.48 | 4.50 | 2.58 | 6.88 |
| **4** | 14 | suburbs | 2.35 | 1.02 | 2.06 | 2.67 | 0.68 | 3.15 | 2.57 | 2.60 | 5.17 | 1.31 | 4.68 | 2.40 | 7.30 |
| **4** | 15 | cities | 2.58 | 1.10 | 2.40 | 3.33 | 0.74 | 3.44 | 2.80 | 2.94 | 5.72 | 1.76 | 5.29 | 3.06 | 8.06 |
| **4** | 15 | country | 2.28 | 0.94 | 2.48 | 4.46 | 0.64 | 2.97 | 2.42 | 2.80 | 5.13 | 3.66 | 5.01 | 4.57 | 7.19 |
| **4** | 15 | suburbs | 2.41 | 1.01 | 2.43 | 3.78 | 0.68 | 3.18 | 2.59 | 2.85 | 5.39 | 2.35 | 5.12 | 3.63 | 7.57 |
| **4** | 16 | cities | 2.20 | 1.04 | 1.47 | 1.50 | 0.67 | 3.11 | 2.52 | 2.11 | 4.69 | 3.52 | 3.83 | 7.26 | 6.71 |
| **4** | 16 | country | 1.97 | 0.91 | 1.41 | 1.50 | 0.59 | 2.75 | 2.23 | 1.96 | 4.24 | (7.04) | 3.55 | (14.53) | 6.04 |
| **4** | 16 | suburbs | 2.06 | 0.96 | 1.43 | 1.49 | 0.62 | 2.89 | 2.35 | 2.01 | 4.42 | (4.70) | 3.65 | 7.26 | 6.31 |
| **5** | 1 | cities | 1.92 | 1.15 | 1.47 | 2.50 | 0.43 | 0.95 | 1.57 | 1.66 | 2.95 | 2.03 | 2.85 | 0.86 | 4.17 |
| **5** | 1 | country | 1.63 | 0.98 | 1.25 | 2.13 | 0.36 | 0.80 | 1.34 | 1.40 | 2.50 | 1.72 | 2.42 | 0.73 | 3.54 |
| **5** | 1 | suburbs | 1.77 | 1.06 | 1.35 | 2.29 | 0.39 | 0.86 | 1.44 | 1.51 | 2.70 | 1.86 | 2.61 | 0.79 | 3.81 |
| **5** | 2 | cities | 2.05 | 1.22 | 1.56 | 2.63 | 0.46 | 0.99 | 1.68 | 1.74 | 3.11 | 2.13 | 3.01 | 0.90 | 4.39 |
| **5** | 2 | country | 1.72 | 1.03 | 1.31 | 2.22 | 0.39 | 0.83 | 1.41 | 1.47 | 2.62 | 1.80 | 2.53 | 0.76 | 3.70 |
| **5** | 2 | suburbs | 1.87 | 1.12 | 1.43 | 2.41 | 0.42 | 0.90 | 1.53 | 1.59 | 2.85 | 1.95 | 2.75 | 0.82 | 4.02 |
| **5** | 3 | cities | 3.52 | 2.11 | 2.68 | 4.54 | 0.79 | 1.70 | 2.88 | 3.00 | 5.36 | 3.67 | 5.18 | 1.55 | 7.56 |
| **5** | 3 | country | 2.65 | 1.59 | 2.02 | 3.41 | 0.59 | 1.27 | 2.17 | 2.25 | 4.03 | 2.76 | 3.89 | 1.16 | 5.68 |
| **5** | 3 | suburbs | 3.03 | 1.81 | 2.31 | 3.90 | 0.68 | 1.46 | 2.48 | 2.58 | 4.61 | 3.15 | 4.45 | 1.33 | 6.50 |
| **5** | 4 | cities | 7.30 | 4.33 | 5.44 | 8.62 | 1.70 | 3.04 | 5.99 | 5.70 | 10.42 | 6.84 | 10.03 | 2.77 | 14.51 |
| **5** | 4 | country | 4.77 | 2.85 | 3.60 | 5.93 | 1.09 | 2.16 | 3.91 | 3.92 | 7.07 | 4.76 | 6.82 | 1.97 | 9.93 |
| **5** | 4 | suburbs | 5.83 | 3.47 | 4.38 | 7.15 | 1.33 | 2.58 | 4.78 | 4.73 | 8.55 | 5.72 | 8.25 | 2.36 | 11.98 |

## WOOD WOOL

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5** | 13 | cities | 3.26 | 1.95 | 2.47 | 4.15 | 0.73 | 1.54 | 2.67 | 2.74 | 4.91 | 3.35 | 4.74 | 1.41 | 6.92 |
| **5** | 13 | country | 2.78 | 1.66 | 2.11 | 3.55 | 0.62 | 1.32 | 2.28 | 2.35 | 4.20 | 2.87 | 4.06 | 1.21 | 5.92 |
| **5** | 13 | suburbs | 3.00 | 1.80 | 2.28 | 3.83 | 0.67 | 1.42 | 2.46 | 2.53 | 4.54 | 3.09 | 4.38 | 1.30 | 6.39 |
| **5** | 14 | cities | 3.34 | 2.00 | 2.53 | 4.26 | 0.75 | 1.59 | 2.73 | 2.82 | 5.05 | 3.44 | 4.87 | 1.45 | 7.11 |
| **5** | 14 | country | 2.87 | 1.72 | 2.18 | 3.67 | 0.64 | 1.37 | 2.35 | 2.43 | 4.35 | 2.97 | 4.20 | 1.25 | 6.13 |
| **5** | 14 | suburbs | 3.09 | 1.85 | 2.34 | 3.95 | 0.69 | 1.47 | 2.53 | 2.61 | 4.67 | 3.19 | 4.51 | 1.34 | 6.59 |
| **5** | 15 | cities | 3.30 | 1.98 | 2.51 | 4.23 | 0.74 | 1.58 | 2.70 | 2.80 | 5.01 | 3.42 | 4.84 | 1.44 | 7.06 |
| **5** | 15 | country | 2.84 | 1.70 | 2.16 | 3.65 | 0.64 | 1.36 | 2.32 | 2.41 | 4.31 | 2.95 | 4.16 | 1.24 | 6.08 |
| **5** | 15 | suburbs | 3.05 | 1.82 | 2.32 | 3.91 | 0.68 | 1.46 | 2.50 | 2.59 | 4.63 | 3.17 | 4.47 | 1.33 | 6.53 |
| **5** | 16 | cities | 3.13 | 1.86 | 2.35 | 3.85 | 0.71 | 1.39 | 2.57 | 2.55 | 4.60 | 3.08 | 4.44 | 1.27 | 6.45 |
| **5** | 16 | country | 2.82 | 1.68 | 2.13 | 3.51 | 0.64 | 1.28 | 2.31 | 2.32 | 4.19 | 2.82 | 4.04 | 1.17 | 5.88 |
| **5** | 16 | suburbs | 2.96 | 1.77 | 2.24 | 3.68 | 0.67 | 1.34 | 2.43 | 2.43 | 4.39 | 2.95 | 4.23 | 1.22 | 6.16 |
| **6** | 1 | cities | 1.19 | 0.88 | 1.17 | 4.02 | 0.24 | 13.78 | 1.00 | 3.72 | 4.44 | 5.70 | 3.28 | 2.50 | 5.39 |
| **6** | 1 | country | 1.08 | 0.80 | 1.06 | 3.59 | 0.21 | 11.48 | 0.91 | 3.27 | 3.91 | 4.99 | 2.95 | 2.69 | 4.82 |
| **6** | 1 | suburbs | 1.14 | 0.84 | 1.12 | 3.82 | 0.22 | 13.02 | 0.95 | 3.53 | 4.22 | 5.41 | 3.12 | 2.88 | 5.13 |
| **6** | 2 | cities | 1.20 | 0.88 | 1.17 | 3.53 | 0.25 | 6.93 | 1.03 | 2.82 | 3.37 | 4.09 | 3.10 | 4.35 | 4.73 |
| **6** | 2 | country | 1.08 | 0.79 | 1.06 | 3.19 | 0.22 | 6.23 | 0.93 | 2.54 | 3.04 | 3.69 | 2.79 | 3.90 | 4.26 |
| **6** | 2 | suburbs | 1.14 | 0.83 | 1.11 | 3.37 | 0.23 | 6.65 | 0.98 | 2.69 | 3.22 | 3.92 | 2.95 | 4.22 | 4.51 |
| **6** | 3 | cities | 1.93 | 1.41 | 1.89 | 5.63 | 0.40 | 10.64 | 1.66 | 4.44 | 5.30 | 6.43 | 4.97 | 6.33 | 7.53 |
| **6** | 3 | country | 1.61 | 1.18 | 1.58 | 4.68 | 0.33 | 8.76 | 1.39 | 3.68 | 4.40 | 5.32 | 4.14 | 5.14 | 6.27 |
| **6** | 3 | suburbs | 1.76 | 1.29 | 1.72 | 5.14 | 0.36 | 9.74 | 1.52 | 4.06 | 4.84 | 5.87 | 4.53 | 5.82 | 6.87 |
| **6** | 4 | cities | 3.00 | 2.17 | 2.91 | 7.70 | 0.65 | 10.87 | 2.65 | 5.46 | 6.52 | 7.66 | 7.24 | 4.78 | 10.28 |
| **6** | 4 | country | 2.24 | 1.62 | 2.18 | 6.08 | 0.47 | 9.63 | 1.95 | 4.51 | 5.38 | 6.40 | 5.55 | 4.68 | 8.12 |
| **6** | 4 | suburbs | 2.56 | 1.86 | 2.49 | 6.85 | 0.54 | 10.49 | 2.24 | 5.01 | 5.99 | 7.09 | 6.31 | 4.94 | 9.14 |
| **6** | 13 | cities | 1.85 | 1.34 | 1.80 | 5.07 | 0.39 | 8.20 | 1.61 | 3.79 | 4.52 | 5.39 | 4.61 | 4.06 | 6.77 |
| **6** | 13 | country | 1.70 | 1.23 | 1.65 | 4.70 | 0.36 | 7.78 | 1.47 | 3.54 | 4.23 | 5.05 | 4.25 | 3.94 | 6.28 |
| **6** | 13 | suburbs | 1.77 | 1.29 | 1.73 | 4.89 | 0.37 | 8.02 | 1.54 | 3.67 | 4.38 | 5.23 | 4.43 | 4.04 | 6.53 |

## WOOD WOOL

| Country | Arc | GL | PBT$_{\text{CC}}$ | PBT$_{\text{OD}}$ | PBT$_{\text{HT\_CE}}$ | PBT$_{\text{HT\_nCE}}$ | PBT$_{\text{PM}}$ | PBT$_{\text{IR\_hh}}$ | PBT$_{\text{POF}}$ | PBT$_{\text{AC}}$ | PBT$_{\text{ET}}$ | PBT$_{\text{EuF}}$ | PBT$_{\text{EuM}}$ | PBT$_{\text{Ec\_FW}}$ | PBT$_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6** | 14 | cities | 1.88 | 1.37 | 1.84 | 5.25 | 0.39 | 8.81 | 1.64 | 3.97 | 4.75 | 5.68 | 4.74 | 4.54 | 7.01 |
| **6** | 14 | country | 1.74 | 1.27 | 1.69 | 4.91 | 0.36 | 8.53 | 1.50 | 3.76 | 4.49 | 5.39 | 4.40 | 4.56 | 6.56 |
| **6** | 14 | suburbs | 1.81 | 1.32 | 1.76 | 5.08 | 0.38 | 8.72 | 1.57 | 3.88 | 4.63 | 5.55 | 4.57 | 4.60 | 6.79 |
| **6** | 15 | cities | 1.86 | 1.36 | 1.82 | 5.27 | 0.39 | 9.22 | 1.61 | 4.05 | 4.84 | 5.81 | 4.72 | 4.97 | 7.05 |
| **6** | 15 | country | 1.72 | 1.26 | 1.68 | 4.96 | 0.36 | 9.06 | 1.49 | 3.87 | 4.62 | 5.57 | 4.40 | 5.14 | 6.63 |
| **6** | 15 | suburbs | 1.79 | 1.31 | 1.75 | 5.12 | 0.37 | 9.19 | 1.55 | 3.97 | 4.74 | 5.71 | 4.56 | 5.11 | 6.85 |
| **6** | 16 | cities | 1.47 | 1.07 | 1.43 | 3.91 | 0.31 | 5.92 | 1.29 | 2.85 | 3.40 | 4.03 | 3.61 | 2.76 | 5.22 |
| **6** | 16 | country | 1.41 | 1.02 | 1.37 | 3.80 | 0.30 | 5.95 | 1.23 | 2.80 | 3.35 | 3.98 | 3.48 | 2.86 | 5.07 |
| **6** | 16 | suburbs | 1.43 | 1.04 | 1.40 | 3.85 | 0.30 | 5.96 | 1.25 | 2.83 | 3.38 | 4.01 | 3.54 | 2.83 | 5.15 |
| **7** | 5 | cities | 1.84 | 0.95 | 1.64 | 3.91 | 0.40 | 0.97 | 1.62 | 2.58 | 4.02 | 3.97 | 3.91 | 1.97 | 5.12 |
| **7** | 5 | country | 1.59 | 0.81 | 1.40 | 3.33 | 0.34 | 0.77 | 1.40 | 2.21 | 3.45 | 3.38 | 3.35 | 1.60 | 4.28 |
| **7** | 5 | suburbs | 1.70 | 0.83 | 1.47 | 3.48 | 0.37 | 0.70 | 1.50 | 2.36 | 3.69 | 3.55 | 3.57 | 1.52 | 4.32 |
| **7** | 6 | cities | 1.76 | 0.91 | 1.57 | 3.75 | 0.38 | 0.94 | 1.55 | 2.47 | 3.85 | 3.80 | 3.74 | 1.90 | 4.92 |
| **7** | 6 | country | 1.51 | 0.78 | 1.34 | 3.20 | 0.33 | 0.77 | 1.33 | 2.11 | 3.30 | 3.25 | 3.21 | 1.59 | 4.16 |
| **7** | 6 | suburbs | 1.62 | 0.80 | 1.41 | 3.34 | 0.35 | 0.69 | 1.43 | 2.25 | 3.53 | 3.40 | 3.41 | 1.49 | 4.17 |
| **7** | 7 | cities | 1.66 | 0.99 | 1.56 | 3.90 | 0.36 | 2.72 | 1.46 | 2.37 | 3.68 | 3.89 | 3.63 | 3.33 | 5.95 |
| **7** | 7 | country | 1.47 | 1.11 | 1.50 | 4.01 | 0.31 | (1.30) | 1.28 | 2.15 | 3.33 | 3.89 | 3.34 | (16.05) | 8.67 |
| **7** | 7 | suburbs | 1.55 | 0.92 | 1.45 | 3.60 | 0.33 | 2.25 | 1.36 | 2.20 | 3.42 | 3.60 | 3.37 | 2.94 | 5.45 |
| **7** | 8 | cities | 2.31 | 1.03 | 1.92 | 4.40 | 0.50 | 0.67 | 2.04 | 3.16 | 4.95 | 4.54 | 4.75 | 1.58 | 5.04 |
| **7** | 8 | country | 1.96 | 0.88 | 1.63 | 3.75 | 0.42 | 0.58 | 1.73 | 2.68 | 4.20 | 3.86 | 4.02 | 1.37 | 4.33 |
| **7** | 8 | suburbs | 2.13 | 0.95 | 1.76 | 4.05 | 0.46 | 0.61 | 1.88 | 2.90 | 4.55 | 4.17 | 4.36 | 1.45 | 4.63 |
| **7** | 17 | cities | 2.69 | 1.31 | 2.33 | 5.47 | 0.58 | 1.07 | 2.37 | 3.73 | 5.84 | 5.59 | 5.64 | 2.36 | 6.76 |
| **7** | 17 | country | 2.37 | 2.25 | 2.61 | 7.43 | 0.50 | (0.96) | 2.07 | 3.56 | 5.47 | 7.00 | 5.58 | (4.37) | 27.81 |
| **7** | 17 | suburbs | 2.49 | 1.36 | 2.26 | 5.49 | 0.53 | 1.80 | 2.19 | 3.51 | 5.46 | 5.53 | 5.34 | 3.27 | 7.59 |
| **7** | 18 | cities | 2.85 | 1.36 | 2.44 | 5.72 | 0.62 | 1.06 | 2.51 | 3.94 | 6.16 | 5.85 | 5.94 | 2.37 | 6.95 |
| **7** | 18 | country | 2.48 | 1.90 | 2.56 | 6.86 | 0.53 | (2.03) | 2.17 | 3.65 | 5.64 | 6.63 | 5.67 | (20.12) | 15.21 |
| **7** | 18 | suburbs | 2.62 | 1.38 | 2.34 | 5.62 | 0.56 | 1.48 | 2.31 | 3.68 | 5.73 | 5.69 | 5.58 | 2.94 | 7.45 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{\text{CC}}$** | **PBT$_{\text{OD}}$** | **PBT$_{\text{HT\_CE}}$** | **PBT$_{\text{HT\_nCE}}$** | **PBT$_{\text{PM}}$** | **PBT$_{\text{IR\_hh}}$** | **PBT$_{\text{POF}}$** | **PBT$_{\text{AC}}$** | **PBT$_{\text{ET}}$** | **PBT$_{\text{EuF}}$** | **PBT$_{\text{EuM}}$** | **PBT$_{\text{Ec\_FW}}$** | **PBT$_{\text{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7** | 19 | cities | 2.94 | 1.28 | 2.42 | 5.52 | 0.64 | 0.80 | 2.60 | 4.00 | 6.28 | 5.71 | 6.00 | 1.92 | 6.24 |
| **7** | 19 | country | 2.53 | 1.14 | 2.11 | 4.85 | 0.55 | 0.75 | 2.23 | 3.46 | 5.42 | 4.99 | 5.20 | 1.77 | 5.59 |
| **7** | 19 | suburbs | 2.71 | 1.20 | 2.24 | 5.13 | 0.59 | 0.76 | 2.39 | 3.69 | 5.80 | 5.29 | 5.55 | 1.81 | 5.83 |
| **7** | 20 | cities | 2.01 | 0.86 | 1.63 | 3.71 | 0.44 | 0.52 | 1.77 | 2.72 | 4.27 | 3.85 | 4.08 | 1.25 | 4.13 |
| **7** | 20 | country | 1.74 | 0.75 | 1.42 | 3.24 | 0.38 | 0.45 | 1.54 | 2.36 | 3.71 | 3.35 | 3.55 | 1.09 | 3.61 |
| **7** | 20 | suburbs | 1.86 | 0.80 | 1.52 | 3.44 | 0.40 | 0.48 | 1.64 | 2.52 | 3.96 | 3.57 | 3.78 | 1.16 | 3.84 |
| **8** | 5 | cities | 1.57 | 0.87 | 0.63 | 1.85 | 0.14 | 1.36 | 0.64 | 1.07 | 1.82 | 1.01 | 1.80 | 1.38 | 5.22 |
| **8** | 5 | country | 1.47 | 0.81 | 0.59 | 1.74 | 0.13 | 1.29 | 0.60 | 1.01 | 1.71 | 0.95 | 1.69 | 1.30 | 4.90 |
| **8** | 5 | suburbs | 1.52 | 0.84 | 0.61 | 1.79 | 0.13 | 1.32 | 0.62 | 1.04 | 1.76 | 0.98 | 1.74 | 1.33 | 5.05 |
| **8** | 6 | cities | 1.48 | 0.82 | 0.60 | 1.75 | 0.13 | 1.30 | 0.61 | 1.01 | 1.72 | 0.96 | 1.70 | 1.31 | 4.93 |
| **8** | 6 | country | 1.38 | 0.77 | 0.56 | 1.65 | 0.12 | 1.22 | 0.57 | 0.95 | 1.61 | 0.91 | 1.59 | 1.24 | 4.63 |
| **8** | 6 | suburbs | 1.43 | 0.79 | 0.58 | 1.69 | 0.12 | 1.25 | 0.59 | 0.98 | 1.66 | 0.93 | 1.65 | 1.27 | 4.77 |
| **8** | 7 | cities | 1.55 | 0.86 | 0.63 | 1.84 | 0.13 | 1.36 | 0.63 | 1.06 | 1.80 | 1.01 | 1.78 | 1.38 | 5.17 |
| **8** | 7 | country | 1.45 | 0.80 | 0.59 | 1.73 | 0.13 | 1.28 | 0.59 | 1.00 | 1.69 | 0.95 | 1.67 | 1.30 | 4.85 |
| **8** | 7 | suburbs | 1.50 | 0.83 | 0.61 | 1.78 | 0.13 | 1.31 | 0.61 | 1.03 | 1.75 | 0.97 | 1.73 | 1.33 | 5.00 |
| **8** | 8 | cities | 2.29 | 1.26 | 0.94 | 3.23 | 0.19 | 2.69 | 0.91 | 1.77 | 2.71 | 2.05 | 2.70 | 2.73 | 8.09 |
| **8** | 8 | country | 2.15 | 1.19 | 0.88 | 3.07 | 0.18 | 2.57 | 0.86 | 1.68 | 2.56 | 1.97 | 2.54 | 2.62 | 7.64 |
| **8** | 8 | suburbs | 2.21 | 1.22 | 0.90 | 3.09 | 0.19 | 2.55 | 0.89 | 1.70 | 2.62 | 1.94 | 2.60 | 2.59 | 7.80 |
| **8** | 17 | cities | 2.40 | 1.33 | 0.97 | 2.87 | 0.21 | 2.12 | 0.98 | 1.65 | 2.80 | 1.58 | 2.77 | 2.15 | 8.04 |
| **8** | 17 | country | 2.23 | 1.23 | 0.90 | 2.66 | 0.19 | 1.97 | 0.91 | 1.54 | 2.60 | 1.47 | 2.57 | 2.00 | 7.45 |
| **8** | 17 | suburbs | 2.31 | 1.28 | 0.94 | 2.75 | 0.20 | 2.04 | 0.95 | 1.59 | 2.69 | 1.51 | 2.66 | 2.07 | 7.73 |
| **8** | 18 | cities | 2.55 | 1.41 | 1.03 | 3.04 | 0.22 | 2.26 | 1.04 | 1.76 | 2.97 | 1.68 | 2.93 | 2.29 | 8.52 |
| **8** | 18 | country | 2.36 | 1.30 | 0.96 | 2.82 | 0.20 | 2.10 | 0.96 | 1.63 | 2.75 | 1.56 | 2.72 | 2.13 | 7.90 |
| **8** | 18 | suburbs | 2.45 | 1.35 | 0.99 | 2.92 | 0.21 | 2.17 | 1.00 | 1.69 | 2.85 | 1.61 | 2.82 | 2.20 | 8.19 |
| **8** | 19 | cities | 2.69 | 1.49 | 1.09 | 3.26 | 0.23 | 2.44 | 1.10 | 1.87 | 3.14 | 1.82 | 3.11 | 2.48 | 9.05 |
| **8** | 19 | country | 2.51 | 1.39 | 1.02 | 3.06 | 0.22 | 2.30 | 1.02 | 1.76 | 2.93 | 1.71 | 2.90 | 2.33 | 8.46 |
| **8** | 19 | suburbs | 2.60 | 1.44 | 1.05 | 3.15 | 0.22 | 2.35 | 1.06 | 1.81 | 3.03 | 1.75 | 3.00 | 2.39 | 8.73 |

## WOOD WOOL

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **8** | 20 | cities | 2.05 | 1.13 | 0.83 | 2.60 | 0.18 | 2.00 | 0.83 | 1.47 | 2.41 | 1.50 | 2.39 | 2.03 | 7.01 |
| **8** | 20 | country | 1.92 | 1.06 | 0.78 | 2.46 | 0.16 | 1.90 | 0.78 | 1.39 | 2.25 | 1.43 | 2.23 | 1.93 | 6.57 |
| **8** | 20 | suburbs | 1.98 | 1.09 | 0.80 | 2.50 | 0.17 | 1.92 | 0.80 | 1.42 | 2.32 | 1.44 | 2.30 | 1.95 | 6.75 |
| **9** | 5 | cities | 0.96 | 0.79 | 0.69 | 1.37 | 0.18 | 1.14 | 0.75 | 1.15 | 1.85 | 0.78 | 1.76 | 0.98 | 3.70 |
| **9** | 5 | country | 0.86 | 0.71 | 0.62 | 1.24 | 0.16 | 1.03 | 0.67 | 1.04 | 1.67 | 0.70 | 1.59 | 0.89 | 3.33 |
| **9** | 5 | suburbs | 0.91 | 0.75 | 0.65 | 1.30 | 0.17 | 1.08 | 0.71 | 1.09 | 1.76 | 0.74 | 1.67 | 0.93 | 3.51 |
| **9** | 6 | cities | 0.90 | 0.74 | 0.64 | 1.29 | 0.17 | 1.08 | 0.70 | 1.08 | 1.74 | 0.73 | 1.65 | 0.92 | 3.48 |
| **9** | 6 | country | 0.81 | 0.67 | 0.58 | 1.16 | 0.15 | 0.97 | 0.63 | 0.97 | 1.57 | 0.66 | 1.49 | 0.83 | 3.13 |
| **9** | 6 | suburbs | 0.85 | 0.70 | 0.61 | 1.22 | 0.16 | 1.02 | 0.67 | 1.02 | 1.65 | 0.69 | 1.57 | 0.88 | 3.30 |
| **9** | 7 | cities | 0.96 | 0.79 | 0.68 | 1.37 | 0.18 | 1.16 | 0.75 | 1.15 | 1.85 | 0.78 | 1.76 | 0.99 | 3.70 |
| **9** | 7 | country | 0.86 | 0.71 | 0.62 | 1.24 | 0.16 | 1.05 | 0.67 | 1.04 | 1.67 | 0.71 | 1.59 | 0.89 | 3.34 |
| **9** | 7 | suburbs | 0.91 | 0.75 | 0.65 | 1.30 | 0.17 | 1.10 | 0.71 | 1.09 | 1.75 | 0.74 | 1.67 | 0.94 | 3.51 |
| **9** | 8 | cities | 1.19 | 0.98 | 0.85 | 1.73 | 0.22 | 1.48 | 0.92 | 1.43 | 2.30 | 0.99 | 2.19 | 1.25 | 4.62 |
| **9** | 8 | country | 1.07 | 0.89 | 0.77 | 1.57 | 0.20 | 1.36 | 0.83 | 1.30 | 2.08 | 0.91 | 1.98 | 1.14 | 4.19 |
| **9** | 8 | suburbs | 1.13 | 0.93 | 0.81 | 1.64 | 0.21 | 1.41 | 0.88 | 1.36 | 2.19 | 0.94 | 2.08 | 1.19 | 4.39 |
| **9** | 17 | cities | 1.52 | 1.25 | 1.09 | 2.17 | 0.28 | 1.80 | 1.19 | 1.82 | 2.93 | 1.22 | 2.79 | 1.55 | 5.86 |
| **9** | 17 | country | 1.35 | 1.11 | 0.96 | 1.93 | 0.25 | 1.61 | 1.05 | 1.62 | 2.61 | 1.09 | 2.48 | 1.38 | 5.21 |
| **9** | 17 | suburbs | 1.43 | 1.17 | 1.02 | 2.04 | 0.26 | 1.69 | 1.11 | 1.71 | 2.76 | 1.15 | 2.62 | 1.46 | 5.51 |
| **9** | 18 | cities | 1.60 | 1.31 | 1.14 | 2.28 | 0.30 | 1.90 | 1.25 | 1.92 | 3.09 | 1.29 | 2.94 | 1.63 | 6.18 |
| **9** | 18 | country | 1.42 | 1.17 | 1.02 | 2.03 | 0.26 | 1.69 | 1.11 | 1.71 | 2.75 | 1.15 | 2.61 | 1.46 | 5.50 |
| **9** | 18 | suburbs | 1.51 | 1.24 | 1.08 | 2.15 | 0.28 | 1.79 | 1.18 | 1.81 | 2.91 | 1.21 | 2.76 | 1.54 | 5.81 |
| **9** | 19 | cities | 1.67 | 1.37 | 1.19 | 2.37 | 0.31 | 1.96 | 1.30 | 2.00 | 3.22 | 1.34 | 3.06 | 1.69 | 6.42 |
| **9** | 19 | country | 1.50 | 1.23 | 1.07 | 2.13 | 0.28 | 1.77 | 1.17 | 1.79 | 2.89 | 1.21 | 2.75 | 1.53 | 5.77 |
| **9** | 19 | suburbs | 1.57 | 1.29 | 1.12 | 2.24 | 0.29 | 1.86 | 1.23 | 1.89 | 3.04 | 1.27 | 2.89 | 1.60 | 6.07 |
| **9** | 20 | cities | 1.23 | 1.01 | 0.88 | 1.76 | 0.23 | 1.46 | 0.96 | 1.48 | 2.38 | 1.00 | 2.26 | 1.26 | 4.75 |
| **9** | 20 | country | 1.12 | 0.92 | 0.80 | 1.61 | 0.21 | 1.35 | 0.87 | 1.35 | 2.17 | 0.91 | 2.06 | 1.16 | 4.34 |
| **9** | 20 | suburbs | 1.17 | 0.96 | 0.84 | 1.67 | 0.22 | 1.40 | 0.91 | 1.40 | 2.26 | 0.95 | 2.15 | 1.20 | 4.51 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | 5 | cities | 1.73 | 1.65 | 0.71 | 2.69 | 0.14 | 5.58 | 0.68 | 1.50 | 2.06 | 1.73 | 2.03 | 2.46 | 8.20 |
| **10** | 5 | country | 1.56 | 1.48 | 0.64 | 2.45 | 0.13 | 5.22 | 0.62 | 1.36 | 1.86 | 1.59 | 1.83 | 2.26 | 7.42 |
| **10** | 5 | suburbs | 1.64 | 1.56 | 0.67 | 2.56 | 0.14 | 5.36 | 0.65 | 1.43 | 1.96 | 1.65 | 1.93 | 2.35 | 7.79 |
| **10** | 6 | cities | 1.65 | 1.57 | 0.68 | 2.61 | 0.14 | 5.72 | 0.65 | 1.44 | 1.97 | 1.71 | 1.94 | 2.43 | 7.88 |
| **10** | 6 | country | 1.48 | 1.41 | 0.61 | 2.37 | 0.12 | 5.34 | 0.59 | 1.30 | 1.77 | 1.57 | 1.75 | 2.22 | 7.12 |
| **10** | 6 | suburbs | 1.56 | 1.49 | 0.64 | 2.48 | 0.13 | 5.47 | 0.62 | 1.36 | 1.87 | 1.63 | 1.84 | 2.31 | 7.48 |
| **10** | 7 | cities | 1.61 | 1.53 | 0.66 | 2.61 | 0.13 | 6.27 | 0.63 | 1.41 | 1.92 | 1.76 | 1.90 | 2.49 | 7.77 |
| **10** | 7 | country | 1.47 | 1.39 | 0.61 | 2.46 | 0.12 | 6.62 | 0.58 | 1.29 | 1.75 | 1.72 | 1.74 | 2.42 | 7.20 |
| **10** | 7 | suburbs | 1.54 | 1.46 | 0.63 | 2.53 | 0.13 | 6.35 | 0.60 | 1.35 | 1.83 | 1.73 | 1.81 | 2.44 | 7.47 |
| **10** | 8 | cities | 1.95 | 1.82 | 0.81 | 3.67 | 0.16 | 20.62 | 0.75 | 1.73 | 2.31 | 3.01 | 2.31 | 4.17 | 10.01 |
| **10** | 8 | country | 1.82 | 1.69 | 0.76 | 3.67 | 0.15 | 68.15 | 0.70 | 1.63 | 2.15 | 3.40 | 2.17 | 4.63 | 9.60 |
| **10** | 8 | suburbs | 1.88 | 1.76 | 0.78 | 3.65 | 0.15 | 27.81 | 0.73 | 1.68 | 2.24 | 3.13 | 2.24 | 4.31 | 9.79 |
| **10** | 17 | cities | 2.52 | 2.42 | 1.03 | 3.74 | 0.21 | 6.79 | 1.01 | 2.18 | 3.02 | 2.29 | 2.96 | 3.27 | 11.72 |
| **10** | 17 | country | 2.25 | 2.16 | 0.92 | 3.41 | 0.19 | 6.54 | 0.90 | 1.96 | 2.70 | 2.13 | 2.65 | 3.04 | 10.56 |
| **10** | 17 | suburbs | 2.38 | 2.28 | 0.97 | 3.56 | 0.20 | 6.62 | 0.95 | 2.06 | 2.85 | 2.20 | 2.80 | 3.14 | 11.10 |
| **10** | 18 | cities | 2.67 | 2.56 | 1.09 | 3.96 | 0.22 | 7.21 | 1.06 | 2.31 | 3.20 | 2.43 | 3.14 | 3.47 | 12.40 |
| **10** | 18 | country | 2.39 | 2.29 | 0.98 | 3.62 | 0.20 | 6.98 | 0.95 | 2.07 | 2.86 | 2.27 | 2.81 | 3.23 | 11.20 |
| **10** | 18 | suburbs | 2.52 | 2.41 | 1.03 | 3.78 | 0.21 | 7.06 | 1.00 | 2.18 | 3.02 | 2.34 | 2.96 | 3.34 | 11.76 |
| **10** | 19 | cities | 2.84 | 2.73 | 1.16 | 4.14 | 0.24 | 7.21 | 1.13 | 2.45 | 3.40 | 2.49 | 3.33 | 3.57 | 13.07 |
| **10** | 19 | country | 2.60 | 2.49 | 1.06 | 3.87 | 0.22 | 7.14 | 1.03 | 2.25 | 3.11 | 2.38 | 3.05 | 3.41 | 12.08 |
| **10** | 19 | suburbs | 2.71 | 2.60 | 1.11 | 3.99 | 0.23 | 7.13 | 1.08 | 2.34 | 3.24 | 2.43 | 3.18 | 3.47 | 12.53 |
| **10** | 20 | cities | 2.05 | 1.96 | 0.84 | 3.10 | 0.17 | 5.91 | 0.81 | 1.78 | 2.45 | 1.93 | 2.41 | 2.76 | 9.60 |
| **10** | 20 | country | 1.95 | 1.86 | 0.80 | 3.08 | 0.16 | 6.64 | 0.77 | 1.70 | 2.33 | 2.00 | 2.30 | 2.85 | 9.31 |
| **10** | 20 | suburbs | 1.99 | 1.90 | 0.82 | 3.06 | 0.16 | 6.17 | 0.79 | 1.73 | 2.38 | 1.95 | 2.34 | 2.77 | 9.39 |
| **11** | 5 | cities | 1.75 | 2.62 | 0.52 | 0.96 | 0.14 | 1.32 | 0.71 | 0.86 | 1.89 | 0.39 | 1.65 | 0.75 | 8.81 |
| **11** | 5 | country | 1.59 | 2.38 | 0.48 | 0.87 | 0.13 | 1.20 | 0.65 | 0.78 | 1.72 | 0.36 | 1.50 | 0.68 | 8.01 |
| **11** | 5 | suburbs | 1.67 | 2.50 | 0.50 | 0.92 | 0.14 | 1.26 | 0.68 | 0.82 | 1.81 | 0.38 | 1.58 | 0.72 | 8.40 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11** | 6 | cities | 1.66 | 2.48 | 0.50 | 0.91 | 0.14 | 1.26 | 0.68 | 0.81 | 1.80 | 0.38 | 1.57 | 0.72 | 8.39 |
| **11** | 6 | country | 1.51 | 2.26 | 0.45 | 0.83 | 0.12 | 1.15 | 0.61 | 0.74 | 1.63 | 0.34 | 1.42 | 0.65 | 7.62 |
| **11** | 6 | suburbs | 1.58 | 2.37 | 0.47 | 0.87 | 0.13 | 1.20 | 0.64 | 0.78 | 1.71 | 0.36 | 1.50 | 0.68 | 8.00 |
| **11** | 7 | cities | 1.67 | 2.51 | 0.50 | 0.93 | 0.14 | 1.29 | 0.68 | 0.82 | 1.80 | 0.38 | 1.58 | 0.73 | 8.51 |
| **11** | 7 | country | 1.53 | 2.29 | 0.46 | 0.85 | 0.12 | 1.18 | 0.62 | 0.75 | 1.65 | 0.35 | 1.44 | 0.67 | 7.79 |
| **11** | 7 | suburbs | 1.60 | 2.40 | 0.48 | 0.89 | 0.13 | 1.23 | 0.65 | 0.78 | 1.73 | 0.37 | 1.51 | 0.70 | 8.15 |
| **11** | 8 | cities | 2.10 | 3.20 | 0.63 | 1.21 | 0.17 | 1.75 | 0.84 | 1.03 | 2.25 | 0.51 | 1.99 | 0.97 | 11.24 |
| **11** | 8 | country | 1.92 | 2.94 | 0.57 | 1.12 | 0.15 | 1.62 | 0.76 | 0.94 | 2.05 | 0.47 | 1.82 | 0.90 | 10.39 |
| **11** | 8 | suburbs | 2.02 | 3.07 | 0.60 | 1.17 | 0.16 | 1.69 | 0.80 | 0.99 | 2.15 | 0.49 | 1.91 | 0.94 | 10.83 |
| **11** | 17 | cities | 2.67 | 3.97 | 0.80 | 1.45 | 0.22 | 1.99 | 1.09 | 1.31 | 2.89 | 0.59 | 2.52 | 1.13 | 13.30 |
| **11** | 17 | country | 2.40 | 3.58 | 0.72 | 1.31 | 0.20 | 1.80 | 0.98 | 1.18 | 2.60 | 0.54 | 2.27 | 1.03 | 12.02 |
| **11** | 17 | suburbs | 2.53 | 3.76 | 0.75 | 1.38 | 0.21 | 1.89 | 1.03 | 1.24 | 2.73 | 0.56 | 2.39 | 1.08 | 12.63 |
| **11** | 18 | cities | 2.81 | 4.19 | 0.84 | 1.53 | 0.23 | 2.10 | 1.15 | 1.38 | 3.04 | 0.63 | 2.65 | 1.20 | 14.03 |
| **11** | 18 | country | 2.54 | 3.78 | 0.76 | 1.38 | 0.21 | 1.90 | 1.04 | 1.24 | 2.74 | 0.57 | 2.39 | 1.08 | 12.70 |
| **11** | 18 | suburbs | 2.67 | 3.97 | 0.80 | 1.45 | 0.22 | 1.99 | 1.09 | 1.31 | 2.88 | 0.60 | 2.52 | 1.14 | 13.33 |
| **11** | 19 | cities | 2.98 | 4.43 | 0.89 | 1.61 | 0.25 | 2.21 | 1.22 | 1.46 | 3.22 | 0.66 | 2.81 | 1.26 | 14.79 |
| **11** | 19 | country | 2.70 | 4.02 | 0.81 | 1.47 | 0.22 | 2.02 | 1.10 | 1.32 | 2.92 | 0.60 | 2.55 | 1.15 | 13.48 |
| **11** | 19 | suburbs | 2.83 | 4.21 | 0.84 | 1.54 | 0.23 | 2.10 | 1.16 | 1.39 | 3.06 | 0.63 | 2.67 | 1.20 | 14.10 |
| **11** | 20 | cities | 2.15 | 3.21 | 0.64 | 1.18 | 0.18 | 1.63 | 0.88 | 1.05 | 2.32 | 0.49 | 2.03 | 0.93 | 10.84 |
| **11** | 20 | country | 1.99 | 2.99 | 0.59 | 1.10 | 0.16 | 1.53 | 0.81 | 0.98 | 2.15 | 0.45 | 1.88 | 0.87 | 10.14 |
| **11** | 20 | suburbs | 2.06 | 3.09 | 0.62 | 1.14 | 0.17 | 1.57 | 0.84 | 1.01 | 2.23 | 0.47 | 1.95 | 0.89 | 10.45 |
| **12** | 5 | cities | 0.67 | 0.43 | 0.97 | 1.11 | 0.48 | 1.40 | 1.40 | 0.67 | 1.96 | 0.98 | 1.93 | 0.79 | 2.65 |
| **12** | 5 | country | 0.60 | 0.39 | 0.87 | 1.01 | 0.43 | 1.27 | 1.27 | 0.61 | 1.77 | 0.89 | 1.75 | 0.72 | 2.40 |
| **12** | 5 | suburbs | 0.64 | 0.41 | 0.92 | 1.06 | 0.46 | 1.34 | 1.33 | 0.64 | 1.86 | 0.93 | 1.84 | 0.76 | 2.52 |
| **12** | 6 | cities | 0.62 | 0.40 | 0.90 | 1.04 | 0.45 | 1.31 | 1.31 | 0.63 | 1.82 | 0.91 | 1.80 | 0.74 | 2.47 |
| **12** | 6 | country | 0.57 | 0.36 | 0.82 | 0.94 | 0.41 | 1.19 | 1.19 | 0.57 | 1.66 | 0.83 | 1.64 | 0.67 | 2.25 |
| **12** | 6 | suburbs | 0.59 | 0.38 | 0.86 | 0.99 | 0.43 | 1.25 | 1.25 | 0.60 | 1.74 | 0.87 | 1.72 | 0.71 | 2.36 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **12** | 7 | cities | 0.64 | 0.41 | 0.93 | 1.07 | 0.46 | 1.35 | 1.34 | 0.64 | 1.88 | 0.94 | 1.85 | 0.76 | 2.54 |
| **12** | 7 | country | 0.58 | 0.37 | 0.84 | 0.96 | 0.42 | 1.22 | 1.22 | 0.58 | 1.70 | 0.85 | 1.67 | 0.69 | 2.30 |
| **12** | 7 | suburbs | 0.61 | 0.39 | 0.88 | 1.01 | 0.44 | 1.28 | 1.28 | 0.61 | 1.78 | 0.89 | 1.76 | 0.72 | 2.41 |
| **12** | 8 | cities | 0.86 | 0.55 | 1.25 | 1.44 | 0.62 | 1.82 | 1.82 | 0.87 | 2.54 | 1.27 | 2.50 | 1.04 | 3.44 |
| **12** | 8 | country | 0.77 | 0.49 | 1.11 | 1.28 | 0.55 | 1.62 | 1.62 | 0.77 | 2.27 | 1.13 | 2.23 | 0.93 | 3.06 |
| **12** | 8 | suburbs | 0.82 | 0.52 | 1.18 | 1.36 | 0.58 | 1.72 | 1.71 | 0.82 | 2.40 | 1.20 | 2.37 | 0.98 | 3.25 |
| **12** | 17 | cities | 1.04 | 0.67 | 1.51 | 1.73 | 0.75 | 2.19 | 2.19 | 1.05 | 3.05 | 1.53 | 3.01 | 1.24 | 4.13 |
| **12** | 17 | country | 0.93 | 0.59 | 1.34 | 1.54 | 0.66 | 1.95 | 1.94 | 0.93 | 2.71 | 1.36 | 2.68 | 1.10 | 3.68 |
| **12** | 17 | suburbs | 0.98 | 0.63 | 1.42 | 1.63 | 0.70 | 2.06 | 2.06 | 0.98 | 2.87 | 1.44 | 2.84 | 1.17 | 3.89 |
| **12** | 18 | cities | 1.09 | 0.70 | 1.58 | 1.81 | 0.78 | 2.29 | 2.29 | 1.09 | 3.19 | 1.60 | 3.15 | 1.30 | 4.33 |
| **12** | 18 | country | 0.97 | 0.62 | 1.41 | 1.62 | 0.70 | 2.05 | 2.04 | 0.98 | 2.85 | 1.43 | 2.81 | 1.16 | 3.86 |
| **12** | 18 | suburbs | 1.03 | 0.66 | 1.49 | 1.71 | 0.74 | 2.16 | 2.16 | 1.03 | 3.01 | 1.51 | 2.97 | 1.23 | 4.08 |
| **12** | 19 | cities | 1.18 | 0.76 | 1.71 | 1.97 | 0.85 | 2.49 | 2.48 | 1.19 | 3.46 | 1.73 | 3.42 | 1.41 | 4.69 |
| **12** | 19 | country | 1.07 | 0.68 | 1.55 | 1.78 | 0.77 | 2.25 | 2.25 | 1.07 | 3.13 | 1.57 | 3.09 | 1.27 | 4.25 |
| **12** | 19 | suburbs | 1.12 | 0.72 | 1.62 | 1.87 | 0.81 | 2.36 | 2.36 | 1.13 | 3.29 | 1.65 | 3.25 | 1.34 | 4.46 |
| **12** | 20 | cities | 0.81 | 0.51 | 1.16 | 1.34 | 0.58 | 1.69 | 1.69 | 0.81 | 2.36 | 1.18 | 2.33 | 0.96 | 3.20 |
| **12** | 20 | country | 0.76 | 0.48 | 1.10 | 1.26 | 0.54 | 1.59 | 1.59 | 0.76 | 2.23 | 1.11 | 2.20 | 0.91 | 3.01 |
| **12** | 20 | suburbs | 0.78 | 0.50 | 1.12 | 1.30 | 0.56 | 1.64 | 1.63 | 0.78 | 2.28 | 1.14 | 2.25 | 0.93 | 3.09 |
| **13** | 5 | cities | 1.38 | 1.09 | 3.83 | 3.99 | 1.77 | 7.87 | 3.27 | 3.49 | 5.42 | 3.93 | 5.39 | 2.86 | 5.35 |
| **13** | 5 | country | 1.22 | 0.96 | 3.38 | 3.52 | 1.56 | 6.96 | 2.89 | 3.08 | 4.79 | 3.47 | 4.76 | 2.53 | 4.72 |
| **13** | 5 | suburbs | 1.29 | 1.03 | 3.60 | 3.75 | 1.66 | 7.40 | 3.07 | 3.28 | 5.10 | 3.69 | 5.06 | 2.69 | 5.03 |
| **13** | 6 | cities | 1.29 | 1.02 | 3.60 | 3.75 | 1.66 | 7.43 | 3.07 | 3.28 | 5.10 | 3.71 | 5.06 | 2.70 | 5.02 |
| **13** | 6 | country | 1.14 | 0.91 | 3.19 | 3.32 | 1.47 | 6.59 | 2.72 | 2.90 | 4.52 | 3.29 | 4.48 | 2.39 | 4.45 |
| **13** | 6 | suburbs | 1.22 | 0.96 | 3.39 | 3.53 | 1.56 | 6.99 | 2.89 | 3.08 | 4.80 | 3.49 | 4.76 | 2.54 | 4.72 |
| **13** | 7 | cities | 1.32 | 1.05 | 3.68 | 3.84 | 1.70 | 7.59 | 3.14 | 3.35 | 5.22 | 3.79 | 5.18 | 2.76 | 5.14 |
| **13** | 7 | country | 1.17 | 0.93 | 3.27 | 3.41 | 1.50 | 6.77 | 2.79 | 2.98 | 4.63 | 3.38 | 4.60 | 2.46 | 4.56 |
| **13** | 7 | suburbs | 1.25 | 0.99 | 3.47 | 3.62 | 1.60 | 7.17 | 2.96 | 3.16 | 4.91 | 3.58 | 4.87 | 2.61 | 4.84 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | 8 | cities | 1.81 | 1.43 | 5.13 | 5.37 | 2.31 | 10.99 | 4.29 | 4.62 | 7.24 | 5.50 | 7.14 | 4.04 | 7.07 |
| **13** | 8 | country | 1.58 | 1.25 | 4.47 | 4.68 | 2.01 | 9.57 | 3.74 | 4.02 | 6.31 | 4.78 | 6.22 | 3.52 | 6.16 |
| **13** | 8 | suburbs | 1.69 | 1.34 | 4.79 | 5.02 | 2.16 | 10.26 | 4.01 | 4.32 | 6.77 | 5.13 | 6.67 | 3.77 | 6.61 |
| **13** | 17 | cities | 2.04 | 1.62 | 5.67 | 5.90 | 2.62 | 11.58 | 4.85 | 5.17 | 8.03 | 5.78 | 7.98 | 4.20 | 7.93 |
| **13** | 17 | country | 1.78 | 1.41 | 4.94 | 5.14 | 2.29 | 10.09 | 4.23 | 4.51 | 7.00 | 5.03 | 6.96 | 3.65 | 6.91 |
| **13** | 17 | suburbs | 1.90 | 1.51 | 5.27 | 5.49 | 2.44 | 10.78 | 4.52 | 4.82 | 7.48 | 5.38 | 7.43 | 3.91 | 7.38 |
| **13** | 18 | cities | 2.15 | 1.70 | 5.95 | 6.19 | 2.75 | 12.16 | 5.10 | 5.43 | 8.43 | 6.06 | 8.38 | 4.41 | 8.33 |
| **13** | 18 | country | 1.88 | 1.49 | 5.21 | 5.42 | 2.41 | 10.64 | 4.46 | 4.75 | 7.38 | 5.31 | 7.33 | 3.86 | 7.29 |
| **13** | 18 | suburbs | 2.00 | 1.59 | 5.55 | 5.77 | 2.57 | 11.34 | 4.75 | 5.07 | 7.86 | 5.66 | 7.81 | 4.11 | 7.76 |
| **13** | 19 | cities | 2.29 | 1.81 | 6.34 | 6.59 | 2.93 | 12.95 | 5.43 | 5.78 | 8.98 | 6.46 | 8.92 | 4.69 | 8.87 |
| **13** | 19 | country | 2.04 | 1.62 | 5.67 | 5.90 | 2.62 | 11.61 | 4.85 | 5.17 | 8.03 | 5.79 | 7.98 | 4.21 | 7.93 |
| **13** | 19 | suburbs | 2.16 | 1.71 | 5.98 | 6.22 | 2.77 | 12.23 | 5.12 | 5.46 | 8.47 | 6.10 | 8.42 | 4.43 | 8.36 |
| **13** | 20 | cities | 1.59 | 1.26 | 4.42 | 4.60 | 2.04 | 9.09 | 3.77 | 4.03 | 6.26 | 4.53 | 6.22 | 3.30 | 6.17 |
| **13** | 20 | country | 1.49 | 1.18 | 4.15 | 4.33 | 1.91 | 8.56 | 3.55 | 3.78 | 5.89 | 4.27 | 5.84 | 3.11 | 5.80 |
| **13** | 20 | suburbs | 1.53 | 1.21 | 4.26 | 4.44 | 1.96 | 8.77 | 3.64 | 3.88 | 6.04 | 4.38 | 5.99 | 3.19 | 5.95 |
| **14** | 5 | cities | 1.40 | 0.72 | 2.72 | 3.48 | 1.03 | 1.37 | 2.67 | 2.38 | 4.46 | 4.00 | 4.44 | 2.16 | 4.37 |
| **14** | 5 | country | 1.24 | 0.64 | 2.41 | 3.09 | 0.92 | 1.22 | 2.37 | 2.11 | 3.96 | 3.55 | 3.94 | 1.92 | 3.88 |
| **14** | 5 | suburbs | 1.32 | 0.67 | 2.56 | 3.27 | 0.97 | 1.28 | 2.51 | 2.24 | 4.19 | 3.76 | 4.18 | 2.02 | 4.11 |
| **14** | 6 | cities | 1.31 | 0.67 | 2.55 | 3.26 | 0.97 | 1.29 | 2.50 | 2.23 | 4.18 | 3.75 | 4.16 | 2.03 | 4.10 |
| **14** | 6 | country | 1.16 | 0.60 | 2.27 | 2.90 | 0.86 | 1.15 | 2.22 | 1.98 | 3.72 | 3.34 | 3.70 | 1.81 | 3.65 |
| **14** | 6 | suburbs | 1.23 | 0.63 | 2.40 | 3.07 | 0.91 | 1.20 | 2.36 | 2.10 | 3.94 | 3.53 | 3.92 | 1.90 | 3.86 |
| **14** | 7 | cities | 1.32 | 0.68 | 2.59 | 3.31 | 0.98 | 1.36 | 2.52 | 2.25 | 4.23 | 3.83 | 4.21 | 2.13 | 4.18 |
| **14** | 7 | country | 1.18 | 0.61 | 2.33 | 2.97 | 0.87 | 1.27 | 2.25 | 2.01 | 3.80 | 3.45 | 3.77 | 1.97 | 3.76 |
| **14** | 7 | suburbs | 1.25 | 0.64 | 2.45 | 3.13 | 0.92 | 1.30 | 2.38 | 2.13 | 4.00 | 3.62 | 3.97 | 2.02 | 3.95 |
| **14** | 8 | cities | 1.89 | 0.97 | 3.71 | 4.75 | 1.40 | 1.98 | 3.61 | 3.22 | 6.07 | 5.50 | 6.03 | 3.08 | 5.99 |
| **14** | 8 | country | 1.63 | 0.84 | 3.21 | 4.10 | 1.21 | 1.70 | 3.12 | 2.79 | 5.25 | 4.75 | 5.21 | 2.64 | 5.18 |
| **14** | 8 | suburbs | 1.76 | 0.91 | 3.45 | 4.41 | 1.30 | 1.82 | 3.36 | 3.00 | 5.64 | 5.10 | 5.61 | 2.83 | 5.56 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | $\textbf{PBT}_{\textbf{CC}}$ | $\textbf{PBT}_{\textbf{OD}}$ | $\textbf{PBT}_{\textbf{HT\_CE}}$ | $\textbf{PBT}_{\textbf{HT\_nCE}}$ | $\textbf{PBT}_{\textbf{PM}}$ | $\textbf{PBT}_{\textbf{IR\_hh}}$ | $\textbf{PBT}_{\textbf{POF}}$ | $\textbf{PBT}_{\textbf{AC}}$ | $\textbf{PBT}_{\textbf{ET}}$ | $\textbf{PBT}_{\textbf{EuF}}$ | $\textbf{PBT}_{\textbf{EuM}}$ | $\textbf{PBT}_{\textbf{Ec\_FW}}$ | $\textbf{PBT}_{\textbf{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **14** | 17 | cities | 1.98 | 1.01 | 3.85 | 4.93 | 1.47 | 1.91 | 3.79 | 3.37 | 6.32 | 5.65 | 6.29 | 3.02 | 6.18 |
| **14** | 17 | country | 1.75 | 0.90 | 3.44 | 4.40 | 1.30 | 1.81 | 3.35 | 2.99 | 5.62 | 5.08 | 5.59 | 2.82 | 5.54 |
| **14** | 17 | suburbs | 1.86 | 0.95 | 3.62 | 4.63 | 1.38 | 1.82 | 3.55 | 3.16 | 5.93 | 5.32 | 5.91 | 2.87 | 5.81 |
| **14** | 18 | cities | 2.08 | 1.06 | 4.03 | 5.16 | 1.54 | 1.99 | 3.97 | 3.53 | 6.62 | 5.91 | 6.59 | 3.15 | 6.47 |
| **14** | 18 | country | 1.84 | 0.95 | 3.60 | 4.61 | 1.36 | 1.87 | 3.52 | 3.14 | 5.90 | 5.32 | 5.87 | 2.92 | 5.80 |
| **14** | 18 | suburbs | 1.95 | 1.00 | 3.79 | 4.85 | 1.44 | 1.89 | 3.73 | 3.32 | 6.22 | 5.57 | 6.19 | 2.99 | 6.09 |
| **14** | 19 | cities | 2.25 | 1.15 | 4.37 | 5.59 | 1.67 | 2.15 | 4.31 | 3.83 | 7.18 | 6.40 | 7.15 | 3.41 | 7.01 |
| **14** | 19 | country | 2.02 | 1.03 | 3.92 | 5.02 | 1.50 | 1.94 | 3.87 | 3.44 | 6.44 | 5.76 | 6.42 | 3.07 | 6.30 |
| **14** | 19 | suburbs | 2.13 | 1.09 | 4.13 | 5.28 | 1.58 | 2.03 | 4.07 | 3.62 | 6.78 | 6.05 | 6.75 | 3.22 | 6.62 |
| **14** | 20 | cities | 1.53 | 0.78 | 2.97 | 3.80 | 1.14 | 1.47 | 2.93 | 2.61 | 4.88 | 4.36 | 4.86 | 2.33 | 4.77 |
| **14** | 20 | country | 1.45 | 0.74 | 2.82 | 3.61 | 1.08 | 1.40 | 2.78 | 2.47 | 4.63 | 4.14 | 4.61 | 2.22 | 4.53 |
| **14** | 20 | suburbs | 1.49 | 0.76 | 2.88 | 3.69 | 1.10 | 1.43 | 2.84 | 2.53 | 4.74 | 4.23 | 4.72 | 2.26 | 4.63 |
| **15** | 5 | cities | 0.74 | 0.39 | 1.69 | 1.69 | 0.83 | 1.22 | 1.67 | 1.31 | 2.28 | 1.37 | 2.43 | 1.31 | 2.46 |
| **15** | 5 | country | 0.65 | 0.34 | 1.49 | 1.50 | 0.73 | 1.08 | 1.47 | 1.16 | 2.01 | 1.21 | 2.15 | 1.16 | 2.17 |
| **15** | 5 | suburbs | 0.69 | 0.36 | 1.59 | 1.59 | 0.78 | 1.15 | 1.57 | 1.23 | 2.14 | 1.29 | 2.28 | 1.23 | 2.31 |
| **15** | 6 | cities | 0.68 | 0.36 | 1.57 | 1.57 | 0.77 | 1.13 | 1.55 | 1.22 | 2.11 | 1.27 | 2.26 | 1.22 | 2.28 |
| **15** | 6 | country | 0.60 | 0.32 | 1.39 | 1.39 | 0.68 | 1.00 | 1.37 | 1.07 | 1.87 | 1.13 | 1.99 | 1.08 | 2.02 |
| **15** | 6 | suburbs | 0.64 | 0.34 | 1.47 | 1.47 | 0.72 | 1.06 | 1.45 | 1.14 | 1.98 | 1.20 | 2.12 | 1.14 | 2.14 |
| **15** | 7 | cities | 0.81 | 0.43 | 1.85 | 1.85 | 0.91 | 1.33 | 1.83 | 1.44 | 2.49 | 1.49 | 2.66 | 1.43 | 2.70 |
| **15** | 7 | country | 0.71 | 0.38 | 1.63 | 1.63 | 0.80 | 1.18 | 1.61 | 1.27 | 2.19 | 1.32 | 2.35 | 1.26 | 2.38 |
| **15** | 7 | suburbs | 0.76 | 0.40 | 1.73 | 1.73 | 0.85 | 1.25 | 1.71 | 1.35 | 2.33 | 1.40 | 2.50 | 1.34 | 2.53 |
| **15** | 8 | cities | 1.13 | 0.59 | 2.60 | 2.61 | 1.27 | 1.88 | 2.56 | 2.01 | 3.50 | 2.13 | 3.73 | 2.03 | 3.77 |
| **15** | 8 | country | 0.99 | 0.52 | 2.29 | 2.30 | 1.11 | 1.66 | 2.24 | 1.77 | 3.08 | 1.91 | 3.28 | 1.81 | 3.31 |
| **15** | 8 | suburbs | 1.06 | 0.56 | 2.45 | 2.45 | 1.19 | 1.77 | 2.39 | 1.89 | 3.29 | 2.02 | 3.50 | 1.92 | 3.54 |
| **15** | 17 | cities | 1.24 | 0.66 | 2.85 | 2.84 | 1.40 | 2.05 | 2.82 | 2.21 | 3.83 | 2.29 | 4.10 | 2.19 | 4.15 |
| **15** | 17 | country | 1.08 | 0.57 | 2.48 | 2.48 | 1.21 | 1.79 | 2.45 | 1.92 | 3.34 | 2.01 | 3.57 | 1.93 | 3.61 |
| **15** | 17 | suburbs | 1.15 | 0.61 | 2.64 | 2.64 | 1.30 | 1.90 | 2.61 | 2.05 | 3.55 | 2.13 | 3.81 | 2.04 | 3.85 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT**$_{\mathrm{CC}}$ | **PBT**$_{\mathrm{OD}}$ | **PBT**$_{\mathrm{HT\_CE}}$ | **PBT**$_{\mathrm{HT\_nCE}}$ | **PBT**$_{\mathrm{PM}}$ | **PBT**$_{\mathrm{IR\_hh}}$ | **PBT**$_{\mathrm{POF}}$ | **PBT**$_{\mathrm{AC}}$ | **PBT**$_{\mathrm{ET}}$ | **PBT**$_{\mathrm{EuF}}$ | **PBT**$_{\mathrm{EuM}}$ | **PBT**$_{\mathrm{Ec\_FW}}$ | **PBT**$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **15** | 18 | cities | 1.31 | 0.69 | 3.00 | 3.00 | 1.47 | 2.16 | 2.97 | 2.33 | 4.03 | 2.41 | 4.32 | 2.31 | 4.37 |
| **15** | 18 | country | 1.14 | 0.60 | 2.62 | 2.62 | 1.28 | 1.89 | 2.58 | 2.03 | 3.52 | 2.13 | 3.76 | 2.03 | 3.81 |
| **15** | 18 | suburbs | 1.22 | 0.64 | 2.79 | 2.78 | 1.37 | 2.01 | 2.76 | 2.16 | 3.75 | 2.24 | 4.01 | 2.15 | 4.06 |
| **15** | 19 | cities | 1.36 | 0.72 | 3.11 | 3.11 | 1.53 | 2.24 | 3.08 | 2.42 | 4.18 | 2.49 | 4.48 | 2.40 | 4.54 |
| **15** | 19 | country | 1.19 | 0.63 | 2.75 | 2.75 | 1.34 | 1.99 | 2.70 | 2.13 | 3.70 | 2.24 | 3.94 | 2.14 | 3.99 |
| **15** | 19 | suburbs | 1.27 | 0.67 | 2.91 | 2.91 | 1.42 | 2.09 | 2.87 | 2.26 | 3.91 | 2.34 | 4.18 | 2.25 | 4.23 |
| **15** | 20 | cities | 1.08 | 0.57 | 2.48 | 2.48 | 1.21 | 1.78 | 2.45 | 1.92 | 3.33 | 2.00 | 3.56 | 1.92 | 3.61 |
| **15** | 20 | country | 0.97 | 0.51 | 2.25 | 2.25 | 1.09 | 1.63 | 2.20 | 1.73 | 3.02 | 1.86 | 3.21 | 1.76 | 3.25 |
| **15** | 20 | suburbs | 1.02 | 0.54 | 2.34 | 2.34 | 1.14 | 1.69 | 2.30 | 1.81 | 3.14 | 1.91 | 3.35 | 1.82 | 3.39 |
| **16** | 5 | cities | 1.11 | 0.94 | 1.99 | 1.98 | 1.36 | 3.38 | 2.37 | 1.59 | 3.21 | 1.65 | 3.06 | 1.03 | 4.14 |
| **16** | 5 | country | 0.93 | 0.79 | 1.67 | 1.67 | 1.14 | 2.84 | 1.99 | 1.33 | 2.69 | 1.38 | 2.57 | 0.86 | 3.48 |
| **16** | 5 | suburbs | 1.01 | 0.86 | 1.81 | 1.80 | 1.24 | 3.06 | 2.15 | 1.44 | 2.91 | 1.49 | 2.78 | 0.93 | 3.77 |
| **16** | 6 | cities | 1.04 | 0.89 | 1.89 | 1.88 | 1.28 | 3.20 | 2.23 | 1.50 | 3.03 | 1.56 | 2.90 | 0.98 | 3.91 |
| **16** | 6 | country | 0.88 | 0.75 | 1.58 | 1.58 | 1.08 | 2.69 | 1.88 | 1.26 | 2.55 | 1.31 | 2.44 | 0.82 | 3.29 |
| **16** | 6 | suburbs | 0.95 | 0.81 | 1.71 | 1.70 | 1.17 | 2.89 | 2.03 | 1.36 | 2.75 | 1.41 | 2.63 | 0.88 | 3.56 |
| **16** | 7 | cities | 1.09 | 0.92 | 1.99 | 1.99 | 1.34 | 3.39 | 2.34 | 1.59 | 3.20 | 1.66 | 3.06 | 1.04 | 4.09 |
| **16** | 7 | country | 0.96 | 0.79 | 1.86 | 1.86 | 1.18 | 3.17 | 2.10 | 1.49 | 2.96 | 1.61 | 2.83 | 1.03 | 3.60 |
| **16** | 7 | suburbs | 1.02 | 0.85 | 1.92 | 1.92 | 1.26 | 3.28 | 2.22 | 1.54 | 3.08 | 1.63 | 2.94 | 1.03 | 3.83 |
| **16** | 8 | cities | 1.72 | 1.39 | 3.49 | 3.51 | 2.14 | 5.99 | 3.82 | 2.80 | 5.53 | 3.10 | 5.30 | 2.01 | 6.50 |
| **16** | 8 | country | 1.38 | 1.14 | 2.64 | 2.64 | 1.70 | 4.51 | 3.01 | 2.11 | 4.22 | 2.26 | 4.03 | 1.44 | 5.19 |
| **16** | 8 | suburbs | 1.53 | 1.26 | 3.01 | 3.02 | 1.90 | 5.15 | 3.37 | 2.41 | 4.79 | 2.62 | 4.59 | 1.68 | 5.79 |
| **16** | 17 | cities | 1.70 | 1.44 | 3.06 | 3.05 | 2.08 | 5.20 | 3.63 | 2.44 | 4.93 | 2.54 | 4.71 | 1.59 | 6.35 |
| **16** | 17 | country | 1.44 | 1.21 | 2.69 | 2.69 | 1.77 | 4.58 | 3.12 | 2.15 | 4.31 | 2.27 | 4.12 | 1.43 | 5.41 |
| **16** | 17 | suburbs | 1.54 | 1.30 | 2.78 | 2.77 | 1.88 | 4.71 | 3.29 | 2.21 | 4.47 | 2.30 | 4.27 | 1.44 | 5.75 |
| **16** | 18 | cities | 1.79 | 1.52 | 3.23 | 3.22 | 2.19 | 5.48 | 3.83 | 2.57 | 5.19 | 2.67 | 4.96 | 1.67 | 6.69 |
| **16** | 18 | country | 1.51 | 1.27 | 2.77 | 2.76 | 1.85 | 4.71 | 3.24 | 2.21 | 4.45 | 2.32 | 4.25 | 1.46 | 5.65 |
| **16** | 18 | suburbs | 1.62 | 1.38 | 2.92 | 2.91 | 1.99 | 4.95 | 3.46 | 2.33 | 4.70 | 2.42 | 4.49 | 1.51 | 6.06 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16** | 19 | cities | 1.91 | 1.62 | 3.48 | 3.46 | 2.35 | 5.90 | 4.10 | 2.77 | 5.59 | 2.89 | 5.34 | 1.81 | 7.16 |
| **16** | 19 | country | 1.60 | 1.37 | 2.86 | 2.85 | 1.96 | 4.85 | 3.42 | 2.28 | 4.61 | 2.36 | 4.41 | 1.47 | 5.99 |
| **16** | 19 | suburbs | 1.74 | 1.48 | 3.12 | 3.11 | 2.13 | 5.29 | 3.71 | 2.48 | 5.02 | 2.58 | 4.80 | 1.61 | 6.49 |
| **16** | 20 | cities | 1.38 | 1.16 | 2.54 | 2.54 | 1.70 | 4.32 | 2.97 | 2.03 | 4.08 | 2.13 | 3.90 | 1.34 | 5.18 |
| **16** | 20 | country | 1.21 | 1.03 | 2.20 | 2.19 | 1.49 | 3.73 | 2.60 | 1.75 | 3.53 | 1.82 | 3.37 | 1.14 | 4.53 |
| **16** | 20 | suburbs | 1.28 | 1.08 | 2.34 | 2.33 | 1.57 | 3.97 | 2.75 | 1.87 | 3.76 | 1.95 | 3.59 | 1.22 | 4.80 |
| **17** | 5 | cities | 1.69 | 1.45 | 2.57 | 2.69 | 1.27 | 2.45 | 3.16 | 1.77 | 4.10 | 1.57 | 3.85 | 2.04 | 7.47 |
| **17** | 5 | country | 1.55 | 1.33 | 2.36 | 2.46 | 1.17 | 2.24 | 2.90 | 1.62 | 3.76 | 1.44 | 3.53 | 1.87 | 6.85 |
| **17** | 5 | suburbs | 1.62 | 1.39 | 2.47 | 2.57 | 1.22 | 2.34 | 3.03 | 1.70 | 3.92 | 1.50 | 3.69 | 1.95 | 7.16 |
| **17** | 6 | cities | 1.59 | 1.36 | 2.42 | 2.53 | 1.19 | 2.31 | 2.97 | 1.67 | 3.85 | 1.48 | 3.62 | 1.92 | 7.03 |
| **17** | 6 | country | 1.46 | 1.25 | 2.22 | 2.31 | 1.09 | 2.11 | 2.72 | 1.53 | 3.53 | 1.35 | 3.32 | 1.76 | 6.44 |
| **17** | 6 | suburbs | 1.52 | 1.30 | 2.32 | 2.42 | 1.14 | 2.21 | 2.84 | 1.59 | 3.68 | 1.41 | 3.47 | 1.84 | 6.73 |
| **17** | 7 | cities | 1.69 | 1.45 | 2.58 | 2.69 | 1.27 | 2.46 | 3.16 | 1.77 | 4.10 | 1.58 | 3.85 | 2.05 | 7.48 |
| **17** | 7 | country | 1.55 | 1.33 | 2.36 | 2.47 | 1.16 | 2.25 | 2.90 | 1.62 | 3.76 | 1.44 | 3.53 | 1.87 | 6.86 |
| **17** | 7 | suburbs | 1.62 | 1.39 | 2.47 | 2.58 | 1.22 | 2.36 | 3.02 | 1.70 | 3.92 | 1.51 | 3.69 | 1.96 | 7.16 |
| **17** | 8 | cities | 2.25 | 1.94 | 3.51 | 3.69 | 1.69 | 3.60 | 4.21 | 2.38 | 5.49 | 2.21 | 5.18 | 2.88 | 10.12 |
| **17** | 8 | country | 2.06 | 1.77 | 3.20 | 3.36 | 1.55 | 3.24 | 3.85 | 2.17 | 5.02 | 2.01 | 4.73 | 2.61 | 9.23 |
| **17** | 8 | suburbs | 2.15 | 1.86 | 3.35 | 3.53 | 1.62 | 3.42 | 4.03 | 2.28 | 5.25 | 2.11 | 4.96 | 2.74 | 9.67 |
| **17** | 17 | cities | 2.58 | 2.21 | 3.93 | 4.09 | 1.94 | 3.73 | 4.82 | 2.70 | 6.25 | 2.39 | 5.87 | 3.11 | 11.40 |
| **17** | 17 | country | 2.34 | 2.00 | 3.56 | 3.71 | 1.76 | 3.37 | 4.37 | 2.45 | 5.66 | 2.17 | 5.32 | 2.81 | 10.33 |
| **17** | 17 | suburbs | 2.45 | 2.10 | 3.73 | 3.89 | 1.84 | 3.54 | 4.58 | 2.57 | 5.94 | 2.28 | 5.58 | 2.95 | 10.84 |
| **17** | 18 | cities | 2.72 | 2.33 | 4.14 | 4.32 | 2.04 | 3.94 | 5.08 | 2.85 | 6.59 | 2.53 | 6.20 | 3.28 | 12.02 |
| **17** | 18 | country | 2.47 | 2.11 | 3.75 | 3.91 | 1.85 | 3.56 | 4.61 | 2.58 | 5.97 | 2.29 | 5.62 | 2.97 | 10.90 |
| **17** | 18 | suburbs | 2.59 | 2.22 | 3.93 | 4.10 | 1.94 | 3.74 | 4.83 | 2.71 | 6.26 | 2.40 | 5.89 | 3.12 | 11.43 |
| **17** | 19 | cities | 2.86 | 2.45 | 4.36 | 4.55 | 2.15 | 4.16 | 5.34 | 3.00 | 6.93 | 2.66 | 6.52 | 3.46 | 12.65 |
| **17** | 19 | country | 2.62 | 2.25 | 3.99 | 4.17 | 1.97 | 3.81 | 4.89 | 2.74 | 6.34 | 2.44 | 5.97 | 3.17 | 11.59 |
| **17** | 19 | suburbs | 2.73 | 2.34 | 4.16 | 4.35 | 2.05 | 3.97 | 5.10 | 2.86 | 6.62 | 2.54 | 6.23 | 3.30 | 12.09 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17** | 20 | cities | 2.11 | 1.81 | 3.24 | 3.38 | 1.59 | 3.15 | 3.94 | 2.22 | 5.12 | 1.99 | 4.82 | 2.59 | 9.37 |
| **17** | 20 | country | 1.96 | 1.68 | 3.00 | 3.14 | 1.47 | 2.92 | 3.66 | 2.06 | 4.76 | 1.85 | 4.48 | 2.40 | 8.71 |
| **17** | 20 | suburbs | 2.03 | 1.74 | 3.11 | 3.25 | 1.52 | 3.02 | 3.78 | 2.13 | 4.92 | 1.92 | 4.63 | 2.49 | 9.00 |
| **18** | 5 | cities | 1.12 | 0.72 | 1.36 | 1.71 | 0.50 | 2.00 | 1.63 | 1.43 | 2.32 | 0.95 | 2.68 | 1.21 | 3.84 |
| **18** | 5 | country | 0.98 | 0.63 | 1.19 | 1.51 | 0.43 | 1.76 | 1.43 | 1.25 | 2.04 | 0.84 | 2.35 | 1.07 | 3.36 |
| **18** | 5 | suburbs | 1.05 | 0.67 | 1.27 | 1.60 | 0.46 | 1.87 | 1.52 | 1.33 | 2.17 | 0.89 | 2.51 | 1.14 | 3.58 |
| **18** | 6 | cities | 1.04 | 0.67 | 1.27 | 1.61 | 0.46 | 1.87 | 1.52 | 1.33 | 2.17 | 0.89 | 2.51 | 1.14 | 3.58 |
| **18** | 6 | country | 0.92 | 0.59 | 1.12 | 1.42 | 0.40 | 1.65 | 1.33 | 1.17 | 1.91 | 0.79 | 2.20 | 1.01 | 3.16 |
| **18** | 6 | suburbs | 0.98 | 0.63 | 1.19 | 1.51 | 0.43 | 1.75 | 1.42 | 1.24 | 2.03 | 0.84 | 2.34 | 1.07 | 3.35 |
| **18** | 7 | cities | 1.15 | 0.74 | 1.42 | 1.81 | 0.51 | 2.10 | 1.67 | 1.47 | 2.42 | 1.02 | 2.78 | 1.30 | 3.98 |
| **18** | 7 | country | 1.01 | 0.65 | 1.25 | 1.61 | 0.45 | 1.86 | 1.47 | 1.30 | 2.14 | 0.91 | 2.45 | 1.16 | 3.52 |
| **18** | 7 | suburbs | 1.08 | 0.69 | 1.33 | 1.70 | 0.47 | 1.97 | 1.57 | 1.38 | 2.27 | 0.96 | 2.60 | 1.22 | 3.73 |
| **18** | 8 | cities | 1.52 | 0.96 | 1.91 | 2.51 | 0.66 | 2.89 | 2.18 | 1.96 | 3.29 | 1.48 | 3.69 | 1.86 | 5.34 |
| **18** | 8 | country | 1.34 | 0.84 | 1.73 | 2.34 | 0.58 | 2.68 | 1.91 | 1.75 | 3.00 | 1.46 | 3.30 | 1.81 | 4.80 |
| **18** | 8 | suburbs | 1.43 | 0.90 | 1.82 | 2.42 | 0.62 | 2.78 | 2.05 | 1.85 | 3.14 | 1.46 | 3.49 | 1.83 | 5.06 |
| **18** | 17 | cities | 1.77 | 1.14 | 2.13 | 2.67 | 0.78 | 3.12 | 2.58 | 2.25 | 3.63 | 1.46 | 4.23 | 1.88 | 6.03 |
| **18** | 17 | country | 1.54 | 0.99 | 1.87 | 2.36 | 0.68 | 2.75 | 2.24 | 1.96 | 3.19 | 1.30 | 3.69 | 1.67 | 5.27 |
| **18** | 17 | suburbs | 1.64 | 1.06 | 1.99 | 2.50 | 0.73 | 2.92 | 2.40 | 2.09 | 3.39 | 1.38 | 3.94 | 1.77 | 5.62 |
| **18** | 18 | cities | 1.86 | 1.20 | 2.24 | 2.81 | 0.82 | 3.28 | 2.72 | 2.36 | 3.82 | 1.54 | 4.45 | 1.98 | 6.34 |
| **18** | 18 | country | 1.62 | 1.04 | 1.97 | 2.49 | 0.72 | 2.91 | 2.37 | 2.07 | 3.37 | 1.38 | 3.89 | 1.77 | 5.57 |
| **18** | 18 | suburbs | 1.73 | 1.11 | 2.10 | 2.64 | 0.77 | 3.08 | 2.52 | 2.20 | 3.58 | 1.45 | 4.15 | 1.87 | 5.92 |
| **18** | 19 | cities | 1.91 | 1.23 | 2.30 | 2.88 | 0.85 | 3.36 | 2.80 | 2.43 | 3.92 | 1.57 | 4.57 | 2.02 | 6.52 |
| **18** | 19 | country | 1.70 | 1.09 | 2.07 | 2.61 | 0.75 | 3.04 | 2.48 | 2.17 | 3.53 | 1.44 | 4.08 | 1.85 | 5.83 |
| **18** | 19 | suburbs | 1.80 | 1.16 | 2.18 | 2.74 | 0.80 | 3.20 | 2.63 | 2.29 | 3.72 | 1.51 | 4.31 | 1.93 | 6.16 |
| **18** | 20 | cities | 1.42 | 0.91 | 1.72 | 2.17 | 0.63 | 2.53 | 2.07 | 1.81 | 2.94 | 1.20 | 3.40 | 1.54 | 4.86 |
| **18** | 20 | country | 1.33 | 0.85 | 1.64 | 2.11 | 0.58 | 2.45 | 1.93 | 1.70 | 2.81 | 1.20 | 3.21 | 1.53 | 4.61 |
| **18** | 20 | suburbs | 1.37 | 0.88 | 1.68 | 2.14 | 0.60 | 2.49 | 1.99 | 1.75 | 2.87 | 1.20 | 3.29 | 1.53 | 4.72 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **19** | 5 | cities | 0.98 | 0.61 | 0.62 | 1.21 | 0.16 | 1.35 | 0.70 | 0.95 | 1.43 | 0.67 | 1.55 | 0.65 | 3.06 |
| **19** | 5 | country | 0.91 | 0.57 | 0.58 | 1.12 | 0.15 | 1.26 | 0.65 | 0.88 | 1.34 | 0.62 | 1.45 | 0.60 | 2.85 |
| **19** | 5 | suburbs | 0.95 | 0.59 | 0.60 | 1.17 | 0.16 | 1.31 | 0.68 | 0.92 | 1.39 | 0.64 | 1.50 | 0.62 | 2.95 |
| **19** | 6 | cities | 0.93 | 0.58 | 0.59 | 1.14 | 0.15 | 1.28 | 0.66 | 0.90 | 1.36 | 0.63 | 1.47 | 0.61 | 2.89 |
| **19** | 6 | country | 0.86 | 0.54 | 0.54 | 1.06 | 0.14 | 1.19 | 0.61 | 0.84 | 1.26 | 0.59 | 1.37 | 0.57 | 2.69 |
| **19** | 6 | suburbs | 0.89 | 0.56 | 0.57 | 1.10 | 0.15 | 1.23 | 0.64 | 0.87 | 1.31 | 0.61 | 1.42 | 0.59 | 2.79 |
| **19** | 7 | cities | 0.96 | 0.60 | 0.61 | 1.18 | 0.16 | 1.33 | 0.69 | 0.93 | 1.41 | 0.66 | 1.52 | 0.63 | 3.00 |
| **19** | 7 | country | 0.90 | 0.56 | 0.57 | 1.10 | 0.15 | 1.24 | 0.64 | 0.87 | 1.31 | 0.61 | 1.42 | 0.59 | 2.79 |
| **19** | 7 | suburbs | 0.93 | 0.58 | 0.59 | 1.14 | 0.15 | 1.28 | 0.66 | 0.90 | 1.36 | 0.63 | 1.47 | 0.61 | 2.90 |
| **19** | 8 | cities | 1.05 | 0.66 | 0.66 | 1.31 | 0.17 | 1.46 | 0.74 | 1.02 | 1.54 | 0.73 | 1.66 | 0.70 | 3.29 |
| **19** | 8 | country | 0.98 | 0.61 | 0.62 | 1.22 | 0.16 | 1.37 | 0.70 | 0.95 | 1.44 | 0.68 | 1.56 | 0.66 | 3.07 |
| **19** | 8 | suburbs | 1.01 | 0.63 | 0.64 | 1.26 | 0.17 | 1.41 | 0.72 | 0.98 | 1.49 | 0.70 | 1.61 | 0.68 | 3.18 |
| **19** | 17 | cities | 1.57 | 0.98 | 0.99 | 1.93 | 0.26 | 2.16 | 1.12 | 1.52 | 2.29 | 1.07 | 2.48 | 1.03 | 4.88 |
| **19** | 17 | country | 1.44 | 0.90 | 0.91 | 1.77 | 0.24 | 1.99 | 1.03 | 1.40 | 2.11 | 0.98 | 2.28 | 0.95 | 4.49 |
| **19** | 17 | suburbs | 1.50 | 0.94 | 0.95 | 1.85 | 0.25 | 2.07 | 1.07 | 1.45 | 2.20 | 1.02 | 2.38 | 0.99 | 4.68 |
| **19** | 18 | cities | 1.65 | 1.03 | 1.04 | 2.03 | 0.27 | 2.27 | 1.17 | 1.60 | 2.41 | 1.12 | 2.61 | 1.09 | 5.14 |
| **19** | 18 | country | 1.52 | 0.95 | 0.96 | 1.87 | 0.25 | 2.09 | 1.08 | 1.47 | 2.22 | 1.03 | 2.40 | 1.00 | 4.73 |
| **19** | 18 | suburbs | 1.58 | 0.99 | 1.00 | 1.95 | 0.26 | 2.18 | 1.13 | 1.53 | 2.31 | 1.08 | 2.51 | 1.04 | 4.93 |
| **19** | 19 | cities | 1.69 | 1.06 | 1.07 | 2.09 | 0.28 | 2.34 | 1.21 | 1.64 | 2.48 | 1.16 | 2.68 | 1.12 | 5.28 |
| **19** | 19 | country | 1.56 | 0.98 | 0.99 | 1.93 | 0.26 | 2.16 | 1.12 | 1.52 | 2.29 | 1.07 | 2.48 | 1.03 | 4.88 |
| **19** | 19 | suburbs | 1.63 | 1.02 | 1.03 | 2.01 | 0.27 | 2.25 | 1.16 | 1.58 | 2.38 | 1.11 | 2.58 | 1.07 | 5.08 |
| **19** | 20 | cities | 1.21 | 0.76 | 0.77 | 1.50 | 0.20 | 1.68 | 0.86 | 1.17 | 1.78 | 0.83 | 1.92 | 0.81 | 3.79 |
| **19** | 20 | country | 1.12 | 0.71 | 0.71 | 1.39 | 0.19 | 1.56 | 0.80 | 1.09 | 1.65 | 0.77 | 1.79 | 0.75 | 3.52 |
| **19** | 20 | suburbs | 1.17 | 0.73 | 0.74 | 1.44 | 0.19 | 1.62 | 0.83 | 1.13 | 1.71 | 0.80 | 1.85 | 0.77 | 3.65 |
| **20** | 5 | cities | 0.76 | 0.90 | 0.47 | 0.70 | 0.15 | 1.07 | 0.65 | 0.58 | 1.35 | 0.33 | 1.21 | 0.58 | 3.91 |
| **20** | 5 | country | 0.69 | 0.82 | 0.42 | 0.63 | 0.14 | 0.96 | 0.59 | 0.53 | 1.22 | 0.29 | 1.10 | 0.52 | 3.53 |
| **20** | 5 | suburbs | 0.72 | 0.86 | 0.44 | 0.66 | 0.14 | 1.01 | 0.62 | 0.55 | 1.28 | 0.31 | 1.15 | 0.55 | 3.71 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT**$_{\mathrm{CC}}$ | **PBT**$_{\mathrm{OD}}$ | **PBT**$_{\mathrm{HT\_CE}}$ | **PBT**$_{\mathrm{HT\_nCE}}$ | **PBT**$_{\mathrm{PM}}$ | **PBT**$_{\mathrm{IR\_hh}}$ | **PBT**$_{\mathrm{POF}}$ | **PBT**$_{\mathrm{AC}}$ | **PBT**$_{\mathrm{ET}}$ | **PBT**$_{\mathrm{EuF}}$ | **PBT**$_{\mathrm{EuM}}$ | **PBT**$_{\mathrm{Ec\_FW}}$ | **PBT**$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **20** | 6 | cities | 0.71 | 0.85 | 0.44 | 0.65 | 0.14 | 1.00 | 0.61 | 0.54 | 1.26 | 0.31 | 1.14 | 0.54 | 3.66 |
| **20** | 6 | country | 0.64 | 0.76 | 0.40 | 0.59 | 0.13 | 0.90 | 0.55 | 0.49 | 1.14 | 0.28 | 1.03 | 0.49 | 3.30 |
| **20** | 6 | suburbs | 0.68 | 0.80 | 0.42 | 0.62 | 0.13 | 0.95 | 0.58 | 0.52 | 1.20 | 0.29 | 1.08 | 0.51 | 3.48 |
| **20** | 7 | cities | 0.77 | 0.91 | 0.47 | 0.70 | 0.15 | 1.08 | 0.66 | 0.59 | 1.36 | 0.33 | 1.23 | 0.58 | 3.96 |
| **20** | 7 | country | 0.70 | 0.83 | 0.43 | 0.64 | 0.14 | 0.97 | 0.60 | 0.53 | 1.23 | 0.30 | 1.11 | 0.53 | 3.57 |
| **20** | 7 | suburbs | 0.73 | 0.87 | 0.45 | 0.67 | 0.15 | 1.02 | 0.63 | 0.56 | 1.29 | 0.31 | 1.17 | 0.55 | 3.76 |
| **20** | 8 | cities | 1.08 | 1.28 | 0.67 | 1.00 | 0.21 | 1.56 | 0.92 | 0.83 | 1.92 | 0.48 | 1.73 | 0.84 | 5.60 |
| **20** | 8 | country | 0.96 | 1.14 | 0.59 | 0.89 | 0.19 | 1.38 | 0.82 | 0.73 | 1.70 | 0.42 | 1.54 | 0.74 | 4.97 |
| **20** | 8 | suburbs | 1.02 | 1.21 | 0.63 | 0.94 | 0.20 | 1.46 | 0.87 | 0.78 | 1.81 | 0.45 | 1.63 | 0.79 | 5.27 |
| **20** | 17 | cities | 1.14 | 1.35 | 0.70 | 1.04 | 0.23 | 1.58 | 0.97 | 0.87 | 2.01 | 0.49 | 1.81 | 0.86 | 5.83 |
| **20** | 17 | country | 1.02 | 1.21 | 0.63 | 0.93 | 0.20 | 1.42 | 0.87 | 0.78 | 1.80 | 0.44 | 1.62 | 0.77 | 5.23 |
| **20** | 17 | suburbs | 1.08 | 1.27 | 0.66 | 0.98 | 0.21 | 1.50 | 0.92 | 0.82 | 1.90 | 0.46 | 1.71 | 0.81 | 5.51 |
| **20** | 18 | cities | 1.20 | 1.42 | 0.73 | 1.09 | 0.24 | 1.67 | 1.02 | 0.91 | 2.11 | 0.51 | 1.90 | 0.90 | 6.13 |
| **20** | 18 | country | 1.07 | 1.27 | 0.66 | 0.98 | 0.21 | 1.49 | 0.92 | 0.82 | 1.90 | 0.46 | 1.71 | 0.81 | 5.50 |
| **20** | 18 | suburbs | 1.13 | 1.34 | 0.69 | 1.03 | 0.23 | 1.57 | 0.97 | 0.86 | 2.00 | 0.48 | 1.80 | 0.85 | 5.80 |
| **20** | 19 | cities | 1.29 | 1.52 | 0.79 | 1.17 | 0.26 | 1.80 | 1.10 | 0.98 | 2.27 | 0.55 | 2.05 | 0.97 | 6.60 |
| **20** | 19 | country | 1.17 | 1.38 | 0.72 | 1.06 | 0.23 | 1.63 | 1.00 | 0.89 | 2.06 | 0.50 | 1.86 | 0.88 | 5.98 |
| **20** | 19 | suburbs | 1.22 | 1.45 | 0.75 | 1.11 | 0.24 | 1.70 | 1.04 | 0.93 | 2.16 | 0.52 | 1.94 | 0.92 | 6.26 |
| **20** | 20 | cities | 0.96 | 1.13 | 0.59 | 0.88 | 0.19 | 1.34 | 0.82 | 0.73 | 1.69 | 0.41 | 1.52 | 0.73 | 4.92 |
| **20** | 20 | country | 0.89 | 1.05 | 0.55 | 0.81 | 0.18 | 1.25 | 0.76 | 0.68 | 1.57 | 0.38 | 1.41 | 0.67 | 4.56 |
| **20** | 20 | suburbs | 0.92 | 1.09 | 0.56 | 0.84 | 0.18 | 1.29 | 0.78 | 0.70 | 1.62 | 0.39 | 1.46 | 0.70 | 4.71 |
| **21** | 5 | cities | 0.83 | 1.49 | 0.56 | 0.90 | 0.18 | 5.64 | 0.86 | 0.48 | 1.69 | 0.59 | 1.58 | 1.14 | 9.76 |
| **21** | 5 | country | 0.73 | 1.32 | 0.49 | 0.79 | 0.16 | 4.97 | 0.76 | 0.42 | 1.49 | 0.52 | 1.39 | 1.01 | 8.61 |
| **21** | 5 | suburbs | 0.78 | 1.40 | 0.52 | 0.84 | 0.17 | 5.29 | 0.81 | 0.45 | 1.58 | 0.55 | 1.48 | 1.07 | 9.15 |
| **21** | 6 | cities | 0.77 | 1.39 | 0.52 | 0.84 | 0.17 | 5.27 | 0.80 | 0.45 | 1.58 | 0.55 | 1.47 | 1.07 | 9.12 |
| **21** | 6 | country | 0.68 | 1.23 | 0.46 | 0.74 | 0.15 | 4.65 | 0.71 | 0.39 | 1.39 | 0.48 | 1.30 | 0.94 | 8.05 |
| **21** | 6 | suburbs | 0.73 | 1.31 | 0.49 | 0.79 | 0.16 | 4.94 | 0.75 | 0.42 | 1.48 | 0.51 | 1.38 | 1.00 | 8.55 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **$PBT_{CC}$** | **$PBT_{OD}$** | **$PBT_{HT\_CE}$** | **$PBT_{HT\_nCE}$** | **$PBT_{PM}$** | **$PBT_{IR\_hh}$** | **$PBT_{POF}$** | **$PBT_{AC}$** | **$PBT_{ET}$** | **$PBT_{EuF}$** | **$PBT_{EuM}$** | **$PBT_{Ec\_FW}$** | **$PBT_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **21** | 7 | cities | 0.85 | 1.53 | 0.57 | 0.93 | 0.19 | 5.80 | 0.88 | 0.49 | 1.73 | 0.61 | 1.62 | 1.18 | 10.05 |
| **21** | 7 | country | 0.75 | 1.36 | 0.50 | 0.82 | 0.17 | 5.12 | 0.78 | 0.43 | 1.53 | 0.53 | 1.43 | 1.04 | 8.88 |
| **21** | 7 | suburbs | 0.80 | 1.44 | 0.54 | 0.87 | 0.18 | 5.44 | 0.83 | 0.46 | 1.63 | 0.57 | 1.52 | 1.11 | 9.43 |
| **21** | 8 | cities | 1.12 | 2.01 | 0.75 | 1.23 | 0.24 | 7.65 | 1.16 | 0.65 | 2.29 | 0.81 | 2.14 | 1.59 | 13.33 |
| **21** | 8 | country | 0.98 | 1.76 | 0.66 | 1.08 | 0.21 | 6.70 | 1.02 | 0.57 | 2.00 | 0.71 | 1.87 | 1.39 | 11.66 |
| **21** | 8 | suburbs | 1.05 | 1.88 | 0.70 | 1.15 | 0.23 | 7.16 | 1.09 | 0.61 | 2.14 | 0.76 | 2.00 | 1.48 | 12.46 |
| **21** | 17 | cities | 1.31 | 2.36 | 0.88 | 1.42 | 0.29 | 8.91 | 1.36 | 0.76 | 2.67 | 0.92 | 2.49 | 1.80 | 15.43 |
| **21** | 17 | country | 1.14 | 2.06 | 0.76 | 1.24 | 0.25 | 7.76 | 1.19 | 0.66 | 2.32 | 0.80 | 2.17 | 1.57 | 13.42 |
| **21** | 17 | suburbs | 1.22 | 2.20 | 0.82 | 1.32 | 0.27 | 8.28 | 1.27 | 0.70 | 2.48 | 0.86 | 2.31 | 1.67 | 14.33 |
| **21** | 18 | cities | 1.38 | 2.49 | 0.93 | 1.50 | 0.30 | 9.39 | 1.44 | 0.80 | 2.81 | 0.97 | 2.63 | 1.90 | 16.26 |
| **21** | 18 | country | 1.20 | 2.17 | 0.81 | 1.31 | 0.26 | 8.18 | 1.25 | 0.70 | 2.45 | 0.85 | 2.29 | 1.65 | 14.16 |
| **21** | 18 | suburbs | 1.28 | 2.31 | 0.86 | 1.39 | 0.28 | 8.72 | 1.33 | 0.74 | 2.61 | 0.90 | 2.44 | 1.76 | 15.10 |
| **21** | 19 | cities | 1.43 | 2.58 | 0.96 | 1.55 | 0.31 | 9.71 | 1.49 | 0.83 | 2.91 | 1.01 | 2.72 | 1.96 | 16.81 |
| **21** | 19 | country | 1.26 | 2.28 | 0.85 | 1.37 | 0.28 | 8.59 | 1.31 | 0.73 | 2.57 | 0.89 | 2.40 | 1.73 | 14.86 |
| **21** | 19 | suburbs | 1.34 | 2.41 | 0.90 | 1.45 | 0.29 | 9.10 | 1.39 | 0.77 | 2.72 | 0.94 | 2.54 | 1.84 | 15.74 |
| **21** | 20 | cities | 1.07 | 1.93 | 0.72 | 1.17 | 0.23 | 7.29 | 1.11 | 0.62 | 2.18 | 0.76 | 2.04 | 1.48 | 12.64 |
| **21** | 20 | country | 0.98 | 1.76 | 0.65 | 1.06 | 0.21 | 6.63 | 1.01 | 0.56 | 1.99 | 0.69 | 1.85 | 1.35 | 11.49 |
| **21** | 20 | suburbs | 1.02 | 1.83 | 0.68 | 1.11 | 0.22 | 6.91 | 1.05 | 0.59 | 2.07 | 0.72 | 1.93 | 1.40 | 11.97 |
| **22** | 5 | cities | 1.68 | 1.39 | 1.26 | 2.72 | 0.30 | 5.48 | 1.23 | 1.09 | 2.25 | 1.86 | 2.19 | 3.91 | 11.74 |
| **22** | 5 | country | 1.36 | 1.15 | 1.01 | 2.05 | 0.25 | 3.75 | 1.03 | 0.89 | 1.80 | 1.35 | 1.79 | 1.95 | 8.16 |
| **22** | 5 | suburbs | 1.49 | 1.26 | 1.11 | 2.29 | 0.27 | 4.27 | 1.12 | 0.97 | 1.98 | 1.52 | 1.96 | 2.36 | 9.26 |
| **22** | 6 | cities | 1.59 | 1.31 | 1.20 | 2.59 | 0.28 | 5.29 | 1.16 | 1.03 | 2.13 | 1.78 | 2.07 | 3.99 | 11.32 |
| **22** | 6 | country | 1.29 | 1.09 | 0.95 | 1.95 | 0.24 | 3.58 | 0.97 | 0.84 | 1.70 | 1.29 | 1.70 | 1.89 | 7.79 |
| **22** | 6 | suburbs | 1.41 | 1.19 | 1.05 | 2.18 | 0.26 | 4.10 | 1.05 | 0.92 | 1.87 | 1.45 | 1.85 | 2.33 | 8.88 |
| **22** | 7 | cities | 1.63 | 1.34 | 1.23 | 2.68 | 0.29 | 5.50 | 1.19 | 1.06 | 2.19 | 1.85 | 2.13 | 4.26 | 11.76 |
| **22** | 7 | country | 1.32 | 1.12 | 0.98 | 1.99 | 0.24 | 3.64 | 1.00 | 0.86 | 1.75 | 1.31 | 1.74 | 1.89 | 7.92 |
| **22** | 7 | suburbs | 1.45 | 1.22 | 1.08 | 2.22 | 0.26 | 4.16 | 1.08 | 0.94 | 1.92 | 1.48 | 1.90 | 2.31 | 9.02 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **22** | 8 | cities | 2.39 | 1.98 | 1.80 | 3.87 | 0.43 | 7.79 | 1.75 | 1.55 | 3.20 | 2.65 | 3.13 | 5.54 | 16.70 |
| **22** | 8 | country | 1.98 | 1.66 | 1.48 | 3.12 | 0.36 | 6.05 | 1.47 | 1.29 | 2.64 | 2.11 | 2.60 | 3.73 | 13.04 |
| **22** | 8 | suburbs | 2.17 | 1.81 | 1.63 | 3.47 | 0.39 | 6.82 | 1.60 | 1.41 | 2.90 | 2.35 | 2.85 | 4.44 | 14.67 |
| **22** | 17 | cities | 2.27 | 1.91 | 1.69 | 3.51 | 0.41 | 6.61 | 1.70 | 1.48 | 3.01 | 2.34 | 2.99 | 3.74 | 14.31 |
| **22** | 17 | country | 1.88 | 1.60 | 1.39 | 2.82 | 0.35 | 5.12 | 1.42 | 1.23 | 2.48 | 1.85 | 2.48 | 2.62 | 11.15 |
| **22** | 17 | suburbs | 2.05 | 1.74 | 1.52 | 3.10 | 0.38 | 5.69 | 1.54 | 1.34 | 2.71 | 2.04 | 2.70 | 2.99 | 12.36 |
| **22** | 18 | cities | 2.40 | 2.02 | 1.79 | 3.71 | 0.44 | 6.99 | 1.79 | 1.56 | 3.18 | 2.47 | 3.15 | 3.96 | 15.13 |
| **22** | 18 | country | 1.99 | 1.69 | 1.48 | 2.99 | 0.37 | 5.45 | 1.50 | 1.30 | 2.63 | 1.97 | 2.63 | 2.80 | 11.86 |
| **22** | 18 | suburbs | 2.17 | 1.84 | 1.61 | 3.28 | 0.40 | 6.04 | 1.63 | 1.42 | 2.87 | 2.17 | 2.86 | 3.19 | 13.13 |
| **22** | 19 | cities | 2.49 | 2.11 | 1.85 | 3.79 | 0.46 | 6.99 | 1.87 | 1.63 | 3.29 | 2.50 | 3.28 | 3.74 | 15.19 |
| **22** | 19 | country | 2.17 | 1.84 | 1.61 | 3.26 | 0.40 | 5.95 | 1.63 | 1.42 | 2.86 | 2.15 | 2.86 | 3.08 | 12.95 |
| **22** | 19 | suburbs | 2.31 | 1.96 | 1.71 | 3.49 | 0.43 | 6.39 | 1.74 | 1.51 | 3.05 | 2.30 | 3.05 | 3.34 | 13.90 |
| **22** | 20 | cities | 1.81 | 1.53 | 1.34 | 2.74 | 0.33 | 5.03 | 1.36 | 1.18 | 2.39 | 1.81 | 2.38 | 2.65 | 10.93 |
| **22** | 20 | country | 1.67 | 1.42 | 1.24 | 2.51 | 0.31 | 4.58 | 1.26 | 1.09 | 2.20 | 1.65 | 2.20 | 2.36 | 9.96 |
| **22** | 20 | suburbs | 1.72 | 1.46 | 1.28 | 2.60 | 0.32 | 4.76 | 1.30 | 1.13 | 2.28 | 1.71 | 2.27 | 2.48 | 10.35 |
| **23** | 9 | cities | 2.39 | 2.99 | 1.02 | 2.98 | 0.22 | 10.12 | 1.05 | 1.29 | 2.49 | 1.89 | 2.46 | 3.38 | 21.35 |
| **23** | 9 | country | 2.18 | 2.72 | 0.93 | 2.72 | 0.20 | 9.18 | 0.96 | 1.18 | 2.27 | 1.72 | 2.24 | 3.07 | 19.42 |
| **23** | 9 | suburbs | 2.28 | 2.85 | 0.97 | 2.85 | 0.21 | 9.63 | 1.01 | 1.23 | 2.38 | 1.80 | 2.35 | 3.21 | 20.35 |
| **23** | 10 | cities | 2.55 | 3.19 | 1.09 | 3.19 | 0.24 | 10.83 | 1.12 | 1.38 | 2.66 | 2.02 | 2.63 | 3.61 | 22.82 |
| **23** | 10 | country | 2.33 | 2.91 | 0.99 | 2.91 | 0.22 | 9.83 | 1.03 | 1.26 | 2.43 | 1.84 | 2.40 | 3.28 | 20.78 |
| **23** | 10 | suburbs | 2.44 | 3.05 | 1.04 | 3.04 | 0.23 | 10.30 | 1.07 | 1.32 | 2.54 | 1.93 | 2.51 | 3.44 | 21.76 |
| **23** | 11 | cities | 3.32 | 4.14 | 1.41 | 4.13 | 0.31 | 14.00 | 1.46 | 1.79 | 3.46 | 2.62 | 3.41 | 4.67 | 29.57 |
| **23** | 11 | country | 3.10 | 3.86 | 1.32 | 3.86 | 0.29 | 13.03 | 1.36 | 1.67 | 3.23 | 2.44 | 3.19 | 4.35 | 27.56 |
| **23** | 11 | suburbs | 3.21 | 4.00 | 1.37 | 4.00 | 0.30 | 13.51 | 1.41 | 1.73 | 3.34 | 2.53 | 3.30 | 4.51 | 28.57 |
| **23** | 12 | cities | 5.45 | 6.81 | 2.32 | 6.79 | 0.51 | 23.22 | 2.39 | 2.94 | 5.68 | 4.30 | 5.61 | 7.73 | 48.80 |
| **23** | 12 | country | 5.07 | 6.33 | 2.16 | 6.32 | 0.47 | 21.48 | 2.23 | 2.74 | 5.28 | 4.00 | 5.21 | 7.16 | 45.27 |
| **23** | 12 | suburbs | 5.25 | 6.57 | 2.24 | 6.55 | 0.49 | 22.31 | 2.31 | 2.84 | 5.48 | 4.15 | 5.41 | 7.43 | 46.98 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23** | 21 | cities | 5.48 | 6.85 | 2.33 | 6.83 | 0.51 | 23.34 | 2.41 | 2.96 | 5.71 | 4.33 | 5.64 | 7.77 | 49.07 |
| **23** | 21 | country | 4.94 | 6.18 | 2.11 | 6.16 | 0.46 | 20.96 | 2.17 | 2.67 | 5.15 | 3.90 | 5.09 | 6.99 | 44.17 |
| **23** | 21 | suburbs | 5.20 | 6.50 | 2.22 | 6.49 | 0.48 | 22.05 | 2.29 | 2.81 | 5.42 | 4.11 | 5.36 | 7.35 | 46.48 |
| **23** | 22 | cities | 6.04 | 7.55 | 2.57 | 7.53 | 0.56 | 25.58 | 2.66 | 3.26 | 6.29 | 4.77 | 6.22 | 8.53 | 53.94 |
| **23** | 22 | country | 5.52 | 6.89 | 2.35 | 6.88 | 0.51 | 23.29 | 2.43 | 2.98 | 5.75 | 4.35 | 5.68 | 7.77 | 49.18 |
| **23** | 22 | suburbs | 5.77 | 7.20 | 2.46 | 7.19 | 0.54 | 24.35 | 2.54 | 3.12 | 6.01 | 4.55 | 5.94 | 8.13 | 51.43 |
| **23** | 23 | cities | 7.69 | 9.62 | 3.28 | 9.59 | 0.71 | 32.77 | 3.38 | 4.15 | 8.02 | 6.07 | 7.91 | 10.91 | 68.88 |
| **23** | 23 | country | 7.01 | 8.76 | 2.99 | 8.74 | 0.65 | 29.75 | 3.08 | 3.78 | 7.30 | 5.53 | 7.21 | 9.91 | 62.66 |
| **23** | 23 | suburbs | 7.34 | 9.18 | 3.13 | 9.15 | 0.68 | 31.16 | 3.23 | 3.96 | 7.65 | 5.80 | 7.55 | 10.38 | 65.62 |
| **23** | 24 | cities | 16.42 | 20.64 | 6.98 | 20.49 | 1.52 | 71.64 | 7.20 | 8.86 | 17.12 | 12.97 | 16.89 | 23.70 | 148.77 |
| **23** | 24 | country | 15.07 | 18.92 | 6.41 | 18.79 | 1.40 | 65.36 | 6.61 | 8.13 | 15.70 | 11.90 | 15.50 | 21.65 | 136.13 |
| **23** | 24 | suburbs | 15.71 | 19.72 | 6.68 | 19.59 | 1.45 | 68.10 | 6.89 | 8.47 | 16.37 | 12.40 | 16.16 | 22.56 | 141.86 |
| **24** | 9 | cities | 1.98 | 2.12 | 0.75 | 2.57 | 0.15 | 6.85 | 0.74 | 1.09 | 1.87 | 1.64 | 1.87 | 2.70 | 14.82 |
| **24** | 9 | country | 1.80 | 1.92 | 0.68 | 2.33 | 0.14 | 6.21 | 0.67 | 0.99 | 1.69 | 1.49 | 1.69 | 2.45 | 13.44 |
| **24** | 9 | suburbs | 1.89 | 2.02 | 0.71 | 2.45 | 0.15 | 6.53 | 0.71 | 1.04 | 1.78 | 1.56 | 1.78 | 2.57 | 14.13 |
| **24** | 10 | cities | 2.12 | 2.27 | 0.80 | 2.74 | 0.17 | 7.33 | 0.79 | 1.16 | 2.00 | 1.76 | 2.00 | 2.88 | 15.85 |
| **24** | 10 | country | 1.93 | 2.06 | 0.73 | 2.49 | 0.15 | 6.65 | 0.72 | 1.06 | 1.81 | 1.59 | 1.82 | 2.62 | 14.40 |
| **24** | 10 | suburbs | 2.02 | 2.16 | 0.76 | 2.62 | 0.16 | 6.99 | 0.75 | 1.11 | 1.91 | 1.67 | 1.91 | 2.75 | 15.12 |
| **24** | 11 | cities | 2.70 | 2.88 | 1.01 | 3.48 | 0.21 | 9.30 | 1.00 | 1.48 | 2.54 | 2.23 | 2.54 | 3.66 | 20.13 |
| **24** | 11 | country | 2.50 | 2.67 | 0.94 | 3.23 | 0.19 | 8.63 | 0.93 | 1.37 | 2.35 | 2.07 | 2.35 | 3.40 | 18.67 |
| **24** | 11 | suburbs | 2.60 | 2.78 | 0.98 | 3.36 | 0.20 | 8.97 | 0.97 | 1.43 | 2.45 | 2.15 | 2.45 | 3.53 | 19.41 |
| **24** | 12 | cities | 4.45 | 4.76 | 1.68 | 5.76 | 0.35 | 15.38 | 1.66 | 2.44 | 4.19 | 3.68 | 4.19 | 6.05 | 33.26 |
| **24** | 12 | country | 4.13 | 4.42 | 1.56 | 5.35 | 0.32 | 14.28 | 1.54 | 2.27 | 3.89 | 3.42 | 3.89 | 5.62 | 30.88 |
| **24** | 12 | suburbs | 4.29 | 4.59 | 1.62 | 5.55 | 0.33 | 14.82 | 1.60 | 2.36 | 4.04 | 3.55 | 4.04 | 5.84 | 32.06 |
| **24** | 21 | cities | 4.43 | 4.73 | 1.67 | 5.73 | 0.34 | 15.29 | 1.65 | 2.43 | 4.17 | 3.66 | 4.17 | 6.02 | 33.08 |
| **24** | 21 | country | 3.98 | 4.25 | 1.50 | 5.14 | 0.31 | 13.73 | 1.48 | 2.18 | 3.74 | 3.29 | 3.74 | 5.40 | 29.69 |
| **24** | 21 | suburbs | 4.20 | 4.49 | 1.58 | 5.43 | 0.33 | 14.49 | 1.56 | 2.30 | 3.95 | 3.47 | 3.95 | 5.70 | 31.34 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | $\text{PBT}_{\text{CC}}$ | $\text{PBT}_{\text{OD}}$ | $\text{PBT}_{\text{HT\_CE}}$ | $\text{PBT}_{\text{HT\_nCE}}$ | $\text{PBT}_{\text{PM}}$ | $\text{PBT}_{\text{IR\_hh}}$ | $\text{PBT}_{\text{POF}}$ | $\text{PBT}_{\text{AC}}$ | $\text{PBT}_{\text{ET}}$ | $\text{PBT}_{\text{EuF}}$ | $\text{PBT}_{\text{EuM}}$ | $\text{PBT}_{\text{Ec\_FW}}$ | $\text{PBT}_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **24** | 22 | cities | 4.97 | 5.31 | 1.87 | 6.42 | 0.39 | 17.14 | 1.85 | 2.73 | 4.68 | 4.11 | 4.68 | 6.75 | 37.09 |
| **24** | 22 | country | 4.49 | 4.80 | 1.69 | 5.81 | 0.35 | 15.51 | 1.67 | 2.47 | 4.23 | 3.72 | 4.23 | 6.11 | 33.55 |
| **24** | 22 | suburbs | 4.72 | 5.05 | 1.78 | 6.11 | 0.37 | 16.30 | 1.76 | 2.59 | 4.45 | 3.91 | 4.45 | 6.42 | 35.27 |
| **24** | 23 | cities | 6.14 | 6.57 | 2.31 | 7.94 | 0.48 | 21.22 | 2.29 | 3.37 | 5.78 | 5.08 | 5.79 | 8.35 | 45.89 |
| **24** | 23 | country | 5.59 | 5.97 | 2.10 | 7.22 | 0.43 | 19.29 | 2.08 | 3.06 | 5.26 | 4.62 | 5.26 | 7.59 | 41.72 |
| **24** | 23 | suburbs | 5.86 | 6.27 | 2.21 | 7.58 | 0.46 | 20.25 | 2.18 | 3.22 | 5.52 | 4.85 | 5.52 | 7.97 | 43.79 |
| **24** | 24 | cities | 12.71 | 13.60 | 4.78 | 16.43 | 0.99 | 43.96 | 4.74 | 6.98 | 11.97 | 10.51 | 11.97 | 17.30 | 95.00 |
| **24** | 24 | country | 11.71 | 12.52 | 4.41 | 15.13 | 0.91 | 40.50 | 4.36 | 6.42 | 11.02 | 9.68 | 11.02 | 15.94 | 87.49 |
| **24** | 24 | suburbs | 12.19 | 13.04 | 4.59 | 15.75 | 0.95 | 42.15 | 4.54 | 6.69 | 11.47 | 10.08 | 11.47 | 16.59 | 91.08 |
| **25** | 9 | cities | 1.72 | 1.73 | 0.66 | 2.19 | 0.14 | 3.99 | 0.64 | 0.82 | 1.46 | 1.38 | 1.45 | 1.86 | 13.54 |
| **25** | 9 | country | 1.52 | 1.53 | 0.58 | 1.94 | 0.12 | 3.53 | 0.56 | 0.73 | 1.30 | 1.22 | 1.29 | 1.64 | 11.98 |
| **25** | 9 | suburbs | 1.62 | 1.62 | 0.62 | 2.06 | 0.13 | 3.75 | 0.60 | 0.77 | 1.38 | 1.30 | 1.37 | 1.75 | 12.73 |
| **25** | 10 | cities | 1.84 | 1.84 | 0.70 | 2.34 | 0.15 | 4.26 | 0.68 | 0.88 | 1.56 | 1.47 | 1.55 | 1.98 | 14.44 |
| **25** | 10 | country | 1.63 | 1.63 | 0.63 | 2.08 | 0.13 | 3.77 | 0.60 | 0.78 | 1.39 | 1.31 | 1.38 | 1.76 | 12.81 |
| **25** | 10 | suburbs | 1.73 | 1.73 | 0.66 | 2.21 | 0.14 | 4.01 | 0.64 | 0.82 | 1.47 | 1.39 | 1.46 | 1.87 | 13.60 |
| **25** | 11 | cities | 2.42 | 2.43 | 0.93 | 3.08 | 0.19 | 5.61 | 0.90 | 1.15 | 2.06 | 1.94 | 2.04 | 2.61 | 19.02 |
| **25** | 11 | country | 2.20 | 2.20 | 0.84 | 2.80 | 0.17 | 5.09 | 0.81 | 1.05 | 1.87 | 1.77 | 1.86 | 2.37 | 17.28 |
| **25** | 11 | suburbs | 2.31 | 2.31 | 0.89 | 2.94 | 0.18 | 5.35 | 0.85 | 1.10 | 1.96 | 1.85 | 1.95 | 2.49 | 18.14 |
| **25** | 12 | cities | 3.84 | 3.85 | 1.47 | 4.90 | 0.31 | 8.91 | 1.42 | 1.83 | 3.27 | 3.09 | 3.24 | 4.15 | 30.22 |
| **25** | 12 | country | 3.50 | 3.51 | 1.34 | 4.47 | 0.28 | 8.12 | 1.30 | 1.67 | 2.98 | 2.82 | 2.96 | 3.78 | 27.55 |
| **25** | 12 | suburbs | 3.67 | 3.68 | 1.41 | 4.67 | 0.29 | 8.50 | 1.36 | 1.75 | 3.12 | 2.95 | 3.10 | 3.96 | 28.85 |
| **25** | 21 | cities | 3.77 | 3.78 | 1.45 | 4.80 | 0.30 | 8.74 | 1.40 | 1.80 | 3.21 | 3.03 | 3.18 | 4.07 | 29.65 |
| **25** | 21 | country | 3.31 | 3.32 | 1.27 | 4.23 | 0.26 | 7.67 | 1.23 | 1.58 | 2.82 | 2.66 | 2.80 | 3.57 | 26.05 |
| **25** | 21 | suburbs | 3.53 | 3.54 | 1.36 | 4.50 | 0.28 | 8.18 | 1.31 | 1.68 | 3.01 | 2.84 | 2.98 | 3.81 | 27.78 |
| **25** | 22 | cities | 4.24 | 4.25 | 1.63 | 5.40 | 0.34 | 9.81 | 1.57 | 2.02 | 3.61 | 3.40 | 3.58 | 4.57 | 33.31 |
| **25** | 22 | country | 3.77 | 3.78 | 1.45 | 4.81 | 0.30 | 8.73 | 1.40 | 1.80 | 3.21 | 3.03 | 3.19 | 4.07 | 29.64 |
| **25** | 22 | suburbs | 3.99 | 4.00 | 1.53 | 5.09 | 0.32 | 9.24 | 1.48 | 1.90 | 3.40 | 3.21 | 3.37 | 4.30 | 31.38 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT**$_{CC}$ | **PBT**$_{OD}$ | **PBT**$_{HT\_CE}$ | **PBT**$_{HT\_nCE}$ | **PBT**$_{PM}$ | **PBT**$_{IR\_hh}$ | **PBT**$_{POF}$ | **PBT**$_{AC}$ | **PBT**$_{ET}$ | **PBT**$_{EuF}$ | **PBT**$_{EuM}$ | **PBT**$_{Ec\_FW}$ | **PBT**$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **25** | 23 | cities | 5.28 | 5.29 | 2.02 | 6.72 | 0.42 | 12.23 | 1.95 | 2.52 | 4.49 | 4.24 | 4.46 | 5.69 | 41.50 |
| **25** | 23 | country | 4.68 | 4.69 | 1.80 | 5.97 | 0.37 | 10.84 | 1.73 | 2.23 | 3.98 | 3.76 | 3.95 | 5.05 | 36.80 |
| **25** | 23 | suburbs | 4.98 | 4.99 | 1.91 | 6.34 | 0.40 | 11.53 | 1.84 | 2.37 | 4.24 | 4.00 | 4.20 | 5.37 | 39.13 |
| **25** | 24 | cities | 10.96 | 11.02 | 4.20 | 13.97 | 0.87 | 25.53 | 4.06 | 5.23 | 9.33 | 8.80 | 9.26 | 11.86 | 86.41 |
| **25** | 24 | country | 9.92 | 9.96 | 3.80 | 12.64 | 0.79 | 23.06 | 3.67 | 4.73 | 8.45 | 7.97 | 8.38 | 10.72 | 78.13 |
| **25** | 24 | suburbs | 10.43 | 10.48 | 4.00 | 13.29 | 0.83 | 24.27 | 3.86 | 4.98 | 8.88 | 8.38 | 8.81 | 11.28 | 82.18 |
| **26** | 9 | cities | 3.09 | 1.34 | 1.53 | 2.44 | 0.68 | 0.33 | 2.54 | 1.47 | 3.18 | 1.80 | 3.11 | 0.55 | 3.96 |
| **26** | 9 | country | 2.94 | 1.27 | 1.45 | 2.32 | 0.64 | 0.31 | 2.41 | 1.40 | 3.02 | 1.71 | 2.95 | 0.52 | 3.75 |
| **26** | 9 | suburbs | 3.02 | 1.30 | 1.49 | 2.38 | 0.66 | 0.32 | 2.48 | 1.43 | 3.10 | 1.76 | 3.03 | 0.53 | 3.85 |
| **26** | 10 | cities | 3.30 | 1.43 | 1.63 | 2.61 | 0.72 | 0.35 | 2.71 | 1.57 | 3.39 | 1.93 | 3.32 | 0.58 | 4.23 |
| **26** | 10 | country | 3.14 | 1.35 | 1.55 | 2.47 | 0.69 | 0.33 | 2.57 | 1.49 | 3.22 | 1.83 | 3.15 | 0.55 | 4.00 |
| **26** | 10 | suburbs | 3.22 | 1.39 | 1.59 | 2.54 | 0.71 | 0.34 | 2.64 | 1.53 | 3.30 | 1.88 | 3.24 | 0.57 | 4.11 |
| **26** | 11 | cities | 4.30 | 1.86 | 2.13 | 3.40 | 0.94 | 0.46 | 3.53 | 2.05 | 4.42 | 2.51 | 4.33 | 0.76 | 5.51 |
| **26** | 11 | country | 4.15 | 1.79 | 2.05 | 3.27 | 0.91 | 0.44 | 3.41 | 1.97 | 4.26 | 2.42 | 4.17 | 0.73 | 5.29 |
| **26** | 11 | suburbs | 4.23 | 1.82 | 2.09 | 3.33 | 0.93 | 0.45 | 3.47 | 2.01 | 4.34 | 2.46 | 4.25 | 0.74 | 5.39 |
| **26** | 12 | cities | 6.53 | 2.84 | 3.24 | 5.17 | 1.43 | 0.70 | 5.36 | 3.10 | 6.71 | 3.82 | 6.57 | 1.16 | 8.43 |
| **26** | 12 | country | 6.30 | 2.73 | 3.12 | 4.98 | 1.38 | 0.67 | 5.17 | 2.99 | 6.47 | 3.68 | 6.34 | 1.12 | 8.10 |
| **26** | 12 | suburbs | 6.42 | 2.78 | 3.18 | 5.08 | 1.41 | 0.69 | 5.27 | 3.05 | 6.59 | 3.75 | 6.45 | 1.14 | 8.25 |
| **26** | 21 | cities | 6.53 | 2.82 | 3.23 | 5.16 | 1.43 | 0.70 | 5.36 | 3.10 | 6.71 | 3.81 | 6.57 | 1.15 | 8.37 |
| **26** | 21 | country | 6.22 | 2.69 | 3.07 | 4.91 | 1.36 | 0.66 | 5.11 | 2.96 | 6.39 | 3.63 | 6.26 | 1.10 | 7.96 |
| **26** | 21 | suburbs | 6.38 | 2.75 | 3.15 | 5.03 | 1.40 | 0.68 | 5.23 | 3.03 | 6.55 | 3.72 | 6.41 | 1.13 | 8.16 |
| **26** | 22 | cities | 7.18 | 3.10 | 3.54 | 5.66 | 1.57 | 0.76 | 5.89 | 3.41 | 7.37 | 4.18 | 7.22 | 1.27 | 9.17 |
| **26** | 22 | country | 6.91 | 2.97 | 3.41 | 5.45 | 1.51 | 0.73 | 5.67 | 3.28 | 7.09 | 4.02 | 6.94 | 1.22 | 8.81 |
| **26** | 22 | suburbs | 7.05 | 3.03 | 3.48 | 5.55 | 1.54 | 0.75 | 5.78 | 3.35 | 7.23 | 4.10 | 7.08 | 1.24 | 8.99 |
| **26** | 23 | cities | 8.66 | 3.74 | 4.28 | 6.84 | 1.90 | 0.93 | 7.10 | 4.11 | 8.89 | 5.05 | 8.70 | 1.53 | 11.11 |
| **26** | 23 | country | 8.34 | 3.61 | 4.13 | 6.59 | 1.83 | 0.89 | 6.85 | 3.96 | 8.57 | 4.87 | 8.39 | 1.48 | 10.70 |
| **26** | 23 | suburbs | 8.51 | 3.68 | 4.20 | 6.72 | 1.86 | 0.91 | 6.98 | 4.04 | 8.73 | 4.96 | 8.55 | 1.50 | 10.90 |

## WOOD WOOL

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26** | 24 | cities | 17.08 | 7.45 | 8.49 | 13.57 | 3.74 | 1.85 | 14.01 | 8.11 | 17.55 | 10.00 | 17.18 | 3.06 | 22.20 |
| **26** | 24 | country | 16.61 | 7.24 | 8.25 | 13.19 | 3.64 | 1.80 | 13.62 | 7.89 | 17.07 | 9.72 | 16.71 | 2.97 | 21.56 |
| **26** | 24 | suburbs | 16.84 | 7.34 | 8.36 | 13.37 | 3.69 | 1.82 | 13.82 | 8.00 | 17.31 | 9.85 | 16.95 | 3.01 | 21.85 |
| **27** | 9 | cities | 1.51 | 0.85 | 0.74 | 1.64 | 0.21 | 0.32 | 0.91 | 0.91 | 1.66 | 1.10 | 1.68 | 0.54 | 3.55 |
| **27** | 9 | country | 1.37 | 0.77 | 0.68 | 1.49 | 0.19 | 0.29 | 0.83 | 0.83 | 1.50 | 1.00 | 1.52 | 0.49 | 3.24 |
| **27** | 9 | suburbs | 1.44 | 0.81 | 0.71 | 1.56 | 0.20 | 0.30 | 0.87 | 0.87 | 1.58 | 1.05 | 1.60 | 0.52 | 3.39 |
| **27** | 10 | cities | 1.62 | 0.91 | 0.80 | 1.75 | 0.23 | 0.34 | 0.98 | 0.98 | 1.77 | 1.17 | 1.80 | 0.58 | 3.80 |
| **27** | 10 | country | 1.47 | 0.83 | 0.72 | 1.59 | 0.21 | 0.31 | 0.89 | 0.89 | 1.61 | 1.07 | 1.63 | 0.53 | 3.47 |
| **27** | 10 | suburbs | 1.54 | 0.87 | 0.76 | 1.67 | 0.22 | 0.32 | 0.93 | 0.93 | 1.69 | 1.12 | 1.71 | 0.55 | 3.63 |
| **27** | 11 | cities | 2.10 | 1.18 | 1.03 | 2.27 | 0.29 | 0.44 | 1.27 | 1.26 | 2.29 | 1.52 | 2.32 | 0.75 | 4.91 |
| **27** | 11 | country | 1.94 | 1.09 | 0.95 | 2.10 | 0.27 | 0.41 | 1.17 | 1.17 | 2.12 | 1.41 | 2.15 | 0.70 | 4.57 |
| **27** | 11 | suburbs | 2.02 | 1.14 | 0.99 | 2.18 | 0.28 | 0.42 | 1.22 | 1.22 | 2.21 | 1.46 | 2.24 | 0.72 | 4.74 |
| **27** | 12 | cities | 3.38 | 1.91 | 1.66 | 3.66 | 0.47 | 0.72 | 2.04 | 2.04 | 3.70 | 2.46 | 3.75 | 1.22 | 7.99 |
| **27** | 12 | country | 3.14 | 1.77 | 1.54 | 3.40 | 0.44 | 0.67 | 1.89 | 1.89 | 3.43 | 2.28 | 3.48 | 1.13 | 7.44 |
| **27** | 12 | suburbs | 3.26 | 1.84 | 1.60 | 3.53 | 0.46 | 0.69 | 1.96 | 1.96 | 3.56 | 2.37 | 3.61 | 1.17 | 7.71 |
| **27** | 21 | cities | 3.27 | 1.84 | 1.61 | 3.54 | 0.46 | 0.69 | 1.97 | 1.97 | 3.58 | 2.38 | 3.63 | 1.18 | 7.72 |
| **27** | 21 | country | 2.96 | 1.67 | 1.45 | 3.21 | 0.41 | 0.63 | 1.78 | 1.78 | 3.23 | 2.15 | 3.28 | 1.07 | 7.00 |
| **27** | 21 | suburbs | 3.11 | 1.75 | 1.53 | 3.37 | 0.44 | 0.66 | 1.87 | 1.87 | 3.40 | 2.26 | 3.45 | 1.12 | 7.35 |
| **27** | 22 | cities | 3.68 | 2.08 | 1.81 | 3.99 | 0.52 | 0.78 | 2.22 | 2.22 | 4.03 | 2.67 | 4.08 | 1.32 | 8.68 |
| **27** | 22 | country | 3.35 | 1.89 | 1.64 | 3.63 | 0.47 | 0.71 | 2.02 | 2.02 | 3.66 | 2.43 | 3.71 | 1.20 | 7.91 |
| **27** | 22 | suburbs | 3.51 | 1.98 | 1.72 | 3.80 | 0.49 | 0.74 | 2.12 | 2.11 | 3.84 | 2.55 | 3.89 | 1.26 | 8.28 |
| **27** | 23 | cities | 4.53 | 2.55 | 2.22 | 4.91 | 0.63 | 0.96 | 2.73 | 2.73 | 4.95 | 3.29 | 5.02 | 1.63 | 10.71 |
| **27** | 23 | country | 4.13 | 2.33 | 2.03 | 4.48 | 0.58 | 0.88 | 2.48 | 2.48 | 4.51 | 3.00 | 4.57 | 1.49 | 9.80 |
| **27** | 23 | suburbs | 4.32 | 2.44 | 2.13 | 4.69 | 0.61 | 0.92 | 2.60 | 2.60 | 4.73 | 3.14 | 4.79 | 1.56 | 10.25 |
| **27** | 24 | cities | 9.42 | 5.34 | 4.63 | 10.26 | 1.31 | 2.04 | 5.64 | 5.66 | 10.29 | 6.87 | 10.42 | 3.45 | 22.60 |
| **27** | 24 | country | 8.68 | 4.94 | 4.27 | 9.47 | 1.21 | 1.89 | 5.19 | 5.21 | 9.48 | 6.35 | 9.61 | 3.20 | 20.95 |
| **27** | 24 | suburbs | 9.03 | 5.13 | 4.44 | 9.85 | 1.26 | 1.96 | 5.41 | 5.43 | 9.87 | 6.60 | 10.00 | 3.32 | 21.74 |

## WOOD WOOL

| Country | Arc | GL | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **28** | 5 | cities | 2.71 | 1.91 | 0.85 | (10.47) | 0.13 | (3.97) | 0.68 | 11.55 | 3.19 | (1.64) | 3.29 | (1.78) | 20.16 |
| **28** | 5 | country | 2.28 | 1.63 | 0.72 | (31.01) | 0.12 | (4.89) | 0.60 | 5.59 | 2.63 | (2.03) | 2.70 | (2.16) | 14.25 |
| **28** | 5 | suburbs | 2.45 | 1.75 | 0.77 | (20.43) | 0.12 | (4.71) | 0.64 | 6.73 | 2.84 | (1.95) | 2.92 | (2.09) | 15.97 |
| **28** | 6 | cities | 2.70 | 1.87 | 0.83 | (6.18) | 0.13 | (3.03) | 0.66 | 38.90 | 3.23 | (1.25) | 3.36 | (1.36) | 24.51 |
| **28** | 6 | country | 2.24 | 1.59 | 0.70 | (11.09) | 0.11 | (3.63) | 0.57 | 7.76 | 2.61 | (1.50) | 2.69 | (1.62) | 15.71 |
| **28** | 6 | suburbs | 2.42 | 1.70 | 0.75 | (9.19) | 0.12 | (3.52) | 0.61 | 10.47 | 2.84 | (1.45) | 2.94 | (1.57) | 18.06 |
| **28** | 7 | cities | 2.83 | 1.92 | 0.86 | (4.19) | 0.13 | (2.42) | 0.65 | (18.72) | 3.46 | (0.99) | 3.64 | (1.09) | 36.34 |
| **28** | 7 | country | 2.36 | 1.64 | 0.73 | (5.63) | 0.11 | (2.71) | 0.57 | 27.45 | 2.82 | (1.12) | 2.93 | (1.22) | 20.95 |
| **28** | 7 | suburbs | 2.53 | 1.75 | 0.78 | (5.47) | 0.12 | (2.75) | 0.61 | 54.08 | 3.03 | (1.13) | 3.16 | (1.24) | 23.63 |
| **28** | 8 | cities | 5.93 | 3.15 | 1.53 | (1.62) | 0.16 | (1.27) | 0.86 | (2.04) | 10.00 | (0.52) | 13.22 | (0.58) | (18.15) |
| **28** | 8 | country | 4.25 | 2.50 | 1.18 | (1.83) | 0.14 | (1.37) | 0.74 | (2.54) | 6.13 | (0.56) | 7.14 | (0.63) | (29.19) |
| **28** | 8 | suburbs | 4.71 | 2.72 | 1.29 | (1.83) | 0.15 | (1.39) | 0.79 | (2.47) | 6.97 | (0.57) | 8.29 | (0.64) | (26.25) |
| **28** | 17 | cities | 3.77 | 2.73 | 1.19 | 22.17 | 0.20 | (10.00) | 1.01 | 7.90 | 4.33 | (4.17) | 4.42 | (4.38) | 22.17 |
| **28** | 17 | country | 3.24 | 2.36 | 1.03 | 18.37 | 0.17 | (11.11) | 0.88 | 5.95 | 3.70 | (4.67) | 3.76 | (4.81) | 17.99 |
| **28** | 17 | suburbs | 3.46 | 2.52 | 1.10 | 8.38 | 0.18 | (11.25) | 0.94 | 6.50 | 3.95 | (4.71) | 4.03 | (4.88) | 19.42 |
| **28** | 18 | cities | 4.01 | 2.89 | 1.27 | (16.88) | 0.21 | (9.83) | 1.06 | 8.85 | 4.61 | (4.09) | 4.72 | (4.32) | 24.07 |
| **28** | 18 | country | 3.45 | 2.50 | 1.09 | 69.06 | 0.18 | (10.73) | 0.93 | 6.61 | 3.94 | (4.49) | 4.02 | (4.67) | 19.51 |
| **28** | 18 | suburbs | 3.68 | 2.67 | 1.17 | 101.65 | 0.19 | (10.91) | 0.99 | 7.23 | 4.21 | (4.56) | 4.30 | (4.76) | 21.05 |
| **28** | 19 | cities | 4.17 | 3.03 | 1.32 | 70.57 | 0.22 | (13.43) | 1.13 | 7.86 | 4.76 | (5.63) | 4.85 | (5.83) | 23.43 |
| **28** | 19 | country | 3.62 | 2.65 | 1.15 | 33.91 | 0.20 | (14.24) | 0.99 | 6.31 | 4.12 | (6.01) | 4.19 | (6.11) | 19.65 |
| **28** | 19 | suburbs | 3.85 | 2.81 | 1.23 | 37.95 | 0.21 | (14.77) | 1.05 | 6.76 | 4.38 | (6.22) | 4.46 | (6.34) | 20.96 |
| **28** | 20 | cities | 3.40 | 2.36 | 1.05 | (8.44) | 0.16 | (3.99) | 0.83 | 33.52 | 4.05 | (1.64) | 4.21 | (1.80) | 29.58 |
| **28** | 20 | country | 2.98 | 2.09 | 0.93 | (9.03) | 0.14 | (3.89) | 0.74 | 17.69 | 3.53 | (1.60) | 3.66 | (1.75) | 23.91 |
| **28** | 20 | suburbs | 3.14 | 2.20 | 0.97 | (9.28) | 0.15 | (4.05) | 0.78 | 19.47 | 3.72 | (1.67) | 3.86 | (1.82) | 25.38 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | cities | 0.39 | 0.29 | 2.75 | 3.08 | 0.51 | 1.13 | 0.51 | 0.36 | 0.57 | 3.83 | 0.56 | 0.87 | 12.82 |
| **1** | 1 | country | 0.27 | 0.19 | 1.94 | 2.10 | 0.35 | 0.75 | 0.34 | 0.24 | 0.38 | 2.66 | 0.37 | 0.58 | 8.97 |
| **1** | 1 | suburbs | 0.31 | 0.22 | 2.26 | 2.48 | 0.41 | 0.89 | 0.41 | 0.29 | 0.45 | 3.12 | 0.44 | 0.69 | 10.49 |
| **1** | 2 | cities | 0.31 | 0.20 | 2.38 | 2.40 | 0.41 | 0.82 | 0.38 | 0.25 | 0.41 | 3.17 | 0.40 | 0.62 | 10.79 |
| **1** | 2 | country | 0.21 | 0.13 | 1.62 | 1.62 | 0.28 | 0.55 | 0.26 | 0.17 | 0.27 | 2.15 | 0.27 | 0.42 | 7.34 |
| **1** | 2 | suburbs | 0.25 | 0.16 | 1.93 | 1.94 | 0.33 | 0.65 | 0.31 | 0.20 | 0.32 | 2.56 | 0.32 | 0.50 | 8.73 |
| **1** | 3 | cities | 0.40 | 0.24 | 3.09 | 2.98 | 0.52 | 0.98 | 0.46 | 0.30 | 0.48 | 4.02 | 0.48 | 0.74 | 13.82 |
| **1** | 3 | country | 0.22 | 0.14 | 1.74 | 1.69 | 0.29 | 0.56 | 0.26 | 0.17 | 0.28 | 2.27 | 0.27 | 0.42 | 7.79 |
| **1** | 3 | suburbs | 0.28 | 0.17 | 2.16 | 2.09 | 0.36 | 0.69 | 0.33 | 0.21 | 0.34 | 2.82 | 0.34 | 0.52 | 9.67 |
| **1** | 4 | cities | 1.12 | 0.61 | 9.19 | 8.12 | 1.47 | 2.55 | 1.23 | 0.77 | 1.25 | 11.48 | 1.23 | 1.91 | 39.99 |
| **1** | 4 | country | 0.55 | 0.32 | 4.30 | 4.08 | 0.72 | 1.33 | 0.63 | 0.41 | 0.66 | 5.56 | 0.65 | 1.00 | 19.13 |
| **1** | 4 | suburbs | 0.71 | 0.41 | 5.61 | 5.24 | 0.93 | 1.70 | 0.81 | 0.52 | 0.83 | 7.19 | 0.82 | 1.27 | 24.83 |
| **1** | 13 | cities | 0.40 | 0.24 | 3.09 | 2.96 | 0.52 | 0.98 | 0.46 | 0.30 | 0.48 | 4.01 | 0.47 | 0.74 | 13.78 |
| **1** | 13 | country | 0.31 | 0.18 | 2.39 | 2.30 | 0.40 | 0.76 | 0.36 | 0.23 | 0.37 | 3.11 | 0.37 | 0.57 | 10.67 |
| **1** | 13 | suburbs | 0.35 | 0.21 | 2.70 | 2.59 | 0.45 | 0.86 | 0.40 | 0.26 | 0.42 | 3.51 | 0.42 | 0.65 | 12.05 |
| **1** | 14 | cities | 0.45 | 0.28 | 3.47 | 3.40 | 0.59 | 1.14 | 0.53 | 0.35 | 0.56 | 4.55 | 0.55 | 0.86 | 15.57 |
| **1** | 14 | country | 0.35 | 0.22 | 2.70 | 2.67 | 0.46 | 0.89 | 0.42 | 0.28 | 0.44 | 3.56 | 0.44 | 0.68 | 12.16 |
| **1** | 14 | suburbs | 0.40 | 0.24 | 3.04 | 2.99 | 0.52 | 1.00 | 0.47 | 0.31 | 0.50 | 3.99 | 0.49 | 0.76 | 13.66 |
| **1** | 15 | cities | 0.40 | 0.25 | 3.12 | 3.06 | 0.53 | 1.02 | 0.48 | 0.31 | 0.50 | 4.09 | 0.50 | 0.77 | 14.00 |
| **1** | 15 | country | 0.32 | 0.20 | 2.42 | 2.39 | 0.41 | 0.80 | 0.38 | 0.25 | 0.40 | 3.18 | 0.39 | 0.60 | 10.89 |
| **1** | 15 | suburbs | 0.35 | 0.22 | 2.72 | 2.68 | 0.46 | 0.90 | 0.42 | 0.28 | 0.44 | 3.58 | 0.44 | 0.68 | 12.25 |
| **1** | 16 | cities | 0.26 | 0.15 | 2.06 | 1.94 | 0.34 | 0.63 | 0.30 | 0.19 | 0.31 | 2.65 | 0.31 | 0.48 | 9.14 |
| **1** | 16 | country | 0.22 | 0.13 | 1.72 | 1.63 | 0.29 | 0.53 | 0.25 | 0.16 | 0.26 | 2.23 | 0.26 | 0.40 | 7.66 |
| **1** | 16 | suburbs | 0.24 | 0.14 | 1.86 | 1.76 | 0.31 | 0.58 | 0.27 | 0.18 | 0.28 | 2.40 | 0.28 | 0.43 | 8.28 |
| **2** | 1 | cities | 0.39 | 0.23 | 2.61 | 2.13 | 1.22 | 0.76 | 1.50 | 1.76 | 2.80 | 3.24 | 2.84 | 16.94 | 9.22 |
| **2** | 1 | country | 0.31 | 0.17 | 2.03 | 1.66 | 0.88 | 0.59 | 1.02 | 1.05 | 1.67 | 2.52 | 1.69 | 4.98 | 7.20 |
| **2** | 1 | suburbs | 0.34 | 0.20 | 2.28 | 1.86 | 1.01 | 0.66 | 1.20 | 1.27 | 2.02 | 2.83 | 2.05 | 6.97 | 8.07 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2** | 2 | cities | 0.28 | 0.16 | 1.94 | 1.61 | 0.54 | 0.58 | 0.50 | 0.35 | 0.56 | 2.41 | 0.57 | 0.81 | 7.07 |
| **2** | 2 | country | 0.22 | 0.12 | 1.50 | 1.24 | 0.42 | 0.45 | 0.39 | 0.27 | 0.44 | 1.86 | 0.44 | 0.63 | 5.45 |
| **2** | 2 | suburbs | 0.25 | 0.14 | 1.70 | 1.41 | 0.47 | 0.51 | 0.44 | 0.31 | 0.50 | 2.12 | 0.50 | 0.72 | 6.20 |
| **2** | 3 | cities | 0.46 | 0.26 | 3.22 | 2.67 | 0.86 | 0.97 | 0.79 | 0.54 | 0.86 | 4.00 | 0.87 | 1.23 | 11.77 |
| **2** | 3 | country | 0.29 | 0.16 | 1.98 | 1.64 | 0.53 | 0.59 | 0.49 | 0.34 | 0.54 | 2.46 | 0.54 | 0.76 | 7.23 |
| **2** | 3 | suburbs | 0.35 | 0.19 | 2.44 | 2.02 | 0.65 | 0.73 | 0.60 | 0.42 | 0.66 | 3.04 | 0.67 | 0.94 | 8.92 |
| **2** | 4 | cities | 0.76 | 0.41 | 5.49 | 4.61 | 1.08 | 1.70 | 0.91 | 0.57 | 0.91 | 6.85 | 0.92 | 1.17 | 20.67 |
| **2** | 4 | country | 0.50 | 0.27 | 3.52 | 2.93 | 0.81 | 1.07 | 0.71 | 0.47 | 0.74 | 4.39 | 0.75 | 1.00 | 13.04 |
| **2** | 4 | suburbs | 0.62 | 0.33 | 4.38 | 3.65 | 0.96 | 1.34 | 0.84 | 0.54 | 0.86 | 5.45 | 0.87 | 1.14 | 16.28 |
| **2** | 13 | cities | 0.36 | 0.20 | 2.52 | 2.09 | 0.60 | 0.76 | 0.53 | 0.35 | 0.56 | 3.13 | 0.56 | 0.75 | 9.29 |
| **2** | 13 | country | 0.31 | 0.17 | 2.15 | 1.79 | 0.52 | 0.65 | 0.47 | 0.31 | 0.49 | 2.67 | 0.50 | 0.68 | 7.91 |
| **2** | 13 | suburbs | 0.33 | 0.18 | 2.34 | 1.94 | 0.56 | 0.71 | 0.50 | 0.33 | 0.53 | 2.91 | 0.53 | 0.72 | 8.61 |
| **2** | 14 | cities | 0.37 | 0.20 | 2.58 | 2.15 | 0.63 | 0.78 | 0.56 | 0.38 | 0.60 | 3.22 | 0.61 | 0.82 | 9.51 |
| **2** | 14 | country | 0.32 | 0.18 | 2.25 | 1.87 | 0.57 | 0.68 | 0.51 | 0.35 | 0.55 | 2.80 | 0.56 | 0.77 | 8.26 |
| **2** | 14 | suburbs | 0.35 | 0.19 | 2.42 | 2.01 | 0.60 | 0.73 | 0.54 | 0.36 | 0.58 | 3.01 | 0.59 | 0.80 | 8.88 |
| **2** | 15 | cities | 0.39 | 0.21 | 2.70 | 2.24 | 0.69 | 0.81 | 0.63 | 0.42 | 0.68 | 3.35 | 0.68 | 0.95 | 9.88 |
| **2** | 15 | country | 0.34 | 0.19 | 2.36 | 1.95 | 0.63 | 0.71 | 0.58 | 0.40 | 0.64 | 2.93 | 0.64 | 0.91 | 8.61 |
| **2** | 15 | suburbs | 0.36 | 0.20 | 2.52 | 2.09 | 0.66 | 0.76 | 0.60 | 0.41 | 0.66 | 3.13 | 0.66 | 0.93 | 9.21 |
| **2** | 16 | cities | 0.25 | 0.13 | 1.74 | 1.45 | 0.40 | 0.53 | 0.35 | 0.23 | 0.36 | 2.16 | 0.37 | 0.49 | 6.44 |
| **2** | 16 | country | 0.22 | 0.12 | 1.58 | 1.32 | 0.37 | 0.48 | 0.33 | 0.22 | 0.35 | 1.97 | 0.35 | 0.47 | 5.85 |
| **2** | 16 | suburbs | 0.24 | 0.13 | 1.66 | 1.39 | 0.39 | 0.51 | 0.34 | 0.22 | 0.36 | 2.07 | 0.36 | 0.48 | 6.15 |
| **3** | 1 | cities | 0.60 | 0.61 | 0.36 | 2.22 | 0.07 | 3.17 | 0.16 | 1.26 | 0.68 | 2.01 | 0.70 | 5.17 | 17.00 |
| **3** | 1 | country | 0.42 | 0.44 | 0.26 | 1.46 | 0.05 | 2.02 | 0.12 | 0.82 | 0.48 | 1.28 | 0.49 | 2.18 | 11.22 |
| **3** | 1 | suburbs | 0.49 | 0.51 | 0.30 | 1.75 | 0.06 | 2.45 | 0.13 | 0.99 | 0.56 | 1.55 | 0.58 | 2.95 | 13.44 |
| **3** | 2 | cities | 0.62 | 0.67 | 0.40 | 1.98 | 0.08 | 2.62 | 0.18 | 1.10 | 0.72 | 1.66 | 0.73 | 2.00 | 15.18 |
| **3** | 2 | country | 0.43 | 0.47 | 0.28 | 1.34 | 0.05 | 1.75 | 0.13 | 0.74 | 0.50 | 1.11 | 0.51 | 1.26 | 10.27 |
| **3** | 2 | suburbs | 0.51 | 0.55 | 0.33 | 1.60 | 0.06 | 2.10 | 0.15 | 0.88 | 0.59 | 1.33 | 0.60 | 1.53 | 12.25 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **$\text{PBT}_{\text{CC}}$** | **$\text{PBT}_{\text{OD}}$** | **$\text{PBT}_{\text{HT\_CE}}$** | **$\text{PBT}_{\text{HT\_nCE}}$** | **$\text{PBT}_{\text{PM}}$** | **$\text{PBT}_{\text{IR\_hh}}$** | **$\text{PBT}_{\text{POF}}$** | **$\text{PBT}_{\text{AC}}$** | **$\text{PBT}_{\text{ET}}$** | **$\text{PBT}_{\text{EuF}}$** | **$\text{PBT}_{\text{EuM}}$** | **$\text{PBT}_{\text{Ec\_FW}}$** | **$\text{PBT}_{\text{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | 3 | cities | 1.09 | 1.19 | 0.70 | 3.47 | 0.14 | 4.59 | 0.32 | 1.92 | 1.26 | 2.91 | 1.29 | 3.45 | 26.66 |
| **3** | 3 | country | 0.61 | 0.67 | 0.40 | 1.86 | 0.08 | 2.42 | 0.18 | 1.02 | 0.70 | 1.54 | 0.72 | 1.66 | 14.30 |
| **3** | 3 | suburbs | 0.78 | 0.85 | 0.50 | 2.41 | 0.10 | 3.14 | 0.23 | 1.33 | 0.90 | 2.00 | 0.92 | 2.21 | 18.49 |
| **3** | 4 | cities | 2.59 | 3.11 | 1.87 | 6.84 | 0.38 | 8.40 | 0.87 | 3.68 | 3.06 | 5.34 | 3.10 | 4.30 | 52.64 |
| **3** | 4 | country | 1.16 | 1.31 | 0.78 | 3.35 | 0.16 | 4.26 | 0.36 | 1.83 | 1.35 | 2.71 | 1.38 | 2.56 | 25.78 |
| **3** | 4 | suburbs | 1.58 | 1.83 | 1.09 | 4.46 | 0.22 | 5.60 | 0.50 | 2.42 | 1.86 | 3.56 | 1.89 | 3.18 | 34.31 |
| **3** | 13 | cities | 1.01 | 1.15 | 0.68 | 2.97 | 0.14 | 3.79 | 0.31 | 1.62 | 1.19 | 2.41 | 1.21 | 2.32 | 22.85 |
| **3** | 13 | country | 0.74 | 0.84 | 0.50 | 2.20 | 0.10 | 2.82 | 0.23 | 1.20 | 0.87 | 1.79 | 0.88 | 1.77 | 16.90 |
| **3** | 13 | suburbs | 0.86 | 0.97 | 0.57 | 2.53 | 0.11 | 3.23 | 0.26 | 1.38 | 1.00 | 2.05 | 1.02 | 2.01 | 19.42 |
| **3** | 14 | cities | 0.99 | 1.11 | 0.66 | 2.95 | 0.13 | 3.78 | 0.30 | 1.61 | 1.15 | 2.40 | 1.18 | 2.41 | 22.64 |
| **3** | 14 | country | 0.72 | 0.81 | 0.48 | 2.19 | 0.10 | 2.82 | 0.22 | 1.20 | 0.84 | 1.79 | 0.86 | 1.85 | 16.81 |
| **3** | 14 | suburbs | 0.83 | 0.93 | 0.55 | 2.51 | 0.11 | 3.24 | 0.25 | 1.38 | 0.97 | 2.06 | 0.99 | 2.10 | 19.30 |
| **3** | 15 | cities | 0.97 | 1.08 | 0.64 | 2.94 | 0.13 | 3.81 | 0.29 | 1.62 | 1.13 | 2.42 | 1.15 | 2.53 | 22.62 |
| **3** | 15 | country | 0.71 | 0.78 | 0.46 | 2.17 | 0.09 | 2.82 | 0.21 | 1.20 | 0.82 | 1.79 | 0.84 | 1.93 | 16.68 |
| **3** | 15 | suburbs | 0.82 | 0.90 | 0.53 | 2.50 | 0.11 | 3.25 | 0.24 | 1.37 | 0.95 | 2.06 | 0.97 | 2.20 | 19.20 |
| **3** | 16 | cities | 0.79 | 0.92 | 0.55 | 2.21 | 0.11 | 2.76 | 0.25 | 1.20 | 0.93 | 1.75 | 0.95 | 1.53 | 16.98 |
| **3** | 16 | country | 0.62 | 0.71 | 0.43 | 1.78 | 0.09 | 2.25 | 0.20 | 0.97 | 0.73 | 1.43 | 0.74 | 1.31 | 13.71 |
| **3** | 16 | suburbs | 0.69 | 0.79 | 0.47 | 1.94 | 0.10 | 2.44 | 0.22 | 1.06 | 0.80 | 1.55 | 0.82 | 1.40 | 14.94 |
| **4** | 1 | cities | 0.15 | 0.07 | (5.98) | (0.28) | 0.12 | 0.28 | 0.21 | 0.69 | 0.54 | (0.07) | 0.89 | (0.29) | 3.95 |
| **4** | 1 | country | 0.13 | 0.06 | (2.96) | (0.22) | 0.10 | 0.23 | 0.17 | 0.61 | 0.46 | (0.06) | 0.78 | (0.23) | 3.33 |
| **4** | 1 | suburbs | 0.14 | 0.06 | (8.10) | (0.26) | 0.11 | 0.25 | 0.19 | 0.61 | 0.49 | (0.07) | 0.79 | (0.27) | 3.56 |
| **4** | 2 | cities | 0.14 | 0.08 | 0.47 | 0.71 | 0.12 | 0.27 | 0.20 | 0.32 | 0.43 | 1.21 | 0.44 | 1.21 | 3.28 |
| **4** | 2 | country | 0.11 | 0.06 | 0.41 | 0.74 | 0.10 | 0.22 | 0.17 | 0.27 | 0.36 | (20.22) | 0.38 | (0.45) | 2.73 |
| **4** | 2 | suburbs | 0.12 | 0.07 | 0.43 | 0.67 | 0.11 | 0.25 | 0.18 | 0.29 | 0.39 | 1.38 | 0.40 | 1.17 | 2.97 |
| **4** | 3 | cities | 0.22 | 0.12 | 0.66 | 0.77 | 0.19 | 0.44 | 0.33 | 0.49 | 0.68 | 0.57 | 0.67 | 1.14 | 5.20 |
| **4** | 3 | country | 0.16 | 0.09 | 0.50 | 0.63 | 0.14 | 0.32 | 0.24 | 0.36 | 0.50 | 0.54 | 0.50 | 0.96 | 3.83 |
| **4** | 3 | suburbs | 0.18 | 0.10 | 0.56 | 0.66 | 0.16 | 0.37 | 0.27 | 0.41 | 0.58 | 0.50 | 0.57 | 0.99 | 4.38 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT**$_{CC}$ | **PBT**$_{OD}$ | **PBT**$_{HT\_CE}$ | **PBT**$_{HT\_nCE}$ | **PBT**$_{PM}$ | **PBT**$_{IR\_hh}$ | **PBT**$_{POF}$ | **PBT**$_{AC}$ | **PBT**$_{ET}$ | **PBT**$_{EuF}$ | **PBT**$_{EuM}$ | **PBT**$_{Ec\_FW}$ | **PBT**$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 4 | cities | 0.29 | 0.20 | 0.47 | 0.30 | 0.28 | 0.66 | 0.49 | 0.46 | 0.84 | 0.12 | 0.65 | 0.37 | 6.60 |
| **4** | 4 | country | 0.20 | 0.13 | 0.40 | 0.30 | 0.19 | 0.43 | 0.32 | 0.36 | 0.60 | 0.13 | 0.51 | 0.38 | 4.65 |
| **4** | 4 | suburbs | 0.23 | 0.16 | 0.44 | 0.30 | 0.22 | 0.52 | 0.38 | 0.41 | 0.70 | 0.13 | 0.57 | 0.38 | 5.45 |
| **4** | 13 | cities | 0.20 | 0.13 | 0.46 | 0.37 | 0.19 | 0.44 | 0.32 | 0.40 | 0.63 | 0.17 | 0.55 | 0.48 | 4.84 |
| **4** | 13 | country | 0.17 | 0.11 | 0.42 | 0.35 | 0.16 | 0.37 | 0.27 | 0.35 | 0.54 | 0.17 | 0.49 | 0.46 | 4.14 |
| **4** | 13 | suburbs | 0.19 | 0.12 | 0.44 | 0.36 | 0.17 | 0.40 | 0.30 | 0.37 | 0.58 | 0.17 | 0.51 | 0.47 | 4.45 |
| **4** | 14 | cities | 0.20 | 0.12 | 0.50 | 0.43 | 0.19 | 0.43 | 0.32 | 0.41 | 0.63 | 0.21 | 0.57 | 0.57 | 4.86 |
| **4** | 14 | country | 0.18 | 0.11 | 0.48 | 0.47 | 0.16 | 0.37 | 0.27 | 0.38 | 0.56 | 0.26 | 0.52 | 0.64 | 4.25 |
| **4** | 14 | suburbs | 0.19 | 0.11 | 0.49 | 0.45 | 0.17 | 0.40 | 0.29 | 0.39 | 0.59 | 0.23 | 0.54 | 0.60 | 4.52 |
| **4** | 15 | cities | 0.21 | 0.12 | 0.57 | 0.56 | 0.19 | 0.44 | 0.32 | 0.45 | 0.66 | 0.32 | 0.62 | 0.77 | 5.05 |
| **4** | 15 | country | 0.19 | 0.11 | 0.59 | 0.75 | 0.16 | 0.38 | 0.28 | 0.43 | 0.59 | 0.66 | 0.59 | 1.16 | 4.51 |
| **4** | 15 | suburbs | 0.20 | 0.11 | 0.58 | 0.64 | 0.17 | 0.40 | 0.30 | 0.44 | 0.62 | 0.43 | 0.60 | 0.92 | 4.74 |
| **4** | 16 | cities | 0.16 | 0.11 | 0.32 | 0.23 | 0.16 | 0.36 | 0.27 | 0.30 | 0.50 | 0.64 | 0.41 | 1.84 | 3.85 |
| **4** | 16 | country | 0.15 | 0.09 | 0.31 | 0.23 | 0.14 | 0.32 | 0.24 | 0.27 | 0.45 | (1.27) | 0.38 | (3.68) | 3.47 |
| **4** | 16 | suburbs | 0.15 | 0.10 | 0.31 | 0.23 | 0.15 | 0.34 | 0.25 | 0.28 | 0.47 | (0.85) | 0.39 | 1.84 | 3.62 |
| **5** | 1 | cities | 0.14 | 0.12 | 0.32 | 0.39 | 0.10 | 0.11 | 0.17 | 0.23 | 0.31 | 0.34 | 0.31 | 0.20 | 2.40 |
| **5** | 1 | country | 0.12 | 0.10 | 0.27 | 0.33 | 0.09 | 0.09 | 0.14 | 0.20 | 0.27 | 0.29 | 0.26 | 0.17 | 2.03 |
| **5** | 1 | suburbs | 0.13 | 0.11 | 0.30 | 0.35 | 0.09 | 0.10 | 0.15 | 0.21 | 0.29 | 0.31 | 0.28 | 0.18 | 2.19 |
| **5** | 2 | cities | 0.15 | 0.13 | 0.34 | 0.41 | 0.11 | 0.12 | 0.18 | 0.24 | 0.33 | 0.35 | 0.32 | 0.21 | 2.52 |
| **5** | 2 | country | 0.13 | 0.11 | 0.29 | 0.34 | 0.09 | 0.10 | 0.15 | 0.21 | 0.28 | 0.30 | 0.27 | 0.18 | 2.12 |
| **5** | 2 | suburbs | 0.14 | 0.12 | 0.31 | 0.37 | 0.10 | 0.11 | 0.16 | 0.22 | 0.30 | 0.32 | 0.30 | 0.19 | 2.31 |
| **5** | 3 | cities | 0.26 | 0.22 | 0.59 | 0.70 | 0.19 | 0.20 | 0.31 | 0.42 | 0.57 | 0.61 | 0.56 | 0.36 | 4.34 |
| **5** | 3 | country | 0.20 | 0.16 | 0.44 | 0.53 | 0.14 | 0.15 | 0.23 | 0.32 | 0.43 | 0.46 | 0.42 | 0.27 | 3.26 |
| **5** | 3 | suburbs | 0.23 | 0.19 | 0.51 | 0.60 | 0.16 | 0.17 | 0.26 | 0.36 | 0.49 | 0.52 | 0.48 | 0.31 | 3.73 |
| **5** | 4 | cities | 0.55 | 0.45 | 1.19 | 1.34 | 0.40 | 0.35 | 0.64 | 0.80 | 1.10 | 1.14 | 1.08 | 0.64 | 8.33 |
| **5** | 4 | country | 0.36 | 0.30 | 0.79 | 0.92 | 0.25 | 0.25 | 0.42 | 0.55 | 0.75 | 0.79 | 0.74 | 0.46 | 5.70 |
| **5** | 4 | suburbs | 0.44 | 0.36 | 0.96 | 1.11 | 0.31 | 0.30 | 0.51 | 0.66 | 0.91 | 0.95 | 0.89 | 0.55 | 6.88 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5** | 13 | cities | 0.28 | 0.23 | 0.62 | 0.73 | 0.20 | 0.21 | 0.32 | 0.44 | 0.59 | 0.64 | 0.59 | 0.37 | 4.54 |
| **5** | 13 | country | 0.24 | 0.20 | 0.53 | 0.63 | 0.17 | 0.18 | 0.28 | 0.38 | 0.51 | 0.54 | 0.50 | 0.32 | 3.89 |
| **5** | 13 | suburbs | 0.26 | 0.21 | 0.57 | 0.68 | 0.18 | 0.19 | 0.30 | 0.41 | 0.55 | 0.59 | 0.54 | 0.34 | 4.20 |
| **5** | 14 | cities | 0.27 | 0.22 | 0.60 | 0.71 | 0.19 | 0.20 | 0.31 | 0.43 | 0.57 | 0.62 | 0.57 | 0.36 | 4.40 |
| **5** | 14 | country | 0.23 | 0.19 | 0.51 | 0.61 | 0.16 | 0.17 | 0.27 | 0.37 | 0.50 | 0.53 | 0.49 | 0.31 | 3.79 |
| **5** | 14 | suburbs | 0.25 | 0.21 | 0.55 | 0.66 | 0.18 | 0.19 | 0.29 | 0.39 | 0.53 | 0.57 | 0.53 | 0.34 | 4.08 |
| **5** | 15 | cities | 0.27 | 0.22 | 0.60 | 0.72 | 0.19 | 0.20 | 0.31 | 0.43 | 0.58 | 0.62 | 0.57 | 0.37 | 4.42 |
| **5** | 15 | country | 0.23 | 0.19 | 0.52 | 0.62 | 0.16 | 0.17 | 0.27 | 0.37 | 0.50 | 0.53 | 0.49 | 0.32 | 3.81 |
| **5** | 15 | suburbs | 0.25 | 0.21 | 0.55 | 0.66 | 0.18 | 0.19 | 0.29 | 0.40 | 0.53 | 0.57 | 0.53 | 0.34 | 4.09 |
| **5** | 16 | cities | 0.23 | 0.19 | 0.52 | 0.60 | 0.17 | 0.16 | 0.27 | 0.36 | 0.49 | 0.51 | 0.48 | 0.30 | 3.71 |
| **5** | 16 | country | 0.21 | 0.18 | 0.47 | 0.54 | 0.15 | 0.15 | 0.25 | 0.33 | 0.44 | 0.47 | 0.44 | 0.27 | 3.38 |
| **5** | 16 | suburbs | 0.22 | 0.18 | 0.49 | 0.57 | 0.16 | 0.16 | 0.26 | 0.34 | 0.46 | 0.49 | 0.46 | 0.28 | 3.54 |
| **6** | 1 | cities | 0.09 | 0.09 | 0.26 | 0.62 | 0.06 | 1.61 | 0.11 | 0.52 | 0.47 | 0.95 | 0.35 | (13.80) | 3.10 |
| **6** | 1 | country | 0.08 | 0.08 | 0.23 | 0.56 | 0.05 | 1.34 | 0.10 | 0.46 | 0.41 | 0.83 | 0.32 | 44.08 | 2.77 |
| **6** | 1 | suburbs | 0.08 | 0.09 | 0.24 | 0.59 | 0.05 | 1.52 | 0.10 | 0.50 | 0.45 | 0.90 | 0.34 | (15.29) | 2.95 |
| **6** | 2 | cities | 0.09 | 0.09 | 0.26 | 0.55 | 0.06 | 0.81 | 0.11 | 0.39 | 0.36 | 0.68 | 0.33 | 1.01 | 2.71 |
| **6** | 2 | country | 0.08 | 0.08 | 0.23 | 0.49 | 0.05 | 0.73 | 0.10 | 0.36 | 0.32 | 0.61 | 0.30 | 0.91 | 2.45 |
| **6** | 2 | suburbs | 0.09 | 0.09 | 0.24 | 0.52 | 0.05 | 0.78 | 0.10 | 0.38 | 0.34 | 0.65 | 0.32 | 0.98 | 2.59 |
| **6** | 3 | cities | 0.14 | 0.15 | 0.41 | 0.87 | 0.09 | 1.24 | 0.18 | 0.62 | 0.56 | 1.07 | 0.54 | 1.47 | 4.33 |
| **6** | 3 | country | 0.12 | 0.12 | 0.35 | 0.73 | 0.08 | 1.02 | 0.15 | 0.52 | 0.47 | 0.88 | 0.45 | 1.19 | 3.60 |
| **6** | 3 | suburbs | 0.13 | 0.13 | 0.38 | 0.80 | 0.09 | 1.14 | 0.16 | 0.57 | 0.51 | 0.97 | 0.49 | 1.35 | 3.95 |
| **6** | 4 | cities | 0.22 | 0.23 | 0.64 | 1.19 | 0.15 | 1.27 | 0.28 | 0.77 | 0.69 | 1.27 | 0.78 | 1.11 | 5.90 |
| **6** | 4 | country | 0.17 | 0.17 | 0.48 | 0.94 | 0.11 | 1.12 | 0.21 | 0.63 | 0.57 | 1.06 | 0.60 | 1.09 | 4.66 |
| **6** | 4 | suburbs | 0.19 | 0.19 | 0.55 | 1.06 | 0.13 | 1.23 | 0.24 | 0.70 | 0.63 | 1.18 | 0.68 | 1.15 | 5.25 |
| **6** | 13 | cities | 0.16 | 0.16 | 0.45 | 0.90 | 0.10 | 1.09 | 0.20 | 0.61 | 0.55 | 1.02 | 0.57 | 1.08 | 4.45 |
| **6** | 13 | country | 0.14 | 0.15 | 0.41 | 0.83 | 0.10 | 1.04 | 0.18 | 0.57 | 0.51 | 0.96 | 0.53 | 1.05 | 4.12 |
| **6** | 13 | suburbs | 0.15 | 0.15 | 0.43 | 0.86 | 0.10 | 1.07 | 0.19 | 0.59 | 0.53 | 0.99 | 0.55 | 1.07 | 4.29 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | $\mathbf{PBT}_{\mathbf{CC}}$ | $\mathbf{PBT}_{\mathbf{OD}}$ | $\mathbf{PBT}_{\mathbf{HT\_CE}}$ | $\mathbf{PBT}_{\mathbf{HT\_nCE}}$ | $\mathbf{PBT}_{\mathbf{PM}}$ | $\mathbf{PBT}_{\mathbf{IR\_hh}}$ | $\mathbf{PBT}_{\mathbf{POF}}$ | $\mathbf{PBT}_{\mathbf{AC}}$ | $\mathbf{PBT}_{\mathbf{ET}}$ | $\mathbf{PBT}_{\mathbf{EuF}}$ | $\mathbf{PBT}_{\mathbf{EuM}}$ | $\mathbf{PBT}_{\mathbf{Ec\_FW}}$ | $\mathbf{PBT}_{\mathbf{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6** | 14 | cities | 0.15 | 0.15 | 0.43 | 0.88 | 0.10 | 1.11 | 0.19 | 0.60 | 0.54 | 1.02 | 0.55 | 1.13 | 4.34 |
| **6** | 14 | country | 0.14 | 0.14 | 0.40 | 0.82 | 0.09 | 1.07 | 0.17 | 0.57 | 0.51 | 0.96 | 0.51 | 1.14 | 4.06 |
| **6** | 14 | suburbs | 0.15 | 0.15 | 0.42 | 0.85 | 0.10 | 1.10 | 0.18 | 0.59 | 0.53 | 0.99 | 0.53 | 1.15 | 4.20 |
| **6** | 15 | cities | 0.15 | 0.15 | 0.43 | 0.89 | 0.10 | 1.18 | 0.19 | 0.62 | 0.56 | 1.05 | 0.56 | 1.26 | 4.42 |
| **6** | 15 | country | 0.14 | 0.14 | 0.40 | 0.84 | 0.09 | 1.15 | 0.17 | 0.59 | 0.53 | 1.01 | 0.52 | 1.30 | 4.16 |
| **6** | 15 | suburbs | 0.15 | 0.15 | 0.42 | 0.87 | 0.10 | 1.17 | 0.18 | 0.61 | 0.55 | 1.03 | 0.54 | 1.29 | 4.29 |
| **6** | 16 | cities | 0.11 | 0.11 | 0.31 | 0.61 | 0.07 | 0.69 | 0.14 | 0.40 | 0.36 | 0.67 | 0.39 | 0.64 | 3.00 |
| **6** | 16 | country | 0.11 | 0.11 | 0.30 | 0.59 | 0.07 | 0.69 | 0.13 | 0.39 | 0.35 | 0.66 | 0.38 | 0.66 | 2.91 |
| **6** | 16 | suburbs | 0.11 | 0.11 | 0.31 | 0.60 | 0.07 | 0.70 | 0.13 | 0.40 | 0.36 | 0.67 | 0.38 | 0.66 | 2.96 |
| **7** | 5 | cities | 0.14 | 0.10 | 0.36 | 0.61 | 0.09 | 0.11 | 0.17 | 0.36 | 0.43 | 0.66 | 0.42 | 0.46 | 2.94 |
| **7** | 5 | country | 0.12 | 0.08 | 0.31 | 0.52 | 0.08 | 0.09 | 0.15 | 0.31 | 0.37 | 0.56 | 0.36 | 0.37 | 2.46 |
| **7** | 5 | suburbs | 0.13 | 0.09 | 0.32 | 0.54 | 0.09 | 0.08 | 0.16 | 0.33 | 0.39 | 0.59 | 0.39 | 0.35 | 2.48 |
| **7** | 6 | cities | 0.15 | 0.11 | 0.39 | 0.65 | 0.10 | 0.12 | 0.19 | 0.39 | 0.46 | 0.71 | 0.45 | 0.50 | 3.18 |
| **7** | 6 | country | 0.13 | 0.09 | 0.33 | 0.56 | 0.09 | 0.10 | 0.16 | 0.33 | 0.39 | 0.61 | 0.39 | 0.41 | 2.69 |
| **7** | 6 | suburbs | 0.14 | 0.09 | 0.35 | 0.58 | 0.09 | 0.09 | 0.17 | 0.36 | 0.42 | 0.64 | 0.41 | 0.39 | 2.70 |
| **7** | 7 | cities | 0.13 | 0.11 | 0.37 | 0.65 | 0.09 | 0.34 | 0.17 | 0.36 | 0.42 | 0.69 | 0.42 | 0.83 | 3.68 |
| **7** | 7 | country | 0.12 | 0.12 | 0.36 | 0.67 | 0.08 | (0.16) | 0.15 | 0.32 | 0.38 | 0.70 | 0.39 | (4.01) | 5.36 |
| **7** | 7 | suburbs | 0.12 | 0.10 | 0.34 | 0.60 | 0.08 | 0.28 | 0.16 | 0.33 | 0.39 | 0.64 | 0.39 | 0.74 | 3.37 |
| **7** | 8 | cities | 0.17 | 0.11 | 0.42 | 0.68 | 0.12 | 0.08 | 0.22 | 0.44 | 0.52 | 0.75 | 0.51 | 0.37 | 2.90 |
| **7** | 8 | country | 0.15 | 0.09 | 0.36 | 0.58 | 0.10 | 0.07 | 0.18 | 0.37 | 0.44 | 0.64 | 0.43 | 0.32 | 2.49 |
| **7** | 8 | suburbs | 0.16 | 0.10 | 0.39 | 0.63 | 0.11 | 0.07 | 0.20 | 0.41 | 0.48 | 0.69 | 0.47 | 0.34 | 2.66 |
| **7** | 17 | cities | 0.21 | 0.14 | 0.54 | 0.90 | 0.14 | 0.13 | 0.27 | 0.55 | 0.65 | 0.98 | 0.65 | 0.58 | 4.11 |
| **7** | 17 | country | 0.19 | 0.25 | 0.61 | 1.22 | 0.12 | (0.12) | 0.23 | 0.53 | 0.61 | 1.23 | 0.64 | (1.07) | 16.92 |
| **7** | 17 | suburbs | 0.20 | 0.15 | 0.52 | 0.90 | 0.13 | 0.22 | 0.25 | 0.52 | 0.61 | 0.97 | 0.61 | 0.80 | 4.62 |
| **7** | 18 | cities | 0.23 | 0.15 | 0.57 | 0.94 | 0.15 | 0.13 | 0.28 | 0.58 | 0.69 | 1.03 | 0.68 | 0.58 | 4.23 |
| **7** | 18 | country | 0.20 | 0.21 | 0.59 | 1.12 | 0.13 | (0.25) | 0.24 | 0.54 | 0.63 | 1.17 | 0.65 | (4.95) | 9.25 |
| **7** | 18 | suburbs | 0.21 | 0.15 | 0.54 | 0.92 | 0.14 | 0.18 | 0.26 | 0.55 | 0.64 | 1.00 | 0.64 | 0.72 | 4.53 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7** | 19 | cities | 0.24 | 0.14 | 0.57 | 0.92 | 0.16 | 0.10 | 0.30 | 0.60 | 0.72 | 1.02 | 0.70 | 0.48 | 3.86 |
| **7** | 19 | country | 0.20 | 0.13 | 0.50 | 0.81 | 0.14 | 0.09 | 0.26 | 0.52 | 0.62 | 0.89 | 0.60 | 0.44 | 3.46 |
| **7** | 19 | suburbs | 0.22 | 0.13 | 0.53 | 0.86 | 0.15 | 0.10 | 0.27 | 0.56 | 0.66 | 0.95 | 0.65 | 0.45 | 3.61 |
| **7** | 20 | cities | 0.18 | 0.11 | 0.43 | 0.69 | 0.12 | 0.07 | 0.23 | 0.46 | 0.54 | 0.77 | 0.53 | 0.35 | 2.85 |
| **7** | 20 | country | 0.16 | 0.09 | 0.37 | 0.60 | 0.11 | 0.06 | 0.20 | 0.40 | 0.47 | 0.67 | 0.46 | 0.30 | 2.49 |
| **7** | 20 | suburbs | 0.17 | 0.10 | 0.40 | 0.64 | 0.11 | 0.07 | 0.21 | 0.42 | 0.50 | 0.71 | 0.49 | 0.32 | 2.64 |
| **8** | 5 | cities | 0.12 | 0.09 | 0.14 | 0.29 | 0.03 | 0.16 | 0.07 | 0.15 | 0.19 | 0.17 | 0.19 | 0.32 | 3.00 |
| **8** | 5 | country | 0.11 | 0.08 | 0.13 | 0.27 | 0.03 | 0.15 | 0.06 | 0.14 | 0.18 | 0.16 | 0.18 | 0.30 | 2.81 |
| **8** | 5 | suburbs | 0.11 | 0.09 | 0.13 | 0.28 | 0.03 | 0.15 | 0.07 | 0.15 | 0.19 | 0.16 | 0.19 | 0.31 | 2.90 |
| **8** | 6 | cities | 0.12 | 0.10 | 0.15 | 0.31 | 0.03 | 0.17 | 0.07 | 0.16 | 0.20 | 0.18 | 0.21 | 0.34 | 3.19 |
| **8** | 6 | country | 0.12 | 0.09 | 0.14 | 0.29 | 0.03 | 0.16 | 0.07 | 0.15 | 0.19 | 0.17 | 0.19 | 0.32 | 2.99 |
| **8** | 6 | suburbs | 0.12 | 0.09 | 0.14 | 0.29 | 0.03 | 0.16 | 0.07 | 0.15 | 0.20 | 0.17 | 0.20 | 0.33 | 3.08 |
| **8** | 7 | cities | 0.12 | 0.10 | 0.15 | 0.31 | 0.03 | 0.17 | 0.07 | 0.16 | 0.21 | 0.18 | 0.21 | 0.35 | 3.20 |
| **8** | 7 | country | 0.12 | 0.09 | 0.14 | 0.29 | 0.03 | 0.16 | 0.07 | 0.15 | 0.19 | 0.17 | 0.19 | 0.32 | 3.00 |
| **8** | 7 | suburbs | 0.12 | 0.09 | 0.14 | 0.30 | 0.03 | 0.17 | 0.07 | 0.16 | 0.20 | 0.17 | 0.20 | 0.33 | 3.10 |
| **8** | 8 | cities | 0.17 | 0.13 | 0.21 | 0.50 | 0.04 | 0.31 | 0.10 | 0.25 | 0.29 | 0.34 | 0.29 | 0.63 | 4.65 |
| **8** | 8 | country | 0.16 | 0.12 | 0.19 | 0.48 | 0.04 | 0.30 | 0.09 | 0.24 | 0.27 | 0.33 | 0.27 | 0.61 | 4.39 |
| **8** | 8 | suburbs | 0.17 | 0.13 | 0.20 | 0.48 | 0.04 | 0.30 | 0.09 | 0.24 | 0.28 | 0.32 | 0.28 | 0.60 | 4.48 |
| **8** | 17 | cities | 0.19 | 0.15 | 0.23 | 0.47 | 0.05 | 0.26 | 0.11 | 0.25 | 0.31 | 0.28 | 0.32 | 0.53 | 4.89 |
| **8** | 17 | country | 0.18 | 0.14 | 0.21 | 0.44 | 0.05 | 0.24 | 0.10 | 0.23 | 0.29 | 0.26 | 0.29 | 0.49 | 4.53 |
| **8** | 17 | suburbs | 0.18 | 0.14 | 0.22 | 0.45 | 0.05 | 0.25 | 0.11 | 0.24 | 0.30 | 0.27 | 0.30 | 0.51 | 4.70 |
| **8** | 18 | cities | 0.20 | 0.15 | 0.24 | 0.50 | 0.05 | 0.28 | 0.12 | 0.26 | 0.33 | 0.30 | 0.34 | 0.56 | 5.18 |
| **8** | 18 | country | 0.19 | 0.14 | 0.22 | 0.46 | 0.05 | 0.26 | 0.11 | 0.24 | 0.31 | 0.27 | 0.31 | 0.52 | 4.80 |
| **8** | 18 | suburbs | 0.19 | 0.15 | 0.23 | 0.48 | 0.05 | 0.27 | 0.11 | 0.25 | 0.32 | 0.28 | 0.32 | 0.54 | 4.98 |
| **8** | 19 | cities | 0.22 | 0.17 | 0.26 | 0.54 | 0.06 | 0.31 | 0.13 | 0.28 | 0.36 | 0.33 | 0.36 | 0.62 | 5.60 |
| **8** | 19 | country | 0.20 | 0.16 | 0.24 | 0.51 | 0.05 | 0.29 | 0.12 | 0.27 | 0.33 | 0.31 | 0.34 | 0.58 | 5.24 |
| **8** | 19 | suburbs | 0.21 | 0.16 | 0.25 | 0.52 | 0.06 | 0.30 | 0.12 | 0.27 | 0.35 | 0.31 | 0.35 | 0.60 | 5.40 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **8** | 20 | cities | 0.18 | 0.14 | 0.22 | 0.48 | 0.05 | 0.28 | 0.11 | 0.25 | 0.31 | 0.30 | 0.31 | 0.56 | 4.83 |
| **8** | 20 | country | 0.17 | 0.13 | 0.21 | 0.46 | 0.05 | 0.27 | 0.10 | 0.23 | 0.29 | 0.28 | 0.29 | 0.54 | 4.53 |
| **8** | 20 | suburbs | 0.18 | 0.14 | 0.21 | 0.47 | 0.05 | 0.27 | 0.10 | 0.24 | 0.29 | 0.29 | 0.30 | 0.54 | 4.65 |
| **9** | 5 | cities | 0.07 | 0.08 | 0.15 | 0.21 | 0.04 | 0.13 | 0.08 | 0.16 | 0.20 | 0.13 | 0.19 | 0.23 | 2.13 |
| **9** | 5 | country | 0.06 | 0.07 | 0.14 | 0.19 | 0.04 | 0.12 | 0.07 | 0.15 | 0.18 | 0.12 | 0.17 | 0.21 | 1.92 |
| **9** | 5 | suburbs | 0.07 | 0.08 | 0.14 | 0.20 | 0.04 | 0.13 | 0.08 | 0.15 | 0.19 | 0.12 | 0.18 | 0.22 | 2.02 |
| **9** | 6 | cities | 0.08 | 0.09 | 0.16 | 0.22 | 0.04 | 0.14 | 0.08 | 0.17 | 0.21 | 0.14 | 0.20 | 0.24 | 2.25 |
| **9** | 6 | country | 0.07 | 0.08 | 0.14 | 0.20 | 0.04 | 0.13 | 0.08 | 0.15 | 0.19 | 0.12 | 0.18 | 0.22 | 2.02 |
| **9** | 6 | suburbs | 0.07 | 0.08 | 0.15 | 0.21 | 0.04 | 0.13 | 0.08 | 0.16 | 0.20 | 0.13 | 0.19 | 0.23 | 2.13 |
| **9** | 7 | cities | 0.08 | 0.09 | 0.16 | 0.23 | 0.04 | 0.15 | 0.09 | 0.17 | 0.21 | 0.14 | 0.20 | 0.25 | 2.29 |
| **9** | 7 | country | 0.07 | 0.08 | 0.15 | 0.21 | 0.04 | 0.13 | 0.08 | 0.16 | 0.19 | 0.13 | 0.18 | 0.22 | 2.07 |
| **9** | 7 | suburbs | 0.07 | 0.08 | 0.15 | 0.22 | 0.04 | 0.14 | 0.08 | 0.16 | 0.20 | 0.13 | 0.19 | 0.23 | 2.17 |
| **9** | 8 | cities | 0.09 | 0.10 | 0.19 | 0.27 | 0.05 | 0.17 | 0.10 | 0.20 | 0.24 | 0.16 | 0.24 | 0.29 | 2.65 |
| **9** | 8 | country | 0.08 | 0.09 | 0.17 | 0.24 | 0.05 | 0.16 | 0.09 | 0.18 | 0.22 | 0.15 | 0.21 | 0.27 | 2.41 |
| **9** | 8 | suburbs | 0.08 | 0.10 | 0.18 | 0.25 | 0.05 | 0.16 | 0.09 | 0.19 | 0.23 | 0.16 | 0.22 | 0.28 | 2.52 |
| **9** | 17 | cities | 0.12 | 0.14 | 0.25 | 0.36 | 0.07 | 0.22 | 0.13 | 0.27 | 0.33 | 0.22 | 0.32 | 0.38 | 3.57 |
| **9** | 17 | country | 0.11 | 0.12 | 0.22 | 0.32 | 0.06 | 0.20 | 0.12 | 0.24 | 0.29 | 0.19 | 0.28 | 0.34 | 3.17 |
| **9** | 17 | suburbs | 0.11 | 0.13 | 0.24 | 0.33 | 0.07 | 0.21 | 0.13 | 0.25 | 0.31 | 0.20 | 0.30 | 0.36 | 3.35 |
| **9** | 18 | cities | 0.13 | 0.14 | 0.27 | 0.37 | 0.07 | 0.23 | 0.14 | 0.28 | 0.35 | 0.23 | 0.34 | 0.40 | 3.76 |
| **9** | 18 | country | 0.11 | 0.13 | 0.24 | 0.33 | 0.07 | 0.21 | 0.13 | 0.25 | 0.31 | 0.20 | 0.30 | 0.36 | 3.34 |
| **9** | 18 | suburbs | 0.12 | 0.14 | 0.25 | 0.35 | 0.07 | 0.22 | 0.13 | 0.27 | 0.33 | 0.21 | 0.32 | 0.38 | 3.53 |
| **9** | 19 | cities | 0.13 | 0.15 | 0.28 | 0.40 | 0.08 | 0.25 | 0.15 | 0.30 | 0.37 | 0.24 | 0.36 | 0.42 | 3.97 |
| **9** | 19 | country | 0.12 | 0.14 | 0.25 | 0.36 | 0.07 | 0.22 | 0.13 | 0.27 | 0.33 | 0.22 | 0.32 | 0.38 | 3.57 |
| **9** | 19 | suburbs | 0.13 | 0.14 | 0.27 | 0.37 | 0.07 | 0.23 | 0.14 | 0.28 | 0.35 | 0.23 | 0.34 | 0.40 | 3.75 |
| **9** | 20 | cities | 0.11 | 0.13 | 0.23 | 0.33 | 0.06 | 0.21 | 0.12 | 0.25 | 0.30 | 0.20 | 0.29 | 0.35 | 3.28 |
| **9** | 20 | country | 0.10 | 0.12 | 0.21 | 0.30 | 0.06 | 0.19 | 0.11 | 0.23 | 0.28 | 0.18 | 0.27 | 0.32 | 2.99 |
| **9** | 20 | suburbs | 0.10 | 0.12 | 0.22 | 0.31 | 0.06 | 0.20 | 0.12 | 0.24 | 0.29 | 0.19 | 0.28 | 0.33 | 3.11 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{\text{CC}}$** | **PBT$_{\text{OD}}$** | **PBT$_{\text{HT\_CE}}$** | **PBT$_{\text{HT\_nCE}}$** | **PBT$_{\text{PM}}$** | **PBT$_{\text{IR\_hh}}$** | **PBT$_{\text{POF}}$** | **PBT$_{\text{AC}}$** | **PBT$_{\text{ET}}$** | **PBT$_{\text{EuF}}$** | **PBT$_{\text{EuM}}$** | **PBT$_{\text{Ec\_FW}}$** | **PBT$_{\text{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | 5 | cities | 0.13 | 0.17 | 0.16 | 0.42 | 0.03 | 0.65 | 0.07 | 0.21 | 0.22 | 0.29 | 0.22 | 0.57 | 4.71 |
| **10** | 5 | country | 0.12 | 0.15 | 0.14 | 0.38 | 0.03 | 0.61 | 0.07 | 0.19 | 0.20 | 0.26 | 0.20 | 0.52 | 4.26 |
| **10** | 5 | suburbs | 0.12 | 0.16 | 0.15 | 0.40 | 0.03 | 0.63 | 0.07 | 0.20 | 0.21 | 0.27 | 0.21 | 0.54 | 4.47 |
| **10** | 6 | cities | 0.14 | 0.18 | 0.17 | 0.46 | 0.04 | 0.75 | 0.08 | 0.23 | 0.23 | 0.32 | 0.24 | 0.63 | 5.10 |
| **10** | 6 | country | 0.12 | 0.17 | 0.15 | 0.41 | 0.03 | 0.70 | 0.07 | 0.20 | 0.21 | 0.29 | 0.21 | 0.58 | 4.60 |
| **10** | 6 | suburbs | 0.13 | 0.17 | 0.16 | 0.43 | 0.03 | 0.72 | 0.07 | 0.22 | 0.22 | 0.30 | 0.22 | 0.60 | 4.83 |
| **10** | 7 | cities | 0.13 | 0.17 | 0.16 | 0.44 | 0.03 | 0.79 | 0.07 | 0.21 | 0.22 | 0.31 | 0.22 | 0.62 | 4.81 |
| **10** | 7 | country | 0.12 | 0.16 | 0.14 | 0.41 | 0.03 | 0.83 | 0.07 | 0.19 | 0.20 | 0.31 | 0.20 | 0.61 | 4.45 |
| **10** | 7 | suburbs | 0.12 | 0.16 | 0.15 | 0.42 | 0.03 | 0.80 | 0.07 | 0.20 | 0.21 | 0.31 | 0.21 | 0.61 | 4.62 |
| **10** | 8 | cities | 0.15 | 0.19 | 0.18 | 0.57 | 0.04 | 2.41 | 0.08 | 0.24 | 0.24 | 0.50 | 0.25 | 0.97 | 5.75 |
| **10** | 8 | country | 0.14 | 0.18 | 0.17 | 0.57 | 0.03 | 7.96 | 0.07 | 0.23 | 0.23 | 0.56 | 0.23 | 1.07 | 5.51 |
| **10** | 8 | suburbs | 0.14 | 0.18 | 0.17 | 0.57 | 0.04 | 3.25 | 0.08 | 0.24 | 0.24 | 0.52 | 0.24 | 1.00 | 5.62 |
| **10** | 17 | cities | 0.20 | 0.27 | 0.24 | 0.61 | 0.05 | 0.84 | 0.11 | 0.32 | 0.34 | 0.40 | 0.34 | 0.80 | 7.13 |
| **10** | 17 | country | 0.18 | 0.24 | 0.21 | 0.56 | 0.05 | 0.81 | 0.10 | 0.29 | 0.30 | 0.37 | 0.30 | 0.75 | 6.43 |
| **10** | 17 | suburbs | 0.19 | 0.25 | 0.23 | 0.58 | 0.05 | 0.82 | 0.11 | 0.31 | 0.32 | 0.39 | 0.32 | 0.77 | 6.75 |
| **10** | 18 | cities | 0.21 | 0.28 | 0.25 | 0.65 | 0.06 | 0.89 | 0.12 | 0.34 | 0.36 | 0.43 | 0.36 | 0.85 | 7.55 |
| **10** | 18 | country | 0.19 | 0.25 | 0.23 | 0.59 | 0.05 | 0.86 | 0.11 | 0.31 | 0.32 | 0.40 | 0.32 | 0.79 | 6.81 |
| **10** | 18 | suburbs | 0.20 | 0.27 | 0.24 | 0.62 | 0.05 | 0.87 | 0.11 | 0.32 | 0.34 | 0.41 | 0.34 | 0.82 | 7.15 |
| **10** | 19 | cities | 0.23 | 0.31 | 0.27 | 0.69 | 0.06 | 0.91 | 0.13 | 0.37 | 0.39 | 0.45 | 0.39 | 0.89 | 8.09 |
| **10** | 19 | country | 0.21 | 0.28 | 0.25 | 0.65 | 0.05 | 0.90 | 0.12 | 0.34 | 0.35 | 0.43 | 0.35 | 0.85 | 7.47 |
| **10** | 19 | suburbs | 0.22 | 0.29 | 0.26 | 0.67 | 0.06 | 0.90 | 0.12 | 0.35 | 0.37 | 0.43 | 0.37 | 0.87 | 7.75 |
| **10** | 20 | cities | 0.18 | 0.24 | 0.22 | 0.58 | 0.05 | 0.83 | 0.10 | 0.30 | 0.31 | 0.38 | 0.31 | 0.77 | 6.61 |
| **10** | 20 | country | 0.18 | 0.23 | 0.21 | 0.57 | 0.05 | 0.93 | 0.10 | 0.29 | 0.30 | 0.40 | 0.30 | 0.79 | 6.42 |
| **10** | 20 | suburbs | 0.18 | 0.24 | 0.21 | 0.57 | 0.05 | 0.86 | 0.10 | 0.29 | 0.30 | 0.39 | 0.30 | 0.77 | 6.47 |
| **11** | 5 | cities | 0.13 | 0.27 | 0.11 | 0.15 | 0.03 | 0.15 | 0.08 | 0.12 | 0.20 | 0.07 | 0.18 | 0.17 | 5.06 |
| **11** | 5 | country | 0.12 | 0.25 | 0.10 | 0.14 | 0.03 | 0.14 | 0.07 | 0.11 | 0.18 | 0.06 | 0.16 | 0.16 | 4.60 |
| **11** | 5 | suburbs | 0.12 | 0.26 | 0.11 | 0.14 | 0.03 | 0.15 | 0.07 | 0.11 | 0.19 | 0.06 | 0.17 | 0.17 | 4.83 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **$\mathrm{PBT}_{\mathrm{CC}}$** | **$\mathrm{PBT}_{\mathrm{OD}}$** | **$\mathrm{PBT}_{\mathrm{HT\_CE}}$** | **$\mathrm{PBT}_{\mathrm{HT\_nCE}}$** | **$\mathrm{PBT}_{\mathrm{PM}}$** | **$\mathrm{PBT}_{\mathrm{IR\_hh}}$** | **$\mathrm{PBT}_{\mathrm{POF}}$** | **$\mathrm{PBT}_{\mathrm{AC}}$** | **$\mathrm{PBT}_{\mathrm{ET}}$** | **$\mathrm{PBT}_{\mathrm{EuF}}$** | **$\mathrm{PBT}_{\mathrm{EuM}}$** | **$\mathrm{PBT}_{\mathrm{Ec\_FW}}$** | **$\mathrm{PBT}_{\mathrm{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11** | 6 | cities | 0.14 | 0.29 | 0.12 | 0.16 | 0.04 | 0.17 | 0.08 | 0.13 | 0.21 | 0.07 | 0.19 | 0.19 | 5.42 |
| **11** | 6 | country | 0.13 | 0.26 | 0.11 | 0.14 | 0.03 | 0.15 | 0.07 | 0.12 | 0.19 | 0.06 | 0.17 | 0.17 | 4.93 |
| **11** | 6 | suburbs | 0.13 | 0.28 | 0.12 | 0.15 | 0.03 | 0.16 | 0.08 | 0.12 | 0.20 | 0.07 | 0.18 | 0.18 | 5.17 |
| **11** | 7 | cities | 0.13 | 0.28 | 0.12 | 0.15 | 0.03 | 0.16 | 0.08 | 0.12 | 0.21 | 0.07 | 0.18 | 0.18 | 5.27 |
| **11** | 7 | country | 0.12 | 0.26 | 0.11 | 0.14 | 0.03 | 0.15 | 0.07 | 0.11 | 0.19 | 0.06 | 0.17 | 0.17 | 4.82 |
| **11** | 7 | suburbs | 0.13 | 0.27 | 0.11 | 0.15 | 0.03 | 0.15 | 0.07 | 0.12 | 0.20 | 0.07 | 0.18 | 0.17 | 5.04 |
| **11** | 8 | cities | 0.16 | 0.33 | 0.14 | 0.19 | 0.04 | 0.20 | 0.09 | 0.14 | 0.24 | 0.08 | 0.21 | 0.23 | 6.46 |
| **11** | 8 | country | 0.14 | 0.31 | 0.13 | 0.17 | 0.04 | 0.19 | 0.08 | 0.13 | 0.22 | 0.08 | 0.20 | 0.21 | 5.97 |
| **11** | 8 | suburbs | 0.15 | 0.32 | 0.13 | 0.18 | 0.04 | 0.20 | 0.08 | 0.14 | 0.23 | 0.08 | 0.21 | 0.22 | 6.22 |
| **11** | 17 | cities | 0.21 | 0.44 | 0.18 | 0.24 | 0.05 | 0.25 | 0.12 | 0.19 | 0.32 | 0.10 | 0.29 | 0.28 | 8.09 |
| **11** | 17 | country | 0.19 | 0.39 | 0.17 | 0.21 | 0.05 | 0.22 | 0.11 | 0.17 | 0.29 | 0.09 | 0.26 | 0.25 | 7.31 |
| **11** | 17 | suburbs | 0.20 | 0.41 | 0.18 | 0.23 | 0.05 | 0.23 | 0.12 | 0.18 | 0.31 | 0.10 | 0.27 | 0.26 | 7.68 |
| **11** | 18 | cities | 0.22 | 0.46 | 0.19 | 0.25 | 0.06 | 0.26 | 0.13 | 0.20 | 0.34 | 0.11 | 0.30 | 0.29 | 8.53 |
| **11** | 18 | country | 0.20 | 0.42 | 0.18 | 0.23 | 0.05 | 0.24 | 0.12 | 0.18 | 0.31 | 0.10 | 0.27 | 0.27 | 7.73 |
| **11** | 18 | suburbs | 0.21 | 0.44 | 0.18 | 0.24 | 0.05 | 0.25 | 0.12 | 0.19 | 0.32 | 0.10 | 0.29 | 0.28 | 8.11 |
| **11** | 19 | cities | 0.24 | 0.50 | 0.21 | 0.27 | 0.06 | 0.28 | 0.14 | 0.22 | 0.37 | 0.12 | 0.33 | 0.31 | 9.15 |
| **11** | 19 | country | 0.22 | 0.45 | 0.19 | 0.25 | 0.06 | 0.25 | 0.13 | 0.20 | 0.33 | 0.11 | 0.30 | 0.29 | 8.34 |
| **11** | 19 | suburbs | 0.23 | 0.47 | 0.20 | 0.26 | 0.06 | 0.26 | 0.13 | 0.21 | 0.35 | 0.11 | 0.31 | 0.30 | 8.72 |
| **11** | 20 | cities | 0.19 | 0.40 | 0.17 | 0.22 | 0.05 | 0.23 | 0.11 | 0.18 | 0.30 | 0.10 | 0.26 | 0.26 | 7.48 |
| **11** | 20 | country | 0.18 | 0.37 | 0.16 | 0.20 | 0.05 | 0.21 | 0.10 | 0.16 | 0.27 | 0.09 | 0.24 | 0.24 | 6.99 |
| **11** | 20 | suburbs | 0.19 | 0.39 | 0.16 | 0.21 | 0.05 | 0.22 | 0.11 | 0.17 | 0.28 | 0.09 | 0.25 | 0.25 | 7.20 |
| **12** | 5 | cities | 0.05 | 0.04 | 0.21 | 0.17 | 0.11 | 0.16 | 0.15 | 0.09 | 0.21 | 0.16 | 0.21 | 0.18 | 1.52 |
| **12** | 5 | country | 0.05 | 0.04 | 0.19 | 0.16 | 0.10 | 0.15 | 0.13 | 0.09 | 0.19 | 0.15 | 0.19 | 0.17 | 1.38 |
| **12** | 5 | suburbs | 0.05 | 0.04 | 0.20 | 0.16 | 0.11 | 0.16 | 0.14 | 0.09 | 0.20 | 0.15 | 0.20 | 0.18 | 1.45 |
| **12** | 6 | cities | 0.05 | 0.05 | 0.22 | 0.18 | 0.12 | 0.17 | 0.16 | 0.10 | 0.22 | 0.17 | 0.22 | 0.19 | 1.60 |
| **12** | 6 | country | 0.05 | 0.04 | 0.20 | 0.16 | 0.11 | 0.16 | 0.14 | 0.09 | 0.20 | 0.16 | 0.20 | 0.18 | 1.45 |
| **12** | 6 | suburbs | 0.05 | 0.04 | 0.21 | 0.17 | 0.11 | 0.16 | 0.15 | 0.09 | 0.21 | 0.16 | 0.21 | 0.18 | 1.52 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT**$_{\text{CC}}$ | **PBT**$_{\text{OD}}$ | **PBT**$_{\text{HT\_CE}}$ | **PBT**$_{\text{HT\_nCE}}$ | **PBT**$_{\text{PM}}$ | **PBT**$_{\text{IR\_hh}}$ | **PBT**$_{\text{POF}}$ | **PBT**$_{\text{AC}}$ | **PBT**$_{\text{ET}}$ | **PBT**$_{\text{EuF}}$ | **PBT**$_{\text{EuM}}$ | **PBT**$_{\text{Ec\_FW}}$ | **PBT**$_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **12** | 7 | cities | 0.05 | 0.05 | 0.22 | 0.18 | 0.12 | 0.17 | 0.15 | 0.10 | 0.21 | 0.17 | 0.22 | 0.19 | 1.57 |
| **12** | 7 | country | 0.05 | 0.04 | 0.20 | 0.16 | 0.11 | 0.15 | 0.14 | 0.09 | 0.19 | 0.15 | 0.19 | 0.17 | 1.42 |
| **12** | 7 | suburbs | 0.05 | 0.04 | 0.21 | 0.17 | 0.11 | 0.16 | 0.15 | 0.09 | 0.20 | 0.16 | 0.20 | 0.18 | 1.49 |
| **12** | 8 | cities | 0.06 | 0.06 | 0.27 | 0.22 | 0.15 | 0.21 | 0.19 | 0.12 | 0.27 | 0.21 | 0.27 | 0.24 | 1.97 |
| **12** | 8 | country | 0.06 | 0.05 | 0.24 | 0.20 | 0.13 | 0.19 | 0.17 | 0.11 | 0.24 | 0.19 | 0.24 | 0.22 | 1.76 |
| **12** | 8 | suburbs | 0.06 | 0.05 | 0.26 | 0.21 | 0.14 | 0.20 | 0.18 | 0.11 | 0.25 | 0.20 | 0.26 | 0.23 | 1.87 |
| **12** | 17 | cities | 0.08 | 0.07 | 0.35 | 0.28 | 0.19 | 0.27 | 0.25 | 0.16 | 0.34 | 0.27 | 0.34 | 0.30 | 2.51 |
| **12** | 17 | country | 0.07 | 0.07 | 0.31 | 0.25 | 0.17 | 0.24 | 0.22 | 0.14 | 0.30 | 0.24 | 0.31 | 0.27 | 2.24 |
| **12** | 17 | suburbs | 0.08 | 0.07 | 0.33 | 0.27 | 0.17 | 0.26 | 0.23 | 0.15 | 0.32 | 0.25 | 0.32 | 0.29 | 2.37 |
| **12** | 18 | cities | 0.09 | 0.08 | 0.37 | 0.30 | 0.19 | 0.28 | 0.26 | 0.16 | 0.36 | 0.28 | 0.36 | 0.32 | 2.63 |
| **12** | 18 | country | 0.08 | 0.07 | 0.33 | 0.27 | 0.17 | 0.25 | 0.23 | 0.14 | 0.32 | 0.25 | 0.32 | 0.28 | 2.35 |
| **12** | 18 | suburbs | 0.08 | 0.07 | 0.35 | 0.28 | 0.18 | 0.27 | 0.24 | 0.15 | 0.34 | 0.27 | 0.34 | 0.30 | 2.48 |
| **12** | 19 | cities | 0.10 | 0.08 | 0.40 | 0.33 | 0.21 | 0.31 | 0.28 | 0.18 | 0.39 | 0.31 | 0.40 | 0.35 | 2.90 |
| **12** | 19 | country | 0.09 | 0.08 | 0.37 | 0.30 | 0.19 | 0.28 | 0.26 | 0.16 | 0.36 | 0.28 | 0.36 | 0.32 | 2.63 |
| **12** | 19 | suburbs | 0.09 | 0.08 | 0.38 | 0.31 | 0.20 | 0.30 | 0.27 | 0.17 | 0.38 | 0.29 | 0.38 | 0.33 | 2.76 |
| **12** | 20 | cities | 0.07 | 0.06 | 0.31 | 0.25 | 0.16 | 0.24 | 0.22 | 0.14 | 0.30 | 0.24 | 0.30 | 0.27 | 2.20 |
| **12** | 20 | country | 0.07 | 0.06 | 0.29 | 0.23 | 0.15 | 0.22 | 0.20 | 0.13 | 0.28 | 0.22 | 0.28 | 0.25 | 2.08 |
| **12** | 20 | suburbs | 0.07 | 0.06 | 0.30 | 0.24 | 0.16 | 0.23 | 0.21 | 0.13 | 0.29 | 0.23 | 0.29 | 0.26 | 2.13 |
| **13** | 5 | cities | 0.10 | 0.11 | 0.84 | 0.62 | 0.41 | 0.92 | 0.35 | 0.49 | 0.57 | 0.65 | 0.58 | 0.66 | 3.07 |
| **13** | 5 | country | 0.09 | 0.10 | 0.74 | 0.55 | 0.37 | 0.81 | 0.31 | 0.43 | 0.51 | 0.58 | 0.51 | 0.59 | 2.71 |
| **13** | 5 | suburbs | 0.10 | 0.11 | 0.79 | 0.58 | 0.39 | 0.86 | 0.33 | 0.46 | 0.54 | 0.61 | 0.55 | 0.62 | 2.89 |
| **13** | 6 | cities | 0.11 | 0.12 | 0.89 | 0.65 | 0.44 | 0.98 | 0.37 | 0.52 | 0.61 | 0.69 | 0.62 | 0.70 | 3.25 |
| **13** | 6 | country | 0.10 | 0.11 | 0.79 | 0.58 | 0.39 | 0.87 | 0.32 | 0.46 | 0.54 | 0.61 | 0.54 | 0.63 | 2.87 |
| **13** | 6 | suburbs | 0.10 | 0.11 | 0.84 | 0.61 | 0.41 | 0.92 | 0.35 | 0.49 | 0.57 | 0.65 | 0.58 | 0.66 | 3.05 |
| **13** | 7 | cities | 0.11 | 0.12 | 0.87 | 0.64 | 0.43 | 0.95 | 0.36 | 0.51 | 0.59 | 0.68 | 0.60 | 0.69 | 3.18 |
| **13** | 7 | country | 0.09 | 0.10 | 0.77 | 0.57 | 0.38 | 0.85 | 0.32 | 0.45 | 0.53 | 0.60 | 0.53 | 0.62 | 2.82 |
| **13** | 7 | suburbs | 0.10 | 0.11 | 0.82 | 0.60 | 0.40 | 0.90 | 0.34 | 0.48 | 0.56 | 0.64 | 0.57 | 0.65 | 2.99 |

## CELLULOSE FIBER

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | 8 | cities | 0.14 | 0.15 | 1.12 | 0.83 | 0.54 | 1.28 | 0.46 | 0.65 | 0.77 | 0.91 | 0.77 | 0.94 | 4.06 |
| **13** | 8 | country | 0.12 | 0.13 | 0.98 | 0.72 | 0.47 | 1.12 | 0.40 | 0.56 | 0.67 | 0.79 | 0.67 | 0.82 | 3.54 |
| **13** | 8 | suburbs | 0.13 | 0.14 | 1.05 | 0.78 | 0.51 | 1.20 | 0.43 | 0.61 | 0.72 | 0.85 | 0.72 | 0.88 | 3.80 |
| **13** | 17 | cities | 0.16 | 0.18 | 1.32 | 0.97 | 0.65 | 1.43 | 0.55 | 0.77 | 0.90 | 1.02 | 0.91 | 1.03 | 4.82 |
| **13** | 17 | country | 0.14 | 0.16 | 1.15 | 0.84 | 0.57 | 1.25 | 0.48 | 0.67 | 0.78 | 0.88 | 0.80 | 0.90 | 4.20 |
| **13** | 17 | suburbs | 0.15 | 0.17 | 1.22 | 0.90 | 0.61 | 1.33 | 0.51 | 0.71 | 0.84 | 0.95 | 0.85 | 0.96 | 4.49 |
| **13** | 18 | cities | 0.17 | 0.19 | 1.38 | 1.02 | 0.68 | 1.50 | 0.57 | 0.81 | 0.94 | 1.07 | 0.96 | 1.08 | 5.07 |
| **13** | 18 | country | 0.15 | 0.16 | 1.21 | 0.89 | 0.60 | 1.32 | 0.50 | 0.71 | 0.83 | 0.93 | 0.84 | 0.95 | 4.43 |
| **13** | 18 | suburbs | 0.16 | 0.17 | 1.29 | 0.95 | 0.64 | 1.40 | 0.53 | 0.75 | 0.88 | 0.99 | 0.89 | 1.01 | 4.72 |
| **13** | 19 | cities | 0.18 | 0.20 | 1.50 | 1.10 | 0.74 | 1.63 | 0.62 | 0.87 | 1.02 | 1.15 | 1.04 | 1.17 | 5.49 |
| **13** | 19 | country | 0.16 | 0.18 | 1.34 | 0.98 | 0.66 | 1.46 | 0.56 | 0.78 | 0.92 | 1.03 | 0.93 | 1.05 | 4.91 |
| **13** | 19 | suburbs | 0.17 | 0.19 | 1.41 | 1.04 | 0.70 | 1.54 | 0.59 | 0.82 | 0.97 | 1.09 | 0.98 | 1.11 | 5.17 |
| **13** | 20 | cities | 0.14 | 0.16 | 1.16 | 0.86 | 0.57 | 1.27 | 0.48 | 0.68 | 0.80 | 0.90 | 0.81 | 0.92 | 4.26 |
| **13** | 20 | country | 0.13 | 0.15 | 1.09 | 0.80 | 0.54 | 1.20 | 0.45 | 0.64 | 0.75 | 0.85 | 0.76 | 0.87 | 4.00 |
| **13** | 20 | suburbs | 0.14 | 0.15 | 1.12 | 0.82 | 0.55 | 1.23 | 0.46 | 0.65 | 0.77 | 0.87 | 0.78 | 0.89 | 4.10 |
| **14** | 5 | cities | 0.10 | 0.07 | 0.60 | 0.54 | 0.24 | 0.16 | 0.28 | 0.33 | 0.47 | 0.66 | 0.48 | 0.50 | 2.51 |
| **14** | 5 | country | 0.09 | 0.07 | 0.53 | 0.48 | 0.22 | 0.14 | 0.25 | 0.30 | 0.42 | 0.59 | 0.43 | 0.45 | 2.23 |
| **14** | 5 | suburbs | 0.10 | 0.07 | 0.56 | 0.51 | 0.23 | 0.15 | 0.27 | 0.31 | 0.44 | 0.62 | 0.45 | 0.47 | 2.36 |
| **14** | 6 | cities | 0.11 | 0.08 | 0.63 | 0.57 | 0.26 | 0.17 | 0.30 | 0.35 | 0.50 | 0.70 | 0.51 | 0.53 | 2.65 |
| **14** | 6 | country | 0.10 | 0.07 | 0.56 | 0.51 | 0.23 | 0.15 | 0.27 | 0.31 | 0.44 | 0.62 | 0.45 | 0.47 | 2.36 |
| **14** | 6 | suburbs | 0.10 | 0.07 | 0.59 | 0.53 | 0.24 | 0.16 | 0.28 | 0.33 | 0.47 | 0.66 | 0.48 | 0.50 | 2.49 |
| **14** | 7 | cities | 0.11 | 0.08 | 0.61 | 0.55 | 0.25 | 0.17 | 0.29 | 0.34 | 0.48 | 0.68 | 0.49 | 0.53 | 2.58 |
| **14** | 7 | country | 0.09 | 0.07 | 0.55 | 0.50 | 0.22 | 0.16 | 0.26 | 0.30 | 0.43 | 0.62 | 0.44 | 0.49 | 2.33 |
| **14** | 7 | suburbs | 0.10 | 0.07 | 0.58 | 0.52 | 0.23 | 0.16 | 0.27 | 0.32 | 0.46 | 0.65 | 0.46 | 0.50 | 2.44 |
| **14** | 8 | cities | 0.14 | 0.10 | 0.81 | 0.74 | 0.33 | 0.23 | 0.38 | 0.45 | 0.64 | 0.91 | 0.65 | 0.71 | 3.44 |
| **14** | 8 | country | 0.12 | 0.09 | 0.70 | 0.64 | 0.28 | 0.20 | 0.33 | 0.39 | 0.56 | 0.79 | 0.56 | 0.61 | 2.97 |
| **14** | 8 | suburbs | 0.13 | 0.09 | 0.76 | 0.68 | 0.31 | 0.21 | 0.36 | 0.42 | 0.60 | 0.85 | 0.61 | 0.66 | 3.20 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **14** | 17 | cities | 0.16 | 0.11 | 0.89 | 0.81 | 0.37 | 0.24 | 0.43 | 0.50 | 0.71 | 0.99 | 0.72 | 0.74 | 3.76 |
| **14** | 17 | country | 0.14 | 0.10 | 0.80 | 0.72 | 0.32 | 0.22 | 0.38 | 0.44 | 0.63 | 0.89 | 0.64 | 0.69 | 3.37 |
| **14** | 17 | suburbs | 0.15 | 0.10 | 0.84 | 0.76 | 0.34 | 0.22 | 0.40 | 0.47 | 0.66 | 0.93 | 0.68 | 0.71 | 3.54 |
| **14** | 18 | cities | 0.16 | 0.12 | 0.94 | 0.85 | 0.38 | 0.25 | 0.45 | 0.52 | 0.74 | 1.04 | 0.75 | 0.78 | 3.93 |
| **14** | 18 | country | 0.15 | 0.10 | 0.84 | 0.76 | 0.34 | 0.23 | 0.40 | 0.47 | 0.66 | 0.93 | 0.67 | 0.72 | 3.53 |
| **14** | 18 | suburbs | 0.15 | 0.11 | 0.88 | 0.80 | 0.36 | 0.23 | 0.42 | 0.49 | 0.70 | 0.98 | 0.71 | 0.74 | 3.70 |
| **14** | 19 | cities | 0.18 | 0.13 | 1.03 | 0.93 | 0.42 | 0.27 | 0.49 | 0.58 | 0.82 | 1.15 | 0.83 | 0.85 | 4.34 |
| **14** | 19 | country | 0.16 | 0.12 | 0.93 | 0.84 | 0.38 | 0.24 | 0.44 | 0.52 | 0.73 | 1.03 | 0.75 | 0.77 | 3.90 |
| **14** | 19 | suburbs | 0.17 | 0.12 | 0.97 | 0.88 | 0.40 | 0.25 | 0.47 | 0.55 | 0.77 | 1.08 | 0.79 | 0.80 | 4.10 |
| **14** | 20 | cities | 0.14 | 0.10 | 0.78 | 0.71 | 0.32 | 0.21 | 0.37 | 0.44 | 0.62 | 0.87 | 0.63 | 0.65 | 3.29 |
| **14** | 20 | country | 0.13 | 0.09 | 0.74 | 0.67 | 0.30 | 0.20 | 0.35 | 0.42 | 0.59 | 0.82 | 0.60 | 0.62 | 3.12 |
| **14** | 20 | suburbs | 0.13 | 0.09 | 0.76 | 0.69 | 0.31 | 0.20 | 0.36 | 0.43 | 0.60 | 0.84 | 0.61 | 0.63 | 3.19 |
| **15** | 5 | cities | 0.06 | 0.04 | 0.37 | 0.26 | 0.19 | 0.14 | 0.18 | 0.18 | 0.24 | 0.23 | 0.26 | 0.31 | 1.41 |
| **15** | 5 | country | 0.05 | 0.04 | 0.33 | 0.23 | 0.17 | 0.13 | 0.16 | 0.16 | 0.21 | 0.20 | 0.23 | 0.27 | 1.25 |
| **15** | 5 | suburbs | 0.05 | 0.04 | 0.35 | 0.25 | 0.18 | 0.13 | 0.17 | 0.17 | 0.23 | 0.21 | 0.25 | 0.29 | 1.33 |
| **15** | 6 | cities | 0.06 | 0.04 | 0.39 | 0.27 | 0.20 | 0.15 | 0.18 | 0.19 | 0.25 | 0.24 | 0.27 | 0.32 | 1.48 |
| **15** | 6 | country | 0.05 | 0.04 | 0.34 | 0.24 | 0.18 | 0.13 | 0.16 | 0.17 | 0.22 | 0.21 | 0.24 | 0.28 | 1.30 |
| **15** | 6 | suburbs | 0.05 | 0.04 | 0.36 | 0.26 | 0.19 | 0.14 | 0.17 | 0.18 | 0.24 | 0.22 | 0.26 | 0.30 | 1.38 |
| **15** | 7 | cities | 0.07 | 0.05 | 0.44 | 0.31 | 0.23 | 0.17 | 0.21 | 0.22 | 0.28 | 0.27 | 0.31 | 0.36 | 1.67 |
| **15** | 7 | country | 0.06 | 0.04 | 0.39 | 0.27 | 0.20 | 0.15 | 0.18 | 0.19 | 0.25 | 0.24 | 0.27 | 0.32 | 1.47 |
| **15** | 7 | suburbs | 0.06 | 0.04 | 0.41 | 0.29 | 0.21 | 0.16 | 0.20 | 0.20 | 0.27 | 0.25 | 0.29 | 0.33 | 1.56 |
| **15** | 8 | cities | 0.08 | 0.06 | 0.57 | 0.40 | 0.30 | 0.22 | 0.27 | 0.28 | 0.37 | 0.35 | 0.40 | 0.47 | 2.17 |
| **15** | 8 | country | 0.07 | 0.05 | 0.50 | 0.36 | 0.26 | 0.19 | 0.24 | 0.25 | 0.33 | 0.32 | 0.35 | 0.42 | 1.90 |
| **15** | 8 | suburbs | 0.08 | 0.06 | 0.54 | 0.38 | 0.28 | 0.21 | 0.25 | 0.26 | 0.35 | 0.34 | 0.38 | 0.45 | 2.03 |
| **15** | 17 | cities | 0.10 | 0.07 | 0.66 | 0.47 | 0.35 | 0.25 | 0.32 | 0.33 | 0.43 | 0.40 | 0.47 | 0.54 | 2.53 |
| **15** | 17 | country | 0.09 | 0.06 | 0.58 | 0.41 | 0.30 | 0.22 | 0.28 | 0.29 | 0.37 | 0.35 | 0.41 | 0.47 | 2.20 |
| **15** | 17 | suburbs | 0.09 | 0.07 | 0.61 | 0.43 | 0.32 | 0.24 | 0.29 | 0.30 | 0.40 | 0.37 | 0.44 | 0.50 | 2.34 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT**$_{\text{CC}}$ | **PBT**$_{\text{OD}}$ | **PBT**$_{\text{HT\_CE}}$ | **PBT**$_{\text{HT\_nCE}}$ | **PBT**$_{\text{PM}}$ | **PBT**$_{\text{IR\_hh}}$ | **PBT**$_{\text{POF}}$ | **PBT**$_{\text{AC}}$ | **PBT**$_{\text{ET}}$ | **PBT**$_{\text{EuF}}$ | **PBT**$_{\text{EuM}}$ | **PBT**$_{\text{Ec\_FW}}$ | **PBT**$_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **15** | 18 | cities | 0.10 | 0.08 | 0.70 | 0.49 | 0.37 | 0.27 | 0.33 | 0.35 | 0.45 | 0.42 | 0.49 | 0.57 | 2.66 |
| **15** | 18 | country | 0.09 | 0.07 | 0.61 | 0.43 | 0.32 | 0.23 | 0.29 | 0.30 | 0.39 | 0.37 | 0.43 | 0.50 | 2.32 |
| **15** | 18 | suburbs | 0.10 | 0.07 | 0.65 | 0.46 | 0.34 | 0.25 | 0.31 | 0.32 | 0.42 | 0.39 | 0.46 | 0.53 | 2.47 |
| **15** | 19 | cities | 0.11 | 0.08 | 0.73 | 0.52 | 0.39 | 0.28 | 0.35 | 0.36 | 0.48 | 0.45 | 0.52 | 0.60 | 2.81 |
| **15** | 19 | country | 0.10 | 0.07 | 0.65 | 0.46 | 0.34 | 0.25 | 0.31 | 0.32 | 0.42 | 0.40 | 0.46 | 0.54 | 2.47 |
| **15** | 19 | suburbs | 0.10 | 0.07 | 0.69 | 0.48 | 0.36 | 0.26 | 0.33 | 0.34 | 0.45 | 0.42 | 0.49 | 0.56 | 2.62 |
| **15** | 20 | cities | 0.10 | 0.07 | 0.65 | 0.46 | 0.34 | 0.25 | 0.31 | 0.32 | 0.42 | 0.40 | 0.46 | 0.53 | 2.49 |
| **15** | 20 | country | 0.09 | 0.06 | 0.59 | 0.42 | 0.31 | 0.23 | 0.28 | 0.29 | 0.38 | 0.37 | 0.42 | 0.49 | 2.24 |
| **15** | 20 | suburbs | 0.09 | 0.07 | 0.62 | 0.44 | 0.32 | 0.24 | 0.29 | 0.30 | 0.40 | 0.38 | 0.43 | 0.51 | 2.34 |
| **16** | 5 | cities | 0.08 | 0.10 | 0.44 | 0.31 | 0.32 | 0.39 | 0.25 | 0.22 | 0.34 | 0.27 | 0.33 | 0.24 | 2.38 |
| **16** | 5 | country | 0.07 | 0.08 | 0.37 | 0.26 | 0.27 | 0.33 | 0.21 | 0.19 | 0.29 | 0.23 | 0.28 | 0.20 | 2.00 |
| **16** | 5 | suburbs | 0.08 | 0.09 | 0.40 | 0.28 | 0.29 | 0.36 | 0.23 | 0.20 | 0.31 | 0.25 | 0.30 | 0.22 | 2.17 |
| **16** | 6 | cities | 0.09 | 0.10 | 0.47 | 0.33 | 0.34 | 0.42 | 0.27 | 0.24 | 0.36 | 0.29 | 0.35 | 0.26 | 2.52 |
| **16** | 6 | country | 0.07 | 0.09 | 0.39 | 0.27 | 0.28 | 0.35 | 0.22 | 0.20 | 0.30 | 0.24 | 0.30 | 0.21 | 2.13 |
| **16** | 6 | suburbs | 0.08 | 0.09 | 0.42 | 0.30 | 0.31 | 0.38 | 0.24 | 0.21 | 0.33 | 0.26 | 0.32 | 0.23 | 2.30 |
| **16** | 7 | cities | 0.09 | 0.10 | 0.47 | 0.33 | 0.34 | 0.43 | 0.27 | 0.24 | 0.37 | 0.30 | 0.36 | 0.26 | 2.53 |
| **16** | 7 | country | 0.08 | 0.09 | 0.44 | 0.31 | 0.30 | 0.40 | 0.24 | 0.22 | 0.34 | 0.29 | 0.33 | 0.26 | 2.23 |
| **16** | 7 | suburbs | 0.08 | 0.10 | 0.45 | 0.32 | 0.32 | 0.41 | 0.25 | 0.23 | 0.35 | 0.29 | 0.34 | 0.26 | 2.37 |
| **16** | 8 | cities | 0.13 | 0.14 | 0.76 | 0.54 | 0.50 | 0.70 | 0.41 | 0.39 | 0.59 | 0.52 | 0.57 | 0.47 | 3.74 |
| **16** | 8 | country | 0.10 | 0.12 | 0.58 | 0.41 | 0.40 | 0.53 | 0.32 | 0.30 | 0.45 | 0.38 | 0.44 | 0.33 | 2.98 |
| **16** | 8 | suburbs | 0.11 | 0.13 | 0.66 | 0.47 | 0.45 | 0.60 | 0.36 | 0.34 | 0.51 | 0.44 | 0.50 | 0.39 | 3.32 |
| **16** | 17 | cities | 0.13 | 0.16 | 0.71 | 0.50 | 0.52 | 0.64 | 0.41 | 0.36 | 0.55 | 0.45 | 0.54 | 0.39 | 3.86 |
| **16** | 17 | country | 0.11 | 0.13 | 0.62 | 0.44 | 0.44 | 0.57 | 0.35 | 0.32 | 0.48 | 0.40 | 0.47 | 0.35 | 3.29 |
| **16** | 17 | suburbs | 0.12 | 0.14 | 0.64 | 0.45 | 0.47 | 0.58 | 0.37 | 0.33 | 0.50 | 0.40 | 0.49 | 0.35 | 3.50 |
| **16** | 18 | cities | 0.14 | 0.17 | 0.75 | 0.53 | 0.55 | 0.68 | 0.43 | 0.38 | 0.58 | 0.47 | 0.57 | 0.41 | 4.07 |
| **16** | 18 | country | 0.12 | 0.14 | 0.64 | 0.45 | 0.46 | 0.58 | 0.36 | 0.33 | 0.50 | 0.41 | 0.49 | 0.36 | 3.43 |
| **16** | 18 | suburbs | 0.13 | 0.15 | 0.68 | 0.48 | 0.49 | 0.61 | 0.39 | 0.35 | 0.53 | 0.43 | 0.51 | 0.37 | 3.69 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT**$_{\mathrm{CC}}$ | **PBT**$_{\mathrm{OD}}$ | **PBT**$_{\mathrm{HT\_CE}}$ | **PBT**$_{\mathrm{HT\_nCE}}$ | **PBT**$_{\mathrm{PM}}$ | **PBT**$_{\mathrm{IR\_hh}}$ | **PBT**$_{\mathrm{POF}}$ | **PBT**$_{\mathrm{AC}}$ | **PBT**$_{\mathrm{ET}}$ | **PBT**$_{\mathrm{EuF}}$ | **PBT**$_{\mathrm{EuM}}$ | **PBT**$_{\mathrm{Ec\_FW}}$ | **PBT**$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16** | 19 | cities | 0.15 | 0.18 | 0.82 | 0.58 | 0.59 | 0.74 | 0.47 | 0.42 | 0.64 | 0.52 | 0.62 | 0.45 | 4.43 |
| **16** | 19 | country | 0.13 | 0.15 | 0.68 | 0.48 | 0.50 | 0.61 | 0.39 | 0.34 | 0.53 | 0.42 | 0.51 | 0.37 | 3.70 |
| **16** | 19 | suburbs | 0.14 | 0.17 | 0.74 | 0.52 | 0.54 | 0.67 | 0.42 | 0.37 | 0.57 | 0.46 | 0.56 | 0.40 | 4.02 |
| **16** | 20 | cities | 0.12 | 0.14 | 0.67 | 0.47 | 0.48 | 0.61 | 0.38 | 0.34 | 0.52 | 0.42 | 0.51 | 0.37 | 3.57 |
| **16** | 20 | country | 0.11 | 0.13 | 0.58 | 0.41 | 0.42 | 0.52 | 0.33 | 0.29 | 0.45 | 0.36 | 0.44 | 0.32 | 3.13 |
| **16** | 20 | suburbs | 0.12 | 0.14 | 0.62 | 0.43 | 0.44 | 0.56 | 0.35 | 0.31 | 0.48 | 0.39 | 0.47 | 0.34 | 3.31 |
| **17** | 5 | cities | 0.13 | 0.15 | 0.56 | 0.42 | 0.30 | 0.29 | 0.34 | 0.25 | 0.43 | 0.26 | 0.42 | 0.47 | 4.29 |
| **17** | 5 | country | 0.12 | 0.14 | 0.52 | 0.38 | 0.27 | 0.26 | 0.31 | 0.23 | 0.40 | 0.24 | 0.38 | 0.43 | 3.94 |
| **17** | 5 | suburbs | 0.12 | 0.14 | 0.54 | 0.40 | 0.29 | 0.27 | 0.32 | 0.24 | 0.42 | 0.25 | 0.40 | 0.45 | 4.11 |
| **17** | 6 | cities | 0.13 | 0.16 | 0.60 | 0.44 | 0.32 | 0.30 | 0.35 | 0.26 | 0.46 | 0.28 | 0.44 | 0.50 | 4.54 |
| **17** | 6 | country | 0.12 | 0.15 | 0.55 | 0.40 | 0.29 | 0.28 | 0.33 | 0.24 | 0.42 | 0.25 | 0.40 | 0.46 | 4.16 |
| **17** | 6 | suburbs | 0.13 | 0.15 | 0.57 | 0.42 | 0.30 | 0.29 | 0.34 | 0.25 | 0.44 | 0.26 | 0.42 | 0.48 | 4.35 |
| **17** | 7 | cities | 0.14 | 0.16 | 0.61 | 0.45 | 0.32 | 0.31 | 0.36 | 0.27 | 0.47 | 0.28 | 0.45 | 0.51 | 4.63 |
| **17** | 7 | country | 0.12 | 0.15 | 0.56 | 0.41 | 0.29 | 0.28 | 0.33 | 0.25 | 0.43 | 0.26 | 0.41 | 0.47 | 4.24 |
| **17** | 7 | suburbs | 0.13 | 0.16 | 0.58 | 0.43 | 0.31 | 0.30 | 0.35 | 0.26 | 0.45 | 0.27 | 0.43 | 0.49 | 4.43 |
| **17** | 8 | cities | 0.17 | 0.20 | 0.77 | 0.57 | 0.40 | 0.42 | 0.45 | 0.33 | 0.58 | 0.37 | 0.56 | 0.67 | 5.81 |
| **17** | 8 | country | 0.15 | 0.18 | 0.70 | 0.52 | 0.36 | 0.38 | 0.41 | 0.30 | 0.53 | 0.33 | 0.51 | 0.61 | 5.30 |
| **17** | 8 | suburbs | 0.16 | 0.19 | 0.73 | 0.55 | 0.38 | 0.40 | 0.43 | 0.32 | 0.56 | 0.35 | 0.54 | 0.64 | 5.56 |
| **17** | 17 | cities | 0.20 | 0.24 | 0.91 | 0.67 | 0.48 | 0.46 | 0.54 | 0.40 | 0.70 | 0.42 | 0.67 | 0.76 | 6.93 |
| **17** | 17 | country | 0.19 | 0.22 | 0.83 | 0.61 | 0.44 | 0.42 | 0.49 | 0.36 | 0.63 | 0.38 | 0.61 | 0.69 | 6.28 |
| **17** | 17 | suburbs | 0.19 | 0.23 | 0.87 | 0.64 | 0.46 | 0.44 | 0.52 | 0.38 | 0.67 | 0.40 | 0.64 | 0.73 | 6.59 |
| **17** | 18 | cities | 0.22 | 0.26 | 0.96 | 0.71 | 0.51 | 0.49 | 0.57 | 0.42 | 0.74 | 0.44 | 0.71 | 0.81 | 7.31 |
| **17** | 18 | country | 0.20 | 0.23 | 0.87 | 0.64 | 0.46 | 0.44 | 0.52 | 0.38 | 0.67 | 0.40 | 0.64 | 0.73 | 6.63 |
| **17** | 18 | suburbs | 0.20 | 0.24 | 0.91 | 0.67 | 0.48 | 0.46 | 0.54 | 0.40 | 0.70 | 0.42 | 0.67 | 0.77 | 6.95 |
| **17** | 19 | cities | 0.23 | 0.27 | 1.03 | 0.76 | 0.54 | 0.52 | 0.61 | 0.45 | 0.79 | 0.48 | 0.76 | 0.86 | 7.83 |
| **17** | 19 | country | 0.21 | 0.25 | 0.94 | 0.69 | 0.50 | 0.48 | 0.56 | 0.41 | 0.72 | 0.44 | 0.69 | 0.79 | 7.17 |
| **17** | 19 | suburbs | 0.22 | 0.26 | 0.98 | 0.72 | 0.52 | 0.50 | 0.58 | 0.43 | 0.75 | 0.46 | 0.72 | 0.83 | 7.48 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT**$_{\mathrm{CC}}$ | **PBT**$_{\mathrm{OD}}$ | **PBT**$_{\mathrm{HT\_CE}}$ | **PBT**$_{\mathrm{HT\_nCE}}$ | **PBT**$_{\mathrm{PM}}$ | **PBT**$_{\mathrm{IR\_hh}}$ | **PBT**$_{\mathrm{POF}}$ | **PBT**$_{\mathrm{AC}}$ | **PBT**$_{\mathrm{ET}}$ | **PBT**$_{\mathrm{EuF}}$ | **PBT**$_{\mathrm{EuM}}$ | **PBT**$_{\mathrm{Ec\_FW}}$ | **PBT**$_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17** | 20 | cities | 0.19 | 0.23 | 0.85 | 0.63 | 0.45 | 0.44 | 0.50 | 0.37 | 0.65 | 0.40 | 0.63 | 0.72 | 6.46 |
| **17** | 20 | country | 0.18 | 0.21 | 0.79 | 0.58 | 0.41 | 0.41 | 0.47 | 0.35 | 0.60 | 0.37 | 0.58 | 0.67 | 6.00 |
| **17** | 20 | suburbs | 0.18 | 0.22 | 0.82 | 0.60 | 0.43 | 0.42 | 0.48 | 0.36 | 0.62 | 0.38 | 0.60 | 0.69 | 6.21 |
| **18** | 5 | cities | 0.08 | 0.07 | 0.30 | 0.27 | 0.12 | 0.23 | 0.17 | 0.20 | 0.25 | 0.16 | 0.29 | 0.28 | 2.20 |
| **18** | 5 | country | 0.07 | 0.07 | 0.26 | 0.23 | 0.10 | 0.21 | 0.15 | 0.18 | 0.22 | 0.14 | 0.25 | 0.25 | 1.93 |
| **18** | 5 | suburbs | 0.08 | 0.07 | 0.28 | 0.25 | 0.11 | 0.22 | 0.16 | 0.19 | 0.23 | 0.15 | 0.27 | 0.26 | 2.06 |
| **18** | 6 | cities | 0.09 | 0.08 | 0.31 | 0.28 | 0.12 | 0.25 | 0.18 | 0.21 | 0.26 | 0.17 | 0.30 | 0.30 | 2.32 |
| **18** | 6 | country | 0.08 | 0.07 | 0.28 | 0.25 | 0.11 | 0.22 | 0.16 | 0.18 | 0.23 | 0.15 | 0.27 | 0.26 | 2.04 |
| **18** | 6 | suburbs | 0.08 | 0.07 | 0.29 | 0.26 | 0.11 | 0.23 | 0.17 | 0.20 | 0.24 | 0.16 | 0.29 | 0.28 | 2.17 |
| **18** | 7 | cities | 0.09 | 0.08 | 0.33 | 0.30 | 0.13 | 0.26 | 0.19 | 0.22 | 0.28 | 0.18 | 0.32 | 0.32 | 2.46 |
| **18** | 7 | country | 0.08 | 0.07 | 0.30 | 0.27 | 0.11 | 0.23 | 0.17 | 0.20 | 0.24 | 0.16 | 0.29 | 0.29 | 2.18 |
| **18** | 7 | suburbs | 0.09 | 0.08 | 0.31 | 0.28 | 0.12 | 0.25 | 0.18 | 0.21 | 0.26 | 0.17 | 0.30 | 0.30 | 2.31 |
| **18** | 8 | cities | 0.11 | 0.10 | 0.42 | 0.39 | 0.15 | 0.34 | 0.23 | 0.27 | 0.35 | 0.25 | 0.40 | 0.43 | 3.07 |
| **18** | 8 | country | 0.10 | 0.09 | 0.38 | 0.36 | 0.14 | 0.31 | 0.20 | 0.24 | 0.32 | 0.24 | 0.36 | 0.42 | 2.76 |
| **18** | 8 | suburbs | 0.11 | 0.09 | 0.40 | 0.38 | 0.14 | 0.32 | 0.22 | 0.26 | 0.33 | 0.24 | 0.38 | 0.42 | 2.91 |
| **18** | 17 | cities | 0.14 | 0.13 | 0.50 | 0.44 | 0.20 | 0.39 | 0.29 | 0.33 | 0.41 | 0.26 | 0.48 | 0.46 | 3.67 |
| **18** | 17 | country | 0.12 | 0.11 | 0.43 | 0.39 | 0.17 | 0.34 | 0.25 | 0.29 | 0.36 | 0.23 | 0.42 | 0.41 | 3.21 |
| **18** | 17 | suburbs | 0.13 | 0.12 | 0.46 | 0.41 | 0.18 | 0.36 | 0.27 | 0.31 | 0.38 | 0.24 | 0.45 | 0.43 | 3.42 |
| **18** | 18 | cities | 0.15 | 0.13 | 0.52 | 0.46 | 0.20 | 0.41 | 0.31 | 0.35 | 0.43 | 0.27 | 0.51 | 0.49 | 3.86 |
| **18** | 18 | country | 0.13 | 0.11 | 0.46 | 0.41 | 0.18 | 0.36 | 0.27 | 0.31 | 0.38 | 0.24 | 0.45 | 0.43 | 3.39 |
| **18** | 18 | suburbs | 0.14 | 0.12 | 0.49 | 0.43 | 0.19 | 0.38 | 0.28 | 0.33 | 0.40 | 0.26 | 0.47 | 0.46 | 3.60 |
| **18** | 19 | cities | 0.15 | 0.14 | 0.54 | 0.48 | 0.21 | 0.42 | 0.32 | 0.37 | 0.45 | 0.28 | 0.53 | 0.50 | 4.03 |
| **18** | 19 | country | 0.14 | 0.12 | 0.49 | 0.44 | 0.19 | 0.38 | 0.28 | 0.33 | 0.40 | 0.26 | 0.48 | 0.46 | 3.61 |
| **18** | 19 | suburbs | 0.14 | 0.13 | 0.51 | 0.46 | 0.20 | 0.40 | 0.30 | 0.35 | 0.42 | 0.27 | 0.50 | 0.48 | 3.81 |
| **18** | 20 | cities | 0.13 | 0.11 | 0.45 | 0.40 | 0.18 | 0.36 | 0.26 | 0.30 | 0.37 | 0.24 | 0.44 | 0.43 | 3.35 |
| **18** | 20 | country | 0.12 | 0.11 | 0.43 | 0.39 | 0.16 | 0.34 | 0.25 | 0.29 | 0.36 | 0.24 | 0.42 | 0.43 | 3.18 |
| **18** | 20 | suburbs | 0.12 | 0.11 | 0.44 | 0.40 | 0.17 | 0.35 | 0.25 | 0.29 | 0.36 | 0.24 | 0.43 | 0.43 | 3.26 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **19** | 5 | cities | 0.07 | 0.06 | 0.14 | 0.19 | 0.04 | 0.16 | 0.07 | 0.13 | 0.15 | 0.11 | 0.17 | 0.15 | 1.76 |
| **19** | 5 | country | 0.07 | 0.06 | 0.13 | 0.17 | 0.04 | 0.15 | 0.07 | 0.12 | 0.14 | 0.10 | 0.16 | 0.14 | 1.63 |
| **19** | 5 | suburbs | 0.07 | 0.06 | 0.13 | 0.18 | 0.04 | 0.15 | 0.07 | 0.13 | 0.15 | 0.11 | 0.16 | 0.14 | 1.70 |
| **19** | 6 | cities | 0.08 | 0.07 | 0.14 | 0.20 | 0.04 | 0.17 | 0.08 | 0.14 | 0.16 | 0.12 | 0.18 | 0.16 | 1.87 |
| **19** | 6 | country | 0.07 | 0.06 | 0.13 | 0.19 | 0.04 | 0.16 | 0.07 | 0.13 | 0.15 | 0.11 | 0.17 | 0.15 | 1.74 |
| **19** | 6 | suburbs | 0.08 | 0.07 | 0.14 | 0.19 | 0.04 | 0.16 | 0.08 | 0.14 | 0.16 | 0.11 | 0.17 | 0.15 | 1.80 |
| **19** | 7 | cities | 0.08 | 0.07 | 0.14 | 0.20 | 0.04 | 0.17 | 0.08 | 0.14 | 0.16 | 0.12 | 0.18 | 0.16 | 1.85 |
| **19** | 7 | country | 0.07 | 0.06 | 0.13 | 0.18 | 0.04 | 0.16 | 0.07 | 0.13 | 0.15 | 0.11 | 0.17 | 0.15 | 1.73 |
| **19** | 7 | suburbs | 0.07 | 0.07 | 0.14 | 0.19 | 0.04 | 0.16 | 0.08 | 0.14 | 0.16 | 0.11 | 0.17 | 0.15 | 1.79 |
| **19** | 8 | cities | 0.08 | 0.07 | 0.15 | 0.20 | 0.04 | 0.17 | 0.08 | 0.14 | 0.16 | 0.12 | 0.18 | 0.16 | 1.89 |
| **19** | 8 | country | 0.07 | 0.06 | 0.14 | 0.19 | 0.04 | 0.16 | 0.07 | 0.13 | 0.15 | 0.11 | 0.17 | 0.15 | 1.77 |
| **19** | 8 | suburbs | 0.08 | 0.07 | 0.14 | 0.20 | 0.04 | 0.16 | 0.08 | 0.14 | 0.16 | 0.12 | 0.17 | 0.16 | 1.83 |
| **19** | 17 | cities | 0.12 | 0.11 | 0.23 | 0.32 | 0.06 | 0.27 | 0.13 | 0.23 | 0.26 | 0.19 | 0.28 | 0.25 | 2.97 |
| **19** | 17 | country | 0.11 | 0.10 | 0.21 | 0.29 | 0.06 | 0.25 | 0.12 | 0.21 | 0.24 | 0.17 | 0.26 | 0.23 | 2.73 |
| **19** | 17 | suburbs | 0.12 | 0.10 | 0.22 | 0.30 | 0.06 | 0.26 | 0.12 | 0.22 | 0.25 | 0.18 | 0.27 | 0.24 | 2.85 |
| **19** | 18 | cities | 0.13 | 0.11 | 0.24 | 0.33 | 0.07 | 0.28 | 0.13 | 0.24 | 0.27 | 0.20 | 0.30 | 0.27 | 3.13 |
| **19** | 18 | country | 0.12 | 0.10 | 0.22 | 0.31 | 0.06 | 0.26 | 0.12 | 0.22 | 0.25 | 0.18 | 0.27 | 0.25 | 2.87 |
| **19** | 18 | suburbs | 0.13 | 0.11 | 0.23 | 0.32 | 0.07 | 0.27 | 0.13 | 0.23 | 0.26 | 0.19 | 0.29 | 0.26 | 3.00 |
| **19** | 19 | cities | 0.14 | 0.12 | 0.25 | 0.35 | 0.07 | 0.29 | 0.14 | 0.25 | 0.28 | 0.21 | 0.31 | 0.28 | 3.27 |
| **19** | 19 | country | 0.13 | 0.11 | 0.23 | 0.32 | 0.07 | 0.27 | 0.13 | 0.23 | 0.26 | 0.19 | 0.29 | 0.26 | 3.02 |
| **19** | 19 | suburbs | 0.13 | 0.11 | 0.24 | 0.33 | 0.07 | 0.28 | 0.13 | 0.24 | 0.27 | 0.20 | 0.30 | 0.27 | 3.14 |
| **19** | 20 | cities | 0.11 | 0.09 | 0.20 | 0.28 | 0.06 | 0.24 | 0.11 | 0.20 | 0.23 | 0.17 | 0.25 | 0.22 | 2.61 |
| **19** | 20 | country | 0.10 | 0.09 | 0.19 | 0.26 | 0.05 | 0.22 | 0.10 | 0.18 | 0.21 | 0.15 | 0.23 | 0.21 | 2.43 |
| **19** | 20 | suburbs | 0.10 | 0.09 | 0.19 | 0.27 | 0.05 | 0.23 | 0.11 | 0.19 | 0.22 | 0.16 | 0.24 | 0.22 | 2.51 |
| **20** | 5 | cities | 0.06 | 0.09 | 0.10 | 0.11 | 0.04 | 0.12 | 0.07 | 0.08 | 0.14 | 0.05 | 0.13 | 0.13 | 2.25 |
| **20** | 5 | country | 0.05 | 0.08 | 0.09 | 0.10 | 0.03 | 0.11 | 0.06 | 0.07 | 0.13 | 0.05 | 0.12 | 0.12 | 2.03 |
| **20** | 5 | suburbs | 0.05 | 0.09 | 0.10 | 0.10 | 0.03 | 0.12 | 0.07 | 0.08 | 0.14 | 0.05 | 0.12 | 0.13 | 2.13 |

## CELLULOSE FIBER

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **20** | 6 | cities | 0.06 | 0.10 | 0.11 | 0.11 | 0.04 | 0.13 | 0.07 | 0.09 | 0.15 | 0.06 | 0.14 | 0.14 | 2.37 |
| **20** | 6 | country | 0.05 | 0.09 | 0.10 | 0.10 | 0.03 | 0.12 | 0.07 | 0.08 | 0.14 | 0.05 | 0.12 | 0.13 | 2.14 |
| **20** | 6 | suburbs | 0.06 | 0.09 | 0.10 | 0.11 | 0.04 | 0.12 | 0.07 | 0.08 | 0.14 | 0.05 | 0.13 | 0.13 | 2.25 |
| **20** | 7 | cities | 0.06 | 0.10 | 0.11 | 0.12 | 0.04 | 0.14 | 0.08 | 0.09 | 0.16 | 0.06 | 0.14 | 0.15 | 2.45 |
| **20** | 7 | country | 0.06 | 0.09 | 0.10 | 0.11 | 0.04 | 0.12 | 0.07 | 0.08 | 0.14 | 0.05 | 0.13 | 0.13 | 2.21 |
| **20** | 7 | suburbs | 0.06 | 0.10 | 0.11 | 0.11 | 0.04 | 0.13 | 0.07 | 0.08 | 0.15 | 0.06 | 0.14 | 0.14 | 2.32 |
| **20** | 8 | cities | 0.08 | 0.13 | 0.15 | 0.16 | 0.05 | 0.18 | 0.10 | 0.12 | 0.20 | 0.08 | 0.19 | 0.19 | 3.22 |
| **20** | 8 | country | 0.07 | 0.12 | 0.13 | 0.14 | 0.04 | 0.16 | 0.09 | 0.10 | 0.18 | 0.07 | 0.17 | 0.17 | 2.86 |
| **20** | 8 | suburbs | 0.08 | 0.13 | 0.14 | 0.15 | 0.05 | 0.17 | 0.09 | 0.11 | 0.19 | 0.07 | 0.18 | 0.18 | 3.03 |
| **20** | 17 | cities | 0.09 | 0.15 | 0.16 | 0.17 | 0.06 | 0.20 | 0.11 | 0.13 | 0.23 | 0.09 | 0.21 | 0.21 | 3.55 |
| **20** | 17 | country | 0.08 | 0.13 | 0.15 | 0.15 | 0.05 | 0.18 | 0.10 | 0.12 | 0.20 | 0.08 | 0.19 | 0.19 | 3.18 |
| **20** | 17 | suburbs | 0.09 | 0.14 | 0.15 | 0.16 | 0.05 | 0.18 | 0.10 | 0.12 | 0.21 | 0.08 | 0.20 | 0.20 | 3.35 |
| **20** | 18 | cities | 0.09 | 0.16 | 0.17 | 0.18 | 0.06 | 0.21 | 0.12 | 0.14 | 0.24 | 0.09 | 0.22 | 0.22 | 3.73 |
| **20** | 18 | country | 0.09 | 0.14 | 0.15 | 0.16 | 0.05 | 0.18 | 0.10 | 0.12 | 0.21 | 0.08 | 0.20 | 0.20 | 3.35 |
| **20** | 18 | suburbs | 0.09 | 0.15 | 0.16 | 0.17 | 0.06 | 0.19 | 0.11 | 0.13 | 0.22 | 0.09 | 0.21 | 0.21 | 3.53 |
| **20** | 19 | cities | 0.10 | 0.17 | 0.19 | 0.20 | 0.06 | 0.23 | 0.13 | 0.15 | 0.26 | 0.10 | 0.24 | 0.24 | 4.08 |
| **20** | 19 | country | 0.09 | 0.15 | 0.17 | 0.18 | 0.06 | 0.20 | 0.11 | 0.13 | 0.23 | 0.09 | 0.22 | 0.22 | 3.70 |
| **20** | 19 | suburbs | 0.10 | 0.16 | 0.18 | 0.19 | 0.06 | 0.21 | 0.12 | 0.14 | 0.25 | 0.09 | 0.23 | 0.23 | 3.88 |
| **20** | 20 | cities | 0.09 | 0.14 | 0.15 | 0.16 | 0.05 | 0.19 | 0.10 | 0.12 | 0.21 | 0.08 | 0.20 | 0.20 | 3.39 |
| **20** | 20 | country | 0.08 | 0.13 | 0.14 | 0.15 | 0.05 | 0.17 | 0.10 | 0.11 | 0.20 | 0.08 | 0.18 | 0.19 | 3.14 |
| **20** | 20 | suburbs | 0.08 | 0.14 | 0.15 | 0.16 | 0.05 | 0.18 | 0.10 | 0.12 | 0.21 | 0.08 | 0.19 | 0.19 | 3.25 |
| **21** | 5 | cities | 0.06 | 0.16 | 0.12 | 0.14 | 0.04 | 0.66 | 0.09 | 0.07 | 0.18 | 0.10 | 0.17 | 0.27 | 5.61 |
| **21** | 5 | country | 0.05 | 0.14 | 0.11 | 0.12 | 0.04 | 0.58 | 0.08 | 0.06 | 0.16 | 0.09 | 0.15 | 0.23 | 4.94 |
| **21** | 5 | suburbs | 0.06 | 0.15 | 0.11 | 0.13 | 0.04 | 0.62 | 0.09 | 0.06 | 0.17 | 0.09 | 0.16 | 0.25 | 5.26 |
| **21** | 6 | cities | 0.07 | 0.16 | 0.13 | 0.15 | 0.04 | 0.69 | 0.10 | 0.07 | 0.19 | 0.10 | 0.18 | 0.28 | 5.90 |
| **21** | 6 | country | 0.06 | 0.14 | 0.11 | 0.13 | 0.04 | 0.61 | 0.08 | 0.06 | 0.17 | 0.09 | 0.16 | 0.25 | 5.20 |
| **21** | 6 | suburbs | 0.06 | 0.15 | 0.12 | 0.14 | 0.04 | 0.65 | 0.09 | 0.07 | 0.18 | 0.10 | 0.17 | 0.26 | 5.53 |

## CELLULOSE FIBER

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **21** | 7 | cities | 0.07 | 0.17 | 0.13 | 0.15 | 0.05 | 0.73 | 0.10 | 0.07 | 0.20 | 0.11 | 0.19 | 0.30 | 6.22 |
| **21** | 7 | country | 0.06 | 0.15 | 0.12 | 0.14 | 0.04 | 0.64 | 0.09 | 0.07 | 0.17 | 0.10 | 0.17 | 0.26 | 5.49 |
| **21** | 7 | suburbs | 0.06 | 0.16 | 0.13 | 0.15 | 0.04 | 0.68 | 0.10 | 0.07 | 0.19 | 0.10 | 0.18 | 0.28 | 5.83 |
| **21** | 8 | cities | 0.08 | 0.21 | 0.17 | 0.19 | 0.06 | 0.89 | 0.12 | 0.09 | 0.24 | 0.14 | 0.23 | 0.37 | 7.66 |
| **21** | 8 | country | 0.07 | 0.18 | 0.14 | 0.17 | 0.05 | 0.78 | 0.11 | 0.08 | 0.21 | 0.12 | 0.20 | 0.32 | 6.70 |
| **21** | 8 | suburbs | 0.08 | 0.20 | 0.15 | 0.18 | 0.05 | 0.84 | 0.12 | 0.08 | 0.23 | 0.13 | 0.22 | 0.34 | 7.16 |
| **21** | 17 | cities | 0.10 | 0.26 | 0.20 | 0.23 | 0.07 | 1.10 | 0.15 | 0.11 | 0.30 | 0.16 | 0.29 | 0.44 | 9.38 |
| **21** | 17 | country | 0.09 | 0.23 | 0.18 | 0.20 | 0.06 | 0.96 | 0.13 | 0.10 | 0.26 | 0.14 | 0.25 | 0.38 | 8.17 |
| **21** | 17 | suburbs | 0.10 | 0.24 | 0.19 | 0.22 | 0.07 | 1.02 | 0.14 | 0.10 | 0.28 | 0.15 | 0.26 | 0.41 | 8.71 |
| **21** | 18 | cities | 0.11 | 0.27 | 0.21 | 0.25 | 0.08 | 1.16 | 0.16 | 0.12 | 0.32 | 0.17 | 0.30 | 0.47 | 9.89 |
| **21** | 18 | country | 0.10 | 0.24 | 0.19 | 0.21 | 0.07 | 1.01 | 0.14 | 0.10 | 0.27 | 0.15 | 0.26 | 0.41 | 8.61 |
| **21** | 18 | suburbs | 0.10 | 0.25 | 0.20 | 0.23 | 0.07 | 1.08 | 0.15 | 0.11 | 0.29 | 0.16 | 0.28 | 0.43 | 9.18 |
| **21** | 19 | cities | 0.12 | 0.29 | 0.23 | 0.26 | 0.08 | 1.22 | 0.17 | 0.12 | 0.33 | 0.18 | 0.32 | 0.49 | 10.40 |
| **21** | 19 | country | 0.10 | 0.25 | 0.20 | 0.23 | 0.07 | 1.08 | 0.15 | 0.11 | 0.29 | 0.16 | 0.28 | 0.43 | 9.19 |
| **21** | 19 | suburbs | 0.11 | 0.27 | 0.21 | 0.24 | 0.07 | 1.14 | 0.16 | 0.12 | 0.31 | 0.17 | 0.30 | 0.46 | 9.74 |
| **21** | 20 | cities | 0.10 | 0.24 | 0.19 | 0.22 | 0.07 | 1.02 | 0.14 | 0.10 | 0.28 | 0.15 | 0.26 | 0.41 | 8.71 |
| **21** | 20 | country | 0.09 | 0.22 | 0.17 | 0.20 | 0.06 | 0.93 | 0.13 | 0.09 | 0.25 | 0.14 | 0.24 | 0.38 | 7.92 |
| **21** | 20 | suburbs | 0.09 | 0.23 | 0.18 | 0.21 | 0.06 | 0.97 | 0.13 | 0.10 | 0.26 | 0.14 | 0.25 | 0.39 | 8.25 |
| **22** | 5 | cities | 0.13 | 0.14 | 0.28 | 0.42 | 0.07 | 0.64 | 0.13 | 0.15 | 0.24 | 0.31 | 0.24 | 0.91 | 6.74 |
| **22** | 5 | country | 0.10 | 0.12 | 0.22 | 0.32 | 0.06 | 0.44 | 0.11 | 0.12 | 0.19 | 0.22 | 0.19 | 0.45 | 4.69 |
| **22** | 5 | suburbs | 0.11 | 0.13 | 0.24 | 0.35 | 0.06 | 0.50 | 0.12 | 0.14 | 0.21 | 0.25 | 0.21 | 0.55 | 5.32 |
| **22** | 6 | cities | 0.13 | 0.15 | 0.29 | 0.45 | 0.07 | 0.70 | 0.14 | 0.16 | 0.25 | 0.33 | 0.25 | 1.04 | 7.31 |
| **22** | 6 | country | 0.11 | 0.13 | 0.24 | 0.34 | 0.06 | 0.47 | 0.12 | 0.13 | 0.20 | 0.24 | 0.21 | 0.49 | 5.03 |
| **22** | 6 | suburbs | 0.12 | 0.14 | 0.26 | 0.38 | 0.07 | 0.54 | 0.13 | 0.14 | 0.22 | 0.27 | 0.23 | 0.61 | 5.74 |
| **22** | 7 | cities | 0.13 | 0.15 | 0.29 | 0.45 | 0.07 | 0.69 | 0.14 | 0.16 | 0.25 | 0.33 | 0.25 | 1.07 | 7.28 |
| **22** | 7 | country | 0.11 | 0.13 | 0.23 | 0.33 | 0.06 | 0.46 | 0.11 | 0.13 | 0.20 | 0.23 | 0.20 | 0.47 | 4.90 |
| **22** | 7 | suburbs | 0.12 | 0.14 | 0.25 | 0.37 | 0.07 | 0.52 | 0.12 | 0.14 | 0.22 | 0.26 | 0.22 | 0.58 | 5.58 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **22** | 8 | cities | 0.18 | 0.21 | 0.39 | 0.60 | 0.10 | 0.91 | 0.19 | 0.22 | 0.34 | 0.44 | 0.34 | 1.29 | 9.60 |
| **22** | 8 | country | 0.15 | 0.17 | 0.33 | 0.48 | 0.08 | 0.71 | 0.16 | 0.18 | 0.28 | 0.35 | 0.28 | 0.87 | 7.49 |
| **22** | 8 | suburbs | 0.16 | 0.19 | 0.36 | 0.54 | 0.09 | 0.80 | 0.17 | 0.20 | 0.31 | 0.39 | 0.31 | 1.03 | 8.43 |
| **22** | 17 | cities | 0.18 | 0.21 | 0.39 | 0.58 | 0.10 | 0.82 | 0.19 | 0.22 | 0.34 | 0.41 | 0.34 | 0.92 | 8.70 |
| **22** | 17 | country | 0.15 | 0.18 | 0.32 | 0.46 | 0.09 | 0.63 | 0.16 | 0.18 | 0.28 | 0.33 | 0.28 | 0.64 | 6.78 |
| **22** | 17 | suburbs | 0.16 | 0.19 | 0.35 | 0.51 | 0.09 | 0.70 | 0.17 | 0.20 | 0.30 | 0.36 | 0.31 | 0.73 | 7.52 |
| **22** | 18 | cities | 0.19 | 0.22 | 0.41 | 0.61 | 0.11 | 0.86 | 0.20 | 0.23 | 0.36 | 0.43 | 0.36 | 0.97 | 9.20 |
| **22** | 18 | country | 0.16 | 0.19 | 0.34 | 0.49 | 0.09 | 0.67 | 0.17 | 0.19 | 0.29 | 0.35 | 0.30 | 0.69 | 7.21 |
| **22** | 18 | suburbs | 0.17 | 0.20 | 0.37 | 0.54 | 0.10 | 0.75 | 0.18 | 0.21 | 0.32 | 0.38 | 0.33 | 0.78 | 7.99 |
| **22** | 19 | cities | 0.20 | 0.24 | 0.44 | 0.63 | 0.12 | 0.88 | 0.21 | 0.25 | 0.38 | 0.45 | 0.38 | 0.93 | 9.40 |
| **22** | 19 | country | 0.17 | 0.21 | 0.38 | 0.54 | 0.10 | 0.75 | 0.19 | 0.21 | 0.33 | 0.38 | 0.33 | 0.77 | 8.01 |
| **22** | 19 | suburbs | 0.19 | 0.22 | 0.40 | 0.58 | 0.11 | 0.80 | 0.20 | 0.23 | 0.35 | 0.41 | 0.35 | 0.84 | 8.60 |
| **22** | 20 | cities | 0.16 | 0.19 | 0.35 | 0.51 | 0.09 | 0.70 | 0.17 | 0.20 | 0.30 | 0.36 | 0.31 | 0.74 | 7.53 |
| **22** | 20 | country | 0.15 | 0.18 | 0.33 | 0.47 | 0.09 | 0.64 | 0.16 | 0.18 | 0.28 | 0.33 | 0.29 | 0.66 | 6.86 |
| **22** | 20 | suburbs | 0.15 | 0.18 | 0.34 | 0.48 | 0.09 | 0.67 | 0.17 | 0.19 | 0.29 | 0.34 | 0.29 | 0.69 | 7.13 |
| **23** | 9 | cities | 0.19 | 0.33 | 0.24 | 0.49 | 0.06 | 1.27 | 0.12 | 0.19 | 0.28 | 0.34 | 0.28 | 0.84 | 13.14 |
| **23** | 9 | country | 0.17 | 0.30 | 0.22 | 0.45 | 0.05 | 1.15 | 0.11 | 0.18 | 0.26 | 0.31 | 0.26 | 0.76 | 11.95 |
| **23** | 9 | suburbs | 0.18 | 0.32 | 0.23 | 0.47 | 0.05 | 1.20 | 0.11 | 0.19 | 0.27 | 0.32 | 0.27 | 0.80 | 12.53 |
| **23** | 10 | cities | 0.20 | 0.36 | 0.26 | 0.53 | 0.06 | 1.36 | 0.13 | 0.21 | 0.30 | 0.36 | 0.30 | 0.90 | 14.05 |
| **23** | 10 | country | 0.19 | 0.32 | 0.23 | 0.48 | 0.05 | 1.23 | 0.12 | 0.19 | 0.28 | 0.33 | 0.28 | 0.82 | 12.79 |
| **23** | 10 | suburbs | 0.20 | 0.34 | 0.24 | 0.51 | 0.06 | 1.29 | 0.12 | 0.20 | 0.29 | 0.34 | 0.29 | 0.86 | 13.39 |
| **23** | 11 | cities | 0.24 | 0.41 | 0.30 | 0.62 | 0.07 | 1.58 | 0.15 | 0.24 | 0.35 | 0.42 | 0.36 | 1.04 | 16.36 |
| **23** | 11 | country | 0.22 | 0.39 | 0.28 | 0.58 | 0.07 | 1.47 | 0.14 | 0.23 | 0.33 | 0.39 | 0.33 | 0.97 | 15.25 |
| **23** | 11 | suburbs | 0.23 | 0.40 | 0.29 | 0.60 | 0.07 | 1.52 | 0.14 | 0.23 | 0.34 | 0.40 | 0.34 | 1.01 | 15.80 |
| **23** | 12 | cities | 0.41 | 0.71 | 0.51 | 1.05 | 0.12 | 2.71 | 0.25 | 0.41 | 0.60 | 0.71 | 0.61 | 1.79 | 28.03 |
| **23** | 12 | country | 0.38 | 0.66 | 0.47 | 0.98 | 0.11 | 2.51 | 0.24 | 0.38 | 0.56 | 0.66 | 0.56 | 1.66 | 26.01 |
| **23** | 12 | suburbs | 0.39 | 0.68 | 0.49 | 1.01 | 0.11 | 2.61 | 0.25 | 0.40 | 0.58 | 0.69 | 0.58 | 1.73 | 26.99 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{\mathrm{CC}}$** | **PBT$_{\mathrm{OD}}$** | **PBT$_{\mathrm{HT\_CE}}$** | **PBT$_{\mathrm{HT\_nCE}}$** | **PBT$_{\mathrm{PM}}$** | **PBT$_{\mathrm{IR\_hh}}$** | **PBT$_{\mathrm{POF}}$** | **PBT$_{\mathrm{AC}}$** | **PBT$_{\mathrm{ET}}$** | **PBT$_{\mathrm{EuF}}$** | **PBT$_{\mathrm{EuM}}$** | **PBT$_{\mathrm{Ec\_FW}}$** | **PBT$_{\mathrm{RD\_MFR}}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23** | 21 | cities | 0.44 | 0.76 | 0.55 | 1.13 | 0.13 | 2.92 | 0.27 | 0.44 | 0.65 | 0.77 | 0.65 | 1.93 | 30.20 |
| **23** | 21 | country | 0.40 | 0.69 | 0.50 | 1.02 | 0.12 | 2.62 | 0.25 | 0.40 | 0.58 | 0.69 | 0.59 | 1.74 | 27.18 |
| **23** | 21 | suburbs | 0.42 | 0.72 | 0.52 | 1.08 | 0.12 | 2.76 | 0.26 | 0.42 | 0.61 | 0.73 | 0.62 | 1.83 | 28.61 |
| **23** | 22 | cities | 0.47 | 0.81 | 0.59 | 1.21 | 0.14 | 3.10 | 0.29 | 0.47 | 0.69 | 0.82 | 0.70 | 2.05 | 32.14 |
| **23** | 22 | country | 0.43 | 0.74 | 0.53 | 1.10 | 0.12 | 2.82 | 0.27 | 0.43 | 0.63 | 0.75 | 0.64 | 1.87 | 29.30 |
| **23** | 22 | suburbs | 0.45 | 0.78 | 0.56 | 1.16 | 0.13 | 2.95 | 0.28 | 0.45 | 0.66 | 0.78 | 0.67 | 1.96 | 30.64 |
| **23** | 23 | cities | 0.55 | 0.96 | 0.69 | 1.43 | 0.16 | 3.67 | 0.34 | 0.56 | 0.81 | 0.97 | 0.82 | 2.43 | 37.99 |
| **23** | 23 | country | 0.50 | 0.87 | 0.63 | 1.30 | 0.15 | 3.34 | 0.31 | 0.51 | 0.74 | 0.88 | 0.75 | 2.21 | 34.56 |
| **23** | 23 | suburbs | 0.53 | 0.92 | 0.66 | 1.36 | 0.15 | 3.49 | 0.33 | 0.53 | 0.78 | 0.92 | 0.78 | 2.31 | 36.19 |
| **23** | 24 | cities | 1.32 | 2.30 | 1.64 | 3.40 | 0.38 | 8.97 | 0.82 | 1.33 | 1.94 | 2.31 | 1.96 | 5.89 | 91.57 |
| **23** | 24 | country | 1.21 | 2.11 | 1.51 | 3.12 | 0.35 | 8.18 | 0.75 | 1.22 | 1.78 | 2.12 | 1.79 | 5.39 | 83.79 |
| **23** | 24 | suburbs | 1.26 | 2.20 | 1.57 | 3.25 | 0.37 | 8.52 | 0.78 | 1.27 | 1.86 | 2.21 | 1.87 | 5.61 | 87.32 |
| **24** | 9 | cities | 0.16 | 0.24 | 0.18 | 0.43 | 0.04 | 0.86 | 0.08 | 0.16 | 0.21 | 0.29 | 0.22 | 0.67 | 9.12 |
| **24** | 9 | country | 0.14 | 0.21 | 0.16 | 0.39 | 0.04 | 0.78 | 0.08 | 0.15 | 0.19 | 0.26 | 0.20 | 0.61 | 8.27 |
| **24** | 9 | suburbs | 0.15 | 0.23 | 0.17 | 0.41 | 0.04 | 0.82 | 0.08 | 0.16 | 0.20 | 0.28 | 0.21 | 0.64 | 8.70 |
| **24** | 10 | cities | 0.17 | 0.25 | 0.19 | 0.46 | 0.04 | 0.92 | 0.09 | 0.17 | 0.23 | 0.31 | 0.23 | 0.72 | 9.76 |
| **24** | 10 | country | 0.15 | 0.23 | 0.17 | 0.41 | 0.04 | 0.83 | 0.08 | 0.16 | 0.21 | 0.28 | 0.21 | 0.65 | 8.86 |
| **24** | 10 | suburbs | 0.16 | 0.24 | 0.18 | 0.43 | 0.04 | 0.87 | 0.09 | 0.17 | 0.22 | 0.30 | 0.22 | 0.68 | 9.30 |
| **24** | 11 | cities | 0.19 | 0.29 | 0.21 | 0.52 | 0.05 | 1.05 | 0.10 | 0.20 | 0.26 | 0.36 | 0.26 | 0.82 | 11.13 |
| **24** | 11 | country | 0.18 | 0.27 | 0.20 | 0.48 | 0.04 | 0.97 | 0.10 | 0.19 | 0.24 | 0.33 | 0.25 | 0.76 | 10.33 |
| **24** | 11 | suburbs | 0.19 | 0.28 | 0.21 | 0.50 | 0.05 | 1.01 | 0.10 | 0.19 | 0.25 | 0.34 | 0.25 | 0.79 | 10.73 |
| **24** | 12 | cities | 0.33 | 0.50 | 0.37 | 0.89 | 0.08 | 1.80 | 0.18 | 0.34 | 0.44 | 0.61 | 0.45 | 1.41 | 19.11 |
| **24** | 12 | country | 0.31 | 0.46 | 0.34 | 0.83 | 0.08 | 1.67 | 0.16 | 0.32 | 0.41 | 0.57 | 0.42 | 1.30 | 17.74 |
| **24** | 12 | suburbs | 0.32 | 0.48 | 0.35 | 0.86 | 0.08 | 1.73 | 0.17 | 0.33 | 0.43 | 0.59 | 0.44 | 1.35 | 18.42 |
| **24** | 21 | cities | 0.35 | 0.53 | 0.39 | 0.95 | 0.09 | 1.91 | 0.19 | 0.36 | 0.47 | 0.65 | 0.48 | 1.50 | 20.36 |
| **24** | 21 | country | 0.32 | 0.47 | 0.35 | 0.85 | 0.08 | 1.72 | 0.17 | 0.33 | 0.42 | 0.58 | 0.43 | 1.34 | 18.28 |
| **24** | 21 | suburbs | 0.34 | 0.50 | 0.37 | 0.90 | 0.08 | 1.81 | 0.18 | 0.35 | 0.45 | 0.62 | 0.46 | 1.42 | 19.29 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **24** | 22 | cities | 0.39 | 0.57 | 0.43 | 1.03 | 0.09 | 2.08 | 0.20 | 0.40 | 0.51 | 0.71 | 0.52 | 1.62 | 22.09 |
| **24** | 22 | country | 0.35 | 0.52 | 0.38 | 0.93 | 0.09 | 1.88 | 0.18 | 0.36 | 0.46 | 0.64 | 0.47 | 1.47 | 19.99 |
| **24** | 22 | suburbs | 0.37 | 0.54 | 0.40 | 0.98 | 0.09 | 1.97 | 0.19 | 0.38 | 0.49 | 0.67 | 0.50 | 1.55 | 21.01 |
| **24** | 23 | cities | 0.44 | 0.66 | 0.49 | 1.18 | 0.11 | 2.38 | 0.23 | 0.45 | 0.59 | 0.81 | 0.60 | 1.86 | 25.31 |
| **24** | 23 | country | 0.40 | 0.60 | 0.44 | 1.07 | 0.10 | 2.16 | 0.21 | 0.41 | 0.53 | 0.74 | 0.55 | 1.69 | 23.01 |
| **24** | 23 | suburbs | 0.42 | 0.63 | 0.46 | 1.13 | 0.10 | 2.27 | 0.22 | 0.43 | 0.56 | 0.77 | 0.57 | 1.78 | 24.15 |
| **24** | 24 | cities | 1.02 | 1.51 | 1.12 | 2.73 | 0.25 | 5.50 | 0.54 | 1.05 | 1.36 | 1.87 | 1.39 | 4.30 | 58.47 |
| **24** | 24 | country | 0.94 | 1.40 | 1.03 | 2.51 | 0.23 | 5.07 | 0.50 | 0.96 | 1.25 | 1.72 | 1.28 | 3.96 | 53.85 |
| **24** | 24 | suburbs | 0.98 | 1.45 | 1.08 | 2.61 | 0.24 | 5.28 | 0.52 | 1.00 | 1.30 | 1.79 | 1.33 | 4.13 | 56.06 |
| **25** | 9 | cities | 0.14 | 0.19 | 0.16 | 0.36 | 0.03 | 0.50 | 0.07 | 0.12 | 0.17 | 0.25 | 0.17 | 0.46 | 8.33 |
| **25** | 9 | country | 0.12 | 0.17 | 0.14 | 0.32 | 0.03 | 0.44 | 0.06 | 0.11 | 0.15 | 0.22 | 0.15 | 0.41 | 7.37 |
| **25** | 9 | suburbs | 0.13 | 0.18 | 0.15 | 0.34 | 0.03 | 0.47 | 0.07 | 0.12 | 0.16 | 0.23 | 0.16 | 0.43 | 7.84 |
| **25** | 10 | cities | 0.15 | 0.21 | 0.17 | 0.39 | 0.04 | 0.53 | 0.08 | 0.13 | 0.18 | 0.26 | 0.18 | 0.49 | 8.89 |
| **25** | 10 | country | 0.13 | 0.18 | 0.15 | 0.34 | 0.03 | 0.47 | 0.07 | 0.12 | 0.16 | 0.23 | 0.16 | 0.44 | 7.89 |
| **25** | 10 | suburbs | 0.14 | 0.19 | 0.16 | 0.37 | 0.03 | 0.50 | 0.07 | 0.12 | 0.17 | 0.25 | 0.17 | 0.46 | 8.37 |
| **25** | 11 | cities | 0.17 | 0.24 | 0.20 | 0.46 | 0.04 | 0.63 | 0.09 | 0.16 | 0.21 | 0.31 | 0.21 | 0.58 | 10.52 |
| **25** | 11 | country | 0.16 | 0.22 | 0.18 | 0.42 | 0.04 | 0.57 | 0.08 | 0.14 | 0.19 | 0.28 | 0.19 | 0.53 | 9.56 |
| **25** | 11 | suburbs | 0.17 | 0.23 | 0.19 | 0.44 | 0.04 | 0.60 | 0.09 | 0.15 | 0.20 | 0.30 | 0.20 | 0.56 | 10.04 |
| **25** | 12 | cities | 0.29 | 0.40 | 0.32 | 0.76 | 0.07 | 1.04 | 0.15 | 0.26 | 0.35 | 0.51 | 0.35 | 0.96 | 17.36 |
| **25** | 12 | country | 0.26 | 0.37 | 0.29 | 0.69 | 0.07 | 0.95 | 0.14 | 0.23 | 0.32 | 0.47 | 0.32 | 0.88 | 15.83 |
| **25** | 12 | suburbs | 0.27 | 0.38 | 0.31 | 0.72 | 0.07 | 0.99 | 0.14 | 0.25 | 0.33 | 0.49 | 0.33 | 0.92 | 16.57 |
| **25** | 21 | cities | 0.30 | 0.42 | 0.34 | 0.80 | 0.08 | 1.09 | 0.16 | 0.27 | 0.36 | 0.54 | 0.37 | 1.01 | 18.25 |
| **25** | 21 | country | 0.27 | 0.37 | 0.30 | 0.70 | 0.07 | 0.96 | 0.14 | 0.24 | 0.32 | 0.47 | 0.32 | 0.89 | 16.04 |
| **25** | 21 | suburbs | 0.28 | 0.39 | 0.32 | 0.75 | 0.07 | 1.02 | 0.15 | 0.25 | 0.34 | 0.51 | 0.35 | 0.95 | 17.10 |
| **25** | 22 | cities | 0.33 | 0.46 | 0.37 | 0.87 | 0.08 | 1.19 | 0.17 | 0.29 | 0.40 | 0.59 | 0.40 | 1.10 | 19.84 |
| **25** | 22 | country | 0.29 | 0.41 | 0.33 | 0.77 | 0.07 | 1.06 | 0.15 | 0.26 | 0.35 | 0.52 | 0.36 | 0.98 | 17.66 |
| **25** | 22 | suburbs | 0.31 | 0.43 | 0.35 | 0.82 | 0.08 | 1.12 | 0.16 | 0.28 | 0.37 | 0.55 | 0.38 | 1.04 | 18.70 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **25** | 23 | cities | 0.38 | 0.53 | 0.43 | 1.00 | 0.09 | 1.37 | 0.20 | 0.34 | 0.46 | 0.68 | 0.46 | 1.27 | 22.89 |
| **25** | 23 | country | 0.34 | 0.47 | 0.38 | 0.89 | 0.08 | 1.22 | 0.18 | 0.30 | 0.40 | 0.60 | 0.41 | 1.12 | 20.29 |
| **25** | 23 | suburbs | 0.36 | 0.50 | 0.40 | 0.94 | 0.09 | 1.29 | 0.19 | 0.32 | 0.43 | 0.64 | 0.44 | 1.20 | 21.58 |
| **25** | 24 | cities | 0.88 | 1.23 | 0.99 | 2.32 | 0.22 | 3.20 | 0.46 | 0.79 | 1.06 | 1.57 | 1.07 | 2.95 | 53.19 |
| **25** | 24 | country | 0.79 | 1.11 | 0.89 | 2.10 | 0.20 | 2.89 | 0.42 | 0.71 | 0.96 | 1.42 | 0.97 | 2.67 | 48.09 |
| **25** | 24 | suburbs | 0.84 | 1.17 | 0.94 | 2.21 | 0.21 | 3.04 | 0.44 | 0.75 | 1.01 | 1.49 | 1.02 | 2.80 | 50.58 |
| **26** | 9 | cities | 0.25 | 0.15 | 0.36 | 0.41 | 0.17 | 0.04 | 0.29 | 0.22 | 0.36 | 0.32 | 0.36 | 0.14 | 2.44 |
| **26** | 9 | country | 0.24 | 0.14 | 0.34 | 0.38 | 0.16 | 0.04 | 0.27 | 0.21 | 0.34 | 0.30 | 0.34 | 0.13 | 2.31 |
| **26** | 9 | suburbs | 0.24 | 0.14 | 0.35 | 0.39 | 0.17 | 0.04 | 0.28 | 0.22 | 0.35 | 0.31 | 0.35 | 0.13 | 2.37 |
| **26** | 10 | cities | 0.26 | 0.16 | 0.38 | 0.43 | 0.18 | 0.04 | 0.31 | 0.24 | 0.38 | 0.34 | 0.38 | 0.15 | 2.60 |
| **26** | 10 | country | 0.25 | 0.15 | 0.36 | 0.41 | 0.17 | 0.04 | 0.29 | 0.22 | 0.36 | 0.33 | 0.36 | 0.14 | 2.46 |
| **26** | 10 | suburbs | 0.26 | 0.15 | 0.37 | 0.42 | 0.18 | 0.04 | 0.30 | 0.23 | 0.37 | 0.33 | 0.37 | 0.14 | 2.53 |
| **26** | 11 | cities | 0.31 | 0.19 | 0.45 | 0.51 | 0.21 | 0.05 | 0.36 | 0.28 | 0.45 | 0.40 | 0.45 | 0.17 | 3.05 |
| **26** | 11 | country | 0.30 | 0.18 | 0.43 | 0.49 | 0.21 | 0.05 | 0.35 | 0.27 | 0.43 | 0.39 | 0.43 | 0.16 | 2.93 |
| **26** | 11 | suburbs | 0.30 | 0.18 | 0.44 | 0.50 | 0.21 | 0.05 | 0.36 | 0.27 | 0.44 | 0.39 | 0.44 | 0.17 | 2.98 |
| **26** | 12 | cities | 0.49 | 0.29 | 0.71 | 0.80 | 0.34 | 0.08 | 0.57 | 0.43 | 0.71 | 0.63 | 0.71 | 0.27 | 4.84 |
| **26** | 12 | country | 0.47 | 0.28 | 0.68 | 0.77 | 0.32 | 0.08 | 0.55 | 0.42 | 0.68 | 0.61 | 0.68 | 0.26 | 4.65 |
| **26** | 12 | suburbs | 0.48 | 0.29 | 0.70 | 0.79 | 0.33 | 0.08 | 0.56 | 0.43 | 0.70 | 0.62 | 0.70 | 0.26 | 4.74 |
| **26** | 21 | cities | 0.52 | 0.31 | 0.76 | 0.86 | 0.36 | 0.09 | 0.61 | 0.47 | 0.76 | 0.68 | 0.76 | 0.29 | 5.15 |
| **26** | 21 | country | 0.50 | 0.30 | 0.72 | 0.82 | 0.34 | 0.08 | 0.58 | 0.44 | 0.72 | 0.65 | 0.72 | 0.27 | 4.90 |
| **26** | 21 | suburbs | 0.51 | 0.31 | 0.74 | 0.84 | 0.35 | 0.09 | 0.60 | 0.46 | 0.74 | 0.66 | 0.74 | 0.28 | 5.02 |
| **26** | 22 | cities | 0.56 | 0.33 | 0.81 | 0.91 | 0.38 | 0.09 | 0.65 | 0.50 | 0.81 | 0.72 | 0.81 | 0.30 | 5.46 |
| **26** | 22 | country | 0.54 | 0.32 | 0.77 | 0.87 | 0.37 | 0.09 | 0.62 | 0.48 | 0.78 | 0.69 | 0.78 | 0.29 | 5.25 |
| **26** | 22 | suburbs | 0.55 | 0.33 | 0.79 | 0.89 | 0.38 | 0.09 | 0.64 | 0.49 | 0.79 | 0.71 | 0.79 | 0.30 | 5.35 |
| **26** | 23 | cities | 0.62 | 0.37 | 0.90 | 1.02 | 0.43 | 0.10 | 0.72 | 0.55 | 0.90 | 0.81 | 0.90 | 0.34 | 6.13 |
| **26** | 23 | country | 0.60 | 0.36 | 0.87 | 0.98 | 0.41 | 0.10 | 0.70 | 0.53 | 0.87 | 0.78 | 0.87 | 0.33 | 5.90 |
| **26** | 23 | suburbs | 0.61 | 0.37 | 0.89 | 1.00 | 0.42 | 0.10 | 0.71 | 0.54 | 0.89 | 0.79 | 0.89 | 0.34 | 6.01 |

## CELLULOSE FIBER

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26** | 24 | cities | 1.37 | 0.83 | 1.99 | 2.25 | 0.94 | 0.23 | 1.59 | 1.22 | 1.99 | 1.78 | 1.99 | 0.76 | 13.66 |
| **26** | 24 | country | 1.33 | 0.81 | 1.94 | 2.19 | 0.92 | 0.22 | 1.55 | 1.18 | 1.94 | 1.73 | 1.93 | 0.74 | 13.27 |
| **26** | 24 | suburbs | 1.35 | 0.82 | 1.96 | 2.22 | 0.93 | 0.23 | 1.57 | 1.20 | 1.96 | 1.75 | 1.96 | 0.75 | 13.45 |
| **27** | 9 | cities | 0.12 | 0.09 | 0.17 | 0.27 | 0.05 | 0.04 | 0.10 | 0.14 | 0.19 | 0.20 | 0.19 | 0.13 | 2.18 |
| **27** | 9 | country | 0.11 | 0.09 | 0.16 | 0.25 | 0.05 | 0.04 | 0.09 | 0.12 | 0.17 | 0.18 | 0.18 | 0.12 | 1.99 |
| **27** | 9 | suburbs | 0.12 | 0.09 | 0.17 | 0.26 | 0.05 | 0.04 | 0.10 | 0.13 | 0.18 | 0.19 | 0.19 | 0.13 | 2.09 |
| **27** | 10 | cities | 0.13 | 0.10 | 0.19 | 0.29 | 0.06 | 0.04 | 0.11 | 0.15 | 0.20 | 0.21 | 0.21 | 0.14 | 2.34 |
| **27** | 10 | country | 0.12 | 0.09 | 0.17 | 0.26 | 0.05 | 0.04 | 0.10 | 0.13 | 0.18 | 0.19 | 0.19 | 0.13 | 2.14 |
| **27** | 10 | suburbs | 0.12 | 0.10 | 0.18 | 0.28 | 0.05 | 0.04 | 0.11 | 0.14 | 0.19 | 0.20 | 0.20 | 0.14 | 2.24 |
| **27** | 11 | cities | 0.15 | 0.12 | 0.22 | 0.34 | 0.07 | 0.05 | 0.13 | 0.17 | 0.23 | 0.24 | 0.24 | 0.17 | 2.72 |
| **27** | 11 | country | 0.14 | 0.11 | 0.20 | 0.31 | 0.06 | 0.05 | 0.12 | 0.16 | 0.22 | 0.23 | 0.22 | 0.16 | 2.53 |
| **27** | 11 | suburbs | 0.15 | 0.11 | 0.21 | 0.33 | 0.06 | 0.05 | 0.12 | 0.16 | 0.23 | 0.23 | 0.23 | 0.16 | 2.62 |
| **27** | 12 | cities | 0.25 | 0.20 | 0.36 | 0.57 | 0.11 | 0.08 | 0.22 | 0.29 | 0.39 | 0.41 | 0.40 | 0.28 | 4.59 |
| **27** | 12 | country | 0.23 | 0.18 | 0.34 | 0.53 | 0.10 | 0.08 | 0.20 | 0.26 | 0.36 | 0.38 | 0.38 | 0.26 | 4.27 |
| **27** | 12 | suburbs | 0.24 | 0.19 | 0.35 | 0.55 | 0.11 | 0.08 | 0.21 | 0.27 | 0.38 | 0.39 | 0.39 | 0.27 | 4.43 |
| **27** | 21 | cities | 0.26 | 0.21 | 0.38 | 0.59 | 0.12 | 0.09 | 0.22 | 0.30 | 0.41 | 0.42 | 0.42 | 0.29 | 4.75 |
| **27** | 21 | country | 0.24 | 0.19 | 0.34 | 0.53 | 0.10 | 0.08 | 0.20 | 0.27 | 0.37 | 0.38 | 0.38 | 0.27 | 4.31 |
| **27** | 21 | suburbs | 0.25 | 0.20 | 0.36 | 0.56 | 0.11 | 0.08 | 0.21 | 0.28 | 0.39 | 0.40 | 0.40 | 0.28 | 4.53 |
| **27** | 22 | cities | 0.29 | 0.22 | 0.41 | 0.64 | 0.13 | 0.09 | 0.24 | 0.32 | 0.44 | 0.46 | 0.46 | 0.32 | 5.17 |
| **27** | 22 | country | 0.26 | 0.20 | 0.37 | 0.58 | 0.11 | 0.09 | 0.22 | 0.29 | 0.40 | 0.42 | 0.42 | 0.29 | 4.71 |
| **27** | 22 | suburbs | 0.27 | 0.21 | 0.39 | 0.61 | 0.12 | 0.09 | 0.23 | 0.31 | 0.42 | 0.44 | 0.44 | 0.30 | 4.93 |
| **27** | 23 | cities | 0.32 | 0.25 | 0.47 | 0.73 | 0.14 | 0.11 | 0.28 | 0.37 | 0.50 | 0.52 | 0.52 | 0.36 | 5.91 |
| **27** | 23 | country | 0.30 | 0.23 | 0.43 | 0.67 | 0.13 | 0.10 | 0.25 | 0.33 | 0.46 | 0.48 | 0.47 | 0.33 | 5.40 |
| **27** | 23 | suburbs | 0.31 | 0.24 | 0.45 | 0.70 | 0.14 | 0.10 | 0.27 | 0.35 | 0.48 | 0.50 | 0.50 | 0.35 | 5.65 |
| **27** | 24 | cities | 0.75 | 0.60 | 1.09 | 1.70 | 0.33 | 0.25 | 0.64 | 0.85 | 1.17 | 1.22 | 1.21 | 0.86 | 13.91 |
| **27** | 24 | country | 0.70 | 0.55 | 1.00 | 1.57 | 0.30 | 0.24 | 0.59 | 0.78 | 1.07 | 1.13 | 1.11 | 0.80 | 12.89 |
| **27** | 24 | suburbs | 0.72 | 0.57 | 1.04 | 1.63 | 0.32 | 0.25 | 0.62 | 0.81 | 1.12 | 1.17 | 1.16 | 0.83 | 13.38 |

## CELLULOSE FIBER

| Country | Arc | GL | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **28** | 5 | cities | 0.20 | 0.20 | 0.19 | (1.62) | 0.03 | (0.46) | 0.07 | 1.62 | 0.34 | (0.27) | 0.36 | (0.41) | 11.58 |
| **28** | 5 | country | 0.17 | 0.17 | 0.16 | (4.80) | 0.03 | (0.57) | 0.06 | 0.78 | 0.28 | (0.34) | 0.29 | (0.50) | 8.18 |
| **28** | 5 | suburbs | 0.18 | 0.18 | 0.17 | (3.16) | 0.03 | (0.55) | 0.07 | 0.94 | 0.30 | (0.32) | 0.32 | (0.49) | 9.17 |
| **28** | 6 | cities | 0.23 | 0.22 | 0.21 | (1.08) | 0.03 | (0.40) | 0.08 | 6.13 | 0.38 | (0.23) | 0.41 | (0.36) | 15.84 |
| **28** | 6 | country | 0.19 | 0.19 | 0.17 | (1.93) | 0.03 | (0.48) | 0.07 | 1.22 | 0.31 | (0.28) | 0.33 | (0.42) | 10.15 |
| **28** | 6 | suburbs | 0.20 | 0.20 | 0.19 | (1.60) | 0.03 | (0.46) | 0.07 | 1.65 | 0.34 | (0.27) | 0.36 | (0.41) | 11.67 |
| **28** | 7 | cities | 0.23 | 0.21 | 0.20 | (0.70) | 0.03 | (0.30) | 0.07 | (2.82) | 0.39 | (0.18) | 0.42 | (0.27) | 22.48 |
| **28** | 7 | country | 0.19 | 0.18 | 0.17 | (0.94) | 0.03 | (0.34) | 0.07 | 4.14 | 0.32 | (0.20) | 0.34 | (0.31) | 12.96 |
| **28** | 7 | suburbs | 0.20 | 0.20 | 0.18 | (0.91) | 0.03 | (0.35) | 0.07 | 8.16 | 0.34 | (0.20) | 0.37 | (0.31) | 14.62 |
| **28** | 8 | cities | 0.44 | 0.33 | 0.34 | (0.25) | 0.04 | (0.15) | 0.09 | (5.65) | 1.06 | (0.09) | 1.43 | (0.14) | 44.97 |
| **28** | 8 | country | 0.32 | 0.26 | 0.26 | (0.28) | 0.03 | (0.16) | 0.08 | 8.28 | 0.65 | (0.09) | 0.77 | (0.15) | 25.92 |
| **28** | 8 | suburbs | 0.35 | 0.28 | 0.28 | (0.28) | 0.03 | (0.16) | 0.08 | 16.32 | 0.74 | (0.09) | 0.90 | (0.15) | 29.24 |
| **28** | 17 | cities | 0.30 | 0.30 | 0.28 | 314.13 | 0.05 | (1.24) | 0.11 | 1.17 | 0.49 | (0.73) | 0.51 | (1.08) | 13.49 |
| **28** | 17 | country | 0.26 | 0.26 | 0.24 | 7.08 | 0.04 | (1.37) | 0.10 | 0.88 | 0.41 | (0.82) | 0.43 | (1.18) | 10.95 |
| **28** | 17 | suburbs | 0.27 | 0.28 | 0.26 | 9.27 | 0.05 | (1.39) | 0.11 | 0.96 | 0.44 | (0.83) | 0.46 | (1.20) | 11.81 |
| **28** | 18 | cities | 0.32 | 0.32 | 0.29 | (27.16) | 0.05 | (1.22) | 0.12 | 1.31 | 0.52 | (0.72) | 0.54 | (1.06) | 14.64 |
| **28** | 18 | country | 0.27 | 0.28 | 0.25 | 11.33 | 0.05 | (1.33) | 0.10 | 0.98 | 0.44 | (0.79) | 0.46 | (1.15) | 11.87 |
| **28** | 18 | suburbs | 0.29 | 0.29 | 0.27 | 16.67 | 0.05 | (1.35) | 0.11 | 1.07 | 0.47 | (0.80) | 0.49 | (1.17) | 12.80 |
| **28** | 19 | cities | 0.34 | 0.34 | 0.31 | 11.77 | 0.06 | (1.69) | 0.13 | 1.19 | 0.54 | (1.01) | 0.56 | (1.46) | 14.50 |
| **28** | 19 | country | 0.29 | 0.30 | 0.27 | 5.66 | 0.05 | (1.79) | 0.11 | 0.95 | 0.47 | (1.07) | 0.49 | (1.53) | 12.15 |
| **28** | 19 | suburbs | 0.31 | 0.31 | 0.29 | 6.33 | 0.05 | (1.86) | 0.12 | 1.02 | 0.50 | (1.11) | 0.52 | (1.59) | 12.97 |
| **28** | 20 | cities | 0.31 | 0.29 | 0.28 | (23.54) | 0.05 | (0.56) | 0.11 | 2.37 | 0.51 | (0.33) | 0.55 | (0.50) | 28.99 |
| **28** | 20 | country | 0.27 | 0.26 | 0.24 | (11.31) | 0.04 | (0.55) | 0.09 | 1.90 | 0.45 | (0.32) | 0.47 | (0.49) | 24.31 |
| **28** | 20 | suburbs | 0.28 | 0.27 | 0.26 | (12.66) | 0.04 | (0.57) | 0.10 | 2.04 | 0.47 | (0.33) | 0.50 | (0.51) | 25.93 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 1 | cities | 1.48 | 1.13 | 5.21 | 8.76 | 1.48 | 5.49 | 1.42 | 1.32 | 1.94 | 16.93 | 1.46 | 1.81 | 8.31 |
| **1** | 1 | country | 1.02 | 0.74 | 3.68 | 5.98 | 1.02 | 3.66 | 0.95 | 0.87 | 1.29 | 11.78 | 0.97 | 1.20 | 5.81 |
| **1** | 1 | suburbs | 1.20 | 0.89 | 4.29 | 7.05 | 1.20 | 4.35 | 1.13 | 1.04 | 1.54 | 13.81 | 1.16 | 1.43 | 6.80 |
| **1** | 2 | cities | 1.20 | 0.79 | 4.51 | 6.83 | 1.21 | 3.98 | 1.06 | 0.92 | 1.39 | 14.01 | 1.04 | 1.29 | 6.99 |
| **1** | 2 | country | 0.81 | 0.53 | 3.08 | 4.62 | 0.82 | 2.67 | 0.71 | 0.62 | 0.93 | 9.51 | 0.70 | 0.87 | 4.75 |
| **1** | 2 | suburbs | 0.97 | 0.63 | 3.66 | 5.50 | 0.97 | 3.19 | 0.85 | 0.74 | 1.11 | 11.32 | 0.84 | 1.04 | 5.65 |
| **1** | 3 | cities | 1.51 | 0.94 | 5.86 | 8.46 | 1.52 | 4.78 | 1.29 | 1.09 | 1.66 | 17.80 | 1.25 | 1.54 | 8.95 |
| **1** | 3 | country | 0.86 | 0.54 | 3.30 | 4.79 | 0.86 | 2.72 | 0.73 | 0.62 | 0.94 | 10.04 | 0.71 | 0.88 | 5.05 |
| **1** | 3 | suburbs | 1.06 | 0.66 | 4.10 | 5.94 | 1.07 | 3.37 | 0.91 | 0.77 | 1.17 | 12.47 | 0.88 | 1.09 | 6.27 |
| **1** | 4 | cities | 4.26 | 2.41 | 17.42 | 23.10 | 4.30 | 12.44 | 3.42 | 2.79 | 4.28 | 50.79 | 3.21 | 3.99 | 25.91 |
| **1** | 4 | country | 2.09 | 1.27 | 8.16 | 11.59 | 2.10 | 6.49 | 1.75 | 1.48 | 2.25 | 24.58 | 1.69 | 2.09 | 12.40 |
| **1** | 4 | suburbs | 2.69 | 1.62 | 10.64 | 14.89 | 2.71 | 8.26 | 2.24 | 1.88 | 2.86 | 31.83 | 2.15 | 2.66 | 16.09 |
| **1** | 13 | cities | 1.51 | 0.94 | 5.85 | 8.42 | 1.52 | 4.75 | 1.28 | 1.09 | 1.65 | 17.75 | 1.24 | 1.54 | 8.93 |
| **1** | 13 | country | 1.17 | 0.73 | 4.53 | 6.54 | 1.18 | 3.70 | 1.00 | 0.85 | 1.28 | 13.75 | 0.96 | 1.20 | 6.92 |
| **1** | 13 | suburbs | 1.32 | 0.82 | 5.11 | 7.38 | 1.33 | 4.17 | 1.12 | 0.95 | 1.45 | 15.52 | 1.09 | 1.35 | 7.81 |
| **1** | 14 | cities | 1.72 | 1.10 | 6.57 | 9.68 | 1.73 | 5.54 | 1.48 | 1.27 | 1.93 | 20.13 | 1.45 | 1.79 | 10.09 |
| **1** | 14 | country | 1.34 | 0.86 | 5.12 | 7.59 | 1.35 | 4.35 | 1.17 | 1.00 | 1.52 | 15.74 | 1.14 | 1.41 | 7.88 |
| **1** | 14 | suburbs | 1.51 | 0.97 | 5.75 | 8.51 | 1.52 | 4.88 | 1.31 | 1.12 | 1.70 | 17.67 | 1.28 | 1.58 | 8.85 |
| **1** | 15 | cities | 1.54 | 0.98 | 5.91 | 8.69 | 1.55 | 4.97 | 1.33 | 1.14 | 1.73 | 18.10 | 1.30 | 1.61 | 9.07 |
| **1** | 15 | country | 1.20 | 0.77 | 4.59 | 6.79 | 1.21 | 3.89 | 1.04 | 0.90 | 1.35 | 14.09 | 1.02 | 1.26 | 7.06 |
| **1** | 15 | suburbs | 1.35 | 0.86 | 5.16 | 7.62 | 1.36 | 4.36 | 1.17 | 1.01 | 1.52 | 15.84 | 1.14 | 1.41 | 7.94 |
| **1** | 16 | cities | 1.00 | 0.61 | 3.90 | 5.52 | 1.00 | 3.08 | 0.83 | 0.70 | 1.07 | 11.74 | 0.80 | 1.00 | 5.92 |
| **1** | 16 | country | 0.84 | 0.51 | 3.27 | 4.65 | 0.84 | 2.60 | 0.70 | 0.59 | 0.90 | 9.85 | 0.68 | 0.84 | 4.97 |
| **1** | 16 | suburbs | 0.90 | 0.55 | 3.53 | 5.01 | 0.91 | 2.80 | 0.76 | 0.64 | 0.97 | 10.63 | 0.73 | 0.91 | 5.36 |
| **2** | 1 | cities | 1.51 | 0.89 | 4.95 | 6.05 | 3.57 | 3.69 | 4.16 | 6.39 | 9.59 | 14.32 | 7.43 | 35.38 | 5.97 |
| **2** | 1 | country | 1.17 | 0.69 | 3.85 | 4.72 | 2.58 | 2.88 | 2.85 | 3.80 | 5.70 | 11.14 | 4.41 | 10.40 | 4.66 |
| **2** | 1 | suburbs | 1.31 | 0.78 | 4.32 | 5.29 | 2.96 | 3.23 | 3.32 | 4.61 | 6.92 | 12.51 | 5.36 | 14.56 | 5.23 |

## CORK SLAB

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2** | 2 | cities | 1.07 | 0.61 | 3.68 | 4.57 | 1.58 | 2.83 | 1.40 | 1.28 | 1.92 | 10.68 | 1.48 | 1.70 | 4.58 |
| **2** | 2 | country | 0.83 | 0.47 | 2.84 | 3.52 | 1.22 | 2.18 | 1.08 | 0.99 | 1.49 | 8.24 | 1.15 | 1.32 | 3.53 |
| **2** | 2 | suburbs | 0.94 | 0.54 | 3.23 | 4.00 | 1.39 | 2.48 | 1.23 | 1.13 | 1.70 | 9.36 | 1.31 | 1.50 | 4.02 |
| **2** | 3 | cities | 1.77 | 1.01 | 6.10 | 7.58 | 2.51 | 4.71 | 2.19 | 1.96 | 2.95 | 17.72 | 2.28 | 2.56 | 7.63 |
| **2** | 3 | country | 1.09 | 0.62 | 3.75 | 4.66 | 1.55 | 2.90 | 1.36 | 1.22 | 1.84 | 10.90 | 1.42 | 1.60 | 4.69 |
| **2** | 3 | suburbs | 1.34 | 0.77 | 4.63 | 5.75 | 1.92 | 3.57 | 1.67 | 1.51 | 2.27 | 13.44 | 1.75 | 1.97 | 5.78 |
| **2** | 4 | cities | 2.90 | 1.61 | 10.41 | 13.10 | 3.15 | 8.29 | 2.52 | 2.06 | 3.10 | 30.29 | 2.39 | 2.45 | 13.39 |
| **2** | 4 | country | 1.90 | 1.07 | 6.68 | 8.34 | 2.38 | 5.23 | 1.98 | 1.69 | 2.54 | 19.41 | 1.96 | 2.09 | 8.45 |
| **2** | 4 | suburbs | 2.35 | 1.32 | 8.30 | 10.39 | 2.82 | 6.52 | 2.32 | 1.96 | 2.94 | 24.14 | 2.27 | 2.39 | 10.55 |
| **2** | 13 | cities | 1.36 | 0.77 | 4.77 | 5.95 | 1.75 | 3.72 | 1.47 | 1.26 | 1.90 | 13.86 | 1.47 | 1.58 | 6.02 |
| **2** | 13 | country | 1.17 | 0.66 | 4.07 | 5.08 | 1.53 | 3.17 | 1.30 | 1.12 | 1.69 | 11.83 | 1.31 | 1.42 | 5.13 |
| **2** | 13 | suburbs | 1.27 | 0.72 | 4.42 | 5.52 | 1.65 | 3.45 | 1.39 | 1.20 | 1.81 | 12.86 | 1.39 | 1.51 | 5.58 |
| **2** | 14 | cities | 1.40 | 0.80 | 4.90 | 6.10 | 1.85 | 3.81 | 1.57 | 1.36 | 2.05 | 14.23 | 1.58 | 1.72 | 6.16 |
| **2** | 14 | country | 1.23 | 0.70 | 4.27 | 5.31 | 1.67 | 3.31 | 1.43 | 1.26 | 1.90 | 12.39 | 1.46 | 1.61 | 5.35 |
| **2** | 14 | suburbs | 1.32 | 0.75 | 4.58 | 5.70 | 1.76 | 3.56 | 1.50 | 1.32 | 1.98 | 13.30 | 1.53 | 1.67 | 5.75 |
| **2** | 15 | cities | 1.47 | 0.84 | 5.11 | 6.36 | 2.02 | 3.96 | 1.74 | 1.54 | 2.32 | 14.84 | 1.79 | 1.98 | 6.40 |
| **2** | 15 | country | 1.29 | 0.74 | 4.47 | 5.55 | 1.84 | 3.45 | 1.61 | 1.45 | 2.18 | 12.97 | 1.68 | 1.89 | 5.58 |
| **2** | 15 | suburbs | 1.38 | 0.79 | 4.77 | 5.93 | 1.93 | 3.69 | 1.67 | 1.49 | 2.25 | 13.85 | 1.73 | 1.93 | 5.97 |
| **2** | 16 | cities | 0.94 | 0.53 | 3.30 | 4.12 | 1.17 | 2.58 | 0.97 | 0.83 | 1.24 | 9.58 | 0.96 | 1.02 | 4.17 |
| **2** | 16 | country | 0.86 | 0.49 | 3.00 | 3.75 | 1.09 | 2.34 | 0.91 | 0.79 | 1.18 | 8.72 | 0.91 | 0.98 | 3.79 |
| **2** | 16 | suburbs | 0.90 | 0.51 | 3.15 | 3.94 | 1.14 | 2.47 | 0.95 | 0.81 | 1.22 | 9.17 | 0.94 | 1.01 | 3.99 |
| **3** | 1 | cities | 2.28 | 2.40 | 0.67 | 6.31 | 0.20 | 15.42 | 0.44 | 4.59 | 2.34 | 8.87 | 1.84 | 10.81 | 11.02 |
| **3** | 1 | country | 1.60 | 1.73 | 0.49 | 4.16 | 0.15 | 9.84 | 0.32 | 2.99 | 1.65 | 5.67 | 1.29 | 4.56 | 7.27 |
| **3** | 1 | suburbs | 1.88 | 2.01 | 0.56 | 4.98 | 0.17 | 11.91 | 0.37 | 3.60 | 1.93 | 6.86 | 1.52 | 6.17 | 8.71 |
| **3** | 2 | cities | 2.36 | 2.64 | 0.75 | 5.62 | 0.23 | 12.75 | 0.50 | 3.98 | 2.45 | 7.35 | 1.91 | 4.18 | 9.84 |
| **3** | 2 | country | 1.63 | 1.85 | 0.52 | 3.80 | 0.16 | 8.54 | 0.35 | 2.68 | 1.70 | 4.93 | 1.32 | 2.63 | 6.66 |
| **3** | 2 | suburbs | 1.93 | 2.18 | 0.62 | 4.54 | 0.19 | 10.22 | 0.41 | 3.20 | 2.01 | 5.89 | 1.57 | 3.20 | 7.94 |

## CORK SLAB

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** | 3 | cities | 4.16 | 4.68 | 1.33 | 9.88 | 0.40 | 22.33 | 0.88 | 6.98 | 4.33 | 12.88 | 3.38 | 7.21 | 17.28 |
| **3** | 3 | country | 2.31 | 2.64 | 0.75 | 5.29 | 0.23 | 11.79 | 0.50 | 3.72 | 2.41 | 6.81 | 1.88 | 3.46 | 9.27 |
| **3** | 3 | suburbs | 2.96 | 3.36 | 0.96 | 6.84 | 0.29 | 15.31 | 0.64 | 4.82 | 3.08 | 8.83 | 2.40 | 4.61 | 11.98 |
| **3** | 4 | cities | 9.86 | 12.26 | 3.54 | 19.45 | 1.12 | 40.89 | 2.40 | 13.36 | 10.48 | 23.64 | 8.09 | 8.98 | 34.11 |
| **3** | 4 | country | 4.40 | 5.19 | 1.48 | 9.54 | 0.46 | 20.75 | 1.00 | 6.64 | 4.63 | 11.99 | 3.59 | 5.35 | 16.71 |
| **3** | 4 | suburbs | 6.04 | 7.23 | 2.07 | 12.69 | 0.65 | 27.28 | 1.40 | 8.79 | 6.37 | 15.76 | 4.94 | 6.63 | 22.23 |
| **3** | 13 | cities | 3.87 | 4.54 | 1.29 | 8.45 | 0.40 | 18.45 | 0.87 | 5.89 | 4.06 | 10.66 | 3.16 | 4.84 | 14.80 |
| **3** | 13 | country | 2.83 | 3.30 | 0.94 | 6.25 | 0.29 | 13.72 | 0.63 | 4.37 | 2.97 | 7.92 | 2.31 | 3.69 | 10.95 |
| **3** | 13 | suburbs | 3.27 | 3.81 | 1.09 | 7.19 | 0.34 | 15.74 | 0.73 | 5.02 | 3.43 | 9.09 | 2.66 | 4.19 | 12.59 |
| **3** | 14 | cities | 3.77 | 4.37 | 1.25 | 8.38 | 0.38 | 18.42 | 0.84 | 5.86 | 3.95 | 10.64 | 3.07 | 5.03 | 14.67 |
| **3** | 14 | country | 2.76 | 3.19 | 0.91 | 6.22 | 0.28 | 13.76 | 0.61 | 4.36 | 2.89 | 7.94 | 2.25 | 3.87 | 10.89 |
| **3** | 14 | suburbs | 3.18 | 3.68 | 1.05 | 7.14 | 0.32 | 15.76 | 0.70 | 5.00 | 3.33 | 9.10 | 2.59 | 4.39 | 12.50 |
| **3** | 15 | cities | 3.70 | 4.25 | 1.21 | 8.37 | 0.37 | 18.55 | 0.81 | 5.87 | 3.87 | 10.71 | 3.01 | 5.28 | 14.66 |
| **3** | 15 | country | 2.70 | 3.08 | 0.88 | 6.18 | 0.27 | 13.75 | 0.59 | 4.34 | 2.82 | 7.94 | 2.19 | 4.02 | 10.81 |
| **3** | 15 | suburbs | 3.11 | 3.56 | 1.01 | 7.11 | 0.31 | 15.81 | 0.68 | 4.99 | 3.25 | 9.12 | 2.53 | 4.59 | 12.44 |
| **3** | 16 | cities | 3.02 | 3.64 | 1.05 | 6.28 | 0.33 | 13.44 | 0.71 | 4.34 | 3.19 | 7.77 | 2.47 | 3.20 | 11.00 |
| **3** | 16 | country | 2.38 | 2.82 | 0.81 | 5.07 | 0.25 | 10.97 | 0.54 | 3.52 | 2.50 | 6.33 | 1.94 | 2.75 | 8.88 |
| **3** | 16 | suburbs | 2.61 | 3.12 | 0.89 | 5.52 | 0.28 | 11.91 | 0.60 | 3.83 | 2.76 | 6.88 | 2.14 | 2.93 | 9.68 |
| **4** | 1 | cities | 0.59 | 0.28 | (11.32) | (0.79) | 0.35 | 1.34 | 0.57 | 2.50 | 1.85 | (0.32) | 2.32 | (0.60) | 2.56 |
| **4** | 1 | country | 0.50 | 0.23 | (5.61) | (0.62) | 0.29 | 1.12 | 0.48 | 2.21 | 1.57 | (0.26) | 2.04 | (0.47) | 2.16 |
| **4** | 1 | suburbs | 0.53 | 0.26 | (15.34) | (0.74) | 0.32 | 1.22 | 0.52 | 2.20 | 1.67 | (0.30) | 2.05 | (0.56) | 2.31 |
| **4** | 2 | cities | 0.52 | 0.30 | 0.89 | 2.02 | 0.34 | 1.33 | 0.56 | 1.17 | 1.48 | 5.36 | 1.16 | 2.54 | 2.13 |
| **4** | 2 | country | 0.43 | 0.25 | 0.78 | 2.11 | 0.28 | 1.09 | 0.46 | 1.00 | 1.24 | (89.48) | 0.98 | (0.94) | 1.77 |
| **4** | 2 | suburbs | 0.47 | 0.27 | 0.81 | 1.90 | 0.31 | 1.20 | 0.51 | 1.06 | 1.34 | 6.12 | 1.05 | 2.44 | 1.92 |
| **4** | 3 | cities | 0.82 | 0.49 | 1.25 | 2.19 | 0.56 | 2.15 | 0.91 | 1.76 | 2.34 | 2.51 | 1.75 | 2.37 | 3.37 |
| **4** | 3 | country | 0.60 | 0.36 | 0.95 | 1.79 | 0.41 | 1.57 | 0.66 | 1.32 | 1.72 | 2.40 | 1.31 | 2.01 | 2.48 |
| **4** | 3 | suburbs | 0.69 | 0.41 | 1.06 | 1.89 | 0.47 | 1.81 | 0.76 | 1.49 | 1.97 | 2.23 | 1.48 | 2.06 | 2.84 |

## CORK SLAB

| Country | Arc | GL | PBT$_{\text{CC}}$ | PBT$_{\text{OD}}$ | PBT$_{\text{HT\_CE}}$ | PBT$_{\text{HT\_nCE}}$ | PBT$_{\text{PM}}$ | PBT$_{\text{IR\_hh}}$ | PBT$_{\text{POF}}$ | PBT$_{\text{AC}}$ | PBT$_{\text{ET}}$ | PBT$_{\text{EuF}}$ | PBT$_{\text{EuM}}$ | PBT$_{\text{Ec\_FW}}$ | PBT$_{\text{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4** | 4 | cities | 1.09 | 0.80 | 0.89 | 0.86 | 0.83 | 3.21 | 1.35 | 1.68 | 2.88 | 0.54 | 1.70 | 0.78 | 4.28 |
| **4** | 4 | country | 0.75 | 0.50 | 0.77 | 0.85 | 0.54 | 2.11 | 0.89 | 1.32 | 2.06 | 0.58 | 1.33 | 0.79 | 3.01 |
| **4** | 4 | suburbs | 0.89 | 0.62 | 0.83 | 0.87 | 0.66 | 2.54 | 1.07 | 1.48 | 2.40 | 0.56 | 1.50 | 0.79 | 3.53 |
| **4** | 13 | cities | 0.78 | 0.50 | 0.87 | 1.05 | 0.55 | 2.13 | 0.90 | 1.44 | 2.15 | 0.76 | 1.44 | 1.00 | 3.13 |
| **4** | 13 | country | 0.66 | 0.42 | 0.79 | 1.00 | 0.47 | 1.80 | 0.76 | 1.27 | 1.85 | 0.76 | 1.27 | 0.97 | 2.69 |
| **4** | 13 | suburbs | 0.71 | 0.46 | 0.83 | 1.02 | 0.50 | 1.95 | 0.82 | 1.34 | 1.98 | 0.75 | 1.34 | 0.98 | 2.88 |
| **4** | 14 | cities | 0.78 | 0.49 | 0.94 | 1.22 | 0.55 | 2.10 | 0.89 | 1.50 | 2.17 | 0.94 | 1.50 | 1.19 | 3.15 |
| **4** | 14 | country | 0.68 | 0.42 | 0.91 | 1.33 | 0.47 | 1.80 | 0.76 | 1.37 | 1.91 | 1.17 | 1.37 | 1.35 | 2.76 |
| **4** | 14 | suburbs | 0.72 | 0.45 | 0.92 | 1.27 | 0.50 | 1.93 | 0.82 | 1.43 | 2.02 | 1.03 | 1.42 | 1.25 | 2.93 |
| **4** | 15 | cities | 0.80 | 0.49 | 1.09 | 1.60 | 0.55 | 2.13 | 0.90 | 1.63 | 2.26 | 1.41 | 1.63 | 1.62 | 3.27 |
| **4** | 15 | country | 0.71 | 0.42 | 1.13 | 2.14 | 0.48 | 1.84 | 0.78 | 1.55 | 2.03 | 2.93 | 1.54 | 2.42 | 2.92 |
| **4** | 15 | suburbs | 0.75 | 0.45 | 1.10 | 1.82 | 0.51 | 1.97 | 0.83 | 1.59 | 2.13 | 1.88 | 1.58 | 1.92 | 3.07 |
| **4** | 16 | cities | 0.63 | 0.43 | 0.61 | 0.66 | 0.46 | 1.77 | 0.74 | 1.07 | 1.70 | 2.82 | 1.08 | 3.84 | 2.50 |
| **4** | 16 | country | 0.56 | 0.37 | 0.58 | 0.66 | 0.40 | 1.56 | 0.66 | 1.00 | 1.54 | (5.64) | 1.00 | (7.68) | 2.25 |
| **4** | 16 | suburbs | 0.59 | 0.40 | 0.59 | 0.65 | 0.43 | 1.65 | 0.69 | 1.02 | 1.60 | (3.77) | 1.03 | 3.84 | 2.35 |
| **5** | 1 | cities | 0.55 | 0.47 | 0.61 | 1.10 | 0.29 | 0.54 | 0.46 | 0.84 | 1.07 | 1.49 | 0.80 | 0.42 | 1.55 |
| **5** | 1 | country | 0.47 | 0.40 | 0.52 | 0.94 | 0.25 | 0.46 | 0.39 | 0.71 | 0.91 | 1.27 | 0.68 | 0.35 | 1.32 |
| **5** | 1 | suburbs | 0.50 | 0.43 | 0.56 | 1.01 | 0.27 | 0.49 | 0.43 | 0.77 | 0.98 | 1.36 | 0.74 | 0.38 | 1.42 |
| **5** | 2 | cities | 0.58 | 0.50 | 0.65 | 1.16 | 0.31 | 0.56 | 0.49 | 0.89 | 1.13 | 1.57 | 0.85 | 0.44 | 1.63 |
| **5** | 2 | country | 0.49 | 0.42 | 0.54 | 0.98 | 0.27 | 0.47 | 0.42 | 0.75 | 0.95 | 1.32 | 0.71 | 0.37 | 1.38 |
| **5** | 2 | suburbs | 0.53 | 0.46 | 0.59 | 1.06 | 0.29 | 0.51 | 0.45 | 0.81 | 1.03 | 1.43 | 0.78 | 0.40 | 1.50 |
| **5** | 3 | cities | 1.00 | 0.87 | 1.11 | 2.00 | 0.54 | 0.97 | 0.85 | 1.53 | 1.94 | 2.70 | 1.46 | 0.75 | 2.82 |
| **5** | 3 | country | 0.76 | 0.65 | 0.84 | 1.50 | 0.41 | 0.72 | 0.64 | 1.15 | 1.46 | 2.03 | 1.10 | 0.56 | 2.11 |
| **5** | 3 | suburbs | 0.86 | 0.74 | 0.96 | 1.72 | 0.47 | 0.83 | 0.73 | 1.31 | 1.67 | 2.32 | 1.26 | 0.64 | 2.42 |
| **5** | 4 | cities | 2.08 | 1.78 | 2.26 | 3.80 | 1.17 | 1.73 | 1.77 | 2.90 | 3.77 | 5.03 | 2.83 | 1.35 | 5.40 |
| **5** | 4 | country | 1.36 | 1.17 | 1.50 | 2.61 | 0.75 | 1.23 | 1.15 | 2.00 | 2.56 | 3.50 | 1.93 | 0.96 | 3.70 |
| **5** | 4 | suburbs | 1.66 | 1.43 | 1.82 | 3.15 | 0.92 | 1.47 | 1.41 | 2.41 | 3.10 | 4.20 | 2.33 | 1.14 | 4.46 |

## CORK SLAB

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5** | 13 | cities | 1.06 | 0.91 | 1.17 | 2.09 | 0.57 | 1.00 | 0.90 | 1.59 | 2.04 | 2.81 | 1.53 | 0.78 | 2.94 |
| **5** | 13 | country | 0.91 | 0.78 | 1.00 | 1.79 | 0.49 | 0.86 | 0.77 | 1.37 | 1.74 | 2.41 | 1.31 | 0.67 | 2.52 |
| **5** | 13 | suburbs | 0.98 | 0.84 | 1.08 | 1.93 | 0.53 | 0.93 | 0.83 | 1.47 | 1.88 | 2.60 | 1.41 | 0.72 | 2.72 |
| **5** | 14 | cities | 1.02 | 0.88 | 1.13 | 2.02 | 0.55 | 0.97 | 0.87 | 1.54 | 1.97 | 2.72 | 1.48 | 0.76 | 2.85 |
| **5** | 14 | country | 0.88 | 0.76 | 0.98 | 1.74 | 0.48 | 0.84 | 0.75 | 1.33 | 1.70 | 2.35 | 1.28 | 0.65 | 2.46 |
| **5** | 14 | suburbs | 0.95 | 0.82 | 1.05 | 1.87 | 0.51 | 0.90 | 0.80 | 1.43 | 1.82 | 2.53 | 1.37 | 0.70 | 2.64 |
| **5** | 15 | cities | 1.03 | 0.88 | 1.14 | 2.03 | 0.56 | 0.98 | 0.87 | 1.55 | 1.98 | 2.74 | 1.49 | 0.76 | 2.87 |
| **5** | 15 | country | 0.88 | 0.76 | 0.98 | 1.75 | 0.48 | 0.85 | 0.75 | 1.34 | 1.70 | 2.37 | 1.28 | 0.66 | 2.47 |
| **5** | 15 | suburbs | 0.95 | 0.82 | 1.05 | 1.88 | 0.51 | 0.91 | 0.80 | 1.44 | 1.83 | 2.54 | 1.38 | 0.71 | 2.65 |
| **5** | 16 | cities | 0.89 | 0.77 | 0.98 | 1.70 | 0.49 | 0.79 | 0.76 | 1.30 | 1.67 | 2.27 | 1.25 | 0.62 | 2.40 |
| **5** | 16 | country | 0.80 | 0.69 | 0.89 | 1.55 | 0.44 | 0.73 | 0.68 | 1.18 | 1.52 | 2.07 | 1.14 | 0.57 | 2.19 |
| **5** | 16 | suburbs | 0.85 | 0.73 | 0.93 | 1.62 | 0.46 | 0.76 | 0.72 | 1.24 | 1.59 | 2.17 | 1.19 | 0.59 | 2.29 |
| **6** | 1 | cities | 0.34 | 0.36 | 0.49 | 1.77 | 0.16 | 7.84 | 0.29 | 1.89 | 1.61 | 4.19 | 0.92 | (28.82) | 2.01 |
| **6** | 1 | country | 0.31 | 0.33 | 0.44 | 1.58 | 0.15 | 6.53 | 0.27 | 1.67 | 1.42 | 3.66 | 0.83 | 92.05 | 1.80 |
| **6** | 1 | suburbs | 0.32 | 0.34 | 0.46 | 1.68 | 0.15 | 7.41 | 0.28 | 1.80 | 1.53 | 3.98 | 0.88 | (31.93) | 1.91 |
| **6** | 2 | cities | 0.34 | 0.36 | 0.49 | 1.56 | 0.17 | 3.94 | 0.30 | 1.43 | 1.22 | 3.01 | 0.87 | 2.11 | 1.76 |
| **6** | 2 | country | 0.31 | 0.32 | 0.44 | 1.40 | 0.15 | 3.55 | 0.27 | 1.29 | 1.10 | 2.71 | 0.79 | 1.89 | 1.59 |
| **6** | 2 | suburbs | 0.32 | 0.34 | 0.46 | 1.48 | 0.16 | 3.78 | 0.29 | 1.37 | 1.17 | 2.88 | 0.83 | 2.04 | 1.68 |
| **6** | 3 | cities | 0.55 | 0.58 | 0.78 | 2.48 | 0.27 | 6.05 | 0.49 | 2.26 | 1.92 | 4.72 | 1.40 | 3.07 | 2.80 |
| **6** | 3 | country | 0.46 | 0.48 | 0.65 | 2.06 | 0.23 | 4.98 | 0.41 | 1.87 | 1.59 | 3.91 | 1.17 | 2.49 | 2.33 |
| **6** | 3 | suburbs | 0.50 | 0.53 | 0.72 | 2.26 | 0.25 | 5.54 | 0.45 | 2.06 | 1.76 | 4.31 | 1.28 | 2.82 | 2.56 |
| **6** | 4 | cities | 0.86 | 0.89 | 1.21 | 3.39 | 0.44 | 6.18 | 0.78 | 2.78 | 2.36 | 5.63 | 2.04 | 2.32 | 3.83 |
| **6** | 4 | country | 0.64 | 0.67 | 0.90 | 2.68 | 0.32 | 5.48 | 0.58 | 2.29 | 1.95 | 4.70 | 1.57 | 2.27 | 3.02 |
| **6** | 4 | suburbs | 0.73 | 0.76 | 1.03 | 3.02 | 0.37 | 5.97 | 0.66 | 2.55 | 2.17 | 5.21 | 1.78 | 2.39 | 3.40 |
| **6** | 13 | cities | 0.60 | 0.63 | 0.86 | 2.55 | 0.31 | 5.33 | 0.54 | 2.20 | 1.87 | 4.52 | 1.49 | 2.25 | 2.88 |
| **6** | 13 | country | 0.55 | 0.58 | 0.78 | 2.36 | 0.28 | 5.06 | 0.50 | 2.06 | 1.75 | 4.24 | 1.37 | 2.19 | 2.67 |
| **6** | 13 | suburbs | 0.58 | 0.60 | 0.82 | 2.46 | 0.29 | 5.22 | 0.52 | 2.14 | 1.82 | 4.39 | 1.43 | 2.24 | 2.78 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6** | 14 | cities | 0.58 | 0.61 | 0.82 | 2.49 | 0.29 | 5.40 | 0.52 | 2.18 | 1.85 | 4.49 | 1.44 | 2.37 | 2.81 |
| **6** | 14 | country | 0.53 | 0.56 | 0.76 | 2.33 | 0.27 | 5.23 | 0.48 | 2.06 | 1.75 | 4.27 | 1.34 | 2.38 | 2.63 |
| **6** | 14 | suburbs | 0.56 | 0.58 | 0.79 | 2.41 | 0.28 | 5.34 | 0.50 | 2.13 | 1.81 | 4.39 | 1.39 | 2.40 | 2.72 |
| **6** | 15 | cities | 0.58 | 0.61 | 0.82 | 2.53 | 0.29 | 5.72 | 0.52 | 2.25 | 1.91 | 4.66 | 1.45 | 2.63 | 2.86 |
| **6** | 15 | country | 0.54 | 0.56 | 0.76 | 2.38 | 0.27 | 5.62 | 0.48 | 2.15 | 1.83 | 4.47 | 1.36 | 2.72 | 2.69 |
| **6** | 15 | suburbs | 0.56 | 0.58 | 0.79 | 2.46 | 0.28 | 5.71 | 0.50 | 2.20 | 1.87 | 4.58 | 1.40 | 2.70 | 2.78 |
| **6** | 16 | cities | 0.42 | 0.44 | 0.59 | 1.72 | 0.21 | 3.37 | 0.38 | 1.45 | 1.23 | 2.96 | 1.02 | 1.34 | 1.94 |
| **6** | 16 | country | 0.40 | 0.42 | 0.57 | 1.67 | 0.20 | 3.38 | 0.36 | 1.43 | 1.21 | 2.92 | 0.98 | 1.38 | 1.89 |
| **6** | 16 | suburbs | 0.41 | 0.43 | 0.58 | 1.70 | 0.21 | 3.39 | 0.37 | 1.44 | 1.23 | 2.95 | 1.00 | 1.37 | 1.92 |
| **7** | 5 | cities | 0.53 | 0.39 | 0.68 | 1.72 | 0.27 | 0.55 | 0.48 | 1.31 | 1.46 | 2.92 | 1.10 | 0.95 | 1.91 |
| **7** | 5 | country | 0.45 | 0.33 | 0.58 | 1.47 | 0.23 | 0.44 | 0.41 | 1.13 | 1.25 | 2.48 | 0.95 | 0.77 | 1.59 |
| **7** | 5 | suburbs | 0.49 | 0.34 | 0.61 | 1.53 | 0.25 | 0.40 | 0.44 | 1.20 | 1.34 | 2.61 | 1.01 | 0.74 | 1.61 |
| **7** | 6 | cities | 0.57 | 0.42 | 0.73 | 1.86 | 0.29 | 0.60 | 0.51 | 1.41 | 1.57 | 3.14 | 1.19 | 1.04 | 2.06 |
| **7** | 6 | country | 0.49 | 0.36 | 0.63 | 1.58 | 0.25 | 0.50 | 0.44 | 1.21 | 1.34 | 2.68 | 1.02 | 0.86 | 1.74 |
| **7** | 6 | suburbs | 0.52 | 0.37 | 0.66 | 1.65 | 0.27 | 0.44 | 0.48 | 1.29 | 1.44 | 2.81 | 1.08 | 0.81 | 1.75 |
| **7** | 7 | cities | 0.51 | 0.44 | 0.70 | 1.85 | 0.26 | 1.66 | 0.46 | 1.30 | 1.44 | 3.07 | 1.10 | 1.74 | 2.39 |
| **7** | 7 | country | 0.45 | 0.49 | 0.67 | 1.90 | 0.23 | (0.80) | 0.41 | 1.18 | 1.30 | 3.08 | 1.01 | (8.38) | 3.48 |
| **7** | 7 | suburbs | 0.47 | 0.40 | 0.65 | 1.71 | 0.24 | 1.38 | 0.43 | 1.21 | 1.34 | 2.85 | 1.02 | 1.54 | 2.18 |
| **7** | 8 | cities | 0.66 | 0.42 | 0.80 | 1.94 | 0.34 | 0.38 | 0.60 | 1.61 | 1.80 | 3.34 | 1.34 | 0.77 | 1.88 |
| **7** | 8 | country | 0.56 | 0.36 | 0.68 | 1.65 | 0.29 | 0.33 | 0.51 | 1.36 | 1.52 | 2.84 | 1.14 | 0.66 | 1.61 |
| **7** | 8 | suburbs | 0.61 | 0.39 | 0.73 | 1.78 | 0.32 | 0.35 | 0.55 | 1.48 | 1.65 | 3.07 | 1.23 | 0.70 | 1.72 |
| **7** | 17 | cities | 0.81 | 0.57 | 1.02 | 2.55 | 0.42 | 0.65 | 0.74 | 2.01 | 2.24 | 4.35 | 1.69 | 1.21 | 2.66 |
| **7** | 17 | country | 0.72 | 0.98 | 1.15 | 3.47 | 0.36 | (0.58) | 0.65 | 1.92 | 2.10 | 5.45 | 1.67 | (2.24) | 10.96 |
| **7** | 17 | suburbs | 0.75 | 0.59 | 0.99 | 2.56 | 0.39 | 1.08 | 0.68 | 1.89 | 2.10 | 4.30 | 1.60 | 1.68 | 2.99 |
| **7** | 18 | cities | 0.86 | 0.59 | 1.07 | 2.67 | 0.45 | 0.64 | 0.78 | 2.12 | 2.36 | 4.55 | 1.78 | 1.22 | 2.74 |
| **7** | 18 | country | 0.75 | 0.83 | 1.13 | 3.20 | 0.38 | (1.22) | 0.68 | 1.97 | 2.16 | 5.16 | 1.69 | (10.33) | 6.00 |
| **7** | 18 | suburbs | 0.79 | 0.60 | 1.03 | 2.62 | 0.41 | 0.89 | 0.72 | 1.98 | 2.20 | 4.43 | 1.67 | 1.51 | 2.94 |

## CORK SLAB

| Country | Arc | GL | PBT$_{CC}$ | PBT$_{OD}$ | PBT$_{HT\_CE}$ | PBT$_{HT\_nCE}$ | PBT$_{PM}$ | PBT$_{IR\_hh}$ | PBT$_{POF}$ | PBT$_{AC}$ | PBT$_{ET}$ | PBT$_{EuF}$ | PBT$_{EuM}$ | PBT$_{Ec\_FW}$ | PBT$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **7** | 19 | cities | 0.90 | 0.57 | 1.08 | 2.62 | 0.47 | 0.49 | 0.83 | 2.19 | 2.45 | 4.51 | 1.82 | 1.00 | 2.50 |
| **7** | 19 | country | 0.78 | 0.50 | 0.94 | 2.30 | 0.41 | 0.46 | 0.71 | 1.89 | 2.12 | 3.95 | 1.58 | 0.92 | 2.24 |
| **7** | 19 | suburbs | 0.83 | 0.53 | 1.00 | 2.43 | 0.44 | 0.47 | 0.76 | 2.02 | 2.26 | 4.19 | 1.69 | 0.94 | 2.34 |
| **7** | 20 | cities | 0.69 | 0.42 | 0.82 | 1.96 | 0.36 | 0.35 | 0.63 | 1.66 | 1.86 | 3.39 | 1.38 | 0.72 | 1.85 |
| **7** | 20 | country | 0.60 | 0.37 | 0.71 | 1.71 | 0.31 | 0.31 | 0.55 | 1.44 | 1.62 | 2.95 | 1.20 | 0.64 | 1.61 |
| **7** | 20 | suburbs | 0.64 | 0.39 | 0.76 | 1.82 | 0.33 | 0.33 | 0.58 | 1.54 | 1.72 | 3.14 | 1.28 | 0.67 | 1.71 |
| **8** | 5 | cities | 0.45 | 0.36 | 0.26 | 0.81 | 0.09 | 0.78 | 0.19 | 0.55 | 0.66 | 0.74 | 0.51 | 0.67 | 1.94 |
| **8** | 5 | country | 0.42 | 0.33 | 0.25 | 0.77 | 0.09 | 0.73 | 0.18 | 0.51 | 0.62 | 0.70 | 0.48 | 0.63 | 1.82 |
| **8** | 5 | suburbs | 0.43 | 0.34 | 0.26 | 0.79 | 0.09 | 0.75 | 0.18 | 0.53 | 0.64 | 0.72 | 0.49 | 0.65 | 1.88 |
| **8** | 6 | cities | 0.47 | 0.38 | 0.28 | 0.87 | 0.10 | 0.83 | 0.20 | 0.58 | 0.70 | 0.80 | 0.54 | 0.72 | 2.06 |
| **8** | 6 | country | 0.44 | 0.35 | 0.26 | 0.82 | 0.09 | 0.78 | 0.19 | 0.55 | 0.66 | 0.75 | 0.51 | 0.68 | 1.94 |
| **8** | 6 | suburbs | 0.46 | 0.37 | 0.27 | 0.84 | 0.10 | 0.80 | 0.19 | 0.56 | 0.68 | 0.77 | 0.52 | 0.69 | 2.00 |
| **8** | 7 | cities | 0.48 | 0.38 | 0.28 | 0.87 | 0.10 | 0.84 | 0.20 | 0.58 | 0.70 | 0.80 | 0.54 | 0.72 | 2.07 |
| **8** | 7 | country | 0.45 | 0.35 | 0.26 | 0.82 | 0.09 | 0.78 | 0.19 | 0.55 | 0.66 | 0.75 | 0.51 | 0.68 | 1.95 |
| **8** | 7 | suburbs | 0.46 | 0.37 | 0.27 | 0.84 | 0.10 | 0.80 | 0.20 | 0.56 | 0.68 | 0.77 | 0.52 | 0.69 | 2.01 |
| **8** | 8 | cities | 0.65 | 0.52 | 0.39 | 1.42 | 0.13 | 1.53 | 0.27 | 0.90 | 0.98 | 1.50 | 0.76 | 1.32 | 3.01 |
| **8** | 8 | country | 0.61 | 0.49 | 0.37 | 1.35 | 0.12 | 1.46 | 0.25 | 0.86 | 0.93 | 1.44 | 0.72 | 1.27 | 2.84 |
| **8** | 8 | suburbs | 0.63 | 0.50 | 0.38 | 1.36 | 0.13 | 1.45 | 0.26 | 0.87 | 0.95 | 1.42 | 0.74 | 1.25 | 2.90 |
| **8** | 17 | cities | 0.73 | 0.58 | 0.43 | 1.34 | 0.15 | 1.28 | 0.31 | 0.89 | 1.07 | 1.23 | 0.83 | 1.10 | 3.17 |
| **8** | 17 | country | 0.67 | 0.54 | 0.40 | 1.24 | 0.14 | 1.19 | 0.28 | 0.83 | 1.00 | 1.14 | 0.77 | 1.03 | 2.94 |
| **8** | 17 | suburbs | 0.70 | 0.56 | 0.41 | 1.28 | 0.15 | 1.23 | 0.30 | 0.86 | 1.03 | 1.18 | 0.80 | 1.06 | 3.05 |
| **8** | 18 | cities | 0.77 | 0.61 | 0.45 | 1.42 | 0.16 | 1.36 | 0.33 | 0.95 | 1.14 | 1.31 | 0.88 | 1.18 | 3.36 |
| **8** | 18 | country | 0.71 | 0.57 | 0.42 | 1.32 | 0.15 | 1.26 | 0.30 | 0.88 | 1.05 | 1.21 | 0.81 | 1.09 | 3.11 |
| **8** | 18 | suburbs | 0.74 | 0.59 | 0.44 | 1.36 | 0.15 | 1.31 | 0.31 | 0.91 | 1.09 | 1.25 | 0.84 | 1.13 | 3.23 |
| **8** | 19 | cities | 0.83 | 0.66 | 0.49 | 1.55 | 0.17 | 1.50 | 0.35 | 1.03 | 1.22 | 1.44 | 0.94 | 1.29 | 3.63 |
| **8** | 19 | country | 0.77 | 0.61 | 0.46 | 1.45 | 0.16 | 1.41 | 0.33 | 0.96 | 1.14 | 1.36 | 0.88 | 1.22 | 3.39 |
| **8** | 19 | suburbs | 0.80 | 0.63 | 0.47 | 1.49 | 0.17 | 1.44 | 0.34 | 0.99 | 1.18 | 1.39 | 0.91 | 1.25 | 3.50 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **8** | 20 | cities | 0.70 | 0.56 | 0.42 | 1.37 | 0.14 | 1.36 | 0.29 | 0.90 | 1.05 | 1.32 | 0.81 | 1.18 | 3.13 |
| **8** | 20 | country | 0.66 | 0.52 | 0.39 | 1.30 | 0.13 | 1.30 | 0.27 | 0.85 | 0.98 | 1.26 | 0.76 | 1.12 | 2.93 |
| **8** | 20 | suburbs | 0.68 | 0.54 | 0.40 | 1.32 | 0.14 | 1.31 | 0.28 | 0.87 | 1.01 | 1.27 | 0.78 | 1.13 | 3.02 |
| **9** | 5 | cities | 0.27 | 0.32 | 0.28 | 0.60 | 0.12 | 0.65 | 0.22 | 0.59 | 0.67 | 0.57 | 0.50 | 0.48 | 1.38 |
| **9** | 5 | country | 0.25 | 0.29 | 0.26 | 0.54 | 0.11 | 0.59 | 0.20 | 0.53 | 0.60 | 0.51 | 0.45 | 0.43 | 1.24 |
| **9** | 5 | suburbs | 0.26 | 0.31 | 0.27 | 0.57 | 0.12 | 0.62 | 0.21 | 0.56 | 0.64 | 0.54 | 0.47 | 0.45 | 1.31 |
| **9** | 6 | cities | 0.29 | 0.34 | 0.30 | 0.64 | 0.13 | 0.69 | 0.23 | 0.62 | 0.71 | 0.60 | 0.53 | 0.50 | 1.46 |
| **9** | 6 | country | 0.26 | 0.31 | 0.27 | 0.58 | 0.12 | 0.62 | 0.21 | 0.56 | 0.64 | 0.55 | 0.47 | 0.45 | 1.31 |
| **9** | 6 | suburbs | 0.27 | 0.32 | 0.29 | 0.61 | 0.12 | 0.65 | 0.22 | 0.59 | 0.67 | 0.57 | 0.50 | 0.48 | 1.38 |
| **9** | 7 | cities | 0.29 | 0.35 | 0.31 | 0.65 | 0.13 | 0.71 | 0.24 | 0.63 | 0.72 | 0.62 | 0.53 | 0.52 | 1.48 |
| **9** | 7 | country | 0.26 | 0.31 | 0.28 | 0.59 | 0.12 | 0.64 | 0.21 | 0.57 | 0.65 | 0.56 | 0.48 | 0.47 | 1.34 |
| **9** | 7 | suburbs | 0.28 | 0.33 | 0.29 | 0.62 | 0.12 | 0.67 | 0.22 | 0.60 | 0.68 | 0.59 | 0.51 | 0.49 | 1.41 |
| **9** | 8 | cities | 0.34 | 0.40 | 0.35 | 0.76 | 0.15 | 0.84 | 0.27 | 0.73 | 0.83 | 0.73 | 0.62 | 0.61 | 1.72 |
| **9** | 8 | country | 0.31 | 0.36 | 0.32 | 0.69 | 0.14 | 0.77 | 0.25 | 0.66 | 0.75 | 0.67 | 0.56 | 0.55 | 1.56 |
| **9** | 8 | suburbs | 0.32 | 0.38 | 0.34 | 0.72 | 0.14 | 0.80 | 0.26 | 0.69 | 0.79 | 0.69 | 0.59 | 0.58 | 1.63 |
| **9** | 17 | cities | 0.46 | 0.54 | 0.48 | 1.01 | 0.20 | 1.08 | 0.37 | 0.98 | 1.13 | 0.95 | 0.83 | 0.79 | 2.31 |
| **9** | 17 | country | 0.41 | 0.48 | 0.42 | 0.90 | 0.18 | 0.97 | 0.33 | 0.87 | 1.00 | 0.85 | 0.74 | 0.71 | 2.05 |
| **9** | 17 | suburbs | 0.43 | 0.51 | 0.45 | 0.95 | 0.19 | 1.02 | 0.35 | 0.92 | 1.06 | 0.90 | 0.78 | 0.75 | 2.17 |
| **9** | 18 | cities | 0.48 | 0.57 | 0.50 | 1.06 | 0.22 | 1.14 | 0.39 | 1.04 | 1.19 | 1.00 | 0.88 | 0.84 | 2.44 |
| **9** | 18 | country | 0.43 | 0.51 | 0.45 | 0.95 | 0.19 | 1.02 | 0.35 | 0.92 | 1.06 | 0.90 | 0.78 | 0.75 | 2.17 |
| **9** | 18 | suburbs | 0.45 | 0.54 | 0.47 | 1.00 | 0.20 | 1.08 | 0.37 | 0.97 | 1.12 | 0.95 | 0.83 | 0.79 | 2.29 |
| **9** | 19 | cities | 0.51 | 0.60 | 0.53 | 1.12 | 0.23 | 1.20 | 0.41 | 1.09 | 1.25 | 1.06 | 0.93 | 0.88 | 2.57 |
| **9** | 19 | country | 0.46 | 0.54 | 0.48 | 1.01 | 0.20 | 1.09 | 0.37 | 0.98 | 1.13 | 0.95 | 0.83 | 0.80 | 2.31 |
| **9** | 19 | suburbs | 0.48 | 0.57 | 0.50 | 1.06 | 0.22 | 1.14 | 0.39 | 1.03 | 1.19 | 1.00 | 0.88 | 0.84 | 2.43 |
| **9** | 20 | cities | 0.42 | 0.50 | 0.44 | 0.93 | 0.19 | 1.00 | 0.34 | 0.90 | 1.03 | 0.88 | 0.77 | 0.73 | 2.12 |
| **9** | 20 | country | 0.38 | 0.45 | 0.40 | 0.85 | 0.17 | 0.92 | 0.31 | 0.82 | 0.94 | 0.81 | 0.70 | 0.67 | 1.94 |
| **9** | 20 | suburbs | 0.40 | 0.47 | 0.42 | 0.88 | 0.18 | 0.95 | 0.32 | 0.86 | 0.98 | 0.84 | 0.73 | 0.70 | 2.02 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT}_{\mathbf{CC}}$ | $\mathbf{PBT}_{\mathbf{OD}}$ | $\mathbf{PBT}_{\mathbf{HT\_CE}}$ | $\mathbf{PBT}_{\mathbf{HT\_nCE}}$ | $\mathbf{PBT}_{\mathbf{PM}}$ | $\mathbf{PBT}_{\mathbf{IR\_hh}}$ | $\mathbf{PBT}_{\mathbf{POF}}$ | $\mathbf{PBT}_{\mathbf{AC}}$ | $\mathbf{PBT}_{\mathbf{ET}}$ | $\mathbf{PBT}_{\mathbf{EuF}}$ | $\mathbf{PBT}_{\mathbf{EuM}}$ | $\mathbf{PBT}_{\mathbf{Ec\_FW}}$ | $\mathbf{PBT}_{\mathbf{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10** | 5 | cities | 0.49 | 0.68 | 0.29 | 1.18 | 0.10 | 3.18 | 0.20 | 0.77 | 0.75 | 1.27 | 0.57 | 1.19 | 3.05 |
| **10** | 5 | country | 0.44 | 0.61 | 0.27 | 1.08 | 0.09 | 2.97 | 0.18 | 0.69 | 0.67 | 1.17 | 0.52 | 1.09 | 2.76 |
| **10** | 5 | suburbs | 0.47 | 0.64 | 0.28 | 1.13 | 0.09 | 3.05 | 0.19 | 0.73 | 0.71 | 1.21 | 0.55 | 1.14 | 2.90 |
| **10** | 6 | cities | 0.53 | 0.73 | 0.32 | 1.29 | 0.11 | 3.66 | 0.22 | 0.82 | 0.80 | 1.41 | 0.62 | 1.32 | 3.30 |
| **10** | 6 | country | 0.48 | 0.65 | 0.29 | 1.17 | 0.09 | 3.42 | 0.19 | 0.74 | 0.72 | 1.29 | 0.56 | 1.21 | 2.98 |
| **10** | 6 | suburbs | 0.50 | 0.69 | 0.30 | 1.23 | 0.10 | 3.50 | 0.20 | 0.78 | 0.76 | 1.34 | 0.59 | 1.26 | 3.13 |
| **10** | 7 | cities | 0.49 | 0.67 | 0.30 | 1.24 | 0.10 | 3.84 | 0.20 | 0.77 | 0.75 | 1.39 | 0.58 | 1.30 | 3.12 |
| **10** | 7 | country | 0.45 | 0.61 | 0.27 | 1.17 | 0.09 | 4.05 | 0.18 | 0.71 | 0.68 | 1.36 | 0.53 | 1.26 | 2.88 |
| **10** | 7 | suburbs | 0.47 | 0.64 | 0.28 | 1.20 | 0.09 | 3.89 | 0.19 | 0.74 | 0.71 | 1.37 | 0.55 | 1.28 | 2.99 |
| **10** | 8 | cities | 0.55 | 0.75 | 0.34 | 1.62 | 0.11 | 11.73 | 0.22 | 0.88 | 0.84 | 2.21 | 0.65 | 2.02 | 3.73 |
| **10** | 8 | country | 0.52 | 0.70 | 0.32 | 1.62 | 0.10 | 38.77 | 0.21 | 0.83 | 0.78 | 2.50 | 0.61 | 2.24 | 3.57 |
| **10** | 8 | suburbs | 0.54 | 0.72 | 0.33 | 1.61 | 0.10 | 15.82 | 0.21 | 0.86 | 0.81 | 2.30 | 0.63 | 2.09 | 3.64 |
| **10** | 17 | cities | 0.76 | 1.05 | 0.45 | 1.74 | 0.15 | 4.09 | 0.31 | 1.18 | 1.16 | 1.78 | 0.89 | 1.68 | 4.62 |
| **10** | 17 | country | 0.68 | 0.94 | 0.41 | 1.59 | 0.14 | 3.94 | 0.28 | 1.05 | 1.04 | 1.66 | 0.79 | 1.56 | 4.16 |
| **10** | 17 | suburbs | 0.72 | 0.99 | 0.43 | 1.66 | 0.14 | 3.99 | 0.30 | 1.11 | 1.09 | 1.71 | 0.84 | 1.61 | 4.37 |
| **10** | 18 | cities | 0.81 | 1.11 | 0.48 | 1.85 | 0.16 | 4.35 | 0.33 | 1.25 | 1.23 | 1.89 | 0.94 | 1.78 | 4.89 |
| **10** | 18 | country | 0.72 | 0.99 | 0.43 | 1.69 | 0.14 | 4.20 | 0.30 | 1.12 | 1.10 | 1.76 | 0.84 | 1.66 | 4.41 |
| **10** | 18 | suburbs | 0.76 | 1.05 | 0.45 | 1.76 | 0.15 | 4.25 | 0.31 | 1.18 | 1.16 | 1.82 | 0.88 | 1.71 | 4.63 |
| **10** | 19 | cities | 0.87 | 1.21 | 0.52 | 1.96 | 0.18 | 4.42 | 0.36 | 1.34 | 1.33 | 1.97 | 1.01 | 1.86 | 5.24 |
| **10** | 19 | country | 0.80 | 1.10 | 0.48 | 1.84 | 0.16 | 4.37 | 0.33 | 1.23 | 1.21 | 1.89 | 0.93 | 1.78 | 4.84 |
| **10** | 19 | suburbs | 0.83 | 1.15 | 0.50 | 1.89 | 0.17 | 4.37 | 0.34 | 1.28 | 1.27 | 1.92 | 0.97 | 1.81 | 5.02 |
| **10** | 20 | cities | 0.70 | 0.97 | 0.42 | 1.64 | 0.14 | 4.03 | 0.29 | 1.09 | 1.07 | 1.70 | 0.82 | 1.60 | 4.29 |
| **10** | 20 | country | 0.67 | 0.92 | 0.40 | 1.63 | 0.13 | 4.53 | 0.27 | 1.04 | 1.01 | 1.77 | 0.78 | 1.66 | 4.16 |
| **10** | 20 | suburbs | 0.68 | 0.94 | 0.41 | 1.62 | 0.14 | 4.21 | 0.28 | 1.06 | 1.03 | 1.72 | 0.79 | 1.61 | 4.19 |
| **11** | 5 | cities | 0.50 | 1.07 | 0.22 | 0.42 | 0.10 | 0.75 | 0.21 | 0.44 | 0.69 | 0.29 | 0.47 | 0.36 | 3.28 |
| **11** | 5 | country | 0.45 | 0.98 | 0.20 | 0.38 | 0.09 | 0.68 | 0.19 | 0.40 | 0.62 | 0.26 | 0.42 | 0.33 | 2.98 |
| **11** | 5 | suburbs | 0.48 | 1.02 | 0.21 | 0.40 | 0.09 | 0.72 | 0.20 | 0.42 | 0.65 | 0.28 | 0.45 | 0.35 | 3.13 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **11** | 6 | cities | 0.53 | 1.15 | 0.23 | 0.45 | 0.11 | 0.81 | 0.22 | 0.47 | 0.73 | 0.31 | 0.50 | 0.39 | 3.51 |
| **11** | 6 | country | 0.48 | 1.04 | 0.21 | 0.41 | 0.10 | 0.73 | 0.20 | 0.42 | 0.66 | 0.28 | 0.45 | 0.35 | 3.19 |
| **11** | 6 | suburbs | 0.51 | 1.09 | 0.22 | 0.43 | 0.10 | 0.77 | 0.21 | 0.44 | 0.70 | 0.30 | 0.48 | 0.37 | 3.35 |
| **11** | 7 | cities | 0.51 | 1.11 | 0.22 | 0.44 | 0.10 | 0.79 | 0.22 | 0.45 | 0.70 | 0.30 | 0.48 | 0.38 | 3.41 |
| **11** | 7 | country | 0.47 | 1.01 | 0.20 | 0.40 | 0.09 | 0.72 | 0.20 | 0.41 | 0.64 | 0.28 | 0.44 | 0.35 | 3.12 |
| **11** | 7 | suburbs | 0.49 | 1.06 | 0.21 | 0.42 | 0.10 | 0.75 | 0.21 | 0.43 | 0.67 | 0.29 | 0.46 | 0.36 | 3.27 |
| **11** | 8 | cities | 0.60 | 1.31 | 0.26 | 0.53 | 0.12 | 0.99 | 0.25 | 0.52 | 0.81 | 0.37 | 0.56 | 0.47 | 4.18 |
| **11** | 8 | country | 0.55 | 1.21 | 0.24 | 0.49 | 0.11 | 0.92 | 0.22 | 0.48 | 0.74 | 0.35 | 0.51 | 0.44 | 3.87 |
| **11** | 8 | suburbs | 0.57 | 1.26 | 0.25 | 0.51 | 0.11 | 0.96 | 0.24 | 0.50 | 0.78 | 0.36 | 0.54 | 0.45 | 4.03 |
| **11** | 17 | cities | 0.80 | 1.72 | 0.35 | 0.68 | 0.16 | 1.20 | 0.34 | 0.70 | 1.11 | 0.46 | 0.75 | 0.58 | 5.24 |
| **11** | 17 | country | 0.72 | 1.56 | 0.32 | 0.61 | 0.14 | 1.08 | 0.31 | 0.63 | 1.00 | 0.42 | 0.68 | 0.53 | 4.74 |
| **11** | 17 | suburbs | 0.76 | 1.64 | 0.33 | 0.64 | 0.15 | 1.14 | 0.32 | 0.67 | 1.05 | 0.44 | 0.71 | 0.55 | 4.98 |
| **11** | 18 | cities | 0.85 | 1.82 | 0.37 | 0.71 | 0.17 | 1.26 | 0.36 | 0.74 | 1.17 | 0.49 | 0.79 | 0.61 | 5.53 |
| **11** | 18 | country | 0.77 | 1.64 | 0.33 | 0.65 | 0.15 | 1.15 | 0.32 | 0.67 | 1.05 | 0.44 | 0.72 | 0.56 | 5.01 |
| **11** | 18 | suburbs | 0.80 | 1.73 | 0.35 | 0.68 | 0.16 | 1.20 | 0.34 | 0.70 | 1.11 | 0.46 | 0.75 | 0.58 | 5.25 |
| **11** | 19 | cities | 0.91 | 1.96 | 0.40 | 0.77 | 0.18 | 1.35 | 0.39 | 0.80 | 1.26 | 0.52 | 0.85 | 0.66 | 5.93 |
| **11** | 19 | country | 0.83 | 1.78 | 0.36 | 0.70 | 0.16 | 1.23 | 0.35 | 0.72 | 1.14 | 0.48 | 0.77 | 0.60 | 5.40 |
| **11** | 19 | suburbs | 0.87 | 1.86 | 0.38 | 0.73 | 0.17 | 1.29 | 0.37 | 0.76 | 1.20 | 0.50 | 0.81 | 0.63 | 5.65 |
| **11** | 20 | cities | 0.74 | 1.58 | 0.32 | 0.62 | 0.15 | 1.11 | 0.31 | 0.64 | 1.01 | 0.43 | 0.69 | 0.54 | 4.84 |
| **11** | 20 | country | 0.68 | 1.47 | 0.30 | 0.58 | 0.13 | 1.05 | 0.29 | 0.60 | 0.94 | 0.40 | 0.64 | 0.50 | 4.53 |
| **11** | 20 | suburbs | 0.71 | 1.52 | 0.31 | 0.60 | 0.14 | 1.07 | 0.30 | 0.62 | 0.97 | 0.41 | 0.66 | 0.52 | 4.67 |
| **12** | 5 | cities | 0.19 | 0.18 | 0.40 | 0.49 | 0.33 | 0.80 | 0.41 | 0.34 | 0.71 | 0.72 | 0.55 | 0.39 | 0.99 |
| **12** | 5 | country | 0.17 | 0.16 | 0.36 | 0.44 | 0.30 | 0.72 | 0.37 | 0.31 | 0.64 | 0.65 | 0.49 | 0.35 | 0.89 |
| **12** | 5 | suburbs | 0.18 | 0.17 | 0.38 | 0.47 | 0.31 | 0.76 | 0.39 | 0.32 | 0.67 | 0.69 | 0.52 | 0.37 | 0.94 |
| **12** | 6 | cities | 0.20 | 0.18 | 0.42 | 0.51 | 0.35 | 0.84 | 0.43 | 0.36 | 0.74 | 0.76 | 0.57 | 0.40 | 1.04 |
| **12** | 6 | country | 0.18 | 0.17 | 0.38 | 0.47 | 0.31 | 0.76 | 0.39 | 0.33 | 0.68 | 0.69 | 0.52 | 0.37 | 0.94 |
| **12** | 6 | suburbs | 0.19 | 0.18 | 0.40 | 0.49 | 0.33 | 0.80 | 0.41 | 0.34 | 0.71 | 0.72 | 0.54 | 0.38 | 0.99 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **12** | 7 | cities | 0.20 | 0.18 | 0.41 | 0.51 | 0.34 | 0.83 | 0.43 | 0.35 | 0.73 | 0.74 | 0.56 | 0.40 | 1.02 |
| **12** | 7 | country | 0.18 | 0.16 | 0.37 | 0.46 | 0.31 | 0.75 | 0.39 | 0.32 | 0.66 | 0.67 | 0.51 | 0.36 | 0.92 |
| **12** | 7 | suburbs | 0.19 | 0.17 | 0.39 | 0.48 | 0.32 | 0.78 | 0.41 | 0.33 | 0.70 | 0.71 | 0.53 | 0.38 | 0.97 |
| **12** | 8 | cities | 0.25 | 0.23 | 0.52 | 0.63 | 0.43 | 1.03 | 0.54 | 0.44 | 0.92 | 0.93 | 0.71 | 0.51 | 1.28 |
| **12** | 8 | country | 0.22 | 0.20 | 0.46 | 0.57 | 0.38 | 0.92 | 0.48 | 0.39 | 0.82 | 0.83 | 0.63 | 0.45 | 1.14 |
| **12** | 8 | suburbs | 0.23 | 0.21 | 0.49 | 0.60 | 0.40 | 0.98 | 0.51 | 0.42 | 0.87 | 0.88 | 0.67 | 0.48 | 1.21 |
| **12** | 17 | cities | 0.31 | 0.29 | 0.66 | 0.81 | 0.54 | 1.32 | 0.68 | 0.56 | 1.17 | 1.19 | 0.90 | 0.64 | 1.63 |
| **12** | 17 | country | 0.28 | 0.26 | 0.59 | 0.72 | 0.48 | 1.17 | 0.61 | 0.50 | 1.04 | 1.06 | 0.80 | 0.57 | 1.45 |
| **12** | 17 | suburbs | 0.30 | 0.27 | 0.62 | 0.76 | 0.51 | 1.24 | 0.64 | 0.53 | 1.10 | 1.12 | 0.85 | 0.60 | 1.54 |
| **12** | 18 | cities | 0.33 | 0.30 | 0.69 | 0.85 | 0.57 | 1.38 | 0.72 | 0.59 | 1.23 | 1.24 | 0.94 | 0.67 | 1.71 |
| **12** | 18 | country | 0.29 | 0.27 | 0.62 | 0.75 | 0.51 | 1.23 | 0.64 | 0.53 | 1.09 | 1.11 | 0.84 | 0.59 | 1.52 |
| **12** | 18 | suburbs | 0.31 | 0.29 | 0.65 | 0.80 | 0.54 | 1.30 | 0.67 | 0.56 | 1.16 | 1.17 | 0.89 | 0.63 | 1.61 |
| **12** | 19 | cities | 0.36 | 0.33 | 0.76 | 0.93 | 0.63 | 1.52 | 0.79 | 0.65 | 1.35 | 1.37 | 1.04 | 0.73 | 1.88 |
| **12** | 19 | country | 0.33 | 0.30 | 0.69 | 0.84 | 0.57 | 1.38 | 0.71 | 0.59 | 1.22 | 1.24 | 0.94 | 0.67 | 1.70 |
| **12** | 19 | suburbs | 0.35 | 0.32 | 0.73 | 0.89 | 0.60 | 1.45 | 0.75 | 0.62 | 1.28 | 1.30 | 0.99 | 0.70 | 1.79 |
| **12** | 20 | cities | 0.28 | 0.25 | 0.58 | 0.71 | 0.48 | 1.15 | 0.60 | 0.49 | 1.03 | 1.04 | 0.79 | 0.56 | 1.43 |
| **12** | 20 | country | 0.26 | 0.24 | 0.55 | 0.67 | 0.45 | 1.09 | 0.56 | 0.47 | 0.97 | 0.98 | 0.74 | 0.53 | 1.35 |
| **12** | 20 | suburbs | 0.27 | 0.24 | 0.56 | 0.68 | 0.46 | 1.12 | 0.58 | 0.48 | 0.99 | 1.01 | 0.76 | 0.54 | 1.38 |
| **13** | 5 | cities | 0.39 | 0.45 | 1.59 | 1.76 | 1.21 | 4.48 | 0.96 | 1.78 | 1.97 | 2.88 | 1.52 | 1.39 | 1.99 |
| **13** | 5 | country | 0.35 | 0.40 | 1.41 | 1.55 | 1.07 | 3.96 | 0.85 | 1.57 | 1.74 | 2.55 | 1.34 | 1.22 | 1.76 |
| **13** | 5 | suburbs | 0.37 | 0.42 | 1.50 | 1.65 | 1.14 | 4.21 | 0.91 | 1.67 | 1.85 | 2.71 | 1.43 | 1.30 | 1.87 |
| **13** | 6 | cities | 0.41 | 0.47 | 1.68 | 1.86 | 1.28 | 4.75 | 1.02 | 1.88 | 2.08 | 3.06 | 1.61 | 1.47 | 2.10 |
| **13** | 6 | country | 0.37 | 0.42 | 1.49 | 1.65 | 1.13 | 4.21 | 0.90 | 1.66 | 1.84 | 2.72 | 1.42 | 1.31 | 1.86 |
| **13** | 6 | suburbs | 0.39 | 0.44 | 1.58 | 1.75 | 1.21 | 4.48 | 0.96 | 1.77 | 1.96 | 2.88 | 1.51 | 1.39 | 1.98 |
| **13** | 7 | cities | 0.41 | 0.46 | 1.65 | 1.82 | 1.26 | 4.65 | 1.00 | 1.84 | 2.04 | 3.00 | 1.57 | 1.44 | 2.06 |
| **13** | 7 | country | 0.36 | 0.41 | 1.46 | 1.62 | 1.11 | 4.15 | 0.89 | 1.63 | 1.81 | 2.67 | 1.40 | 1.28 | 1.83 |
| **13** | 7 | suburbs | 0.38 | 0.44 | 1.55 | 1.72 | 1.18 | 4.39 | 0.94 | 1.73 | 1.92 | 2.83 | 1.48 | 1.36 | 1.94 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT}_{\mathbf{CC}}$ | $\mathbf{PBT}_{\mathbf{OD}}$ | $\mathbf{PBT}_{\mathbf{HT\_CE}}$ | $\mathbf{PBT}_{\mathbf{HT\_nCE}}$ | $\mathbf{PBT}_{\mathbf{PM}}$ | $\mathbf{PBT}_{\mathbf{IR\_hh}}$ | $\mathbf{PBT}_{\mathbf{POF}}$ | $\mathbf{PBT}_{\mathbf{AC}}$ | $\mathbf{PBT}_{\mathbf{ET}}$ | $\mathbf{PBT}_{\mathbf{EuF}}$ | $\mathbf{PBT}_{\mathbf{EuM}}$ | $\mathbf{PBT}_{\mathbf{Ec\_FW}}$ | $\mathbf{PBT}_{\mathbf{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | 8 | cities | 0.52 | 0.59 | 2.13 | 2.36 | 1.59 | 6.25 | 1.27 | 2.35 | 2.62 | 4.04 | 2.01 | 1.96 | 2.63 |
| **13** | 8 | country | 0.45 | 0.51 | 1.86 | 2.06 | 1.38 | 5.44 | 1.10 | 2.05 | 2.29 | 3.51 | 1.76 | 1.70 | 2.29 |
| **13** | 8 | suburbs | 0.48 | 0.55 | 1.99 | 2.21 | 1.49 | 5.84 | 1.18 | 2.20 | 2.45 | 3.77 | 1.88 | 1.83 | 2.46 |
| **13** | 17 | cities | 0.62 | 0.70 | 2.49 | 2.75 | 1.91 | 6.98 | 1.52 | 2.79 | 3.08 | 4.49 | 2.39 | 2.15 | 3.13 |
| **13** | 17 | country | 0.54 | 0.61 | 2.17 | 2.40 | 1.66 | 6.08 | 1.32 | 2.43 | 2.69 | 3.91 | 2.08 | 1.88 | 2.72 |
| **13** | 17 | suburbs | 0.57 | 0.66 | 2.32 | 2.56 | 1.78 | 6.50 | 1.41 | 2.60 | 2.87 | 4.18 | 2.22 | 2.01 | 2.91 |
| **13** | 18 | cities | 0.65 | 0.74 | 2.62 | 2.89 | 2.00 | 7.33 | 1.59 | 2.93 | 3.24 | 4.72 | 2.50 | 2.26 | 3.28 |
| **13** | 18 | country | 0.57 | 0.65 | 2.29 | 2.53 | 1.75 | 6.41 | 1.39 | 2.56 | 2.83 | 4.13 | 2.19 | 1.98 | 2.87 |
| **13** | 18 | suburbs | 0.60 | 0.69 | 2.44 | 2.69 | 1.87 | 6.83 | 1.48 | 2.73 | 3.02 | 4.40 | 2.34 | 2.11 | 3.06 |
| **13** | 19 | cities | 0.70 | 0.80 | 2.83 | 3.13 | 2.17 | 7.94 | 1.72 | 3.17 | 3.51 | 5.11 | 2.71 | 2.45 | 3.55 |
| **13** | 19 | country | 0.63 | 0.72 | 2.54 | 2.80 | 1.94 | 7.11 | 1.54 | 2.84 | 3.14 | 4.58 | 2.43 | 2.20 | 3.18 |
| **13** | 19 | suburbs | 0.66 | 0.75 | 2.67 | 2.95 | 2.05 | 7.49 | 1.63 | 2.99 | 3.31 | 4.82 | 2.56 | 2.31 | 3.35 |
| **13** | 20 | cities | 0.54 | 0.62 | 2.20 | 2.43 | 1.68 | 6.20 | 1.34 | 2.46 | 2.72 | 4.00 | 2.11 | 1.92 | 2.76 |
| **13** | 20 | country | 0.51 | 0.58 | 2.07 | 2.29 | 1.58 | 5.85 | 1.26 | 2.31 | 2.56 | 3.77 | 1.98 | 1.81 | 2.59 |
| **13** | 20 | suburbs | 0.52 | 0.60 | 2.12 | 2.35 | 1.62 | 5.99 | 1.29 | 2.37 | 2.62 | 3.86 | 2.03 | 1.85 | 2.66 |
| **14** | 5 | cities | 0.40 | 0.29 | 1.13 | 1.53 | 0.71 | 0.78 | 0.79 | 1.21 | 1.62 | 2.94 | 1.25 | 1.05 | 1.63 |
| **14** | 5 | country | 0.35 | 0.26 | 1.00 | 1.36 | 0.63 | 0.69 | 0.70 | 1.07 | 1.43 | 2.61 | 1.11 | 0.93 | 1.44 |
| **14** | 5 | suburbs | 0.37 | 0.28 | 1.06 | 1.44 | 0.67 | 0.73 | 0.74 | 1.14 | 1.52 | 2.76 | 1.18 | 0.98 | 1.53 |
| **14** | 6 | cities | 0.42 | 0.31 | 1.19 | 1.62 | 0.75 | 0.82 | 0.83 | 1.28 | 1.70 | 3.10 | 1.32 | 1.11 | 1.72 |
| **14** | 6 | country | 0.37 | 0.28 | 1.06 | 1.44 | 0.67 | 0.74 | 0.74 | 1.13 | 1.52 | 2.76 | 1.17 | 0.99 | 1.53 |
| **14** | 6 | suburbs | 0.40 | 0.29 | 1.12 | 1.52 | 0.71 | 0.77 | 0.78 | 1.20 | 1.60 | 2.91 | 1.24 | 1.04 | 1.61 |
| **14** | 7 | cities | 0.41 | 0.30 | 1.16 | 1.57 | 0.72 | 0.84 | 0.80 | 1.23 | 1.65 | 3.03 | 1.28 | 1.11 | 1.67 |
| **14** | 7 | country | 0.36 | 0.27 | 1.04 | 1.41 | 0.64 | 0.78 | 0.72 | 1.10 | 1.48 | 2.73 | 1.14 | 1.03 | 1.51 |
| **14** | 7 | suburbs | 0.38 | 0.28 | 1.09 | 1.48 | 0.68 | 0.79 | 0.76 | 1.17 | 1.56 | 2.86 | 1.21 | 1.05 | 1.58 |
| **14** | 8 | cities | 0.54 | 0.40 | 1.54 | 2.09 | 0.96 | 1.13 | 1.07 | 1.64 | 2.20 | 4.04 | 1.70 | 1.49 | 2.23 |
| **14** | 8 | country | 0.47 | 0.35 | 1.33 | 1.81 | 0.83 | 0.97 | 0.92 | 1.42 | 1.90 | 3.49 | 1.47 | 1.28 | 1.93 |
| **14** | 8 | suburbs | 0.50 | 0.37 | 1.43 | 1.94 | 0.89 | 1.03 | 0.99 | 1.53 | 2.04 | 3.75 | 1.58 | 1.37 | 2.07 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT**$_{CC}$ | **PBT**$_{OD}$ | **PBT**$_{HT\_CE}$ | **PBT**$_{HT\_nCE}$ | **PBT**$_{PM}$ | **PBT**$_{IR\_hh}$ | **PBT**$_{POF}$ | **PBT**$_{AC}$ | **PBT**$_{ET}$ | **PBT**$_{EuF}$ | **PBT**$_{EuM}$ | **PBT**$_{Ec\_FW}$ | **PBT**$_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **14** | 17 | cities | 0.60 | 0.44 | 1.69 | 2.30 | 1.07 | 1.15 | 1.18 | 1.82 | 2.43 | 4.40 | 1.88 | 1.55 | 2.44 |
| **14** | 17 | country | 0.53 | 0.39 | 1.51 | 2.05 | 0.94 | 1.09 | 1.05 | 1.61 | 2.16 | 3.95 | 1.67 | 1.45 | 2.19 |
| **14** | 17 | suburbs | 0.56 | 0.41 | 1.59 | 2.16 | 1.00 | 1.09 | 1.11 | 1.71 | 2.28 | 4.14 | 1.76 | 1.47 | 2.29 |
| **14** | 18 | cities | 0.63 | 0.46 | 1.77 | 2.40 | 1.12 | 1.20 | 1.24 | 1.90 | 2.54 | 4.60 | 1.97 | 1.62 | 2.55 |
| **14** | 18 | country | 0.56 | 0.41 | 1.59 | 2.15 | 0.99 | 1.12 | 1.10 | 1.69 | 2.26 | 4.14 | 1.75 | 1.50 | 2.29 |
| **14** | 18 | suburbs | 0.59 | 0.43 | 1.67 | 2.26 | 1.05 | 1.14 | 1.16 | 1.79 | 2.39 | 4.33 | 1.85 | 1.54 | 2.40 |
| **14** | 19 | cities | 0.69 | 0.51 | 1.95 | 2.65 | 1.24 | 1.32 | 1.37 | 2.10 | 2.80 | 5.07 | 2.17 | 1.78 | 2.81 |
| **14** | 19 | country | 0.62 | 0.46 | 1.76 | 2.38 | 1.11 | 1.19 | 1.23 | 1.89 | 2.51 | 4.55 | 1.95 | 1.60 | 2.53 |
| **14** | 19 | suburbs | 0.65 | 0.48 | 1.85 | 2.50 | 1.17 | 1.24 | 1.29 | 1.99 | 2.65 | 4.79 | 2.05 | 1.68 | 2.66 |
| **14** | 20 | cities | 0.52 | 0.39 | 1.48 | 2.01 | 0.94 | 1.00 | 1.04 | 1.59 | 2.12 | 3.85 | 1.65 | 1.36 | 2.13 |
| **14** | 20 | country | 0.50 | 0.37 | 1.41 | 1.91 | 0.89 | 0.95 | 0.98 | 1.51 | 2.01 | 3.65 | 1.56 | 1.29 | 2.02 |
| **14** | 20 | suburbs | 0.51 | 0.37 | 1.44 | 1.95 | 0.91 | 0.97 | 1.01 | 1.54 | 2.06 | 3.73 | 1.60 | 1.31 | 2.07 |
| **15** | 5 | cities | 0.21 | 0.16 | 0.70 | 0.75 | 0.57 | 0.70 | 0.49 | 0.67 | 0.83 | 1.01 | 0.69 | 0.64 | 0.92 |
| **15** | 5 | country | 0.19 | 0.14 | 0.62 | 0.66 | 0.50 | 0.61 | 0.43 | 0.59 | 0.73 | 0.89 | 0.61 | 0.56 | 0.81 |
| **15** | 5 | suburbs | 0.20 | 0.15 | 0.66 | 0.70 | 0.53 | 0.65 | 0.46 | 0.63 | 0.77 | 0.95 | 0.64 | 0.60 | 0.86 |
| **15** | 6 | cities | 0.22 | 0.17 | 0.73 | 0.78 | 0.59 | 0.73 | 0.51 | 0.70 | 0.86 | 1.05 | 0.72 | 0.66 | 0.96 |
| **15** | 6 | country | 0.19 | 0.15 | 0.65 | 0.69 | 0.52 | 0.64 | 0.45 | 0.62 | 0.76 | 0.93 | 0.63 | 0.59 | 0.84 |
| **15** | 6 | suburbs | 0.21 | 0.16 | 0.69 | 0.73 | 0.56 | 0.68 | 0.48 | 0.65 | 0.81 | 0.99 | 0.67 | 0.62 | 0.90 |
| **15** | 7 | cities | 0.25 | 0.19 | 0.83 | 0.88 | 0.67 | 0.82 | 0.58 | 0.79 | 0.97 | 1.18 | 0.81 | 0.75 | 1.08 |
| **15** | 7 | country | 0.22 | 0.17 | 0.73 | 0.77 | 0.59 | 0.72 | 0.51 | 0.69 | 0.86 | 1.04 | 0.71 | 0.66 | 0.95 |
| **15** | 7 | suburbs | 0.23 | 0.18 | 0.78 | 0.82 | 0.63 | 0.77 | 0.54 | 0.74 | 0.91 | 1.10 | 0.76 | 0.70 | 1.01 |
| **15** | 8 | cities | 0.32 | 0.24 | 1.08 | 1.15 | 0.87 | 1.07 | 0.75 | 1.02 | 1.27 | 1.56 | 1.05 | 0.98 | 1.41 |
| **15** | 8 | country | 0.28 | 0.21 | 0.95 | 1.02 | 0.76 | 0.95 | 0.66 | 0.90 | 1.12 | 1.40 | 0.93 | 0.88 | 1.23 |
| **15** | 8 | suburbs | 0.30 | 0.23 | 1.02 | 1.08 | 0.81 | 1.01 | 0.71 | 0.96 | 1.19 | 1.48 | 0.99 | 0.93 | 1.32 |
| **15** | 17 | cities | 0.38 | 0.29 | 1.25 | 1.33 | 1.02 | 1.23 | 0.88 | 1.19 | 1.47 | 1.78 | 1.23 | 1.13 | 1.64 |
| **15** | 17 | country | 0.33 | 0.25 | 1.09 | 1.16 | 0.88 | 1.08 | 0.76 | 1.04 | 1.28 | 1.57 | 1.07 | 0.99 | 1.42 |
| **15** | 17 | suburbs | 0.35 | 0.26 | 1.16 | 1.23 | 0.94 | 1.15 | 0.82 | 1.11 | 1.36 | 1.65 | 1.14 | 1.05 | 1.52 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **15** | 18 | cities | 0.40 | 0.30 | 1.32 | 1.40 | 1.07 | 1.30 | 0.93 | 1.26 | 1.55 | 1.87 | 1.29 | 1.19 | 1.72 |
| **15** | 18 | country | 0.34 | 0.26 | 1.15 | 1.22 | 0.93 | 1.14 | 0.81 | 1.09 | 1.35 | 1.65 | 1.12 | 1.04 | 1.50 |
| **15** | 18 | suburbs | 0.37 | 0.28 | 1.23 | 1.30 | 0.99 | 1.21 | 0.86 | 1.17 | 1.44 | 1.74 | 1.20 | 1.10 | 1.60 |
| **15** | 19 | cities | 0.42 | 0.32 | 1.39 | 1.47 | 1.13 | 1.37 | 0.98 | 1.32 | 1.63 | 1.97 | 1.36 | 1.25 | 1.82 |
| **15** | 19 | country | 0.37 | 0.28 | 1.23 | 1.31 | 0.99 | 1.22 | 0.86 | 1.17 | 1.44 | 1.77 | 1.20 | 1.12 | 1.60 |
| **15** | 19 | suburbs | 0.39 | 0.30 | 1.30 | 1.38 | 1.05 | 1.28 | 0.91 | 1.24 | 1.53 | 1.85 | 1.27 | 1.17 | 1.70 |
| **15** | 20 | cities | 0.37 | 0.28 | 1.23 | 1.31 | 1.00 | 1.22 | 0.87 | 1.17 | 1.45 | 1.76 | 1.21 | 1.11 | 1.61 |
| **15** | 20 | country | 0.33 | 0.25 | 1.12 | 1.19 | 0.90 | 1.11 | 0.78 | 1.06 | 1.31 | 1.64 | 1.09 | 1.03 | 1.45 |
| **15** | 20 | suburbs | 0.35 | 0.26 | 1.17 | 1.24 | 0.94 | 1.15 | 0.81 | 1.10 | 1.37 | 1.68 | 1.14 | 1.06 | 1.52 |
| **16** | 5 | cities | 0.32 | 0.39 | 0.83 | 0.87 | 0.93 | 1.92 | 0.70 | 0.81 | 1.16 | 1.21 | 0.86 | 0.50 | 1.54 |
| **16** | 5 | country | 0.27 | 0.33 | 0.70 | 0.73 | 0.78 | 1.61 | 0.59 | 0.68 | 0.98 | 1.02 | 0.73 | 0.42 | 1.30 |
| **16** | 5 | suburbs | 0.29 | 0.35 | 0.75 | 0.79 | 0.85 | 1.74 | 0.64 | 0.73 | 1.05 | 1.09 | 0.78 | 0.45 | 1.40 |
| **16** | 6 | cities | 0.33 | 0.41 | 0.88 | 0.93 | 0.99 | 2.05 | 0.74 | 0.86 | 1.24 | 1.29 | 0.92 | 0.53 | 1.64 |
| **16** | 6 | country | 0.28 | 0.35 | 0.74 | 0.78 | 0.83 | 1.72 | 0.62 | 0.72 | 1.04 | 1.08 | 0.77 | 0.45 | 1.38 |
| **16** | 6 | suburbs | 0.31 | 0.37 | 0.80 | 0.84 | 0.90 | 1.85 | 0.67 | 0.78 | 1.12 | 1.16 | 0.83 | 0.48 | 1.49 |
| **16** | 7 | cities | 0.34 | 0.41 | 0.89 | 0.94 | 0.99 | 2.07 | 0.74 | 0.87 | 1.25 | 1.32 | 0.93 | 0.55 | 1.64 |
| **16** | 7 | country | 0.29 | 0.35 | 0.83 | 0.88 | 0.88 | 1.94 | 0.67 | 0.81 | 1.16 | 1.27 | 0.86 | 0.54 | 1.44 |
| **16** | 7 | suburbs | 0.31 | 0.38 | 0.86 | 0.91 | 0.93 | 2.01 | 0.70 | 0.84 | 1.20 | 1.29 | 0.89 | 0.54 | 1.54 |
| **16** | 8 | cities | 0.49 | 0.57 | 1.45 | 1.55 | 1.47 | 3.41 | 1.13 | 1.43 | 2.00 | 2.28 | 1.49 | 0.98 | 2.42 |
| **16** | 8 | country | 0.39 | 0.47 | 1.10 | 1.16 | 1.17 | 2.56 | 0.89 | 1.07 | 1.53 | 1.66 | 1.14 | 0.70 | 1.93 |
| **16** | 8 | suburbs | 0.44 | 0.52 | 1.25 | 1.33 | 1.31 | 2.93 | 1.00 | 1.23 | 1.74 | 1.93 | 1.29 | 0.81 | 2.15 |
| **16** | 17 | cities | 0.51 | 0.63 | 1.35 | 1.42 | 1.51 | 3.13 | 1.14 | 1.32 | 1.89 | 1.98 | 1.41 | 0.82 | 2.50 |
| **16** | 17 | country | 0.43 | 0.52 | 1.18 | 1.25 | 1.29 | 2.76 | 0.97 | 1.16 | 1.65 | 1.77 | 1.23 | 0.74 | 2.13 |
| **16** | 17 | suburbs | 0.46 | 0.57 | 1.22 | 1.29 | 1.37 | 2.84 | 1.03 | 1.19 | 1.71 | 1.79 | 1.28 | 0.74 | 2.27 |
| **16** | 18 | cities | 0.54 | 0.66 | 1.42 | 1.50 | 1.60 | 3.30 | 1.20 | 1.39 | 1.99 | 2.08 | 1.48 | 0.86 | 2.64 |
| **16** | 18 | country | 0.45 | 0.55 | 1.22 | 1.29 | 1.35 | 2.84 | 1.01 | 1.19 | 1.71 | 1.80 | 1.27 | 0.75 | 2.23 |
| **16** | 18 | suburbs | 0.49 | 0.60 | 1.28 | 1.36 | 1.44 | 2.98 | 1.08 | 1.25 | 1.80 | 1.88 | 1.34 | 0.78 | 2.39 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **16** | 19 | cities | 0.59 | 0.72 | 1.56 | 1.64 | 1.74 | 3.61 | 1.30 | 1.52 | 2.18 | 2.29 | 1.62 | 0.95 | 2.87 |
| **16** | 19 | country | 0.49 | 0.60 | 1.28 | 1.35 | 1.45 | 2.97 | 1.09 | 1.25 | 1.80 | 1.87 | 1.34 | 0.77 | 2.40 |
| **16** | 19 | suburbs | 0.53 | 0.65 | 1.40 | 1.47 | 1.57 | 3.24 | 1.18 | 1.36 | 1.96 | 2.04 | 1.46 | 0.84 | 2.60 |
| **16** | 20 | cities | 0.47 | 0.57 | 1.27 | 1.34 | 1.40 | 2.95 | 1.05 | 1.24 | 1.78 | 1.88 | 1.32 | 0.78 | 2.31 |
| **16** | 20 | country | 0.41 | 0.51 | 1.09 | 1.16 | 1.23 | 2.54 | 0.92 | 1.07 | 1.54 | 1.61 | 1.14 | 0.66 | 2.03 |
| **16** | 20 | suburbs | 0.44 | 0.53 | 1.17 | 1.23 | 1.30 | 2.71 | 0.98 | 1.14 | 1.64 | 1.72 | 1.22 | 0.71 | 2.15 |
| **17** | 5 | cities | 0.48 | 0.59 | 1.07 | 1.18 | 0.87 | 1.39 | 0.93 | 0.90 | 1.48 | 1.15 | 1.09 | 0.99 | 2.78 |
| **17** | 5 | country | 0.44 | 0.55 | 0.98 | 1.08 | 0.80 | 1.27 | 0.85 | 0.83 | 1.36 | 1.06 | 1.00 | 0.91 | 2.55 |
| **17** | 5 | suburbs | 0.46 | 0.57 | 1.02 | 1.13 | 0.84 | 1.33 | 0.89 | 0.86 | 1.42 | 1.11 | 1.04 | 0.95 | 2.67 |
| **17** | 6 | cities | 0.51 | 0.63 | 1.13 | 1.25 | 0.92 | 1.48 | 0.99 | 0.95 | 1.57 | 1.22 | 1.15 | 1.05 | 2.94 |
| **17** | 6 | country | 0.47 | 0.58 | 1.04 | 1.15 | 0.85 | 1.35 | 0.90 | 0.87 | 1.44 | 1.12 | 1.05 | 0.96 | 2.70 |
| **17** | 6 | suburbs | 0.49 | 0.60 | 1.08 | 1.20 | 0.88 | 1.41 | 0.94 | 0.91 | 1.50 | 1.17 | 1.10 | 1.00 | 2.82 |
| **17** | 7 | cities | 0.52 | 0.64 | 1.15 | 1.28 | 0.94 | 1.51 | 1.00 | 0.97 | 1.60 | 1.25 | 1.17 | 1.07 | 3.00 |
| **17** | 7 | country | 0.48 | 0.59 | 1.06 | 1.17 | 0.86 | 1.38 | 0.92 | 0.89 | 1.47 | 1.14 | 1.07 | 0.98 | 2.75 |
| **17** | 7 | suburbs | 0.50 | 0.61 | 1.10 | 1.22 | 0.90 | 1.44 | 0.96 | 0.93 | 1.53 | 1.19 | 1.12 | 1.02 | 2.87 |
| **17** | 8 | cities | 0.64 | 0.80 | 1.46 | 1.63 | 1.16 | 2.05 | 1.24 | 1.21 | 1.99 | 1.63 | 1.46 | 1.40 | 3.77 |
| **17** | 8 | country | 0.59 | 0.73 | 1.33 | 1.48 | 1.06 | 1.84 | 1.14 | 1.11 | 1.82 | 1.48 | 1.34 | 1.27 | 3.44 |
| **17** | 8 | suburbs | 0.61 | 0.76 | 1.39 | 1.55 | 1.11 | 1.94 | 1.19 | 1.16 | 1.90 | 1.55 | 1.40 | 1.33 | 3.60 |
| **17** | 17 | cities | 0.78 | 0.96 | 1.73 | 1.91 | 1.41 | 2.24 | 1.51 | 1.46 | 2.40 | 1.86 | 1.76 | 1.59 | 4.49 |
| **17** | 17 | country | 0.71 | 0.87 | 1.56 | 1.73 | 1.28 | 2.03 | 1.36 | 1.32 | 2.17 | 1.69 | 1.59 | 1.44 | 4.07 |
| **17** | 17 | suburbs | 0.74 | 0.91 | 1.64 | 1.81 | 1.34 | 2.13 | 1.43 | 1.38 | 2.28 | 1.77 | 1.67 | 1.52 | 4.27 |
| **17** | 18 | cities | 0.82 | 1.01 | 1.82 | 2.01 | 1.49 | 2.37 | 1.59 | 1.54 | 2.53 | 1.97 | 1.85 | 1.68 | 4.74 |
| **17** | 18 | country | 0.74 | 0.92 | 1.65 | 1.82 | 1.35 | 2.14 | 1.44 | 1.39 | 2.29 | 1.78 | 1.68 | 1.52 | 4.30 |
| **17** | 18 | suburbs | 0.78 | 0.96 | 1.73 | 1.91 | 1.41 | 2.25 | 1.51 | 1.46 | 2.40 | 1.87 | 1.76 | 1.60 | 4.50 |
| **17** | 19 | cities | 0.88 | 1.08 | 1.95 | 2.16 | 1.59 | 2.55 | 1.70 | 1.64 | 2.70 | 2.11 | 1.98 | 1.80 | 5.07 |
| **17** | 19 | country | 0.80 | 0.99 | 1.79 | 1.98 | 1.46 | 2.33 | 1.55 | 1.50 | 2.48 | 1.93 | 1.81 | 1.65 | 4.64 |
| **17** | 19 | suburbs | 0.84 | 1.03 | 1.86 | 2.06 | 1.52 | 2.43 | 1.62 | 1.57 | 2.58 | 2.01 | 1.89 | 1.72 | 4.84 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17** | 20 | cities | 0.72 | 0.89 | 1.61 | 1.79 | 1.31 | 2.15 | 1.40 | 1.35 | 2.23 | 1.76 | 1.63 | 1.51 | 4.19 |
| **17** | 20 | country | 0.67 | 0.83 | 1.50 | 1.66 | 1.21 | 1.99 | 1.30 | 1.26 | 2.07 | 1.63 | 1.52 | 1.40 | 3.89 |
| **17** | 20 | suburbs | 0.69 | 0.86 | 1.55 | 1.72 | 1.26 | 2.06 | 1.34 | 1.30 | 2.14 | 1.69 | 1.57 | 1.45 | 4.02 |
| **18** | 5 | cities | 0.32 | 0.30 | 0.56 | 0.75 | 0.34 | 1.14 | 0.48 | 0.73 | 0.84 | 0.69 | 0.76 | 0.59 | 1.43 |
| **18** | 5 | country | 0.28 | 0.26 | 0.50 | 0.66 | 0.30 | 1.00 | 0.42 | 0.64 | 0.74 | 0.61 | 0.66 | 0.52 | 1.25 |
| **18** | 5 | suburbs | 0.30 | 0.28 | 0.53 | 0.71 | 0.32 | 1.06 | 0.45 | 0.68 | 0.79 | 0.65 | 0.71 | 0.55 | 1.33 |
| **18** | 6 | cities | 0.33 | 0.31 | 0.59 | 0.80 | 0.36 | 1.20 | 0.50 | 0.76 | 0.88 | 0.74 | 0.80 | 0.62 | 1.50 |
| **18** | 6 | country | 0.29 | 0.27 | 0.52 | 0.70 | 0.31 | 1.06 | 0.44 | 0.67 | 0.78 | 0.66 | 0.70 | 0.55 | 1.32 |
| **18** | 6 | suburbs | 0.31 | 0.29 | 0.56 | 0.75 | 0.33 | 1.12 | 0.47 | 0.71 | 0.83 | 0.69 | 0.74 | 0.58 | 1.40 |
| **18** | 7 | cities | 0.35 | 0.33 | 0.63 | 0.86 | 0.38 | 1.29 | 0.53 | 0.81 | 0.95 | 0.81 | 0.84 | 0.68 | 1.60 |
| **18** | 7 | country | 0.31 | 0.29 | 0.56 | 0.76 | 0.33 | 1.14 | 0.47 | 0.71 | 0.84 | 0.72 | 0.74 | 0.61 | 1.41 |
| **18** | 7 | suburbs | 0.33 | 0.31 | 0.59 | 0.80 | 0.35 | 1.21 | 0.50 | 0.76 | 0.89 | 0.76 | 0.79 | 0.64 | 1.50 |
| **18** | 8 | cities | 0.43 | 0.40 | 0.79 | 1.11 | 0.45 | 1.65 | 0.64 | 1.00 | 1.19 | 1.09 | 1.04 | 0.90 | 1.99 |
| **18** | 8 | country | 0.38 | 0.35 | 0.72 | 1.03 | 0.40 | 1.53 | 0.56 | 0.89 | 1.09 | 1.07 | 0.93 | 0.88 | 1.79 |
| **18** | 8 | suburbs | 0.41 | 0.37 | 0.75 | 1.07 | 0.42 | 1.58 | 0.60 | 0.94 | 1.14 | 1.08 | 0.98 | 0.89 | 1.88 |
| **18** | 17 | cities | 0.53 | 0.50 | 0.94 | 1.25 | 0.57 | 1.88 | 0.81 | 1.21 | 1.39 | 1.14 | 1.26 | 0.97 | 2.38 |
| **18** | 17 | country | 0.46 | 0.43 | 0.82 | 1.10 | 0.50 | 1.66 | 0.70 | 1.06 | 1.22 | 1.01 | 1.10 | 0.86 | 2.08 |
| **18** | 17 | suburbs | 0.50 | 0.46 | 0.88 | 1.17 | 0.53 | 1.76 | 0.75 | 1.13 | 1.30 | 1.07 | 1.18 | 0.91 | 2.22 |
| **18** | 18 | cities | 0.56 | 0.52 | 0.99 | 1.31 | 0.60 | 1.98 | 0.85 | 1.27 | 1.47 | 1.20 | 1.33 | 1.02 | 2.50 |
| **18** | 18 | country | 0.49 | 0.45 | 0.87 | 1.16 | 0.52 | 1.75 | 0.74 | 1.11 | 1.29 | 1.07 | 1.16 | 0.91 | 2.19 |
| **18** | 18 | suburbs | 0.52 | 0.48 | 0.92 | 1.23 | 0.56 | 1.86 | 0.79 | 1.19 | 1.37 | 1.13 | 1.24 | 0.96 | 2.33 |
| **18** | 19 | cities | 0.59 | 0.55 | 1.03 | 1.37 | 0.63 | 2.06 | 0.89 | 1.33 | 1.53 | 1.24 | 1.39 | 1.05 | 2.61 |
| **18** | 19 | country | 0.52 | 0.48 | 0.93 | 1.24 | 0.56 | 1.86 | 0.79 | 1.19 | 1.38 | 1.14 | 1.24 | 0.97 | 2.34 |
| **18** | 19 | suburbs | 0.55 | 0.51 | 0.98 | 1.30 | 0.59 | 1.96 | 0.83 | 1.25 | 1.45 | 1.19 | 1.31 | 1.01 | 2.47 |
| **18** | 20 | cities | 0.49 | 0.45 | 0.86 | 1.15 | 0.52 | 1.73 | 0.73 | 1.10 | 1.28 | 1.06 | 1.15 | 0.90 | 2.17 |
| **18** | 20 | country | 0.45 | 0.42 | 0.82 | 1.12 | 0.48 | 1.67 | 0.68 | 1.04 | 1.22 | 1.06 | 1.09 | 0.89 | 2.06 |
| **18** | 20 | suburbs | 0.47 | 0.43 | 0.84 | 1.13 | 0.50 | 1.70 | 0.70 | 1.07 | 1.25 | 1.06 | 1.12 | 0.89 | 2.11 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **19** | 5 | cities | 0.28 | 0.25 | 0.26 | 0.53 | 0.11 | 0.77 | 0.21 | 0.48 | 0.52 | 0.49 | 0.44 | 0.31 | 1.14 |
| **19** | 5 | country | 0.26 | 0.24 | 0.24 | 0.50 | 0.10 | 0.72 | 0.19 | 0.45 | 0.48 | 0.46 | 0.41 | 0.29 | 1.06 |
| **19** | 5 | suburbs | 0.27 | 0.24 | 0.25 | 0.51 | 0.11 | 0.74 | 0.20 | 0.47 | 0.50 | 0.47 | 0.42 | 0.30 | 1.10 |
| **19** | 6 | cities | 0.30 | 0.27 | 0.27 | 0.57 | 0.12 | 0.82 | 0.22 | 0.51 | 0.55 | 0.52 | 0.47 | 0.33 | 1.21 |
| **19** | 6 | country | 0.28 | 0.25 | 0.25 | 0.53 | 0.11 | 0.76 | 0.20 | 0.48 | 0.51 | 0.49 | 0.43 | 0.31 | 1.13 |
| **19** | 6 | suburbs | 0.29 | 0.26 | 0.26 | 0.55 | 0.11 | 0.79 | 0.21 | 0.50 | 0.53 | 0.50 | 0.45 | 0.32 | 1.17 |
| **19** | 7 | cities | 0.29 | 0.27 | 0.27 | 0.56 | 0.12 | 0.81 | 0.22 | 0.51 | 0.55 | 0.52 | 0.46 | 0.33 | 1.20 |
| **19** | 7 | country | 0.28 | 0.25 | 0.25 | 0.52 | 0.11 | 0.76 | 0.20 | 0.48 | 0.51 | 0.48 | 0.43 | 0.31 | 1.12 |
| **19** | 7 | suburbs | 0.29 | 0.26 | 0.26 | 0.54 | 0.11 | 0.78 | 0.21 | 0.49 | 0.53 | 0.50 | 0.45 | 0.32 | 1.16 |
| **19** | 8 | cities | 0.30 | 0.27 | 0.28 | 0.57 | 0.12 | 0.83 | 0.22 | 0.52 | 0.56 | 0.53 | 0.47 | 0.34 | 1.22 |
| **19** | 8 | country | 0.28 | 0.25 | 0.26 | 0.54 | 0.11 | 0.78 | 0.21 | 0.48 | 0.52 | 0.50 | 0.44 | 0.32 | 1.14 |
| **19** | 8 | suburbs | 0.29 | 0.26 | 0.27 | 0.56 | 0.12 | 0.80 | 0.21 | 0.50 | 0.54 | 0.52 | 0.45 | 0.33 | 1.18 |
| **19** | 17 | cities | 0.47 | 0.43 | 0.44 | 0.90 | 0.19 | 1.30 | 0.35 | 0.82 | 0.88 | 0.83 | 0.74 | 0.53 | 1.92 |
| **19** | 17 | country | 0.43 | 0.39 | 0.40 | 0.83 | 0.17 | 1.20 | 0.32 | 0.75 | 0.81 | 0.76 | 0.68 | 0.49 | 1.77 |
| **19** | 17 | suburbs | 0.45 | 0.41 | 0.42 | 0.86 | 0.18 | 1.25 | 0.33 | 0.78 | 0.84 | 0.80 | 0.71 | 0.51 | 1.85 |
| **19** | 18 | cities | 0.50 | 0.45 | 0.46 | 0.95 | 0.20 | 1.37 | 0.37 | 0.86 | 0.93 | 0.87 | 0.78 | 0.56 | 2.03 |
| **19** | 18 | country | 0.46 | 0.41 | 0.42 | 0.87 | 0.18 | 1.26 | 0.34 | 0.79 | 0.85 | 0.80 | 0.72 | 0.51 | 1.86 |
| **19** | 18 | suburbs | 0.48 | 0.43 | 0.44 | 0.91 | 0.19 | 1.31 | 0.35 | 0.82 | 0.89 | 0.84 | 0.75 | 0.53 | 1.94 |
| **19** | 19 | cities | 0.52 | 0.47 | 0.48 | 0.99 | 0.21 | 1.43 | 0.38 | 0.90 | 0.97 | 0.92 | 0.82 | 0.58 | 2.12 |
| **19** | 19 | country | 0.48 | 0.43 | 0.44 | 0.92 | 0.19 | 1.32 | 0.35 | 0.83 | 0.89 | 0.85 | 0.75 | 0.54 | 1.96 |
| **19** | 19 | suburbs | 0.50 | 0.45 | 0.46 | 0.95 | 0.20 | 1.38 | 0.37 | 0.86 | 0.93 | 0.88 | 0.78 | 0.56 | 2.03 |
| **19** | 20 | cities | 0.41 | 0.37 | 0.38 | 0.79 | 0.17 | 1.15 | 0.31 | 0.72 | 0.77 | 0.73 | 0.65 | 0.47 | 1.69 |
| **19** | 20 | country | 0.38 | 0.35 | 0.35 | 0.74 | 0.15 | 1.06 | 0.28 | 0.67 | 0.72 | 0.68 | 0.60 | 0.43 | 1.57 |
| **19** | 20 | suburbs | 0.40 | 0.36 | 0.37 | 0.76 | 0.16 | 1.10 | 0.29 | 0.69 | 0.74 | 0.71 | 0.63 | 0.45 | 1.63 |
| **20** | 5 | cities | 0.22 | 0.37 | 0.19 | 0.31 | 0.10 | 0.61 | 0.19 | 0.30 | 0.49 | 0.24 | 0.34 | 0.28 | 1.46 |
| **20** | 5 | country | 0.20 | 0.33 | 0.18 | 0.28 | 0.09 | 0.55 | 0.17 | 0.27 | 0.44 | 0.22 | 0.31 | 0.25 | 1.31 |
| **20** | 5 | suburbs | 0.21 | 0.35 | 0.18 | 0.29 | 0.10 | 0.57 | 0.18 | 0.28 | 0.46 | 0.23 | 0.33 | 0.27 | 1.38 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **20** | 6 | cities | 0.23 | 0.39 | 0.20 | 0.32 | 0.11 | 0.64 | 0.20 | 0.31 | 0.51 | 0.25 | 0.36 | 0.30 | 1.53 |
| **20** | 6 | country | 0.21 | 0.35 | 0.18 | 0.29 | 0.10 | 0.58 | 0.18 | 0.28 | 0.46 | 0.23 | 0.33 | 0.27 | 1.38 |
| **20** | 6 | suburbs | 0.22 | 0.37 | 0.19 | 0.31 | 0.10 | 0.61 | 0.19 | 0.30 | 0.49 | 0.24 | 0.34 | 0.28 | 1.46 |
| **20** | 7 | cities | 0.24 | 0.40 | 0.21 | 0.33 | 0.11 | 0.66 | 0.21 | 0.32 | 0.53 | 0.26 | 0.37 | 0.30 | 1.59 |
| **20** | 7 | country | 0.21 | 0.36 | 0.19 | 0.30 | 0.10 | 0.59 | 0.19 | 0.29 | 0.48 | 0.24 | 0.34 | 0.28 | 1.43 |
| **20** | 7 | suburbs | 0.22 | 0.38 | 0.20 | 0.32 | 0.11 | 0.63 | 0.20 | 0.31 | 0.51 | 0.25 | 0.35 | 0.29 | 1.51 |
| **20** | 8 | cities | 0.31 | 0.53 | 0.28 | 0.44 | 0.15 | 0.89 | 0.27 | 0.42 | 0.69 | 0.35 | 0.49 | 0.41 | 2.09 |
| **20** | 8 | country | 0.27 | 0.47 | 0.25 | 0.39 | 0.13 | 0.78 | 0.24 | 0.37 | 0.62 | 0.31 | 0.43 | 0.36 | 1.85 |
| **20** | 8 | suburbs | 0.29 | 0.50 | 0.26 | 0.41 | 0.14 | 0.83 | 0.26 | 0.40 | 0.65 | 0.33 | 0.46 | 0.38 | 1.96 |
| **20** | 17 | cities | 0.34 | 0.59 | 0.31 | 0.48 | 0.16 | 0.95 | 0.30 | 0.47 | 0.77 | 0.38 | 0.54 | 0.44 | 2.30 |
| **20** | 17 | country | 0.31 | 0.53 | 0.28 | 0.43 | 0.15 | 0.85 | 0.27 | 0.42 | 0.69 | 0.34 | 0.49 | 0.40 | 2.06 |
| **20** | 17 | suburbs | 0.32 | 0.55 | 0.29 | 0.46 | 0.16 | 0.90 | 0.29 | 0.44 | 0.73 | 0.36 | 0.51 | 0.42 | 2.17 |
| **20** | 18 | cities | 0.36 | 0.62 | 0.32 | 0.51 | 0.17 | 1.00 | 0.32 | 0.49 | 0.81 | 0.40 | 0.57 | 0.46 | 2.42 |
| **20** | 18 | country | 0.32 | 0.55 | 0.29 | 0.46 | 0.16 | 0.90 | 0.29 | 0.44 | 0.73 | 0.36 | 0.51 | 0.42 | 2.17 |
| **20** | 18 | suburbs | 0.34 | 0.58 | 0.31 | 0.48 | 0.16 | 0.95 | 0.30 | 0.47 | 0.77 | 0.38 | 0.54 | 0.44 | 2.28 |
| **20** | 19 | cities | 0.39 | 0.67 | 0.35 | 0.56 | 0.19 | 1.10 | 0.35 | 0.54 | 0.89 | 0.44 | 0.62 | 0.51 | 2.65 |
| **20** | 19 | country | 0.36 | 0.61 | 0.32 | 0.50 | 0.17 | 1.00 | 0.32 | 0.49 | 0.80 | 0.40 | 0.56 | 0.46 | 2.40 |
| **20** | 19 | suburbs | 0.37 | 0.64 | 0.34 | 0.53 | 0.18 | 1.04 | 0.33 | 0.51 | 0.84 | 0.41 | 0.59 | 0.48 | 2.51 |
| **20** | 20 | cities | 0.33 | 0.56 | 0.29 | 0.46 | 0.16 | 0.92 | 0.29 | 0.45 | 0.74 | 0.36 | 0.52 | 0.42 | 2.20 |
| **20** | 20 | country | 0.30 | 0.52 | 0.27 | 0.43 | 0.15 | 0.85 | 0.27 | 0.41 | 0.68 | 0.34 | 0.48 | 0.39 | 2.04 |
| **20** | 20 | suburbs | 0.31 | 0.53 | 0.28 | 0.44 | 0.15 | 0.88 | 0.28 | 0.43 | 0.70 | 0.35 | 0.49 | 0.41 | 2.10 |
| **21** | 5 | cities | 0.24 | 0.61 | 0.23 | 0.40 | 0.12 | 3.21 | 0.25 | 0.24 | 0.61 | 0.43 | 0.44 | 0.55 | 3.63 |
| **21** | 5 | country | 0.21 | 0.54 | 0.20 | 0.35 | 0.11 | 2.83 | 0.22 | 0.22 | 0.54 | 0.38 | 0.39 | 0.49 | 3.20 |
| **21** | 5 | suburbs | 0.22 | 0.57 | 0.22 | 0.37 | 0.12 | 3.01 | 0.24 | 0.23 | 0.57 | 0.40 | 0.42 | 0.52 | 3.41 |
| **21** | 6 | cities | 0.25 | 0.64 | 0.24 | 0.42 | 0.13 | 3.37 | 0.27 | 0.26 | 0.64 | 0.45 | 0.47 | 0.58 | 3.82 |
| **21** | 6 | country | 0.22 | 0.57 | 0.21 | 0.37 | 0.12 | 2.97 | 0.24 | 0.23 | 0.57 | 0.40 | 0.41 | 0.51 | 3.37 |
| **21** | 6 | suburbs | 0.23 | 0.60 | 0.23 | 0.39 | 0.12 | 3.16 | 0.25 | 0.24 | 0.60 | 0.42 | 0.44 | 0.55 | 3.58 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **21** | 7 | cities | 0.26 | 0.68 | 0.26 | 0.44 | 0.14 | 3.55 | 0.28 | 0.27 | 0.68 | 0.48 | 0.49 | 0.62 | 4.03 |
| **21** | 7 | country | 0.23 | 0.60 | 0.23 | 0.39 | 0.12 | 3.14 | 0.25 | 0.24 | 0.60 | 0.42 | 0.44 | 0.54 | 3.56 |
| **21** | 7 | suburbs | 0.25 | 0.64 | 0.24 | 0.41 | 0.13 | 3.33 | 0.26 | 0.25 | 0.64 | 0.45 | 0.46 | 0.58 | 3.78 |
| **21** | 8 | cities | 0.32 | 0.82 | 0.31 | 0.54 | 0.17 | 4.35 | 0.34 | 0.33 | 0.83 | 0.60 | 0.60 | 0.77 | 4.96 |
| **21** | 8 | country | 0.28 | 0.72 | 0.27 | 0.48 | 0.15 | 3.81 | 0.30 | 0.29 | 0.73 | 0.52 | 0.53 | 0.67 | 4.34 |
| **21** | 8 | suburbs | 0.30 | 0.77 | 0.29 | 0.51 | 0.16 | 4.07 | 0.32 | 0.31 | 0.78 | 0.56 | 0.56 | 0.72 | 4.64 |
| **21** | 17 | cities | 0.40 | 1.03 | 0.39 | 0.66 | 0.21 | 5.37 | 0.43 | 0.41 | 1.02 | 0.72 | 0.74 | 0.93 | 6.08 |
| **21** | 17 | country | 0.34 | 0.89 | 0.34 | 0.58 | 0.18 | 4.67 | 0.37 | 0.36 | 0.89 | 0.63 | 0.65 | 0.80 | 5.29 |
| **21** | 17 | suburbs | 0.37 | 0.95 | 0.36 | 0.62 | 0.19 | 4.99 | 0.40 | 0.38 | 0.95 | 0.67 | 0.69 | 0.86 | 5.65 |
| **21** | 18 | cities | 0.42 | 1.08 | 0.41 | 0.70 | 0.22 | 5.66 | 0.45 | 0.43 | 1.08 | 0.76 | 0.78 | 0.98 | 6.41 |
| **21** | 18 | country | 0.36 | 0.94 | 0.35 | 0.61 | 0.19 | 4.93 | 0.39 | 0.37 | 0.94 | 0.66 | 0.68 | 0.85 | 5.58 |
| **21** | 18 | suburbs | 0.39 | 1.00 | 0.38 | 0.65 | 0.20 | 5.25 | 0.42 | 0.40 | 1.00 | 0.70 | 0.73 | 0.90 | 5.95 |
| **21** | 19 | cities | 0.44 | 1.14 | 0.43 | 0.74 | 0.23 | 5.95 | 0.47 | 0.45 | 1.14 | 0.80 | 0.83 | 1.02 | 6.74 |
| **21** | 19 | country | 0.39 | 1.01 | 0.38 | 0.65 | 0.21 | 5.26 | 0.42 | 0.40 | 1.00 | 0.70 | 0.73 | 0.91 | 5.96 |
| **21** | 19 | suburbs | 0.41 | 1.07 | 0.40 | 0.69 | 0.22 | 5.57 | 0.44 | 0.42 | 1.06 | 0.75 | 0.77 | 0.96 | 6.31 |
| **21** | 20 | cities | 0.37 | 0.95 | 0.36 | 0.62 | 0.19 | 4.98 | 0.39 | 0.38 | 0.95 | 0.67 | 0.69 | 0.86 | 5.64 |
| **21** | 20 | country | 0.33 | 0.86 | 0.33 | 0.56 | 0.18 | 4.53 | 0.36 | 0.34 | 0.86 | 0.61 | 0.63 | 0.78 | 5.13 |
| **21** | 20 | suburbs | 0.35 | 0.90 | 0.34 | 0.58 | 0.18 | 4.71 | 0.37 | 0.36 | 0.90 | 0.63 | 0.65 | 0.82 | 5.35 |
| **22** | 5 | cities | 0.48 | 0.57 | 0.52 | 1.20 | 0.20 | 3.11 | 0.36 | 0.55 | 0.81 | 1.37 | 0.62 | 1.89 | 4.37 |
| **22** | 5 | country | 0.39 | 0.47 | 0.42 | 0.90 | 0.17 | 2.13 | 0.30 | 0.45 | 0.65 | 0.99 | 0.51 | 0.95 | 3.04 |
| **22** | 5 | suburbs | 0.43 | 0.52 | 0.46 | 1.01 | 0.19 | 2.43 | 0.33 | 0.50 | 0.72 | 1.12 | 0.55 | 1.14 | 3.45 |
| **22** | 6 | cities | 0.51 | 0.60 | 0.56 | 1.29 | 0.22 | 3.39 | 0.38 | 0.59 | 0.87 | 1.47 | 0.66 | 2.17 | 4.74 |
| **22** | 6 | country | 0.41 | 0.50 | 0.45 | 0.97 | 0.18 | 2.29 | 0.32 | 0.48 | 0.69 | 1.06 | 0.54 | 1.03 | 3.26 |
| **22** | 6 | suburbs | 0.45 | 0.55 | 0.49 | 1.08 | 0.20 | 2.63 | 0.35 | 0.53 | 0.76 | 1.20 | 0.59 | 1.27 | 3.72 |
| **22** | 7 | cities | 0.50 | 0.59 | 0.55 | 1.27 | 0.21 | 3.37 | 0.38 | 0.58 | 0.86 | 1.46 | 0.65 | 2.22 | 4.71 |
| **22** | 7 | country | 0.41 | 0.50 | 0.44 | 0.95 | 0.18 | 2.23 | 0.32 | 0.47 | 0.68 | 1.04 | 0.53 | 0.99 | 3.18 |
| **22** | 7 | suburbs | 0.44 | 0.54 | 0.48 | 1.05 | 0.20 | 2.55 | 0.34 | 0.52 | 0.75 | 1.17 | 0.58 | 1.21 | 3.62 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **22** | 8 | cities | 0.68 | 0.81 | 0.75 | 1.71 | 0.29 | 4.43 | 0.52 | 0.79 | 1.16 | 1.95 | 0.88 | 2.69 | 6.22 |
| **22** | 8 | country | 0.57 | 0.68 | 0.62 | 1.38 | 0.25 | 3.44 | 0.43 | 0.66 | 0.96 | 1.55 | 0.73 | 1.81 | 4.86 |
| **22** | 8 | suburbs | 0.62 | 0.74 | 0.68 | 1.53 | 0.27 | 3.88 | 0.47 | 0.72 | 1.05 | 1.73 | 0.80 | 2.15 | 5.46 |
| **22** | 17 | cities | 0.69 | 0.83 | 0.74 | 1.64 | 0.30 | 3.98 | 0.53 | 0.80 | 1.16 | 1.82 | 0.89 | 1.92 | 5.64 |
| **22** | 17 | country | 0.57 | 0.69 | 0.61 | 1.31 | 0.25 | 3.09 | 0.44 | 0.66 | 0.95 | 1.44 | 0.74 | 1.34 | 4.40 |
| **22** | 17 | suburbs | 0.62 | 0.75 | 0.67 | 1.44 | 0.27 | 3.42 | 0.48 | 0.72 | 1.04 | 1.59 | 0.81 | 1.53 | 4.87 |
| **22** | 18 | cities | 0.72 | 0.88 | 0.79 | 1.73 | 0.32 | 4.21 | 0.56 | 0.84 | 1.22 | 1.92 | 0.94 | 2.03 | 5.96 |
| **22** | 18 | country | 0.60 | 0.74 | 0.65 | 1.40 | 0.27 | 3.28 | 0.47 | 0.70 | 1.01 | 1.53 | 0.79 | 1.44 | 4.68 |
| **22** | 18 | suburbs | 0.65 | 0.80 | 0.71 | 1.53 | 0.29 | 3.64 | 0.51 | 0.76 | 1.10 | 1.69 | 0.85 | 1.64 | 5.18 |
| **22** | 19 | cities | 0.76 | 0.93 | 0.83 | 1.80 | 0.34 | 4.28 | 0.59 | 0.89 | 1.29 | 1.98 | 1.00 | 1.95 | 6.09 |
| **22** | 19 | country | 0.67 | 0.81 | 0.72 | 1.55 | 0.30 | 3.65 | 0.52 | 0.78 | 1.12 | 1.70 | 0.87 | 1.61 | 5.19 |
| **22** | 19 | suburbs | 0.71 | 0.87 | 0.77 | 1.66 | 0.32 | 3.92 | 0.55 | 0.83 | 1.19 | 1.82 | 0.93 | 1.74 | 5.57 |
| **22** | 20 | cities | 0.62 | 0.75 | 0.67 | 1.45 | 0.27 | 3.43 | 0.48 | 0.72 | 1.04 | 1.59 | 0.81 | 1.54 | 4.88 |
| **22** | 20 | country | 0.57 | 0.70 | 0.62 | 1.33 | 0.25 | 3.12 | 0.45 | 0.67 | 0.96 | 1.46 | 0.74 | 1.37 | 4.45 |
| **22** | 20 | suburbs | 0.59 | 0.72 | 0.64 | 1.37 | 0.26 | 3.25 | 0.46 | 0.69 | 0.99 | 1.51 | 0.77 | 1.44 | 4.62 |
| **23** | 9 | cities | 0.73 | 1.31 | 0.45 | 1.41 | 0.16 | 6.17 | 0.33 | 0.70 | 0.97 | 1.49 | 0.74 | 1.75 | 8.52 |
| **23** | 9 | country | 0.67 | 1.20 | 0.41 | 1.28 | 0.15 | 5.60 | 0.30 | 0.64 | 0.88 | 1.35 | 0.68 | 1.59 | 7.74 |
| **23** | 9 | suburbs | 0.70 | 1.25 | 0.43 | 1.34 | 0.16 | 5.87 | 0.32 | 0.67 | 0.92 | 1.42 | 0.71 | 1.67 | 8.12 |
| **23** | 10 | cities | 0.78 | 1.40 | 0.48 | 1.50 | 0.17 | 6.60 | 0.36 | 0.75 | 1.03 | 1.59 | 0.80 | 1.88 | 9.10 |
| **23** | 10 | country | 0.71 | 1.28 | 0.44 | 1.37 | 0.16 | 5.99 | 0.32 | 0.69 | 0.94 | 1.45 | 0.73 | 1.70 | 8.29 |
| **23** | 10 | suburbs | 0.75 | 1.34 | 0.46 | 1.44 | 0.17 | 6.28 | 0.34 | 0.72 | 0.99 | 1.52 | 0.76 | 1.79 | 8.68 |
| **23** | 11 | cities | 0.98 | 1.76 | 0.61 | 1.89 | 0.22 | 8.26 | 0.45 | 0.95 | 1.30 | 1.99 | 1.00 | 2.35 | 11.42 |
| **23** | 11 | country | 0.92 | 1.64 | 0.57 | 1.76 | 0.21 | 7.68 | 0.42 | 0.88 | 1.21 | 1.86 | 0.93 | 2.19 | 10.64 |
| **23** | 11 | suburbs | 0.95 | 1.70 | 0.59 | 1.83 | 0.21 | 7.97 | 0.43 | 0.91 | 1.26 | 1.93 | 0.97 | 2.27 | 11.03 |
| **23** | 12 | cities | 1.55 | 2.80 | 0.96 | 2.99 | 0.35 | 13.21 | 0.71 | 1.50 | 2.06 | 3.16 | 1.58 | 3.75 | 18.17 |
| **23** | 12 | country | 1.44 | 2.60 | 0.90 | 2.78 | 0.32 | 12.22 | 0.66 | 1.39 | 1.91 | 2.94 | 1.47 | 3.47 | 16.85 |
| **23** | 12 | suburbs | 1.50 | 2.69 | 0.93 | 2.89 | 0.34 | 12.69 | 0.68 | 1.44 | 1.98 | 3.05 | 1.53 | 3.60 | 17.49 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23** | 21 | cities | 1.56 | 2.81 | 0.97 | 3.01 | 0.35 | 13.28 | 0.71 | 1.51 | 2.07 | 3.18 | 1.59 | 3.77 | 18.27 |
| **23** | 21 | country | 1.41 | 2.53 | 0.88 | 2.71 | 0.32 | 11.92 | 0.64 | 1.36 | 1.87 | 2.87 | 1.44 | 3.39 | 16.44 |
| **23** | 21 | suburbs | 1.48 | 2.67 | 0.92 | 2.86 | 0.33 | 12.55 | 0.67 | 1.43 | 1.97 | 3.02 | 1.51 | 3.56 | 17.30 |
| **23** | 22 | cities | 1.66 | 2.98 | 1.03 | 3.19 | 0.37 | 14.01 | 0.75 | 1.60 | 2.20 | 3.37 | 1.69 | 3.98 | 19.34 |
| **23** | 22 | country | 1.51 | 2.72 | 0.94 | 2.92 | 0.34 | 12.76 | 0.69 | 1.46 | 2.01 | 3.08 | 1.54 | 3.63 | 17.63 |
| **23** | 22 | suburbs | 1.58 | 2.85 | 0.98 | 3.05 | 0.35 | 13.34 | 0.72 | 1.53 | 2.10 | 3.22 | 1.61 | 3.79 | 18.44 |
| **23** | 23 | cities | 2.10 | 3.79 | 1.31 | 4.05 | 0.47 | 17.89 | 0.96 | 2.03 | 2.79 | 4.28 | 2.14 | 5.08 | 24.62 |
| **23** | 23 | country | 1.92 | 3.45 | 1.19 | 3.69 | 0.43 | 16.25 | 0.87 | 1.85 | 2.54 | 3.90 | 1.95 | 4.61 | 22.39 |
| **23** | 23 | suburbs | 2.01 | 3.61 | 1.25 | 3.87 | 0.45 | 17.01 | 0.91 | 1.94 | 2.66 | 4.09 | 2.05 | 4.83 | 23.45 |
| **23** | 24 | cities | 5.02 | 9.07 | 3.11 | 9.67 | 1.12 | 43.67 | 2.27 | 4.83 | 6.65 | 10.21 | 5.11 | 12.31 | 59.34 |
| **23** | 24 | country | 4.60 | 8.32 | 2.85 | 8.87 | 1.03 | 39.84 | 2.09 | 4.43 | 6.10 | 9.37 | 4.69 | 11.25 | 54.30 |
| **23** | 24 | suburbs | 4.80 | 8.67 | 2.97 | 9.24 | 1.07 | 41.50 | 2.18 | 4.62 | 6.36 | 9.76 | 4.89 | 11.72 | 56.58 |
| **24** | 9 | cities | 0.61 | 0.93 | 0.33 | 1.21 | 0.11 | 4.17 | 0.23 | 0.59 | 0.73 | 1.29 | 0.57 | 1.40 | 5.91 |
| **24** | 9 | country | 0.55 | 0.85 | 0.30 | 1.10 | 0.10 | 3.79 | 0.21 | 0.54 | 0.66 | 1.17 | 0.51 | 1.27 | 5.36 |
| **24** | 9 | suburbs | 0.58 | 0.89 | 0.32 | 1.15 | 0.11 | 3.98 | 0.22 | 0.57 | 0.69 | 1.23 | 0.54 | 1.34 | 5.64 |
| **24** | 10 | cities | 0.65 | 1.00 | 0.36 | 1.29 | 0.12 | 4.46 | 0.25 | 0.64 | 0.78 | 1.38 | 0.60 | 1.50 | 6.32 |
| **24** | 10 | country | 0.59 | 0.91 | 0.32 | 1.18 | 0.11 | 4.06 | 0.23 | 0.58 | 0.70 | 1.26 | 0.55 | 1.36 | 5.74 |
| **24** | 10 | suburbs | 0.62 | 0.95 | 0.34 | 1.23 | 0.12 | 4.26 | 0.24 | 0.61 | 0.74 | 1.32 | 0.58 | 1.43 | 6.03 |
| **24** | 11 | cities | 0.80 | 1.23 | 0.44 | 1.59 | 0.15 | 5.49 | 0.31 | 0.78 | 0.95 | 1.70 | 0.74 | 1.84 | 7.77 |
| **24** | 11 | country | 0.74 | 1.14 | 0.41 | 1.48 | 0.14 | 5.09 | 0.29 | 0.72 | 0.88 | 1.58 | 0.69 | 1.71 | 7.21 |
| **24** | 11 | suburbs | 0.77 | 1.18 | 0.42 | 1.53 | 0.14 | 5.29 | 0.30 | 0.75 | 0.92 | 1.64 | 0.72 | 1.78 | 7.49 |
| **24** | 12 | cities | 1.27 | 1.95 | 0.70 | 2.54 | 0.24 | 8.75 | 0.49 | 1.24 | 1.52 | 2.71 | 1.18 | 2.93 | 12.38 |
| **24** | 12 | country | 1.18 | 1.81 | 0.65 | 2.35 | 0.22 | 8.12 | 0.45 | 1.15 | 1.41 | 2.51 | 1.10 | 2.73 | 11.50 |
| **24** | 12 | suburbs | 1.22 | 1.88 | 0.67 | 2.44 | 0.23 | 8.43 | 0.47 | 1.20 | 1.46 | 2.61 | 1.14 | 2.83 | 11.93 |
| **24** | 21 | cities | 1.26 | 1.94 | 0.69 | 2.52 | 0.24 | 8.70 | 0.49 | 1.24 | 1.51 | 2.69 | 1.18 | 2.92 | 12.31 |
| **24** | 21 | country | 1.13 | 1.74 | 0.62 | 2.26 | 0.21 | 7.81 | 0.44 | 1.11 | 1.36 | 2.42 | 1.06 | 2.62 | 11.05 |
| **24** | 21 | suburbs | 1.20 | 1.84 | 0.66 | 2.39 | 0.22 | 8.24 | 0.46 | 1.17 | 1.43 | 2.55 | 1.12 | 2.77 | 11.67 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathrm{PBT}_{\mathrm{CC}}$ | $\mathrm{PBT}_{\mathrm{OD}}$ | $\mathrm{PBT}_{\mathrm{HT\_CE}}$ | $\mathrm{PBT}_{\mathrm{HT\_nCE}}$ | $\mathrm{PBT}_{\mathrm{PM}}$ | $\mathrm{PBT}_{\mathrm{IR\_hh}}$ | $\mathrm{PBT}_{\mathrm{POF}}$ | $\mathrm{PBT}_{\mathrm{AC}}$ | $\mathrm{PBT}_{\mathrm{ET}}$ | $\mathrm{PBT}_{\mathrm{EuF}}$ | $\mathrm{PBT}_{\mathrm{EuM}}$ | $\mathrm{PBT}_{\mathrm{Ec\_FW}}$ | $\mathrm{PBT}_{\mathrm{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **24** | 22 | cities | 1.36 | 2.10 | 0.75 | 2.72 | 0.26 | 9.39 | 0.53 | 1.34 | 1.63 | 2.91 | 1.27 | 3.15 | 13.30 |
| **24** | 22 | country | 1.23 | 1.90 | 0.68 | 2.46 | 0.23 | 8.50 | 0.48 | 1.21 | 1.48 | 2.63 | 1.15 | 2.85 | 12.03 |
| **24** | 22 | suburbs | 1.30 | 1.99 | 0.71 | 2.59 | 0.24 | 8.93 | 0.50 | 1.27 | 1.55 | 2.76 | 1.21 | 3.00 | 12.64 |
| **24** | 23 | cities | 1.68 | 2.59 | 0.92 | 3.36 | 0.32 | 11.59 | 0.65 | 1.65 | 2.01 | 3.58 | 1.57 | 3.89 | 16.40 |
| **24** | 23 | country | 1.53 | 2.35 | 0.84 | 3.05 | 0.29 | 10.53 | 0.59 | 1.50 | 1.83 | 3.26 | 1.42 | 3.53 | 14.91 |
| **24** | 23 | suburbs | 1.60 | 2.47 | 0.88 | 3.20 | 0.30 | 11.06 | 0.62 | 1.57 | 1.92 | 3.42 | 1.50 | 3.71 | 15.65 |
| **24** | 24 | cities | 3.88 | 5.98 | 2.13 | 7.75 | 0.73 | 26.80 | 1.50 | 3.80 | 4.65 | 8.28 | 3.62 | 8.99 | 37.89 |
| **24** | 24 | country | 3.58 | 5.51 | 1.96 | 7.14 | 0.67 | 24.69 | 1.38 | 3.50 | 4.28 | 7.62 | 3.33 | 8.28 | 34.90 |
| **24** | 24 | suburbs | 3.72 | 5.73 | 2.04 | 7.43 | 0.70 | 25.69 | 1.44 | 3.65 | 4.46 | 7.93 | 3.47 | 8.62 | 36.33 |
| **25** | 9 | cities | 0.53 | 0.76 | 0.29 | 1.03 | 0.10 | 2.43 | 0.20 | 0.45 | 0.57 | 1.09 | 0.44 | 0.96 | 5.40 |
| **25** | 9 | country | 0.47 | 0.67 | 0.26 | 0.92 | 0.09 | 2.15 | 0.18 | 0.40 | 0.50 | 0.96 | 0.39 | 0.85 | 4.78 |
| **25** | 9 | suburbs | 0.49 | 0.71 | 0.28 | 0.97 | 0.09 | 2.29 | 0.19 | 0.42 | 0.54 | 1.02 | 0.41 | 0.91 | 5.08 |
| **25** | 10 | cities | 0.56 | 0.81 | 0.31 | 1.10 | 0.11 | 2.60 | 0.21 | 0.48 | 0.61 | 1.16 | 0.47 | 1.03 | 5.76 |
| **25** | 10 | country | 0.50 | 0.72 | 0.28 | 0.98 | 0.10 | 2.30 | 0.19 | 0.42 | 0.54 | 1.03 | 0.42 | 0.91 | 5.11 |
| **25** | 10 | suburbs | 0.53 | 0.76 | 0.30 | 1.04 | 0.10 | 2.44 | 0.20 | 0.45 | 0.57 | 1.09 | 0.44 | 0.97 | 5.43 |
| **25** | 11 | cities | 0.71 | 1.03 | 0.40 | 1.41 | 0.14 | 3.31 | 0.27 | 0.61 | 0.77 | 1.48 | 0.60 | 1.31 | 7.34 |
| **25** | 11 | country | 0.65 | 0.94 | 0.36 | 1.28 | 0.12 | 3.00 | 0.25 | 0.55 | 0.70 | 1.35 | 0.54 | 1.19 | 6.67 |
| **25** | 11 | suburbs | 0.68 | 0.98 | 0.38 | 1.34 | 0.13 | 3.15 | 0.26 | 0.58 | 0.74 | 1.41 | 0.57 | 1.25 | 7.00 |
| **25** | 12 | cities | 1.09 | 1.58 | 0.61 | 2.16 | 0.21 | 5.07 | 0.42 | 0.93 | 1.18 | 2.27 | 0.92 | 2.01 | 11.25 |
| **25** | 12 | country | 1.00 | 1.44 | 0.56 | 1.97 | 0.19 | 4.62 | 0.38 | 0.85 | 1.08 | 2.07 | 0.84 | 1.83 | 10.26 |
| **25** | 12 | suburbs | 1.05 | 1.51 | 0.58 | 2.06 | 0.20 | 4.84 | 0.40 | 0.89 | 1.13 | 2.17 | 0.87 | 1.92 | 10.74 |
| **25** | 21 | cities | 1.07 | 1.55 | 0.60 | 2.12 | 0.21 | 4.97 | 0.41 | 0.91 | 1.16 | 2.23 | 0.90 | 1.97 | 11.04 |
| **25** | 21 | country | 0.94 | 1.36 | 0.53 | 1.86 | 0.18 | 4.37 | 0.36 | 0.80 | 1.02 | 1.96 | 0.79 | 1.73 | 9.70 |
| **25** | 21 | suburbs | 1.01 | 1.45 | 0.56 | 1.98 | 0.19 | 4.66 | 0.39 | 0.86 | 1.09 | 2.09 | 0.84 | 1.85 | 10.34 |
| **25** | 22 | cities | 1.16 | 1.68 | 0.65 | 2.29 | 0.22 | 5.38 | 0.45 | 0.99 | 1.26 | 2.41 | 0.97 | 2.13 | 11.94 |
| **25** | 22 | country | 1.04 | 1.49 | 0.58 | 2.04 | 0.20 | 4.78 | 0.40 | 0.88 | 1.12 | 2.14 | 0.87 | 1.90 | 10.63 |
| **25** | 22 | suburbs | 1.10 | 1.58 | 0.61 | 2.16 | 0.21 | 5.06 | 0.42 | 0.93 | 1.19 | 2.27 | 0.92 | 2.01 | 11.25 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $PBT_{CC}$ | $PBT_{OD}$ | $PBT_{HT\_CE}$ | $PBT_{HT\_nCE}$ | $PBT_{PM}$ | $PBT_{IR\_hh}$ | $PBT_{POF}$ | $PBT_{AC}$ | $PBT_{ET}$ | $PBT_{EuF}$ | $PBT_{EuM}$ | $PBT_{Ec\_FW}$ | $PBT_{RD\_MFR}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **25** | 23 | cities | 1.44 | 2.08 | 0.81 | 2.84 | 0.28 | 6.68 | 0.55 | 1.23 | 1.56 | 2.99 | 1.21 | 2.65 | 14.83 |
| **25** | 23 | country | 1.28 | 1.85 | 0.72 | 2.52 | 0.25 | 5.92 | 0.49 | 1.09 | 1.39 | 2.65 | 1.07 | 2.35 | 13.15 |
| **25** | 23 | suburbs | 1.36 | 1.97 | 0.76 | 2.68 | 0.26 | 6.30 | 0.52 | 1.16 | 1.47 | 2.82 | 1.14 | 2.50 | 13.99 |
| **25** | 24 | cities | 3.35 | 4.84 | 1.87 | 6.59 | 0.64 | 15.56 | 1.28 | 2.85 | 3.62 | 6.93 | 2.80 | 6.16 | 34.47 |
| **25** | 24 | country | 3.03 | 4.38 | 1.69 | 5.97 | 0.58 | 14.06 | 1.16 | 2.58 | 3.28 | 6.27 | 2.53 | 5.57 | 31.16 |
| **25** | 24 | suburbs | 3.19 | 4.61 | 1.78 | 6.27 | 0.61 | 14.79 | 1.22 | 2.71 | 3.45 | 6.60 | 2.67 | 5.86 | 32.78 |
| **26** | 9 | cities | 0.95 | 0.59 | 0.68 | 1.15 | 0.50 | 0.20 | 0.80 | 0.80 | 1.23 | 1.42 | 0.94 | 0.28 | 1.58 |
| **26** | 9 | country | 0.90 | 0.56 | 0.65 | 1.09 | 0.47 | 0.19 | 0.76 | 0.76 | 1.17 | 1.35 | 0.89 | 0.27 | 1.50 |
| **26** | 9 | suburbs | 0.92 | 0.57 | 0.66 | 1.12 | 0.49 | 0.20 | 0.78 | 0.78 | 1.20 | 1.38 | 0.92 | 0.28 | 1.53 |
| **26** | 10 | cities | 1.01 | 0.63 | 0.73 | 1.23 | 0.53 | 0.21 | 0.86 | 0.86 | 1.32 | 1.52 | 1.00 | 0.30 | 1.69 |
| **26** | 10 | country | 0.96 | 0.59 | 0.69 | 1.17 | 0.51 | 0.20 | 0.81 | 0.81 | 1.25 | 1.44 | 0.95 | 0.29 | 1.60 |
| **26** | 10 | suburbs | 0.98 | 0.61 | 0.71 | 1.20 | 0.52 | 0.21 | 0.84 | 0.83 | 1.28 | 1.48 | 0.98 | 0.29 | 1.64 |
| **26** | 11 | cities | 1.27 | 0.79 | 0.92 | 1.55 | 0.67 | 0.27 | 1.08 | 1.08 | 1.66 | 1.91 | 1.27 | 0.38 | 2.13 |
| **26** | 11 | country | 1.23 | 0.76 | 0.88 | 1.49 | 0.65 | 0.26 | 1.04 | 1.04 | 1.60 | 1.84 | 1.22 | 0.37 | 2.04 |
| **26** | 11 | suburbs | 1.25 | 0.77 | 0.90 | 1.52 | 0.66 | 0.26 | 1.06 | 1.06 | 1.63 | 1.88 | 1.24 | 0.37 | 2.08 |
| **26** | 12 | cities | 1.86 | 1.16 | 1.34 | 2.28 | 0.98 | 0.40 | 1.58 | 1.58 | 2.43 | 2.80 | 1.85 | 0.56 | 3.14 |
| **26** | 12 | country | 1.80 | 1.12 | 1.30 | 2.19 | 0.95 | 0.38 | 1.53 | 1.52 | 2.35 | 2.70 | 1.79 | 0.54 | 3.01 |
| **26** | 12 | suburbs | 1.83 | 1.14 | 1.32 | 2.24 | 0.97 | 0.39 | 1.55 | 1.55 | 2.39 | 2.75 | 1.82 | 0.55 | 3.07 |
| **26** | 21 | cities | 1.86 | 1.16 | 1.34 | 2.27 | 0.98 | 0.40 | 1.58 | 1.58 | 2.43 | 2.80 | 1.85 | 0.56 | 3.12 |
| **26** | 21 | country | 1.77 | 1.10 | 1.28 | 2.16 | 0.94 | 0.38 | 1.51 | 1.51 | 2.32 | 2.67 | 1.77 | 0.53 | 2.96 |
| **26** | 21 | suburbs | 1.82 | 1.13 | 1.31 | 2.22 | 0.96 | 0.39 | 1.54 | 1.54 | 2.37 | 2.73 | 1.81 | 0.55 | 3.04 |
| **26** | 22 | cities | 1.97 | 1.22 | 1.42 | 2.40 | 1.04 | 0.42 | 1.67 | 1.67 | 2.57 | 2.96 | 1.96 | 0.59 | 3.29 |
| **26** | 22 | country | 1.90 | 1.18 | 1.36 | 2.31 | 1.00 | 0.40 | 1.61 | 1.61 | 2.47 | 2.85 | 1.89 | 0.57 | 3.16 |
| **26** | 22 | suburbs | 1.93 | 1.20 | 1.39 | 2.36 | 1.02 | 0.41 | 1.64 | 1.64 | 2.52 | 2.90 | 1.92 | 0.58 | 3.22 |
| **26** | 23 | cities | 2.37 | 1.48 | 1.71 | 2.89 | 1.25 | 0.51 | 2.01 | 2.01 | 3.09 | 3.56 | 2.36 | 0.71 | 3.97 |
| **26** | 23 | country | 2.28 | 1.42 | 1.65 | 2.79 | 1.21 | 0.49 | 1.94 | 1.94 | 2.98 | 3.43 | 2.27 | 0.69 | 3.83 |
| **26** | 23 | suburbs | 2.33 | 1.45 | 1.68 | 2.84 | 1.23 | 0.50 | 1.98 | 1.97 | 3.04 | 3.50 | 2.32 | 0.70 | 3.90 |

## CORK SLAB

| **Country** | **Arc** | **GL** | $\mathbf{PBT_{CC}}$ | $\mathbf{PBT_{OD}}$ | $\mathbf{PBT_{HT\_CE}}$ | $\mathbf{PBT_{HT\_nCE}}$ | $\mathbf{PBT_{PM}}$ | $\mathbf{PBT_{IR\_hh}}$ | $\mathbf{PBT_{POF}}$ | $\mathbf{PBT_{AC}}$ | $\mathbf{PBT_{ET}}$ | $\mathbf{PBT_{EuF}}$ | $\mathbf{PBT_{EuM}}$ | $\mathbf{PBT_{Ec\_FW}}$ | $\mathbf{PBT_{RD\_MFR}}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26** | 24 | cities | 5.22 | 3.28 | 3.78 | 6.40 | 2.75 | 1.13 | 4.43 | 4.42 | 6.81 | 7.87 | 5.20 | 1.59 | 8.86 |
| **26** | 24 | country | 5.07 | 3.18 | 3.67 | 6.22 | 2.68 | 1.10 | 4.31 | 4.30 | 6.63 | 7.65 | 5.05 | 1.54 | 8.60 |
| **26** | 24 | suburbs | 5.14 | 3.23 | 3.72 | 6.31 | 2.72 | 1.11 | 4.37 | 4.36 | 6.72 | 7.76 | 5.12 | 1.57 | 8.71 |
| **27** | 9 | cities | 0.46 | 0.37 | 0.33 | 0.77 | 0.16 | 0.19 | 0.29 | 0.50 | 0.64 | 0.86 | 0.51 | 0.28 | 1.42 |
| **27** | 9 | country | 0.42 | 0.34 | 0.30 | 0.70 | 0.14 | 0.18 | 0.26 | 0.45 | 0.58 | 0.79 | 0.46 | 0.26 | 1.29 |
| **27** | 9 | suburbs | 0.44 | 0.36 | 0.32 | 0.74 | 0.15 | 0.18 | 0.28 | 0.47 | 0.61 | 0.82 | 0.48 | 0.27 | 1.35 |
| **27** | 10 | cities | 0.49 | 0.40 | 0.35 | 0.83 | 0.17 | 0.21 | 0.31 | 0.53 | 0.69 | 0.92 | 0.54 | 0.30 | 1.51 |
| **27** | 10 | country | 0.45 | 0.36 | 0.32 | 0.75 | 0.15 | 0.19 | 0.28 | 0.48 | 0.62 | 0.84 | 0.49 | 0.27 | 1.38 |
| **27** | 10 | suburbs | 0.47 | 0.38 | 0.34 | 0.79 | 0.16 | 0.20 | 0.29 | 0.51 | 0.66 | 0.88 | 0.52 | 0.29 | 1.45 |
| **27** | 11 | cities | 0.62 | 0.50 | 0.44 | 1.03 | 0.21 | 0.26 | 0.39 | 0.67 | 0.86 | 1.16 | 0.68 | 0.38 | 1.90 |
| **27** | 11 | country | 0.57 | 0.47 | 0.41 | 0.96 | 0.19 | 0.24 | 0.36 | 0.62 | 0.80 | 1.07 | 0.63 | 0.35 | 1.77 |
| **27** | 11 | suburbs | 0.60 | 0.48 | 0.43 | 1.00 | 0.20 | 0.25 | 0.37 | 0.64 | 0.83 | 1.12 | 0.66 | 0.36 | 1.83 |
| **27** | 12 | cities | 0.96 | 0.78 | 0.69 | 1.61 | 0.33 | 0.41 | 0.60 | 1.04 | 1.34 | 1.80 | 1.06 | 0.59 | 2.97 |
| **27** | 12 | country | 0.89 | 0.73 | 0.64 | 1.50 | 0.30 | 0.38 | 0.56 | 0.96 | 1.24 | 1.68 | 0.98 | 0.55 | 2.77 |
| **27** | 12 | suburbs | 0.93 | 0.75 | 0.67 | 1.56 | 0.31 | 0.39 | 0.58 | 1.00 | 1.29 | 1.74 | 1.02 | 0.57 | 2.87 |
| **27** | 21 | cities | 0.93 | 0.76 | 0.67 | 1.56 | 0.32 | 0.39 | 0.58 | 1.00 | 1.30 | 1.75 | 1.02 | 0.57 | 2.87 |
| **27** | 21 | country | 0.84 | 0.68 | 0.60 | 1.41 | 0.28 | 0.36 | 0.53 | 0.91 | 1.17 | 1.58 | 0.92 | 0.52 | 2.61 |
| **27** | 21 | suburbs | 0.89 | 0.72 | 0.63 | 1.48 | 0.30 | 0.37 | 0.55 | 0.95 | 1.23 | 1.66 | 0.97 | 0.54 | 2.74 |
| **27** | 22 | cities | 1.01 | 0.82 | 0.72 | 1.69 | 0.34 | 0.43 | 0.63 | 1.09 | 1.41 | 1.89 | 1.11 | 0.62 | 3.11 |
| **27** | 22 | country | 0.92 | 0.75 | 0.66 | 1.54 | 0.31 | 0.39 | 0.57 | 0.99 | 1.28 | 1.72 | 1.01 | 0.56 | 2.84 |
| **27** | 22 | suburbs | 0.96 | 0.78 | 0.69 | 1.61 | 0.33 | 0.41 | 0.60 | 1.04 | 1.34 | 1.80 | 1.06 | 0.59 | 2.97 |
| **27** | 23 | cities | 1.24 | 1.01 | 0.89 | 2.08 | 0.42 | 0.52 | 0.77 | 1.33 | 1.72 | 2.32 | 1.36 | 0.76 | 3.83 |
| **27** | 23 | country | 1.13 | 0.92 | 0.81 | 1.89 | 0.38 | 0.48 | 0.70 | 1.21 | 1.57 | 2.12 | 1.24 | 0.69 | 3.50 |
| **27** | 23 | suburbs | 1.18 | 0.96 | 0.85 | 1.98 | 0.40 | 0.50 | 0.74 | 1.27 | 1.64 | 2.22 | 1.30 | 0.73 | 3.66 |
| **27** | 24 | cities | 2.88 | 2.35 | 2.06 | 4.84 | 0.97 | 1.24 | 1.78 | 3.09 | 3.99 | 5.41 | 3.15 | 1.79 | 9.01 |
| **27** | 24 | country | 2.65 | 2.17 | 1.90 | 4.47 | 0.89 | 1.15 | 1.64 | 2.84 | 3.68 | 5.00 | 2.90 | 1.66 | 8.36 |
| **27** | 24 | suburbs | 2.76 | 2.26 | 1.98 | 4.65 | 0.93 | 1.20 | 1.71 | 2.96 | 3.83 | 5.20 | 3.02 | 1.73 | 8.67 |

## CORK SLAB

| **Country** | **Arc** | **GL** | **PBT$_{CC}$** | **PBT$_{OD}$** | **PBT$_{HT\_CE}$** | **PBT$_{HT\_nCE}$** | **PBT$_{PM}$** | **PBT$_{IR\_hh}$** | **PBT$_{POF}$** | **PBT$_{AC}$** | **PBT$_{ET}$** | **PBT$_{EuF}$** | **PBT$_{EuM}$** | **PBT$_{Ec\_FW}$** | **PBT$_{RD\_MFR}$** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **28** | 5 | cities | 0.77 | 0.78 | 0.35 | (4.61) | 0.09 | (2.26) | 0.20 | 5.88 | 1.16 | (1.20) | 0.93 | (0.86) | 7.51 |
| **28** | 5 | country | 0.65 | 0.67 | 0.30 | (13.66) | 0.08 | (2.78) | 0.18 | 2.85 | 0.95 | (1.49) | 0.76 | (1.05) | 5.30 |
| **28** | 5 | suburbs | 0.70 | 0.72 | 0.32 | (9.00) | 0.09 | (2.68) | 0.19 | 3.43 | 1.03 | (1.43) | 0.82 | (1.01) | 5.95 |
| **28** | 6 | cities | 0.87 | 0.86 | 0.39 | (3.06) | 0.10 | (1.94) | 0.22 | 22.27 | 1.32 | (1.03) | 1.07 | (0.74) | 10.27 |
| **28** | 6 | country | 0.72 | 0.73 | 0.33 | (5.49) | 0.09 | (2.32) | 0.19 | 4.44 | 1.07 | (1.24) | 0.86 | (0.88) | 6.58 |
| **28** | 6 | suburbs | 0.78 | 0.79 | 0.35 | (4.55) | 0.09 | (2.25) | 0.20 | 6.00 | 1.16 | (1.20) | 0.93 | (0.86) | 7.56 |
| **28** | 7 | cities | 0.87 | 0.85 | 0.38 | (1.99) | 0.09 | (1.48) | 0.21 | (10.26) | 1.35 | (0.79) | 1.11 | (0.57) | 14.57 |
| **28** | 7 | country | 0.73 | 0.72 | 0.33 | (2.67) | 0.08 | (1.66) | 0.18 | 15.04 | 1.10 | (0.88) | 0.89 | (0.64) | 8.40 |
| **28** | 7 | suburbs | 0.78 | 0.77 | 0.35 | (2.59) | 0.09 | (1.68) | 0.19 | 29.64 | 1.18 | (0.89) | 0.96 | (0.65) | 9.48 |
| **28** | 8 | cities | 1.69 | 1.29 | 0.64 | (0.72) | 0.11 | (0.72) | 0.25 | (20.52) | 3.63 | (0.38) | 3.73 | (0.28) | 29.14 |
| **28** | 8 | country | 1.21 | 1.03 | 0.49 | (0.81) | 0.09 | (0.78) | 0.22 | 30.09 | 2.22 | (0.41) | 2.02 | (0.30) | 16.80 |
| **28** | 8 | suburbs | 1.34 | 1.11 | 0.53 | (0.81) | 0.10 | (0.79) | 0.23 | 59.29 | 2.53 | (0.42) | 2.34 | (0.31) | 18.95 |
| **28** | 17 | cities | 1.14 | 1.18 | 0.53 | 893.19 | 0.14 | (6.02) | 0.31 | 4.26 | 1.66 | (3.24) | 1.32 | (2.25) | 8.74 |
| **28** | 17 | country | 0.98 | 1.02 | 0.45 | 20.13 | 0.13 | (6.69) | 0.28 | 3.20 | 1.42 | (3.63) | 1.12 | (2.47) | 7.09 |
| **28** | 17 | suburbs | 1.04 | 1.09 | 0.48 | 26.36 | 0.13 | (6.77) | 0.29 | 3.50 | 1.52 | (3.67) | 1.20 | (2.50) | 7.66 |
| **28** | 18 | cities | 1.21 | 1.26 | 0.56 | (77.24) | 0.15 | (5.92) | 0.33 | 4.77 | 1.77 | (3.18) | 1.41 | (2.22) | 9.49 |
| **28** | 18 | country | 1.04 | 1.09 | 0.48 | 32.20 | 0.13 | (6.47) | 0.29 | 3.56 | 1.51 | (3.50) | 1.20 | (2.40) | 7.69 |
| **28** | 18 | suburbs | 1.11 | 1.16 | 0.51 | 47.40 | 0.14 | (6.57) | 0.31 | 3.90 | 1.62 | (3.55) | 1.28 | (2.44) | 8.30 |
| **28** | 19 | cities | 1.28 | 1.34 | 0.59 | 33.47 | 0.16 | (8.23) | 0.36 | 4.31 | 1.86 | (4.45) | 1.47 | (3.04) | 9.39 |
| **28** | 19 | country | 1.11 | 1.17 | 0.52 | 16.08 | 0.14 | (8.73) | 0.32 | 3.46 | 1.61 | (4.75) | 1.27 | (3.19) | 7.88 |
| **28** | 19 | suburbs | 1.18 | 1.24 | 0.55 | 18.00 | 0.15 | (9.05) | 0.33 | 3.70 | 1.71 | (4.92) | 1.35 | (3.31) | 8.40 |
| **28** | 20 | cities | 1.16 | 1.16 | 0.52 | (66.94) | 0.13 | (2.73) | 0.29 | 8.62 | 1.76 | (1.45) | 1.43 | (1.05) | 18.79 |
| **28** | 20 | country | 1.02 | 1.03 | 0.46 | (32.17) | 0.12 | (2.66) | 0.26 | 6.91 | 1.53 | (1.41) | 1.24 | (1.02) | 15.75 |
| **28** | 20 | suburbs | 1.07 | 1.08 | 0.49 | (35.99) | 0.12 | (2.76) | 0.28 | 7.41 | 1.62 | (1.47) | 1.31 | (1.06) | 16.81 |