

# ENERGISE

EUROPEAN NETWORK FOR RESEARCH, GOOD PRACTICE  
AND INNOVATION FOR SUSTAINABLE ENERGY 

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## DELIVERABLE 2.6

### TYOLOGY REPORTS OF RESULTS FOR WP6 AND WP7

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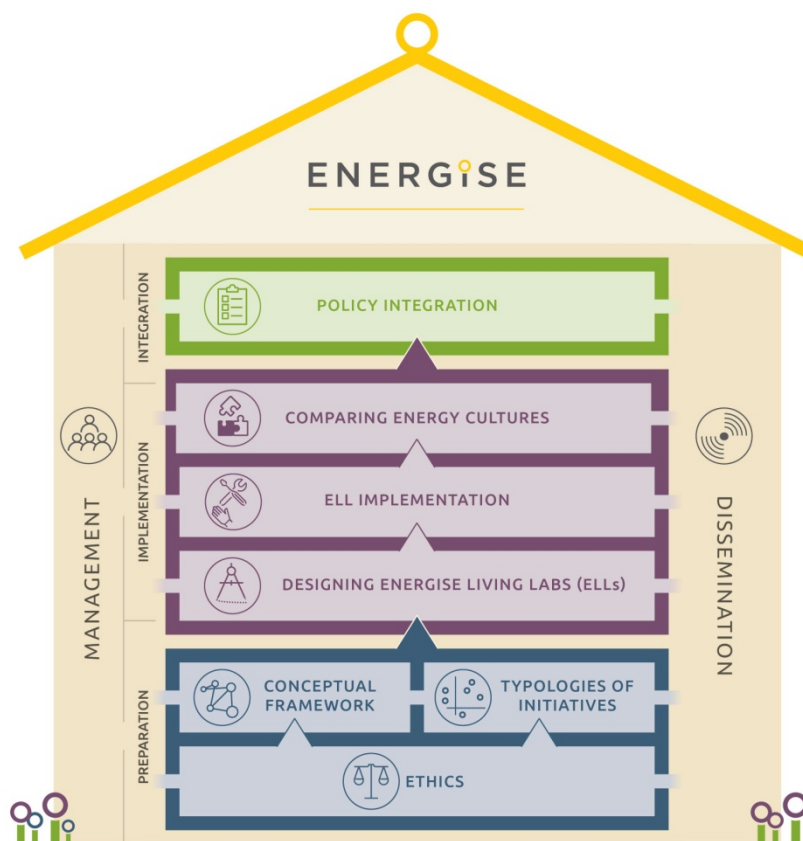
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## ENERGISE PROJECT

ENERGISE is an innovative pan-European research initiative to achieve a greater scientific understanding of the social and cultural influences on energy consumption. Funded under the EU Horizon 2020 programme for three years (2016-2019), ENERGISE develops, tests and assesses options for a bottom-up transformation of energy use in households and communities across Europe. ENERGISE's primary objectives are to:

- **Develop an innovative framework** to evaluate energy initiatives, taking into account existing social practices and cultures that affect energy consumption.
- **Assess and compare the impact** of European energy consumption reduction initiatives.
- **Advance the use of Living Lab approaches** for researching and transforming energy-related practice cultures.
- **Produce new research-led insights** into the role of household routines and changes to those routines towards more sustainable energy.
- **Encourage positive interaction** between actors from society, the policy arena and industry.
- **Effectively transfer** project outputs towards the implementation of the European Energy Union.



## EXECUTIVE SUMMARY

This document (ENERGISE D2.6) provides four summary reports of WP2. After a brief introduction to this deliverable (section 1), section 2 provides short summaries of the form, function and results of all the previous WP2 Deliverables (D2.1, D2.2, D2.3, D2.4 and D2.5). Section 3 provides a summary of policy implications of the results, as well as corresponding recommendations. Section 4 provides a summary of academic publications coming out of WP2, and section 5 presents a summary of current and future work with disseminating WP2 results to wider, public audiences.

# 1 INTRODUCTION TO DELIVERABLE D2.6

This document provides a summary report of WP2 results, particularly demonstrating relevant connections to WP6 and WP7. The document is comprised of several chapters dedicated to presenting different types of results. Chapter 2 presents a general summary of the process and results of developing sustainable energy consumption initiative (SECI) typologies. Chapter 3 presents resulting policy implications and recommendations. Chapter 4 presents resulting dissemination for academic audiences, and chapter 5 provides an overview of dissemination (plans) of results to public audiences.

## 1.1 WP2: TYPOLOGIES OF ENERGY INITIATIVES

ENERGISE WP2 has provided a systematic criteria-guided review and classification of existing sustainable energy consumption initiatives (SECIs) from 30 European countries (EU-28, Switzerland, and Norway), which now provides a comprehensive European database of energy initiatives involving households, and related typologies of sustainable energy consumption initiatives. This extensive synthesizing work has further guided the selection of Living Lab design elements for ENERGISE and future energy consumption research, policy and practice.

This work has been carried out in order to

- Construct innovative typologies of sustainable energy consumption initiatives that can inform further research and action.
- Identify key success factors and related indicators, focusing on individual-level, collective, organizational, institutional and societal aspects of energy consumption, which will inform subsequent WP3 (designing Living Labs), WP4 (ENERGISE Living Labs) and WP5 (capturing energy-related practice cultures).
- Create a publicly archived open access dataset of sustainable energy initiatives across 30 countries in Europe.

See Deliverables D2.1 (Jensen et al. 2017a), D2.2 (Jensen 2017), D2.3 (Jensen et al. 2017b) and D2.4 (Jensen et al. 2017b), and D2.5 (Jensen et al. 2018b) for further details on how ENERGISE has defined SECIs, how data have been collected and how it has been analysed and contextualised.

## 2 RESULTS OF DEVELOPING TYPOLOGIES OF SECIs IN AND ACROSS EUROPE

WP2 planned and conducted a systematic criteria-guided classification of existing sustainable energy consumption initiatives (SECIs) from 30 European countries. This work provided a comprehensive database of European SECIs and facilitated the subsequent development of typologies of SECIs. In the following sections, the results of assessing and collecting data on sustainable energy consumption initiatives across Europe are presented, by giving a brief summary of resulting deliverables coming out of WP2 of ENERGISE.

### DELIVERABLES 2.1 AND 2.2

Based on a large-scale assessment, a catalogue of existing examples of programmes and interventions for sustainable energy consumption initiatives (SECIs) in 30 countries across Europe has been developed. The catalogue consists of a compilation of 1000+ SECIs, presented by their title, scale, description and objectives, and they are divided into countries from which the SECIs originate as well as where they are carried out. As several SECIs are cross-national, these are represented in more than one country. This catalogue comprises the ENERGISE D2.1 (Jensen et al. 2017a), and it is publically available.

The process of developing and carrying out this large scale assessment is presented and explained in an extensive background report. The background report clarifies how the ENERGISE project defines SECIs, and the process of identifying key success factors and related indicators for existing Sustainable Energy Consumption Initiatives (SECIs) across Europe is described in detail. The report provides an elaborate account of the three phases of data collection that were purposefully designed in WP2 to carefully identify and assess relevant dynamics of SECIs pertinent to the understanding of the individual, collective, organisational and institutional aspects of consumption change. The criteria guided data collection process is demonstrated through a thorough description and explanation of the categories that were developed for empirical enquiry. Examples of the relevance of the categories are given throughout the report. The data assessment that was conducted through the categories of all three phases is important, not only to the objectives of WP2, but also in relation to designing future SECIs (WP3 and WP4) and in relation to analysing the role of social-cultural conditions of SECIs; to capture intra- and cross-national differences and similarities between SECIs; to understand interactions between collective conventions and regulatory frameworks; and infrastructural conditions related to energy consumption (WP5). Equally they help to identify policy measures required to reduce energy consumption as well as to enable diverse configurations of actors needed to obtain this (WP6). The background report is ENERGISE D2.2 (Jensen 2017), and it is publically available.



## DELIVERABLE 2.3

The 1000+ identified and assessed SECIs are published in a Public Open Access Database on the ENERGISE webpage. Here, the user can browse the identified SECIs, and read about their objectives. The 1000+ SECIs in the database have also been categorised in relation to the Problem Framing Typology (see description in the following section). The Public Open Access Database can be accessed at <http://energise-project.eu/projects>, and a description of the development of the Open Access Database as well as a user manual can be found in ENERGISE D2.3 (Jensen et al. 2017b).

The ENERGISE Open Access Dataset is an attempt to systematically map European SECIs. As part of our work with developing such a dataset, we have had to make some decisions about what to include in the dataset and how to categorise and classify the SECIs that are various in scope, size and content. The methodology and scope of collecting data on European SECIs is presented in ENERGISE D2.2 (Jensen 2017) and the theoretical and methodological steps taken in analysing, classifying and categorising the SECIs can be found in ENERGISE D2.4 (Jensen et al. 2017c). Although the ENERGISE team represents a number of European countries, and language skills related to and knowledge about researching European SECIs have been ensured, we acknowledge that some SECIs might also have been missed during our delimited search, and some SECIs might be misrepresented by our classification and categorisation of the SECIs. We therefore welcome feedback and suggestions for updates, and we have included a feature to allow users to submit questions and suggestions directly through the dataset webpage. We aim to update the ENERGISE Open Access Dataset once a year until 2020. The main function of the ENERGISE Open Access Dataset is to: 1) display 1000+ SECIs that actively involves households in change processes; and 2) display ENERGISE's typological categorisation of the SECIs. The ENERGISE Open Access Dataset does not represent an evaluation of the merits or otherwise of any particular SECI. Further, please note that inclusion of SECIs in the map is not an endorsement by the ENERGISE project or its partners.

## DELIVERABLE 2.4

Based on analyses of the 1000+ European SECIs, two sets of typologies were developed, corresponding to the analytical interests of the project (described in above paragraphs).

One of the resulting typologies categorises the 1000+ SECIs according to the type of 'problem framings' they seem to draw on. Problem framings were systematically identified through the assessment of the SECIs recorded in the database template introduced above (Jensen 2017). The Problem Framing Typology categorises the SECIs according to four typical problem framings, according to the way that energy consumption is understood to be a challenge.

The four categories are:

1) Change as a matter of technological change

- 2) Change as a matter of changes in individuals' behaviours,
- 3) Change as a matter of changes in everyday life situations, and
- 4) Change as a matter of changes in complex (social and material) interactions.

The Problem Framing Typology is described in detail in ENERGISE D2.4 (Jensen et al. 2017c)

The other resulting typology categorises the 1000+ SECIs according to the way they understand resource consumption to be challenged and dealt with. The Resource Consumption Typology consists of three overall categories, whereby one of the categories includes three subcategories. A SECI can be classified within one or more of the categories depending on what a SECI understands sustainable energy consumption to be and how for it to come about.

The three overall categories, as well as the three subcategories are:

- 1) Sufficiency
- 2) Sharing/repairing
- 3) Efficiency
  - i) Efficiency (reduction and substitution)
  - ii) Efficiency (reduction only)
  - iii) Efficiency (substitution only)

The Resource Consumption Typology is described in detail in ENERGISE D2.4 (Jensen et al 2017c).

The results of the typologised SECIs are as follows:

*Table 1 overview of SECIs categorised according to the Problem Framing Typology*

| Sustainable consumption category              | No. initiatives | % of total initiatives |
|---|-----------------|------------------------|
| Change as change in Complex Interactions      | 147             | 13.7                   |
| Change as changes in Everyday Life Situations | 124             | 11.7                   |
| Change as changes in Individual Behaviour     | 514             | 48.2                   |
| Change as changes in Technologies             | 282             | 26.4                   |
| <i>Total SECIs</i>                            | <i>1067</i>     | <i>100</i>             |

Table 2 overview of SECI<sub>s</sub> categorised according to the Resource Consumption Typology

| Sustainable consumption category        | No. initiatives | % of total initiatives |
|---|-----------------|------------------------|
| Sufficiency                             | 97              | 9.09                   |
| Sharing/Repairing                       | 35              | 3.28                   |
| Efficiency                              | 961             | 90.06                  |
| Efficiency (reduction and substitution) | 622             | 58.29                  |
| Efficiency (reduction only)             | 156             | 14.62                  |
| Efficiency (substitution only)          | 183             | 17.15                  |
| <i>Total SECI<sub>s</sub></i>           | <i>1067</i>     | <i>100</i>             |

It is important to note that the SECI<sub>s</sub> have been categorised as a result of a collaborative approach within the ENERGISE consortium. However, the ENERGISE consortium recognises that the categorisation of each SECI within both the RCT and PFT typologies is subject to change if actors from identified SECI<sub>s</sub> object to the category within which they have been placed and provide more information about the initiative that may result in a re-categorisation. As mentioned, the categorised SECI<sub>s</sub> are mapped in an Open Access Database and actors from all identified SECI<sub>s</sub> are encouraged to get in touch and engage in debate about problem framings of the sustainability challenge.

## DELIVERABLE 2.5

Finally, comprehensive national briefs for all 30 European countries were prepared as a final step of WP2. The national briefs provide an overview of the national demographics, including data on energy consumption levels and configurations in energy supply. Further details about national energy supply system and energy policies are given. This includes current trends in energy policy and trends in national campaigns. Finally, a few reflections are provided on particular socio-material aspects that influence national (and local) energy consumption patterns.

All briefs include an overview of national SECI<sub>s</sub> and their configurations in relation to the problem framing typology. Finally, a ‘good-practice’ example is provided for each country; this is a SECI that has been categorised within one of the two categories “Change as change in Complex Interactions” and “Change as changes in Everyday Life Situations”. The 30 national briefs provide contextual information about the SECI<sub>s</sub> for which data has been collected across the 30 European countries. The contextual information provides insights into similarities and, maybe more importantly, differences between countries in terms of social, material and institutional conditions, which have a bearing on energy demand, but also on how they can be challenged. A full overview of the 30 national briefs can be found in ENERGISE D2.5 (Jensen et al 2018b).

## 3 RESULTING POLICY RECOMMENDATIONS AND IMPLICATIONS

This section presents a number of policy implications and recommendations based on the findings from WP2, which have been summarised in chapter 2, above. For the purpose of clarification it may be recalled that WP2 developed a methodology, which highlights aspects of: 1) embedded problem framings in SECIs; and 2) the contextual dynamics of SECIs.

SECIs may be based on problem framings that to some extent assume that solutions can be somewhat “surgically removed and replaced by other solutions, seamlessly entering the social tissue where they are installed, without causing any change but reduction in energy inputs” (Labanca and Bertoldi, 2018, p. 496). It is therefore important to assess these problem framings in existing SECIs and in what way the problem framings understand and consider the contexts in which they seek to intervene. Based on the developed methodology, WP2 conducted a review of 1000+ SECIs, which revealed that approximately 75% of the reviewed SECIs framed energy demand reduction as a matter of technological innovation or individual behaviour change. In addition, the review found that approximately 10% of the reviewed SECIs understood energy demand reduction as a matter of sufficiency and repairing and sharing, where as 90% of the reviewed SECIs understood it as a matter of efficiency (see table 1 and table 2). There is a large overlap between ‘efficiency-oriented’ SECIs and ‘technologically or individual-behaviourally focused’ SECIs. This is in spite of the increasing amount of research and literature - also within a policy setting (see particularly Labanca and Bertoldi 2018) – that suggests a reframing of policy interventions away from technological and behaviourally focused interventions, towards more practice and context-oriented interventions.

A fundamental insight for policy-makers concerns the benefits of taking a practice-theoretical approach to understanding and reducing energy demand. This perspective has been the subject of debate in recent years, for example, in relation to the extent that it offers clear guidance to policy-makers. However, results from WP2 demonstrate the insights that a focus on practices brings. In particular, it suggests that policy makers eschew the focus on individual behaviour and choice and technical solutions, which have been the substance of energy and climate change policy interventions in many countries over past decades. Instead, researchers and policy-makers may benefit from exploring and working with how particular institutionalised configurations of social practices hold particular energy consumption patterns in place. Fundamentally, this requires the application of a different theory of change from those which have typified energy demand reduction policy in Europe to date.

In particular, the problem framing typology of sustainable consumption energy initiatives gives a clear view of how different theories of change are realised in interventions in practice. Table 1 clearly shows the dominance of interventions rooted in a theory of change which emphasises the importance of individual behaviour, which comprise over 48% of the initiatives, and technical solutions, which make up over 26% of the total. In

contrast there is a minor role for policy interventions that address the substructure of individual choices and behaviour. This indicates two areas of neglect: policies which might disrupt and transform isolated practices, and those which might disentangle nests of interacting practices. The clear message of the work package is that to effectively address energy challenges policy-makers need to adopt hitherto marginalised theories of change. They need to design and to implement measures adapted to the task of changing practices which are rooted in mundane, everyday activities, undertaken in particular socio-material and temporal spaces, commingled with shared though contextually delimited meanings and knowledge. Beyond this, WP2 reminds users of the research of the importance of transcending an over-emphasis on either technical or social dimensions of energy use to embrace a more fully socio-technical and culturally sensitive complex of factors inhering in energy-related social practices, such as heating one's home or doing the laundry.

As noted in Jensen et al (2017c), the SECI typologies should not be seen as 'universalising', or as a mode of generalisation producing a stable representation of the reality of sustainable consumption initiatives in Europe. Instead, users of the typologies need to exercise care with regard to the contingency and instability of the categories generated and the instances on which they are founded (Halkier 2011). Thus our typologies remain open to other ways in which the 1067 initiatives might be categorised. There are also multiple points of difference, which need to be borne in mind, even among initiatives which have been allocated to a particular typological category in our work. These specificities speak to an empirical richness, which should not be sacrificed in the name of creating a typology, which might otherwise usefully inform policy considerations. Nevertheless, taken together the typologies speak to issues of framing, which in policy terms might be characterised in relation to competing imaginaries. These 'socio-technical imaginaries' are indicative of different visions of how the world is or should be and how such futures may be accomplished. In connection with matters of energy and sustainable consumption, the various imaginaries are manifest in the foci of policy, the role of research in informing policy and the contributions of civil society and other actors to the policy process. The imaginaries are variously enacted in the national energy policy trends examined in relation to 30 European countries, presented in Jensen et al (2018b).

The work carried out for WP2 demonstrates that the prevailing imaginary and the mainstay of energy demand reduction initiatives in European countries is predicated upon policy-making which emphasises individual behaviour, focusing on the correction of poor consumer choices, or sidesteps choice through the adoption and diffusion of energy efficient technologies (e.g. in 'smart' buildings and cities and consumer products). Much less prevalent are imaginaries in which the policy focus is on either discrete or interlocking social practices, however these may be defined and delineated in situ. In addition, the role of research tends to be to inform knowledge of factors affecting individual behaviours and how these might be 'nudged' in the 'right' directions. The dominant imaginary in much energy research has been one in which the central question has been how to enable consumers to make better choices (e.g. through improved information about energy performance of products). Less prevalent has been an imaginary in which the contribution of civil society is envisaged as part of a collectively arrived at policy agenda and options,

which emerge from possibly very different political and epistemic cultures than currently typify European countries.

## 4 RESULTING ACADEMIC DISSEMINATION

Several academic publications have come out of WP2 and the data collected as part of WP2.

Three key academic contributions have been developed, reporting on the ENERGISE WP2 methodology for assessing and categorising SECIs;

- The first contribution presented is a product of a collaborative process between several ENERGISE researchers. The paper presents and discusses the novel and innovative methodology developed for data collection and classification as part of WP2, D2.2. The paper is submitted for publication in the journal *Energy Research and Social Science*.
- The second contribution presented is a paper elaborating and discussing results from a classification of the 1000+ SECI Database that has been developed as part of WP2, D2.4. The paper presents the Problem Framing Typology, which has been developed on the basis of this classification. The paper is submitted for presentation at the International conference for Sustainability Transitions (IST 2018) in Manchester, UK. A version of this paper will be submitted for publication in a high-ranking peer-reviewed journal.
- The third contribution presented is a paper elaborating and discussing results from another classification of the 1000+ SECI Database, as part of D2.4. The paper presents the Resource Consumption Typology that has been developed from this classification. The paper was presented at the Association of American Geographers Annual Meeting 2018, New Orleans, USA. A version of this paper will be also submitted for publication in a high-ranking peer-reviewed journal.

Further, at least four additional academic contributions have been developed from the bases of assessing and analysing the resulting WP2 database.

- One academic paper has been developed on the bases of exploring and assessing in detail the Swiss SECIs identified and reported on as part of the WP2 Database. The paper addresses the need for moving away from governing behaviours to enabling transformative change. The paper has been presented at the conference 'Deconstructing Participatory Climate Governance: Innovation or Business as Usual?' 2017, Sciences Po Bordeaux, France
- Another paper discusses similarities and differences of 'theories-in-use' in a sample of 155 past and present SECIs targeting private households in Finland, Spain and the Netherlands. The paper builds on the idea of exploring hegemonic and counter-hegemonic theories-in-use in SECIs. This paper will be presented at the Energy and Society conference 2018, Exeter, UK.
- A third contribution discusses the differences in energy efficiency, energy use reduction, degrowth and energy sufficiency, and how these terms relate to each



other or conflict each other. The discussion is taking point of departure in analyses of SECIs from Germany, Hungary and Slovenia. This paper will be presented at the Degrowth Conference, 2018, Brussels, Switzerland.

- A fourth paper discusses characteristics and governance of *urban* SECIs across Europe. In particular, the paper discusses common trends and characteristics in the type of Urban SECIs that are promoted, including the scale at which they are administered, the intended target group, and implementation method. The paper was presented at the Association of American Geographers Annual Meeting 2018, New Orleans, USA. A version of this paper will be submitted for publication in a peer-reviewed journal.

The abstracts for each of the contributions are presented below.

#### **4.1 TOWARDS A PRACTICE-THEORETICAL CLASSIFICATION OF SUSTAINABLE ENERGY CONSUMPTION INITIATIVES: INSIGHTS FROM SOCIAL SCIENTIFIC ENERGY RESEARCH IN 30 EUROPEAN COUNTRIES**

*Written by Charlotte Louise Jensen, Gary Goggins, Frances Fahy, Eoin Grealis, Edina Vadovics, Audley Genus, Henrike Rau*

Reducing residential energy use and related CO<sub>2</sub> emissions across society requires approaches that understand energy demand as dependent on the performance of a range of interconnected social practices, which includes aspects of timing, location and material contexts. However, current energy policy and change initiatives often rely on a somewhat narrow combination of rational consumer choice models, efficiency measures and information-based behavioral change theory, thus falling short on anticipated reductions (EEA, 2013). Insights from the ENERGISE project highlight the merits of a practice-theoretical approach to social scientific energy research that explicitly recognizes complex interactions in the social organization of everyday life. The paper demonstrates how such an approach provides knowledge on variations in energy use across households, social groups and societies and how these are (not) acknowledged in the problem framings of dominant energy policies and change initiatives. Reflecting on experiences made during a large-scale comparative analysis of sustainable energy consumption change initiatives in 30 European countries, this paper presents a new and innovative methodology for investigating the dynamics of change initiatives that target energy use within households and communities. It concludes with some critical reflections on the methodology presented.

#### **4.2 ACHIEVING SUSTAINABILITY TRANSITIONS IN RESIDENTIAL ENERGY USE: DO PROBLEM FRAMINGS WITHIN EXISTING INITIATIVES MATCH CURRENT AND FUTURE NEEDS?**

*Written by Charlotte Louise Jensen, Gary Goggins, Frances Fahy and Inge Røpke*

In response to the increasingly urgent climate change challenge, the European Commission are promoting several climate and energy targets, which attempt to reduce greenhouse gas emissions and decarbonize the economy. However, the current pace and scale of change is insufficient to achieve the necessary sustainability transition in the energy system. There is an increasing realization that meeting energy targets is highly dependent on the behavior and practices of people in terms of final energy consumption patterns (EEA Signals 2017). Several academic claims assert that current endeavors to implement energy efficiency policies are not appropriately dealing with social and cultural aspects of energy use, thereby limiting their potential for initiating long-term transformation.

In responding to above concerns and claims, this paper reports on a large-scale review of over 1000 Sustainable Energy Consumption Initiatives (SECI) that aim to reduce residential energy use and related CO<sub>2</sub> emissions across Europe. The purpose of the review is to understand objectives, scales, targets and problem definitions of current and recent sustainable energy initiatives that specifically address final consumption. Further analysis of these initiatives uncovers a number of broad overarching tendencies in how and in what way final energy consumption is problematized, targeted and managed across Europe. These common trends have been categorized according to one of four categories, which together make up the Problem Framing Typology (PFT); 1. Changes in Technology, 2. Changes in Individuals' Behaviour, 3. Changes in Everyday Life Situations, and 4. Changes in Complex Interactions. Each category was developed according to how the empirical data corresponds to the analytical interest in reviewing and highlighting different kinds of problem framings within energy consumption initiatives. According to an increasingly convincing body of research literature, problem framings that treat energy consumption as a result of social practices and complex interactions between changes in technology, changes in business models and services, and changes in everyday life, are more likely to bring about meaningful and lasting changes in energy consumption (eg. Shove 2010; Spurling et al, 2013; Southerton et al, 2011). Therefore, SECI that falls under category 3 and 4 of the PFT would arguably be preferable and more likely to lead to long-term transformation. Applying the PFT to over 1000 SECI shows that merely 24% of the SECI correspond to problem framing category 3 (11%) or 4 (13%). The majority of SECI are positioned within the PFT category 1 and 2, which indicates a strong ongoing bias towards material and technical solutions within energy transitions.

### **4.3 SWITCHING ON TO SUFFICIENCY: AN INNOVATIVE TYPOLOGY FOR CRITICALLY EXPLORING EUROPEAN SUSTAINABLE ENERGY INITIATIVES**

*Written by Frances Fahy, Gary Goggins and Charlotte Jensen*

Over the past decade a plethora of 'top-down' and 'bottom-up' sustainable energy initiatives have emerged all over Europe. While sustainable energy initiatives are generally heralded as part of a successful energy transition, there is a wide spectrum of energy activities promoted within these initiatives. This paper presents a novel Resource-Consumption-Typology, (RCT) a conceptual tool developed by the authors to examine the



different forms and range of energy related consumption activities, and explore the degree to which they adhere to the principles of efficiency and sufficiency within the sustainable consumption and production literature. Grounded in an analysis of the ENERGISE database of over 1000 sustainable energy community initiatives from 30 countries in Europe, the paper critically discusses the development of the RCT and the identification of four distinct categories of sustainable energy initiatives.

Based on the Resource-Consumption Typology, the data generated in the analysis of 1000+ SECIs reveals that many activities are still concentrated on efficiency measures, where environmental impacts remain relatively high. The principle of sufficiency remains underdeveloped in both academic and policy literature and this paper provides valuable empirical data categorizing innovative energy reduction initiatives. The resultant typology may also contribute to advancing the energy sufficiency agenda by assisting policy makers, communities groups and researcher in the energy domain to identify some of the practical 'energy sufficiency' initiatives that are being undertaken by householders and communities across Europe.

#### **4.4 FROM GOVERNING BEHAVIOUR TO TRANSFORMATIVE CHANGE: A TYPOLOGY OF HOUSEHOLD ENERGY INITIATIVES IN SWITZERLAND.**

*Written by Marlyne Sahakian and Laure Dobigny*

This paper explores initiatives aimed at improving or reducing energy consumption among households in Switzerland, as part of a broader European project (ENERGISE). Our aim is to uncover what representations of change and forms of engagement are being put forward in these initiatives. The dominant worldview around change is based on governing behaviour towards “better” individual choices that are made possible through rationalizing, evaluating, and awareness-raising: a great number of initiatives fall into this category. We propose another ideal type, which emerged from our analysis: representations of change based on recognizing the social embeddedness of practices across systems. We suggest that initiatives that fall into this category seek to transform how everyday life plays out, in relation to energy services and systems of provision, while challenging dominant norms around individuals as central to change. In relation to both ideal types, Living Labs are an interesting proposition – or efforts towards the co-production of knowledge, the participation of diverse groups of people in initiative design and implementation, while aiming towards more durable, effective and innovative solutions. Ultimately, the ideal type of “transformative and socially-embedded change” is more radical than “governing behavior” because it goes beyond forms of substitution, which are implied in most energy transition policies. Substituting more efficiency for less efficiency, for example, or substituting an irrational subject for a more rational decision-maker. A question remains: how to tackle transformative change at a larger scale, addressing institutions, systems of provision, and dominant worldviews.

## 4.5 HEGEMONIC AND COUNTER-HEGEMONIC THEORIES-IN-USE IN SUSTAINABLE ENERGY INITIATIVES

*Written by Julia Backhaus, Rachel Greer, Kaisa Matschoss and Harro van Lente*

Sustainable energy initiatives targeting households typically draw on assumptions about human nature and ways to influence behavior which come with preferred goals and measures. The notion of ‘theory-in-use’, meaning “the world view and values implied by ... maps [used] to take action” (Argyris 1993), offers a useful lens to trace common assumptions about how to best bring about sustainable energy use. Appropriating this lens, this paper discusses similarities and differences of ‘theories-in-use’ in a sample of 155 past and present sustainable energy initiatives targeting private households in, Finland, Spain and the Netherlands, collected in the framework of the European ENERGISE project.

Preliminary results suggest that by relying on information, economic incentives or technological fixes, most sustainable energy initiatives resonate with and are informed by socio-politico-economically hegemonic world views and try to appeal to individual ‘rational actors’. Many community-led or community-focused initiatives, however, appear to try to raise to the challenge of addressing energy use as a complex phenomenon emerging from and shaped by social needs, social structures and technical infrastructures.

## 4.6 INITIATIVES FOCUSING ON ENERGY EFFICIENCY, REDUCTION, DEGROWTH AND SUFFICIENCY IN EUROPEAN COUNTRIES - INSIGHTS BASED ON THE ENERGISE DATABASE

*Written by Edina Vadovics, Kristóf Vadovics and Lidija Zivcic*

Energy efficiency, energy use reduction, degrowth and energy sufficiency are all needed for more sustainable energy consumption at the household level. However, at the moment, there is some clarification needed as to how all these different terms relate to one another, and how they build on and complement one another within the overall framework of ensuring that a sufficient and fair amount of energy can be consumed by everyone within the limits of the planet. Following the explanation of this overall framework, this paper will introduce the ENERGISE database of European sustainable energy consumption initiatives (SECIs). ENERGISE is an innovative pan-European research initiative to achieve a greater scientific understanding of the social and cultural influences on energy consumption. ENERGISE develops, tests and assesses options aimed at transforming the quality and quantity of energy use among households and communities across Europe. As part of these efforts, the ENERGISE international research team has collected 1000+ SECIs from 30 European countries and will present them in a publicly available (and extendable) database from spring 2018. As part of the paper we will present a more detailed analysis of SECIs collected using the framework introduced earlier, with specific attention to the 3 countries participating in the organization of the session: Germany, Hungary and Slovenia. Finally, we will conclude with suggestions for research, practice and policy.

## 4.7 CHARACTERISTICS AND GOVERNANCE OF URBAN SUSTAINABLE ENERGY INITIATIVES ACROSS EUROPE

*Written by Gary Goggins, Frances Fahy and Charlotte Jensen*

With over half of the world's population now living in urban areas, reducing domestic energy use in cities has become a key focus in achieving sustainability goals. Recent and on-going efforts to address excess energy use in households have been initiated by a range of different organizations and actors, and have focused on a number of different areas and target groups. This paper presents evidence from the analysis of a database of 249 sustainable energy initiatives that have been implemented at various scales in and across urban areas in Europe. Drawing on the sustainable transitions literature, the paper examines common trends and characteristics in the type of initiatives that are promoted, including the scale at which they are administered, the intended target group, and implementation method. A second focus of enquiry centers on the governance mechanisms that underpin these initiatives. Here, attention turns to the main actors responsible for driving initiatives, the frequency and various forms of implementing partnerships, and the funding source through which the selected initiatives are financed. Findings reveal that while there is diversity in approaches to reducing household energy use, there remains significant scope to further tailor initiatives to the particular needs and behaviors of households. To overcome the social and cultural challenges in reducing energy use, there needs to be a greater emphasis on citizen engagement throughout the design and implementation of sustainable energy initiatives. To achieve this goal, it is crucial that public sector funding and support remains in place.

## 5 RESULTING DISSEMINATION TO PUBLIC AND EXPERT AUDIENCES

There are a number of plans and strategies for public dissemination of WP2 results. First of all, the public ENERGISE 1000+ SECI Database, which was developed as part of ENERGISE D2.3, has been launched on the ENERGISE webpage <http://energise-project.eu/projects>. The database will be announced widely through a press release (see 5.1). Further, WP2 results will be inputting to the development of ENERGISE D7.13 (General Project Summary Brochure), as part of the WP7 Dissemination-Communication-Exploitation work. The Database Press Release and the WP2 Results plan for incorporation in ENERGISE D7.13 are presented below.

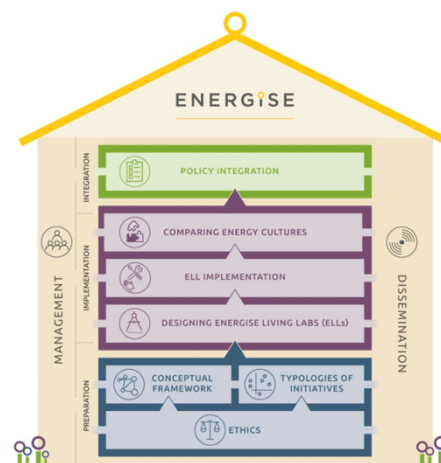
### 5.1 PRESS RELEASE

#### International ENERGISE team launches new online interactive dataset, which maps over 1000 sustainable energy initiatives across Europe!

In response to the increasingly urgent climate change challenge, the European Commission is promoting several climate and energy targets with the goal to reduce greenhouse gas emissions and decarbonise the economy. However, the current pace and scale of change is insufficient to achieve the necessary sustainability transitions in the energy system; there is an increasing realisation that meeting energy targets is highly dependent on several complex aspects of final energy consumption patterns or energy demand.

Recognising these concerns, [ENERGISE](#) is an innovative pan-European research initiative to achieve a greater scientific understanding of the social and cultural influences on energy consumption. Funded under the EU Horizon 2020 programme for three years (2016-2019), ENERGISE develops, tests and assesses options for a bottom-up transformation of energy use in households and communities across Europe.

The international [ENERGISE research team](#) has conducted a systematic classification of over 1,000 existing sustainable energy consumption initiatives (SECIs) from 30 European countries. As the lead on this ambitious task, colleagues at Aalborg University in Denmark have just launched these data in an open access [online database](#). The database informs users about the content, scale and objectives of SECIs that specifically address final consumption, as well as providing an assessment of how the challenge of addressing excessive energy consumption is understood. The database and interactive map will be an invaluable resource for energy practitioners, researchers, community groups or anyone seeking good practice examples of energy initiatives from all over Europe.



SECI have been divided into four overall categories for how they approach the challenge of climate change and the need for energy use reduction (see examples in Annex below).

According to an increasing body of research, "Complex Interactions" and "Everyday Life Situations" initiatives and programmes that treat energy consumption as a result of social practices and complex interactions between changes in technology, business models, services, and the social and temporal organisation of everyday life, are more likely to bring about meaningful and lasting changes in energy consumption than those focusing on "Individual Behaviour" and "Technologies" only. As the ENERGISE team's research reveals, only a small number of the SECIs reviewed are in this category.

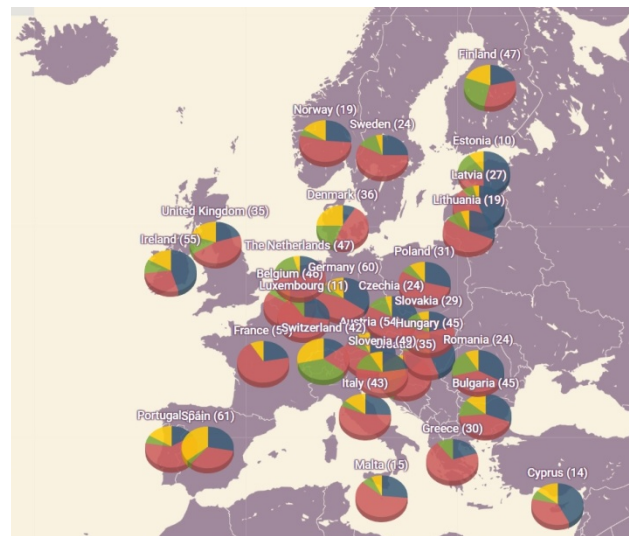
## VISIT OUR DATABASE AND GET IN TOUCH

Visit our Open Access Database at:  
<http://energise-project.eu/projects>

To learn more about the methodology we developed for collecting data please see:  
[Identification of Key Success Factors and Related Indicators](#)

To read more about our classification (Problem Framing Typology) see:  
[Construction of Typologies of Sustainable Energy Consumption Initiatives \(SECIs\)](#)

Finally, if you know of SECIs that are not yet included in the database, get in touch with us at <http://energise-project.eu/> or write to [info@energise-project.eu](mailto:info@energise-project.eu)



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## ENERGISE

- o ENERGISE stands for European Network for Research, Good Practice and Innovation for Sustainable Energy
- o Coordinated by the National University of Ireland, Galway
- o Funded by the European Union's Horizon2020 programme
- o Web: <http://www.energise-project.eu/>, Email: [info@energise-project.eu](mailto:info@energise-project.eu)

### 5.1.1 ISSUING THE PRESS RELEASE

10 national (translated) press releases will be issued in the 10 ENERGISE Partner countries at the same time as the general press release is released cross-nationally. Stakeholders identified as part of WP7 will be targeted as part of issuing the press release.

## 5.2 PLANS FOR INCORPORATION OF WP2 OUTCOMES IN D7.13

The objective of producing D7.13 is to have an easy-to-use publication that summarises the processes and outcomes of the ENERGISE project for an expert, but not necessarily academic audience. The publication should be suitable for use by experts and academics as well as policy-makers and practitioners. Thus, in this publication, all work packages, the methodology used (if relevant) and outcomes will be introduced in a reader-friendly and easily accessible way. However, as D7.13 will only be written and produced towards the end of the project, at this point we are only able to provide preliminary information about it, and relate preliminary plans. Consequently, the plans detailed below may change by the time actual work on D7.13 starts.

### THE DRAFT CONTENTS PLAN OF THE CHAPTER ON WP2

- **About the SECI database:**
  - Brief summary of the database development process;
  - Introducing the database: which types of initiatives, which countries, etc. are covered;
  - The use of the database and the data it contains in the ENERGISE project: e.g. to inform ELLs, analyse, inform policy-making, etc.
  - Future plans for the database: how we're planning to keep the database online after the project, how everyone can contribute
- **Peek into the database: example cases:**
  - A collection of interesting/inspiring cases (1-2 from each ENERGISE partner country) to illustrate the database - with a very brief description and ideally with pictures.  
The objective of having this collection is also to show the variety found in the database.
- **Introducing the typologies the consortium developed based on the database:** a brief description of the typologies the ENERGISE team developed during the project, e.g.:
  - summary of the typology presented in D2.4;
  - sufficiency-efficiency typology as presented in Fahy et al.;
  - any other typologies that are still to be developed by the ENERGISE team;



- country specific typologies members of the ENERGISE team have developed.

Except for the typology already published in D2.4, all other sub-sections will be written in cooperation with relevant ENERGISE partners.

### **TIMELINE FOR DEVELOPING D7.13 (AND THE WP2 CONTRIBUTION)**

- Contents plan developed for D7.13: **M29**
- Co-authors (ENERGISE partners) writing their chapter/section contributions: **M31**
- Assembling all contents and review of draft 1 by ENERGISE team: **M32**
- Producing draft 2 (rewriting, design, etc.): **M34**
- Review of draft 2 by ENERGISE team: **M35**
- Producing final draft: **M36**

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