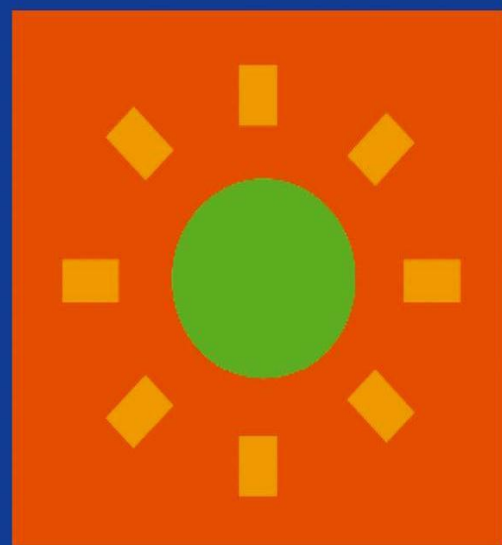




J R C T E C H N I C A L R E P O R T S

# The 2012 European GreenLight Programme Evaluation

Gueorgui Trenev  
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2014



**GREENLIGHT**



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# **The 2012 European GreenLight Programme Evaluation**

**By GUEORGUI TRENEV and PAOLO BERTOLDI**

**JOINT RESEARCH CENTRE**



GreeeLight is a voluntary programme where private and public organisations commit towards the European Commission to upgrading their existing lighting and to designing new installations, using energy efficient lighting systems when the energy savings justify the investment and lightning quality is maintained or improved.



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## 2. Executive Summary

The GreenLight Programme is a voluntary activation programme launched by the European Commission in 2000 to increase non-residential lighting energy efficiency. By the end of 2012, 731 Partners from across the European Union, plus Norway and Switzerland, participated in GreenLight. This report assesses the achievements of the scheme in the year 2012. For 2012, 46 new Partners joined the programme.

The scope of the current analysis is to provide an insight into how the programme developed during the assessed period, both in terms of type and scope of new registrations, energy, cost savings and technologies involved. The comparison is based on the previous evaluation reports – the 2000-2008 Report, which represents an assessment of the programme over the period of eight years, the 2009 Report, the 2010 Report, and the 2011 Report, which contributed an update. Regular spread sheet analysis was used for the evaluation. 4 Partners within 2012 registered multiple projects, therefore the main basis for the analysis are the 103 projects, which were listed by the 46 Partners.

As has been already mentioned in the previous evaluation, a limitation on this analysis derives from the fact that often inadequate data is available. Out of the 103 projects that joined 2012 GreenLight Programme in 7 reports the data sent can be considered insufficient mainly concerning the upgraded surface. In addition, there were inconsistencies and gaps in the data reported resulting in important technical or financial details missing. A complete overview of the data provided by the Partners can be found in Table 6.5.

In 2006 a special emphasis was started to enlarge the GreenLight programme to the new Member States of the European Union. As a result the network of Partners further expanded. However, in the year 2012, no new Partners from the New Member States were registered. Partners within 2012 came from only 7 countries of the European Union. The country with the most Partners is Belgium – 28 and the country with the most registered projects is France, representing 60 projects from 8 partners.

The 2000-2008 Report showed a total annual saving of all Partners of 241 GWh/a for the reported period of eight years. In 2009, an additional saving amounted to about 16 GWh/year and Partners joined until the end of 2010 saved an amount of very respectable 40.7 GWh/a. In 2011, the reported annual savings amount to 10.6 GWh/a. In 2012 the amount of savings reached 7.9 GWh/a.

In the year 2012 there were no applications to outdoor projects. About 50 % of the projects were implemented in the category “Production Sites”. More than half (52%) of the total of savings was achieved in projects in the same category.

Savings were achieved primarily through gradually upgrading technologies. The majority of projects exchanged fluorescent with more efficient fluorescent light bulbs. 22% of the absolute energy savings are achieved implementing LED - technology of light-emitting diodes. In the year 2012 the development in terms of savings are very good. Majority of the projects reached a saving above 50 %. Also the number of registered partners is positive compared to the previous year.

In total, all 731 GreenLight Partners reach the savings of more than 316 GWh of electricity saved annually through efficient lighting by the end of 2012.

### 3. Introduction

In the year 2000, the European Commission launched the European GreenLight Programme to convince end-users to adopt energy efficient lighting technologies and systems, as well as to foster a gradual market conversion. GreenLight is promoting energy efficient lighting in non-residential premises and it is based on a voluntary participation. This Programme is managed by the Joint Research Centre of the European Commission.

Any European organisation - public or private, can join the programme as a GreenLight Partner or as a GreenLight Endorser. In the case in which energy savings can justify the relative investments, and that the lighting quality can be maintained or improved, Partner organisations commit themselves to upgrade their lighting systems in their existing facilities, and/or to install the best available energy efficient technologies in their new buildings, or outdoors. Endorser organisations are promoting the GreenLight Programme to potential new Partners which might be, either in their country of origin, or in any other country in the EU. Their role is to expand the network of Partners as well as to provide assistance to Partners in their application process. Most importantly, it is to promote the proper implementation of energy saving measures.

Joining the programme allows Partners to benefit from a wide public recognition for their efforts to improve the energy efficiency of their lighting systems in their organisation.

The principles for participating in the GreenLight Programme are detailed in the respective guidelines for Partners and Endorsers. Partners have to report to the Joint Research Centre on their savings whenever they implement saving measures. Endorsers have to submit a Promotion Plan as part of their application, detailing the specific actions that they intend to take to promote the programme to potential Partners. Endorsers are expected to submit a Promotion Plan each year.

Besides the Joint Research Centre, National Contact Points have been created in most of the member states, covering a transitional role in the Green Light Programme: they constitute the bridge between the Joint Research Centre and interested local organisations. The National Contact Points provide information and guide potential Partners and Endorsers through the application process. The active National Contact Points submit applications to the Joint Research Centre on a regular basis.

Up until now, the achievements and particularities of the technologies adapted within the GreenLight Programme have been evaluated in two reports – the 2000-2008 Evaluation Report as well as the 2009 Evaluation Report. In addition, motivations of the Partners have been assessed within a Survey Report based on questionnaires, which has been published for the years 2008 to 2010. Case Studies and Catalogues representing all GreenLight Partners are available on a regular annual basis.

The current Report is primarily focused on:

- The split of Partners by sector of activity
- The Partner's savings achieved (energy saved, costs saved, etc)
- The correlation between the investments and the savings
- The type of technologies applied.



## 4. Methods

This report is based on the information and documentation provided by the Partners that have applied to the GreenLight Programme and have reported on the results achieved through their own GreenLight project.

The period assessed is the calendar year 2012 and included all information reported by Partners newly registered within this period.

The assessment was carried out through the collection of information submitted by the Partners and its subsequent analysis through spreadsheets, tables and graphs. Energy savings are calculated in the database by subtracting the consumption in kWh/a after the project from the consumption before the project. Costs savings in Euro are calculated in the database comparing the running cost (Euro/Year) before and after the programme implementation. Attention is given to the relation between the investments and the savings achieved, this representing the key driver in convincing new Partners, and to that matter any organisation outside of the GreenLight Programme to invest into energy saving projects. The spreadsheet also includes other data, if available, such as the project's investment payback time, the area interested by the intervention (size in square meters and whether indoors or outdoors) and the type of lamps and luminaires installed. The analysis is also split into different categories. These categories are based on the business sector of the Partners and also on the type of project implemented.

Based on the analysis of the previous years, the following categories were identified:

- A: Airports
- C: City and Public Buildings
- CP: Car Parks
- E: Educational Buildings
- HP: Hospitals and Medical Centres
- HR: Hotel and Restaurants
- LT: Logistic and Transportation
- O: Others
- OS: Street Lighting
- P: Production Sites
- PT: Public Transportation
- R: Retail and Supermarkets
- S: Services and Offices
- SP: Sport Halls
- T: Telecommunications
- U: Unclear

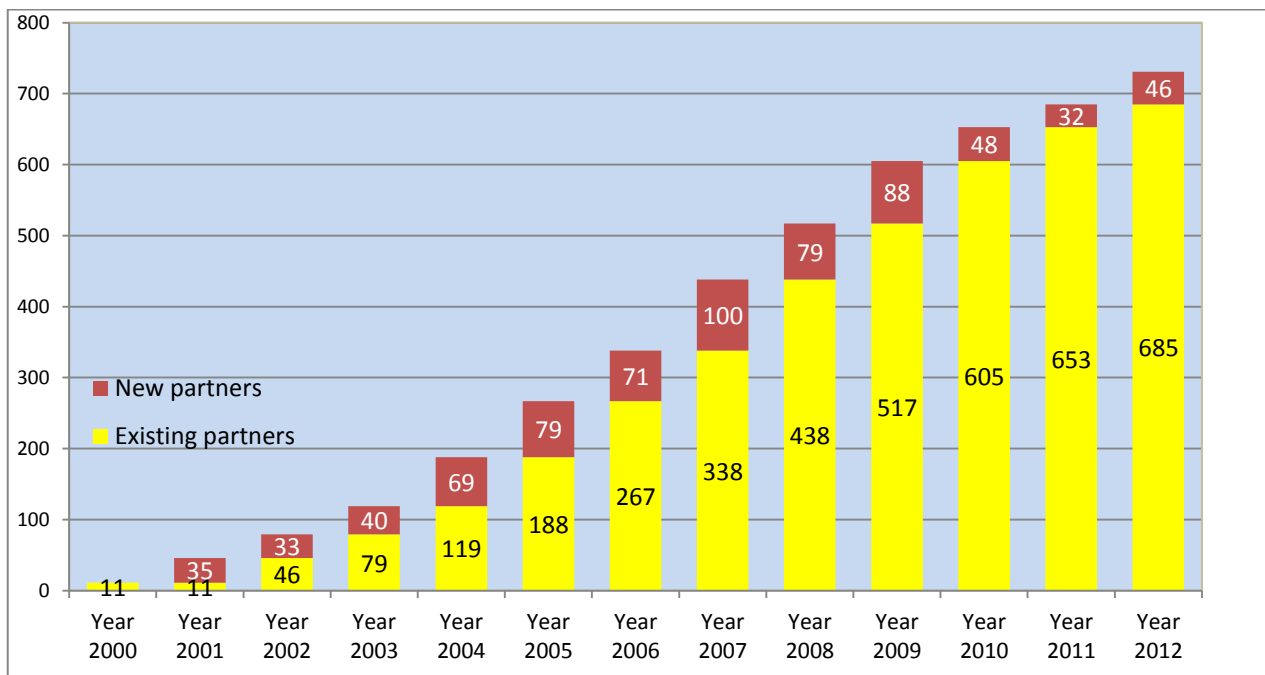
Within the year 2012, there were Projects within ten categories: City and Public Buildings, Car Parks, Educational Buildings, Hotel and Restaurants, Logistics and Transportation, Production Sites, Retail and Supermarkets, Services and Offices and Others. All projects were implemented indoors. 4 Partners applied multiple projects, one of them different in geographical location and in different buildings complexes. Thus the elaboration of the technical data and its analysis focused more on the reported 103 projects rather than on the number of 46 Partners.

## 6. Results

### 6.1 Evolution of the GreenLight Programme in 2012

By the end of 2012, 46 new Partners joined GreenLight bringing the total number of Partners to 731. The new entry for 2012 constitutes a bigger number of new partners compared to the previous year. This is the first growth since the year of 2007 and after the continuation of the trend of decreasing of new entries after the peak of registrations in 2007. Trend of increasing could be overcome with additional promotional activities and additional budgets to reach new target groups. Figure 6.1 and table 6.1 show the number of new partners that joined the GreenLight Programme each year from 2000 to 2012 as well as the number of already existing Partners.

**Figure 6.1 GreenLight 2000 to 2012: Development of New Registrations**



**Table 6.1 GreenLight 2000 to 2012: Number of Partners Joining**

Year	Existing	New
2000	0	11
2001	11	35
2002	46	33
2003	79	40
2004	119	69
2005	188	79
2006	267	71
2007	338	100
2008	438	79
2009	517	88
2010	605	48
2011	653	32
2012	685	46
<b>Total</b>	<b>731</b>	

## 6.2 Composition of Partners

The size of the Partners varies to a large degree. Some companies are large international groups with thousands of indoor square meters, whilst others are small companies. Implemented projects are in industrial halls, offices, stores, shops, hangars, parking, public buildings, restaurants, covering from 80 to more than 17000 square meter.

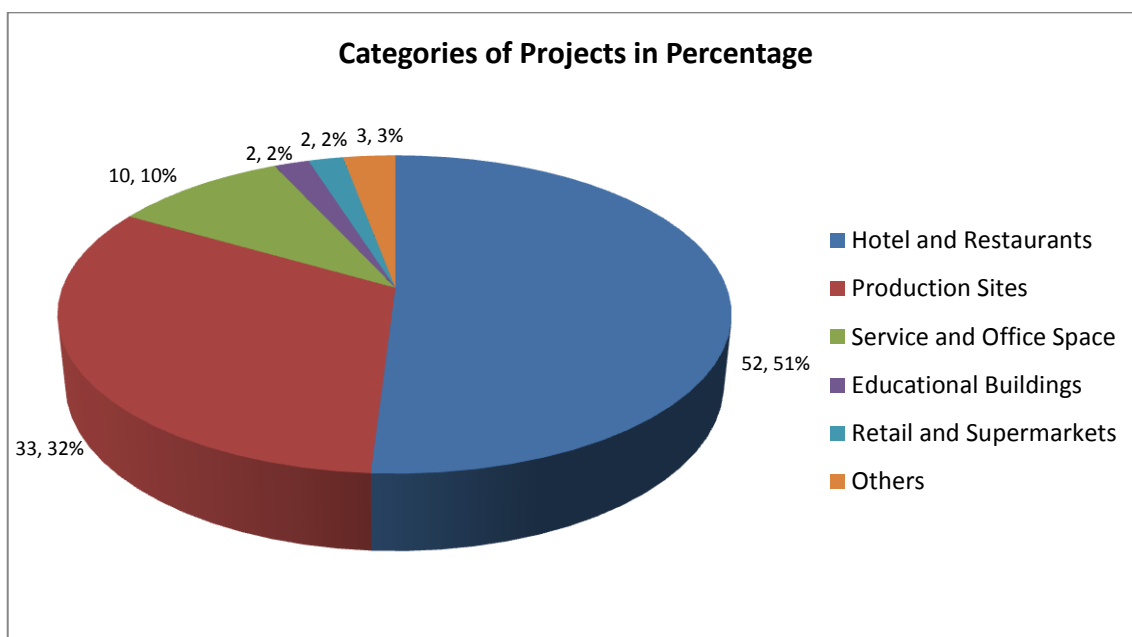
There were seven categories covered in 2012: Car Parks, Educational Buildings, Hotel and Restaurants, Production Sites, Retail and Supermarkets, Service and Offices and Others.

The 46 Partners from 2012 came from 7 countries of the European Union as well and submitted a total of 103 projects. 4 Partners submitted multiple projects and implemented thus upgrading and improvements of lightings in more than one setting, such as building complex, business fraction or area. There were no projects submitted for the so called New Member States.

Table 6.2 GreenLight 2012: Number of Projects by Country	
Country	N° of projects
France	60
Belgium	32
Spain	5
Germany	3
Netherlands	1
Portugal	1
United Kingdom	1
<b>total</b>	<b>103</b>

Figure 6.2 shows the share of the different categories of the GreenLight Programme projects implemented in 2012.

Figure 6.2 GreenLight 2012: Categories of Projects in Percentage

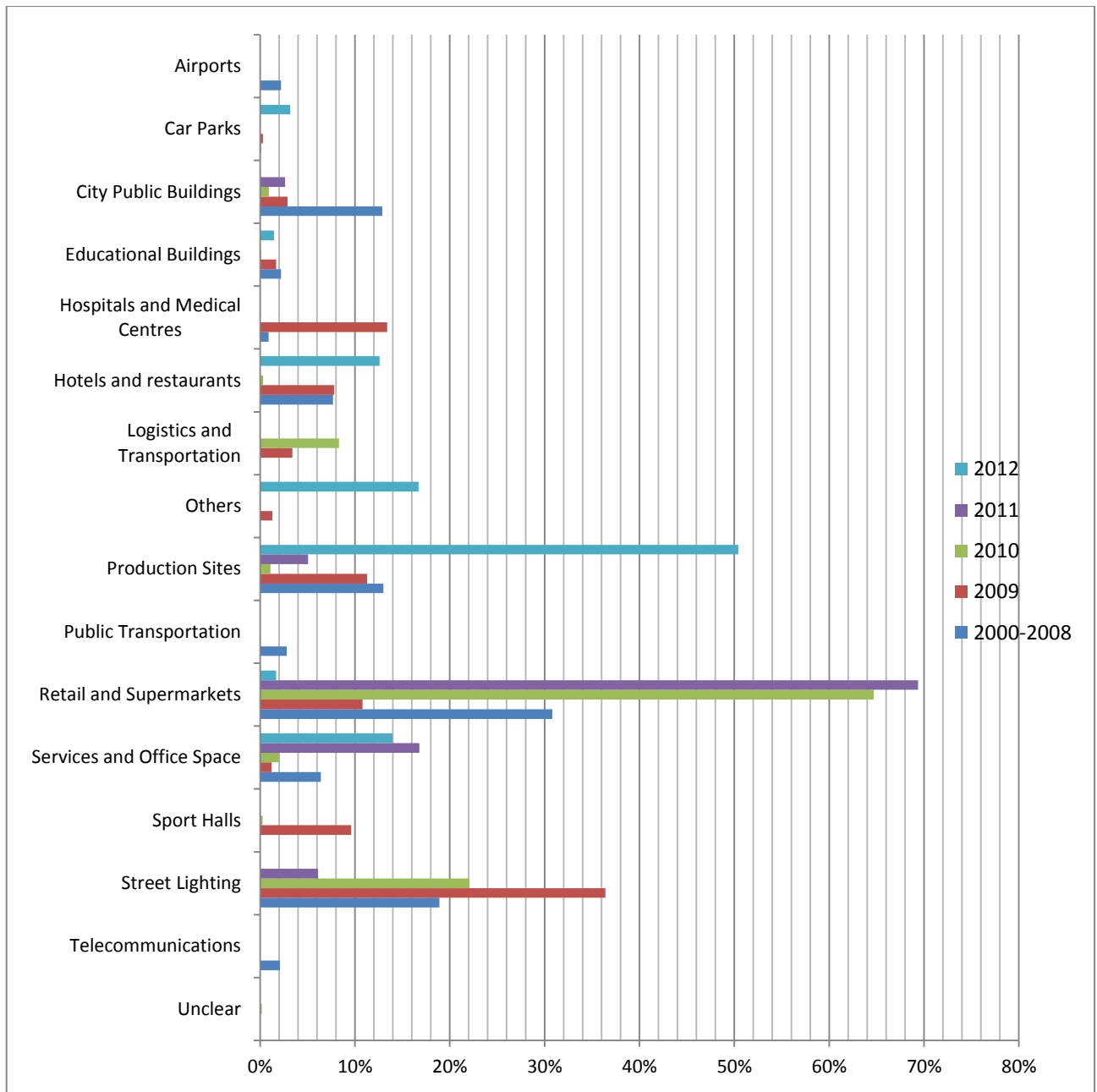


In 2012 the largest fraction of projects by far came from the category “Hotels and Restaurants”. This is a considerable change from last year, where the largest fraction was projects in the category “Retail and Supermarkets”. Neither the largest category of 2010 – which was “Street Lighting” – nor the classical indoor public activity field “Public Buildings”, which was the largest category in the assessment of the scheme 2000-2008 according to number had much weight in 2012.

Category	N° of projects
Hotels and Restaurants	52
Production Sites	33
Service and Office Space	10
Educational Buildings	2
Retail and Supermarkets	2
Car Parks	1
Others	3
<b>total</b>	<b>103</b>

<b>* category with highest percentage within Report</b>					
Category	2000-2008	2009	2010	2011	2012
Airports	2,2%	-	-	-	-
Car Parks	0,1%	0,3%	-	-	3,17%
City Public Buildings	12,9%	2,9%	0,92%	2,64%	-
Educational Buildings	2,2%	1,7%	0,10%	-	1,46%
Hospitals and Medical Centres	0,9%	13,4%	-	-	-
Hotels and Restaurants	7,7%	7,8%	0,34%	-	12,60%
Logistics and Transportation	-	3,4%	8,33%	-	-
Others	-	1,3%	-	-	16,70%
Production Sites	13,0%	11,3%	1,11%	5,06%	<b>50,41%</b>
Public Transportation	2,8%	-	0,00%	-	-
Retail and Supermarkets	<b>30,80%</b>	10,8%	<b>64,70%</b>	<b>69,36%</b>	1,70%
Services and Office Space	6,4%	1,2%	2,01%	16,81%	13,96%
Sports Halls	-	9,6%	0,27%	-	-
Street Lighting	18,9%	<b>36,40%</b>	22,05%	6,13%	-
Telecommunications	2,1%	-	-	-	-
Unclear	-	-	0,18%	-	-
<b>total</b>	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>	<b>100%</b>

Figure 6.3 GreenLight 2000 to 2012: Savings by Category in Percentage According to Reports



### 6.3. Quality of Reporting

The total number of projects registered in 2012 amounted to 103, whilst the total number of Partners joining was 46. Four Partners listed multiple projects. In general, the quality of reporting is satisfactory. Only very little information was not provided as to the investments, payback time period or the type of ballast and luminaires adopted. The results have been submitted in many different ways, both through the application form supplied by the GreenLight Programme as well as in the form of a free submission of information on the projects. The non-homogeneous submission of data has been an obstacle for the proper comparison and evaluation of both the technical and economic information. Common and mandatory reporting should be encouraged and enforced. In Table 6.6 all percentage data reported per project can be seen.

<b>Table 6.5 GreenLight 2012: Type of Data submitted by the Partners</b>		
Numbers of partners in the research		46
Numbers of projects in the research		103
Type of data	No of projects, who submitted this data	In percent of total
Country	103	100,00%
Sector	103	100,00%
Indoor/Outdoor	103	100,00%
Lamp changes	103	100,00%
Effective Energy Savings in %	103	100,00%
Lamps after 1	102	99,03%
Lamps before 1	102	99,03%
Effective Energy Savings kWh/a	101	98,06%
Consumption before kWh/a	101	98,06%
Consumption after kWh/a	101	98,06%
Project Name	96	93,20%
Payback in years	91	88,35%
Investment costs €	91	88,35%
Upgraded surface in m2	90	87,38%
Running cost in €/a before	85	82,52%
Running cost in €/a after	85	82,52%
Savings in running costs €/a	84	81,56%
Luminaire changes	84	81,56%
Ballast type changes	75	72,82%
Ballast before	72	69,90%
Ballast after	72	69,90%
Reflector before	72	69,90%
Reflector after	72	69,90%
Lamps before 2	72	69,90%
Lamps after 2	71	68,93%
Lamps before 3	65	63,11%
Lamps after 3	64	62,14%
Lighting control upgrades	24	23,30%
Description	20	19,42%

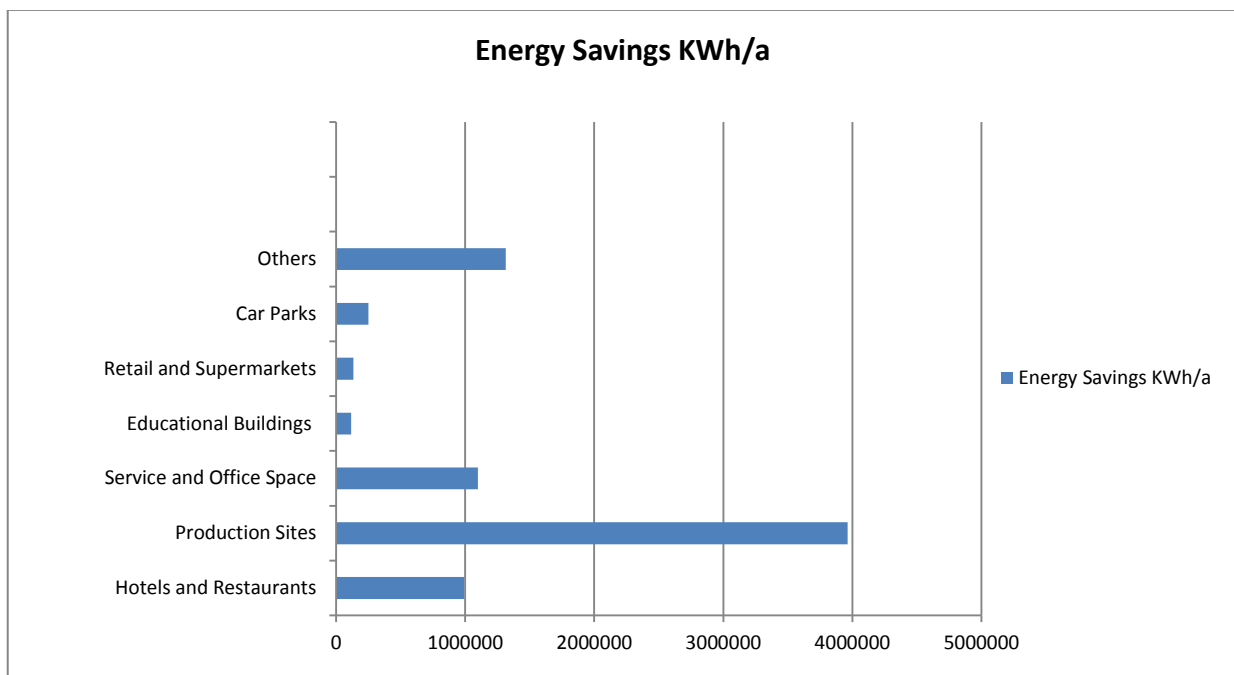
### 6.4 Energy Savings

In total, the 2012 GreenLight Partners achieved to save a 7.862.005 kWh/a or approximately 7,9 GWh per year.

<b>Table 6.6 GreenLight 2000 to 2012: Comparison Energy Saving Totals and Average per Partner</b>			
<b>Year</b>	<b>Total number of partners</b>	<b>Total savings in kWh/a</b>	<b>Average saving in kWh/a per partner</b>
2000	11	8.839.674,00	803.606,73
2001	35	46.312.204,00	1.323.205,83
2002	33	31.506.482,00	954.741,88
2003	40	50.364.496,03	1.259.112,40
2004	69	13.484.372,00	195.425,68
2005	79	3.142.521,59	39.778,75
2006	71	29.461.975,90	414.957,41
2007	100	36.892.976,91	368.929,77
2008	79	21.027.109,42	266.165,94
2009	88	15.323.958,82	174.135,90
2010	48	40.705.956,15	848.040,75
2011	32	10.591.957,36	330.998,67
2012	46	7.862.005,00	170.913,15
<b>total</b>	<b>731</b>	<b>315.515.689,18</b>	<b>449.129,47</b>

The highest amount of energy with 50,41 % was saved in the single category of “Production Sites”.

**Figure 6.4 GreenLight 2012: Total Energy Savings by Category**

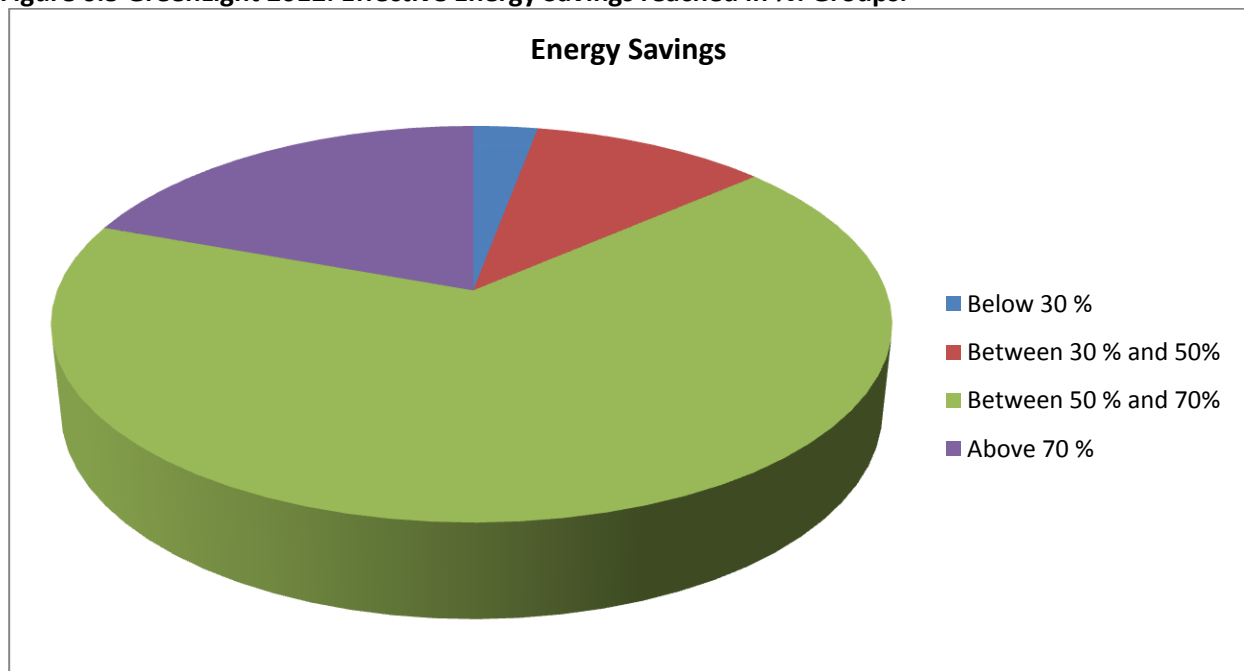


<b>Table 6.7 GreenLight 2012: Total and Average Savings by Category</b>			
<b>Category</b>	<b>Number of projects</b>	<b>Total savings in KWh/a</b>	<b>Average savings per project in kWh/a</b>
Hotels and Restaurants	52	991.000	19.057,69
Production Sites	33	3.963.236	120.098,88
Service and Office Space	10	1.097.535	121.948,33
Educational Buildings	2	114.785	57.392,50
Retail and Supermarkets	2	133.654	66.827,00
Car Parks	1	249.500	249.500,00
Others	3	1.312.955	656.477,50
<b>total</b>	<b>103</b>	<b>7.862.005</b>	<b>77.841,60</b>

*Note: the average has only been calculated for those partners, who stated savings, i.e. for the category "Service and Office Space", 1 project did not indicate a total of savings; therefore the average here was calculated for 9 projects, for the category "Others", 1 project did not indicate a total of savings therefore the average here was calculated for 2 projects*

As regards the percentage of effective energy savings reached, the data shows variation. However, it has to be noted that the majority of effective energy savings reached are above 50 % and thus represent a clear bigger achievement than in the previous report of 2011.

**Figure 6.5 GreenLight 2012: Effective Energy Savings reached in %. Groups.**





Percentage range	No of projects
20-25 %	1
25-30 %	2
30-35 %	2
35-40 %	2
40-45 %	3
45-50 %	4
50-55 %	5
55-60 %	3
60-65 %	5
65-70 %	56
70-75 %	8
75-80 %	8
80-85 %	1
85-90 %	2
90-95 %	1
<b>total</b>	<b>103</b>

The highest percentage in savings with 50,41% was reached in the category “Production Sites”, whereas the smallest percentage in savings with 1,46% was reached in the category of “Educational Buildings”. Table 6.9 shows the groupings of the projects according to the percentage range of energy savings achieved. When divided into the different categories the category of “Production Sites” with a total of 33 projects, that have stated their percentage of savings, can be considered to be the category with the highest achieved savings.

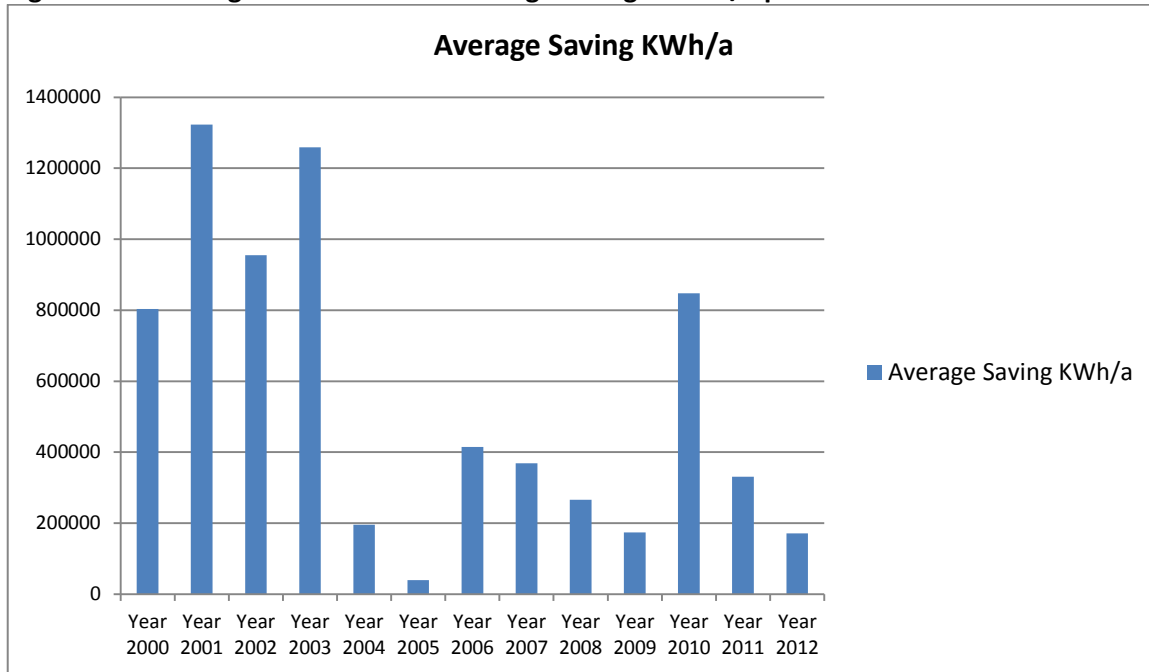
Percentage range	Categories							total
	CP	EB	HR	PS	RS	SO	O	
20-25 %						1		1
25-30 %				1		1		2
30-35 %						1	1	2
35-40 %				2				2
40-45 %				2	1			3
45-50 %				3		1		4
50-55 %				4		1		5
55-60 %		2		1				3
60-65 %	1			4				5
65-70 %			52	1	1	1	1	56
70-75 %				5		3		8
75-80 %				8				8
80-85 %						1		1
85-90 %				2				2
90-95 %							1	1
<b>total</b>	<b>1</b>	<b>2</b>	<b>52</b>	<b>33</b>	<b>2</b>	<b>10</b>	<b>3</b>	<b>103</b>

CP: Car Parks  
 EB: Educational Buildings  
 HR: Hotels and Restaurants  
 PS: Production Sites

- R: Retail and Supermarkets
- SO: Services and Offices
- O: Others

The average percentage of savings reached in 2012 is 60,95% and it's significantly higher than average percentage of savings in 2011 which is 32,91%. It's constitutes an increase of 28 % after the decrease of 14% of the average related to the year before, where the average in 2010 was 46,69 % of energy savings reached. The average saved by project is not identical with the average saved per partner, because a partner could list multiple projects. The average savings per partner in KWh per year decrease compared to previous two years and for the year of 2012 it's 170.913,15 KWh/a.

**Figure 6.6 GreenLight 2000 to 2012: Average saving in kWh/a per Partner and Year**



Year	Savings in kWh/a	N° of Partners per year	Average saving in kWh/a per Partner
2000	8.839.674,00	9	803.606,73
2001	46.312.204,00	26	1.323.205,83
2002	31.506.482,00	26	954.741,88
2003	50.364.496,03	30	1.259.112,40
2004	13.484.372,00	51	195.425,68
2005	3.142.521,59	20	39.778,75
2006	29.461.975,90	42	414.957,41
2007	36.892.976,91	75	368.929,77
2008	21.027.109,42	70	266.165,94
2009	15.993.341,22	53	174.135,90
2010	40.705.956,15	48	848.040,75
2011	10.591.957,36	32	330.998,66
2012	7.862.005,00	46	170.913,15
<b>total</b>	<b>315.515.689,18</b>	<b>731</b>	<b>449.129,47</b>

## 6.5 Cost of Savings and Investments

The data shows that within the category "Hotels and Restaurants" the largest amount regarding the costs was saved on average per partner.

<b>Table 6.11 GreenLight 2012: Total and Average Cost Savings by Category</b>				
Category	N° of projects	N° of projects (data available)	Total savings in running cost in €/a	Average savings per partner in running cost in €/a
Hotels and Restaurants	52	52	122.655 €	122.655 €
Production Sites	33	5	44.721 €	8.944 €
Service and Office Space	10	6	106.327 €	17.721,17 €
Educational Buildings	2	2	3.861 €	1.930,50 €
Retails and Supermarkets	2	1	8.400 €	8.400 €
Car Parks	1	1	17.500 €	17.500 €
Others	3	1	61.548 €	61.548 €
<b>total</b>	<b>103</b>	<b>68</b>	<b>365.012 €</b>	<b>14.032 €</b>

The figure shows average savings per partner in running cost in €/a, and it has been estimated only for those partners/projects which have submitted data about it in the reporting forms.

In the category "Hotels and Restaurants" there is only one partner with multiple projects.

Data on the payback period was only available for 55 % or 57 of the projects. The table below clearly shows that the most frequent payback time is between 2 and four years. The average of these values given, is a payback period of 3,58 years. However it is very difficult to further elaborate on this figure due to the limited number of figures given. The smallest payback period given is 1,5 year and the highest was indicated with 5,8 years.

<b>Table 6.12 GreenLight 2012: Payback Time in Years Grouped by Technology Implemented</b>				
Payback Time	T5	T8	LED	N° of projects
1,5 – 2 Years	4			4
2 – 2,5 Years	6			6
2,5 – 3 Years	6			6
3 – 3,5 Years	6		1	7
3,5 – 4 Years	6		26	32
4 – 4,5 Years	1			1
4,5 – 5 Years				
5 – 5,5 Years				
5,5 – 6 Years	1			1
N/A	17	1	28	46
<b>total</b>	<b>47</b>	<b>1</b>	<b>55</b>	<b>103</b>

T5: 16mm fluorescent (T5)  
 T8: 26mm fluorescent (T8)  
 LED: Light-emitting diode  
 N/A: Data not available

Regarding the investments costs for relighting, the data given is not satisfactory. Only part of the projects indicated their investments varying from 1.440 to 240.000 €. Because of the small numbers available a statement on the correlation between investments made and achieved savings is not feasible.

Also based on this scarce data, it is also more than difficult to establish clear statements about the ratio of made investment to the savings achieved in kWh/a.

## 6.6 Technological Interventions

As regards the technological aspects of the projects, the data received was not very detailed, even if the percentage of project given information on lamp changes was much higher than in the report before. Within the given templates, Partners have the option to report three substitutions, but often reported only a single change.

Within the last report, the highest lamp change implemented was from T8 (26 mm fluorescent) to T5 (16 mm fluorescent). Within this report, the majority of changes were from Metal halide to LED (39 projects), but LED projects have been made from 4 partners only. Changes from fluorescent to fluorescent lamps with a higher efficiency have been made in 8 projects. There are 4 projects in which partners replaced the old halogen lamps with T5 fluorescent and 4 projects where metal halide lamps have been replaced to T5. In 6 projects standard high pressure lamps have been replaced with T5.

**Table 6.13 GreenLight 2012: Lamp Changes**

Lamps before 1	Lamps after 1				total
	T5	T8	LED	n/a	
16mm fluorescent (T5)			14		14
26mm fluorescent (T8)	8				8
Halogen	4		1		5
Metal halide	4	1	39		44
Standard high pressure mercury	6				6
Standard high pressure sodium					
Unspecified fluorescent	2		1		3
N/A	23				23
<b>total</b>	<b>47</b>	<b>1</b>	<b>55</b>		<b>103</b>

T5: 16mm fluorescent (T5)

T8: 26mm fluorescent (T8)

LED: Light-emitting diode

N/A: Data not available

The lighting technologies applied are a continuation of the trend outlined in the 2000-2008 Report and well as in the follow-up 2009 Report, which means that a transition from less efficient incandescent lamps (which was only mentioned in one single project in 2010 and not at all within 2011), magnetically ballasted fluorescent lamps and/or mercury vapour lamps, to more efficient electronic fluorescent lamps and compact fluorescent lamps as well as very high efficient LED. However, with the vast majority of partners within the current report, the changes have been from fluorescent to fluorescent lamps with a higher efficiency.

For the changes in ballast and luminaries, the data submitted is not as good. The highest percentages of changes within the ballast reported are changes from conventional magnetic ballast to electronic non dimmable ballast. Concerning the luminaries the majority reported a change from a regular painted

reflector to an aluminised reflector. Changes in the regulation were only reported for several projects, but the basis for a further analysis is unsatisfactory.

Also a correlation between technology chosen after the intervention (Lamp after 1) and the effective energy savings reached in percent shows, that not surprisingly the changes from fluorescent to fluorescent lamp in general does not yield savings more than changes to LED.

<b>Table 6.14 GreenLight 2012: Lamp Changes in Correlation to Percentage Energy Saved</b>					
<b>Effective Energy Savings in % groupings</b>	<b>T5</b>	<b>T8</b>	<b>LED</b>	<b>n/a</b>	<b>total</b>
20-25 %	1				1
25-30 %	2				2
30-35 %	2				2
35-40 %	2				2
40-45 %	3				3
45-50 %	3	1			4
50-55 %	5				5
55-60 %	2		1		3
60-65 %	5				5
65-70 %	3		53		56
70-75 %	8				8
75-80 %	8				8
80-85 %	1				1
85-90 %	2				2
90-95 %			1		1
<b>total</b>	<b>47</b>	<b>1</b>	<b>55</b>		<b>103</b>

T8: 26mm fluorescent (T8)

T5: 16mm fluorescent (T5)

LED: Light-emitting diode

N/A: Data not available

## **8. Conclusions**

The overall development of the GreenLight Programme in 2012 did not increase the amount of energy saved as a whole, but the percentage of energy savings significantly increase compared to the report in 2011. The average of energy saved in 2011 is 32,91% and it's 45% less compared to the average of 60,95 % reached within the year of 2012. The reason for this can be found in the composition of partners that listed for 2012 dominated by Production Facilities and Restaurants, part of them implemented new technologies such as LED, whilst partners listed within the year 2011, are dominated by supermarkets that implemented gradual energy efficiency improvements and not radical new technologies.

Also a positive development can be seen in the number of newly registered Partners. This is the first growth since the year of 2007. For the year of 2012, 46 new Partners joined the programme (32 are new the partners in 2011)

The public recognition and positive image as well as the respectable results achieved in overall savings underline that the GreenLight Programme is worth to be continued with increased efforts.

## **9. Recommendations**

In general, the GreenLight Programme constitutes a very positive voluntary commitment that activates and engages many various actors across Europe, but a new strategic redirection of the scheme could be useful. An modernization and strategic redirection of the scheme is closely related to potential available financial and manpower resources. An update of guidelines, assisting materials and enhancement of the website including electronic registration functions might be able to make application and registration easier. This could also include a modernised electronic reporting possibilities and functions via the website such as a proper log-in accessible databank, which would allow the JRC to better evaluate and access the success and results. This again would contribute to the diffusion and promotion of the scheme.

## 9. Appendices

### I. List of Partners which joined the GreenLight Programme in 2012.

1. ECM Technologies
2. Kerkfabriek H. Hart
3. Immo Horst
4. Migration Solutions Ltd
5. Advison bvba
6. De Boer
7. Cassidian NV
8. Affilips Nv
9. Groep Bolkmans
10. Evapco Europe NV
11. Greif bvba
12. Kalimba
13. Tapibel NV
14. ZF Services
15. NV Gijmacon
16. NV Mathieu Gijbels
17. Menken NV
18. Olympia
19. Nitto Europe
20. Nikita
21. AB Inbev
22. Bitron Industrie Espana SA
23. ENTPE
24. France Quick SAS
25. Venschott GmbH
26. EMFB Arquitectura y Construction
27. Bayer Hispania SL
28. CPAM de l'Artois
29. Clextral
30. Nerco
31. Ville de Villeneuve d'Ascq
32. Tesco
33. SSM System Service Marketing
34. Deceuninck
35. Vanstraelen Sprinkler+Piping NV
36. Ijzerhandel Van den Broeck NV
37. Starco
38. Sheuten Glas Diest NV
39. Coeck Beton NV
40. Vincipark
41. ABN AMRO Dordrecht
42. Brussels Airlines
43. Graham Packaging Belgium
44. Toplas NV
45. Lambrechts Constructie
46. WinTO GmbH



## II. Winners of the Green Light Awards

### 2003

1. Statoil (Norway)
2. Apoteket AB (Sweden)
3. Comune di Trezzano Rosa (Italy)
4. Lorentz Casimir Lyceum (The Netherlands)
5. Monte dei Paschi di Siena (Italy)
6. Neukauff Merz (Germany)

### 2004

1. Athens International Airport (Greece)
2. Carrefour Italia (Italy)
3. City of Hamburg (Germany)
4. City of Helsinki Educational Department (Finland)
5. City of Zurich (Switzerland)
6. Dolce & Gabbana (Italy and Germany)
7. Futebol Clube do Porto (Portugal)
8. Gemeente Sittard-Geleen (The Netherlands)
9. Groupe Casino (France)
10. Dn BNOR ASA v/Vital Eiendom AS (Norway)

### 2005

1. San Paolo IMI (Italy)
2. Provincia di Reggio Emilia (Italy)
3. TIM (Greece) – today WIND
4. Auchan (France)
5. Q8 (Denmark)
6. Centocor (The Netherlands) – today SenterNovem
7. Halliburton (Norway)
8. EDP (Portugal)
9. McDonald's (Europe)
10. Wipark (Austria)

### 2006

1. City of Oslo (Norway)
2. COOP (Italy)
3. Gates Europe nv (Belgium)
4. Hospital Universitario Virgen de las Nieves de Granada (Spain)
5. Nyborg Municipality (Denmark)
6. Philips (The Netherlands)
7. Piraneus Bank (Greece)
8. Servicio Extremeno de Salud (Spain)
9. SP-Tratek (Sweden)
10. Stadt Graz (Austria)
11. Stadt Frankfurt am Main Hochbauamt (Germany)
12. swb Netze Bremerhaven (Germany)
13. Vodafone Portugal (Portugal)
14. Zehnder Group Produktion Graenichen (Switzerland)

### 2008

1. Dumaplast NV (Belgium)
2. Stadsbestuur Sint-Niklaas (Belgium)
3. Municipality of Gorna Oryahovitsa (Bulgaria)
4. Zlin Municipality (Czech Republic)
5. Town of Kladno (Czech Republic)
6. Bic (France)
7. Communauté Urbaine de Dunkerque (France)
8. Kautex Textron GmbH (Germany)

9. Unicredit (Italy)
10. Comune di Piombino (Italy)
11. Kaunas Municipality (Lithuania)
12. Stadhuis Amsterdam (The Netherlands)
13. DSM (The Netherlands)
14. Instituto Superior de Engenharia do Porto (Portugal)
15. METROREX (Romania)
16. Parliament House (Romania)
17. PREDILNICA LITJIA d.o.o (Slovenia)
18. TAIM-TFG S.A (Spain)
19. Vattenfall Service Nord AB (Sweden)

### 2010

1. Dagda Town Council (Latvia)
2. ING Real Estate (The Netherlands)
3. E-on (Germany)
4. O.S.V.O Comp, a.s. (Slovakia)
5. Municipality of Dobrich (Bulgaria)
6. Prague Marriott Hotel (Czech Republic)
7. Public Service of the City of Villingen-Schwenningen (Germany)
8. Saule Birinius Pils SIA (Latvia)
9. NH Hotels (Spain)
10. Aguas do Cavado (Portugal)
11. Decathlon (Spain and Romania)
12. Center of Dialysis in Bearn Pau-Aressy (France)

### 2011

1. City of Tilburg (The Netherlands)
2. City of Zaprešić (Croatia)
3. Delhaize Belgium (Belgium)
4. Gemeinde St. Georgen (Germany)
5. ING Luxembourg (Luxembourg)
6. MBZ N.V. (Belgium)
7. Nestlé France (France)
8. Prokind Scholengroep, (The Netherlands)
9. Unibail-Rodamco shopping centres (Spain)

### 2012

1. bft Petrol station Vornmoor GmbH (Germany)
2. City of Lille (France)
3. COOP Lombardia (Italy)
4. Decathlon (Italy and Romania)
5. Migration Solutions (UK)
6. Stadt Langen (Germany)
7. Telenet Group Holding (Belgium)
8. VZW K.S.O.Z. (Belgium)

### 2013

1. AB Inbev (Belgium)
2. ABN AMRO (The Netherlands)
3. Banque de France (France)
4. Bayer Hispania (Spain)
5. Brussels Airlines (Belgium)
6. France Quick SAS (France)
7. Gijbels Group (Belgium)
8. Vincipark (France)
9. WinTO GmbH (Germany)



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**Abstract:** The GreenLight Programme is a voluntary pollution prevention initiative encouraging non-residential electricity consumers (public and private), referred to as Partners, to commit towards the European Commission to install energy-efficient lighting technologies in their facilities when (1) it is profitable, and (2) lighting quality is maintained or improved. GreenLight was launched on 7 February 2000. The objective of the GreenLight programme is to reduce the energy consumption from indoor and outdoor lighting throughout Europe, thus reducing polluting emissions and limiting the global warming. The objective is also to improve the quality of visual conditions while saving money. This report analyses the results of the GreenLight programme during year 2012. It calculates total annual energy savings, the type of projects implemented in terms of technologies, buildings, companies and pay back time. By the end of 2012, 731 Partners from across the European Union, plus Norway and Switzerland, participated in GreenLight. For 2012, 46 new Partners joined the programme. This report assesses the achievements of the scheme in the year 2012.

As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

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Key policy areas include: environment and climate change; energy and transport; agriculture and food security; health and consumer protection; information society and digital agenda; safety and security including nuclear; all supported through a cross-cutting and multi-disciplinary approach.

