

Title of the measure:	EU 1 European Green Light Programme
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General description

The GreenLight Programme (launched in January 2000) is a European Commission voluntary programme through which non-residential building owners and occupiers and organisations responsible for street lighting, being private or public organisations, are aided in improving the energy efficiency of their lighting systems. Any enterprise or company planning to contribute to the GreenLight Programme objectives can participate.

Lighting electricity use in European non-residential sector represents more than 160 TWh/year. This has a substantial impact on the environment, accounting for up 40% of electricity used in non-residential buildings. Major energy savings can be achieved. Examples from the field have shown that between 30% and 50% of electricity used for lighting could be saved investing in energy-efficient lighting system. In most cases, such investments are not only economically profitable but they also maintain or improve lighting quality (Bertoldi and Cuniberti, 2011).

The GreenLight Programme is a voluntary pollution prevention initiative encouraging non-residential electricity consumers (public and private) 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 in February 2000 by the European Commission Directorate General Energy & Transport.

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.

The core of the programme is a registration form, signed by the Partner and the Commission, in which the Partner commits to:

- For existing spaces: either upgrade at least 50% of all the eligible spaces owned or on long term leases or reduce the total aggregate lighting electricity consumption by at least 30%. Eligible spaces are those spaces where the lighting upgrades are profitable.
- For new spaces: choose new installations so that no alternative installation exists that would: maintain or improve the lighting quality provided by the chosen installation and consume less electricity and represent a supplementary investment which would be profitable.
- In addition, the Partner shall complete the upgrades within 5 years of joining the programme, send a progress report every year and appoint a Corporate Manager responsible for assuring the programme execution.

The programme is totally voluntary, which means that companies are free to decide whether they want to join or not. If a Partner cannot meet minimal space requirements or reductions in total lighting energy, they may drop out of the programme without any prejudice to rejoin when their situation changes. Lighting professionals interested in promoting GreenLight and assisting its Partners are encouraged to register as GreenLight Endorsers. In return, the Endorsers get public acknowledgement for their efforts to support the GreenLight Programme.

While the Commission does not provide actual funds for the lighting upgrades (because they pay for themselves), it provides support to the Partners in the form of information resources and public recognition (plaques on building, advertisements, exclusive use of the logo, awards, etc.). Other benefits for Partners are the fact that:

- they save money (they only carry out the cost effective lighting upgrades)
- they have better lighting conditions which is good for their employees and their clients
- they get technical assistance and Energy Service Companies can even finance up-front capital improvements in the client's premises in exchange for a portion of the savings generated.

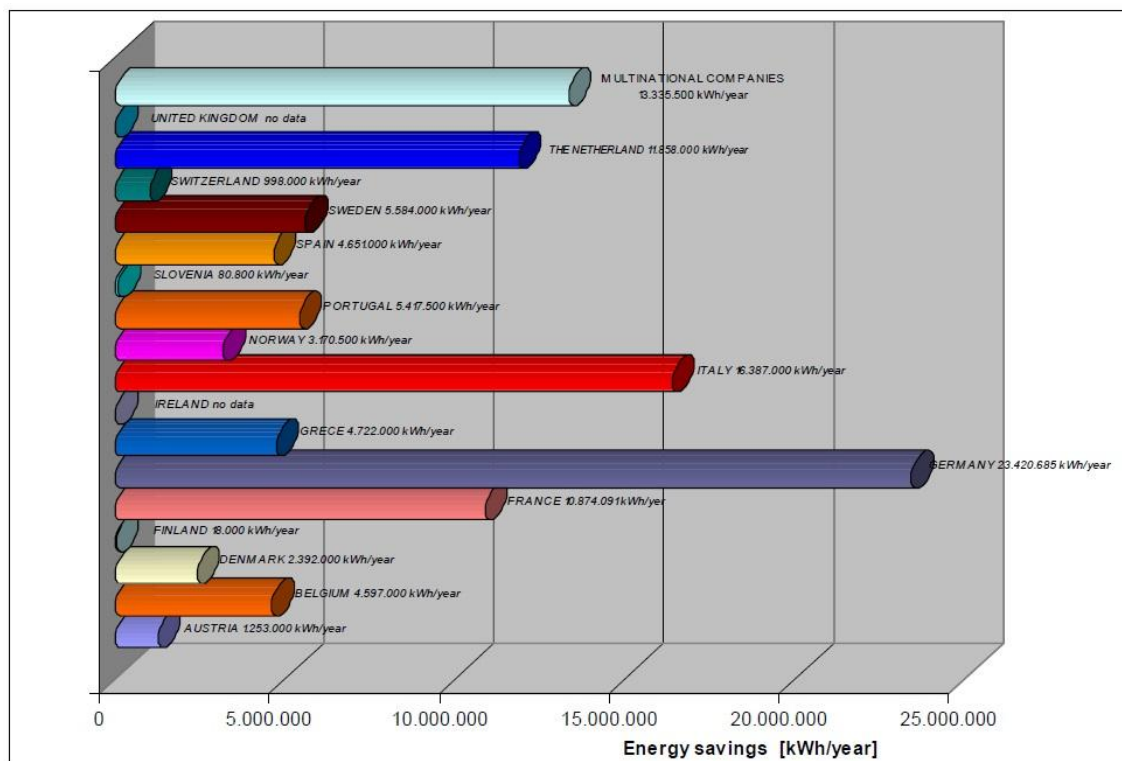
- they can publicly claim that they are taking part in a European programme to reduce CO₂ emissions, i.e. they can claim to be a "green or environmental conscious company"
- they get free publicity about their participation from public authorities including the Commission

By the end of 2012, 731 Partners from across the European Union, plus Norway and Switzerland, participated in Green Light Programme. In 2012, 46 new partners joined the program. GreenLight investments use moderation technology, products and services which can reduce lighting energy use by 30% to 50% receiving internal Rates of Return (IRR) over 20%. Greenlight upgrades have covered the range of energy-efficiency measures such as replacing general lighting service incandescent bulbs or high pressure mercury lamps; installing occupancy linking control systems or light flux regulators; etc.

Impact evaluation

According to 2005 evaluation report, the total reported savings of energy are approximately 109 GWh/year which corresponds to the abatement (using common carbon intensity of 500 gCO₂/kWh) of about 54500 tCO₂. About 85% of these savings were achieved within buildings.

Figure 1, can be observed the total GreenLight electricity savings per country;



Considering all the energy savings reported by the end of 2008, the total savings of GreenLight Partners amount to 241 GWh/year (Bertoldi and Cuniberti, 2011)¹. This is more than twice as much as the savings reported by Bertoldi and Ciugudeanu, 2005.

The energy saving of 241 GWh/year generated a running cost saving of about 24 million EUR. 76% of the GreenLight Partners implemented lighting retrofits in buildings, on a total surface area of 3.5 million m². The remaining Partners' projects were street lighting upgrades. 81% of the savings was achieved indoor. This share was approximately the same between indoor and outdoor savings by 2005 as well (Bertoldi and Ciugudeanu, 2005).

¹ This was reported by 350 Partners. For the remaining 169 Partners there is no adequate data available on the energy savings.

16 GWh/ year savings were added in 2009 to the energy savings of 241 GWh/year till 2008. By the end of 2010, 40.7 GWh/year savings were added due to new partners in the Greenlight Programme. In 2011, reported additional savings were 10.6 GWh/year. In 2012 the amount of savings reached 7.9 GWh/a. 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.

Following table highlights savings from 2000 to 2012 for different categories in percentage of total;

Table 1 GreenLight 2000 to 2012: Savings by Category in Percentage of Total According to Reports					
* category with highest percentage within Report					
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%	50,41%
Public Transportation	2,8%	-	0,00%	-	-
Retail and Supermarkets	30,80%	10,8%	64,70%	69,36%	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%	36,40%	22,05%	6,13%	-
Telecommunications	2,1%	-	-	-	-
Unclear	-	-	0,18%	-	-
total	100 %	100 %	100 %	100 %	100%

Table 2 depicts energy savings since 2000 and savings per partner;

Table 2 GreenLight 2000 to 2012: Comparison Energy Saving Totals and Average per Partner			
Year	Total number of partners	Total savings in kWh/a	Average saving in kWh/a per partner
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
total	731	315.515.689,18	449.129,47

References

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