NETWORKING WITH EUROPEAN GREEN LIGHT PROMOTERS

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Synopsis:
This paper shows how Central and Eastern European Countries could join the network of energy-efficient lighting expertise centres being constituted within the framework of the future European Green Light Programme.

1. INTRODUCTION

The European Commission – Directorate General for Energy (DGXVII) - is about to launch a EU-wide Green Light voluntary programme encouraging non-residential electricity consumers (public or private) to commit themselves to install energy-efficient lighting technologies in their facilities wherever (1) it is profitable, and (2) lighting quality is maintained or improved. The principle of this programme is to invite European top-managers to sign a Memorandum of Understanding stating that they will undertake all the profitable lighting upgrades within a given time period. In return for their commitment, these people (referred to as Green Light Partners) receive broad public recognition as well as comprehensive information support [1].

This programme will be promoted in the European Member States by the energy agencies (referred to as Green Light Promoters). Besides marketing the programme, these agencies will disseminate the Green Light information support. In this respect, they will constitute an important network of energy-efficient lighting expertise centres, fostered by the European Commission Joint Research Centre[1].

The objective of the present paper is to see how Central and Eastern European Countries (CEEC) could join this network of expertise on the basis of lasting and mutually beneficial relationship.

2. PROMISING PERSPECTIVE FOR EU GREEN LIGHT

The key concept of Green Light is to elevate decision-making about efficiency in buildings to senior corporate officials. It has been successfully applied in the United States since 1991 by the Environmental Protection Agency (EPA). According to EPA, the US Green Lights Programme had generated 7 TWh electricity savings by 1997 [2]. More than 158 million square meters were upgraded and reported by US Green Lights Partners in 1996, reducing lighting electricity bills by an average of 47 percent while earning an average Internal Rate of Return (IRR) of 36 percent [3].

In Europe, the concept was applied within the framework of energy-efficiency programmes dealing with more than only lighting. This was the case in Sweden with the industry-directed EKO-Energi programme and in the UK with the "Making a Corporate Commitment" campaign [4]. Both have had a significant impact according to their organisers.

To get an idea of the energy savings that such a concept could generate in Europe as a whole, the European Commission (EC) is funding two studies aimed at categorising and quantifying commercial lighting use. One is trying to establish commercial sector energy use and savings potentials[2]. The other one is taking a more in-depth approach to establishing a European baseline for lighting in the commercial sector[3].

Thought both studies are in progress and should deliver results later in 1999, the current impression shared by many people is that EU Green Light has a high probability of success. A recent market survey commissioned by the Joint Research Centre on a sample of 43 big companies showed that attitudes towards joining the programme were generally favourable [1]. Furthermore, as described hereafter, the programme has received a strong support from the European energy agencies who have agreed to be the future Green Light Promoters.

3. STRONG NETWORK OF EUROPEAN GREEN LIGHT PROMOTERS

The Green Light Promoters will relay the execution of the programme in the European Member States. In particular they will:

- Tailor the programme according to the market situation and consumers' preferences in each country. They will take into account national lighting programmes already underway, carried out by national organisations or local utilities. They will avoid conflict or competition with similar programmes. In the case a lighting programme is underway, an agreement will be reached with the programme promoter.
- Market aggressively the programme to enrol the largest number of companies.
- Fund the programme together with the European Commission. The amount of resources must be enough to set up and provide financial support for maintaining a structure of a few people.
- Monitor the progress of Green Light in their country.
- Deploy an extensive communication plan that will help market Green Light.
- Tailor and disseminate the technical support for Green Light Partners.

Up to now, organisations from twelve countries[4] have agreed to embark, by the end of 1999, in a timely SAVE[5] kick-off pilot project aimed at helping them start their Green Light activities. This pilot project is meant to:

- Demonstrate and showcase the benefits of Green Light upgrades.
- Check the validity of the Green Light concept and support.
- Demonstrate the ability of energy agencies to promote Green Light.
- Foster a network of national information centres on energy-efficient lighting.

This pilot project has a total duration of 23 months and is divided into 6 tasks:

1. Customisation and dissemination of the Green Light information support through the Internet.
2. Enrolment and briefing of strategic pilot companies in various business fields (public/private, offices/schools/hospitals/hotels/etc.). This must prove that the Green Light concept works.
3. Audit, recommendations, pre-monitoring on 3 to 5 case study buildings per country.
4. Lighting retrofit and commissioning of these buildings.
5. Post-monitoring to provide a sound demonstration of the benefits.
6. Intensive communication toward potential Green Light Partners.

Besides strengthening and catalysing Green Light, this preliminary project will offer a unique opportunity to set up a powerful network of information centres on energy-efficient lighting.

This network will merge in the first of the above-mentioned tasks, scheduled January 2000 – June 2000. During this period, The energy agencies will translate into their own language the Green Light information given by the Commission. Should part of this information happen to be not relevant to

one country, the corresponding agency will make the appropriate corrections. In addition, they will provide, both in their own language and in English, the country-specific information necessary for Green Light Partners (e.g. contact directories, legislation). They will make these materials accessible through the Internet. The Joint Research Centre will pay attention to web pages homogeneity and will supervise the electronic links. The result will be a decentralised but cohesive web site on the subject of energy-efficient lighting.

"Cohesive" implies in no way that the web site is to be confined to the European Union. On the contrary – and this is the reason of the present paper - it is hoped that CEEC organisations express interest for taking an active part in this network, provided they have, like their European counterparts, experience, independence, commitment to energy efficiency and possibly an acknowledged institutional role in their country.

To help CEEC organisations figure out whether they could join this network, the next chapter describes in more details what the web site will contain (and who is supposed to provide what). The aspects particularly relevant to CEEC are highlighted, hypothesising that these countries may not be running a Green Light scheme, at least in the short term, but be interested nevertheless in disseminating general information on energy-efficient lighting.

4. A NETWORK OF INFORMATION

The set of information provided within Green Light has been defined keeping in mind the future Partners. Indeed, it constitutes an essential feature of the Green Light deal and comes in addition to the public recognition provided by the EC to the Partners for their contribution in protecting the environment. This support was outlined figuring out the kind of questions European Green Light Partners would ask themselves.

The terms Green Light Partner hide a number of different actors inside the company, each of them having a specific background and specific needs. Basically, a distinction can be made on whether these actors are more involved in financial and planning tasks or in technical tasks. In this respect, two types of information were distinguished: the information for 'planning people' and that for 'technical people'. These two types of information are outlined hereafter. They have been cross-checked with the results of the Green Light market survey (see paragraph 2) and with what is offered by EPA to US Green Lights Partners. Although transpositions from US to Europe are not straightforward, the support from EPA is interesting to look at because the US project has been constantly refined since its inception in 1991 to take into account remarks and suggestions that have come up from more than 1600 participants. In this sense, it provides good insights on Partners' demand.

4.1 Information for planning people

This information is targeted to all the people in the company who will manage the financial, organisational and communicative aspects of the project, e.g.: decision-makers, financial and communication directors, etc. Their task is essential to make the project develop at the scale of the whole company. Often, they have limited knowledge in the field of lighting. Sometimes, they may not even be familiar with energy management projects in general. Described below are the questions that they will probably ask themselves and the pieces of information most likely to provide relevant answers.

First, they may ask what the programme is and how they can implement it within their company. This is why the web site will contain explanations on this topic, including updated figures of the results, success stories, implementation guidelines, etc. not described here because of their Green Light specificity (as also the communication guide that will be provided to Green Light Partners to help them communicate their success).

Most probably, the companies will wonder how to finance such a programme. They may not always think about all the financing options they can choose from to fund lighting upgrades. Also, they may not always be aware of all the financial incentives they can benefit from. A guide will resume all these aspects. Financing options will be described on a general basis. However, the list of incentives will be drawn for each country by National Promoters. To the attention of CEECs, references could be made to financing options specifically suitable to these countries e.g. the Guide to Energy Efficiency Bankable Proposals jointly prepared by the European Commission DGXVII and the European Bank for Reconstruction and Development [5].

Companies may also wonder why and how they should optimise lighting maintenance and waste disposal. These actions can bring significant money and energy savings if they are carefully planned at the scale of the whole company. This will be resumed in a guide derived from existing ones and, as far as waste disposal is concerned, be complemented at country level by an up-to-date description of the relevant legislation.

To the companies who further wonder who they can contact for third party investments, lamp recycling, lighting upgrades, etc. when they don't have the expertise in-house, each country will maintain a list of contacts and make the corresponding electronic links. To the attention of CEEC, this list could say to what extent it applies to these countries e.g. indicating the European Energy Service Companies (ESCOs) which have an experience in CEEC.

4.2 Information for technical people

This information will be targeted to the people inside (or outside) the company who will tell which and how installations must be upgraded. Their knowledge in lighting is very variable, at least in Europe. Some of these people may be considered as actual lighting designers while some others are mostly active in other fields, e.g. HVAC, and know very little about lighting. For this reason, they will be provided with some reference information on lighting. This reference information will accommodate for the fact that technical people have different background. It will also take into account the fact that they may either look for some information on specific technologies or proceed with a specific application in mind, searching for example lighting recommendations for offices, sport halls, retail spaces, etc. Therefore, it will be both technology-oriented and application-oriented. Properly edited, it will serve as a reference to the information provided in direct support to the main questions of the technical staff namely: how do I see whether a given installation can be upgraded? What kind of upgrade shall I do?

A common specific answer will be provided to these two questions. This will be done with a guide that tells technical people (1) how to carry out a comprehensive lighting assessment within their facilities before and after the retrofit, considering energy and human aspects; and (2) how to choose upgrade options. Such guide will be complemented by a software that calculates the profitability of upgrade options. Such software will be kept simple. Experience from EPA has shown that the main challenge is to get partner organisations to execute basic steps in a timely manner. Focusing on simple procedures to get all key-steps taken was found to be much more important than elaborating decision support systems.

Such a guide will also be complemented by a product database. It is still open however whether an independent laboratory will check it. The financial resources required for this might not be too high if an independent performance-testing programme was already planned or under way somewhere in Europe. In this case, the financial effort from the EC to check the Green Lights database could be limited to a co-sponsoring of this programme.

In order to avoid incorrect and inhomogeneous ways of collecting and reporting energy saving results, it is highly advisable to define few standard procedures for measuring them. The importance of this requirement is not only for gathering correct data at country and EU level, but also for ensuring contractual specifications and guarantees for all parties involved in the lighting retrofit actions. This is why, reference will be made to the International Performance Measurements and Verification (IPMVP) Protocol[6] [6], where four measurement and verification options are defined for various energy efficiency retrofit measures, lighting retrofit included. Since the retrofit actions may vary considerably in size, cost and importance, also the accuracy of M&V vary accordingly and hence the need of defining different options. The involved parties will be free to choose the option that best suit to the types of performance contract, values and risks. The JRC and the national agencies will check these options for general viability.

5. CONCLUSION

The present paper shows that the promising EU Green Light Programme represents an optimum frame for fruitfully networking on the subject of energy-efficient lighting. In the first semester of 2000, a decentralised but cohesive information site will emerge, actualising the collaboration of a network of twelve European Member States. It will be open to Central and Eastern European Countries which will be able to receive and provide relevant information.

Carefully managed by the European Commission Joint Research Centre, this should result in a lasting and mutually beneficial partnership, facilitating the transfer of knowledge and experience between the participating organisations.

This paper has not talked about the financial tools which could facilitate the participation of CEEC within this network. This would be the next issue to consider, investigating solutions offered by the European Commission and other bodies, should the reaction from CEEC to this paper be positive.

6. ENDNOTES

1 The mission of the Joint Research Centre (JRC) is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of EU policies. As a service of the European Commission, the JRC functions as a reference centre of science and technology for the Union. Close to the policy-making process, it serves the common interest of the Member States, while being independent of special interests, private or national. Web site: www.jrc.it

2 This study is part of the SAVE II project "Green Lights Potential Assessment and Programme Experience Study". Prime Contractor: Netherlands Agency for Energy and the Environment (NOVEM - NL). Other partners: Borg&Co, Building Research Establishment, ProLicht. In progress. SAVE II contract EC-DGXVII No. 4.103/D/97-028

3 "Market Research on the Use of Energy Efficient Lighting in the Commercial Sector". Prime Contractor: Research Association of Danish Electric Utilities (DEFU). Other partners: Building Research Establishment, Danish Illuminating Engineering Society. In progress. SAVE II contract EC-DGXVII No. 4.1031/Z/97-029

[4] Austria (EVA); Finland (MOTIVA); France (ADEME); Germany (Saarländische Energieagentur); Greece (CRES); Italy (FIRE – Ass. of Energy Managers); The Netherlands (NOVEM); Norway (NVE); Portugal (CCE); Spain (IDAE); Sweden (STEM); UK (BRECSU).

[5] Project co-funded in the framework of SAVE, the non-technology energy efficiency programme of the European Union.

[6] The Protocol is based on a consensus among several organisations world-wide including some in CEEC e.g. the Bulgarian Foundation for Energy Efficiency (EnEffect).

7. REFERENCES

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