

First experience with filing applications for support for energy savings from OP Environment

Since 2007 it has been possible to file applications for support from the Operational Programme Environment (OPE), whose administrator in the Czech Republic is the State Environmental Fund. Directly pertaining to energy savings is subsection 3.2.1 Implementation of energy savings (within section 3.2 Implementation of energy savings and use of waste heat in the non-business sector). The Ministry of the Environment of the Czech Republic announced for the mentioned part of the OPE two calls, with the deadlines for filing applications being 26 October 2007 and 31 January 2008. Whereas within the first call applications could be submitted by public subjects in general, the January call only applied to educational facilities. The question remains of when applicants can expect the announcement of other calls. So far, no calls have been scheduled for 2008.

The subject of support under the mentioned section is reduction of energy consumption by means of improving the thermal/technical properties of buildings' claddings (thermal insulation of envelopes and roof structures, replacement or restoration of aperture fillings) and implementing measurement and regulation technology in heating and cooling systems.

When it comes to the October call, the conditions for filing applications were defined very specifically. They were further refined and simplified in the case of the other call. This concerned, for example, the assessment of the maximum level of specific acknowledged costs per square metre of the proposed

measure (the value of CZK 2,500/m² was stipulated for external walls, CZK 6,000/m² for aperture fillings and CZK 2,000/m² for roofs, all excluding VAT). Costs exceeding these limits are automatically considered ineligible.

In addition, the condition entailing technical calculation by means of the building's energy performance certificate was omitted. Originally, it was unclear whether the application should contain the

values of energy consumption in an existing building according to real consumption data taken over from an energy audit or according to a balance calculation by means of the building's energy performance certificate, which describes more objectively the building itself, not the "behaviour" of its occupier.

If projects meet the acceptance criteria, they are further assessed in technical, environmental and economic terms. The economic criteria » [cont.](#) » [page 4](#)



Renewable energy sources in 2010 – where and how?

Where should the EU be in close future in terms of implementing the renewable energy sources? Do the national governments actually fulfil their own goals of increasing the share of renewable energies? And which support mechanisms prove to be the most practical ones in supporting further development of the renewables?

These and other questions have been addressed by the consortium members of the Progress project, which was initiated by the European Commission, the Di-

rectorate General Energy and Transport (DG TREN). We have interviewed the project coordinator, Mr. Rogier Coenraads, from Ecofys, the Netherlands, to share the results with us:

Why was the Progress project initiated at all?

The European Commission sought for a comprehensive Europe-wide information in the field of market analysis of renewable energy sources, status quo on national policies to promote renewable energy in Member States, analysis of administrative and grid barriers to promoting renewable energy sources, and analysis of the implementation of a system of Guarantee of Origin in Member States.

Which main problems and barriers in the development of the RES have been identified within the project?

There exists a significant discrepancy between the financial support schemes across Member States of the EU. Some countries have implemented solid and stable remuneration for renewable energy production, which led to a significant increase of the share of renewable energy in their energy mix over the past years. On the other hand, other countries have implemented systems which provide insufficient financial support or have proven to be unstable. As a result, little progress in renewable energy deployment was made in these countries.

In addition, the project focused on administrative and energy grid barriers, for which » [cont.](#) » [page 8](#)

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Revision of the European Energy Labelling Directive – where to go from now?

A widespread agreement among energy efficiency and policy makers exists that the household appliance energy labelling system has proven to be a very effective tool to promote energy efficiency.

However, the updating of the system by new appliances and the revision of the energy classes has not been as regular, as planned originally. Therefore, the European Commission has initiated a revision of the labelling directive, in which it posed several important questions in this regard. During a public consultation process about 67 organisations, industry representatives, and government officials shared their position in this regard.

It has become clear that the label scheme has become obsolete, to a large degree even in the Central European conditions, and has lost part of its informative value to the consumer. Therefore it urgently needs an update and a revision to resume its role in transforming the market towards more efficient appliances. Furthermore, a revised energy label scheme is needed to complement minimum efficiency standards (implemented via the ecodesign directive).

What to label

The following proposal to the European Commission has been therefore made by several organisations, including SEVEn:

A) on short term (adoption by the Commission before the end of the year 2008):

- Upgrading the label for cold appliances by removing the A+ and A++ classes and redefining the A-G scale so that appliances in the A class must have an index of 20 or less.
- Introducing a label for televisions.
- Including tighter tolerances for the measurements and a date for review in the revised and new directives.

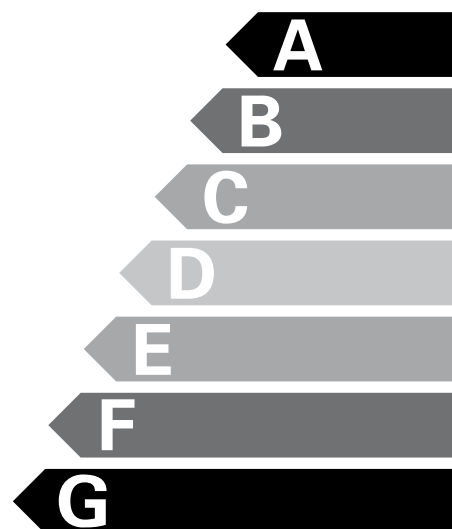
B) on the medium term (adoption by the Commission in 2009):

- Upgrading the label for air conditioners.
- Introducing an EU energy label for water heaters and boilers.

Given the success of the energy labelling scheme, including the fact that the concept is known to the consumer, it seems also logical to extend the scope of the energy labelling concept to other products: other household products, non-household products, and products influencing the further energy usage. It has to be kept in mind, however, that the energy labelling concept is also a marketing tool and it should be considered carefully per product whether this tool is an appropriate instrument given the target group and how the instrument would fit in the complete package (e.g. Ecodesign minimum standards, information requirements, A to G scale label, endorsement label).

How to control labels

But it is not only about the list of products which should be labelled, but also about ensuring that the products are evaluated properly. Energy performance declarations of appliances are self-declared by suppliers. National authorities have, under the European Union's internal market rules, the obligation to survey the market to check for non-compliance with regulations. Energy label directives do indirectly refer to a verification procedure, to be used by Member States



when verifying compliance of a products energy performance declaration (on an energy label). The directives, however, do not describe how Member States should perform the market surveillance; that is national decision. International experience indicates that the great majority of European countries have never performed a single verification of the energy performance of an appliance. Countries in this category seem to include all new Member States, and also most of the EU-15. There are, as far as could be established, only three countries that regularly test appliances to check and enforce accurate energy performance indications, and one more where there is regular testing but not related to enforcement.

Clearly, the planned revision of the energy label is an excellent opportunity to increase the attention devoted to energy labelling paid by the national authorities.

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Further information:

- http://ec.europa.eu/energy/demand/legislation/domestic_en.htm
- www.cecicap.org

CLIMATICALLY NEUTRAL SOCIETY – TIPS AND EXAMPLES

What do the 2006 football World Cup, the World Bank and the band Coldplay have in common? The answer is the endeavour to reduce environmental impacts through abatement of greenhouse gases originating during generation of energy necessary for their operation and their replacement by measures aimed at energy savings and utilisation of renewable energy sources.

Specifically, it concerns summarisation of the level of greenhouse gas emissions that originate during an organisation's activity and a concrete plan of their replacement, mainly by means of saving measures and support for renewable energy projects— either within the company's premises or through supporting their organisation in, for example, developing countries. Implementation of these measures will place into operation emission-reducing equipment also "in the name" of a selected "sponsor".

When it comes to the 2006 World Cup, it

entailed support for construction of a biogas station near Johannesburg, South Africa. The organisers of the 2006 Winter Olympic Games in Turin calculated the Games' impact at the level of 120,000 tonnes of CO₂, which were offset by a series of projects entailing energy savings, use of renewable energy sources and investments in forest crop regeneration. The British government offsets emissions produced during official trips of its employees, the offices of the World Bank in Washington DC are "climatically neutral" owing to their purchasing electric power

from renewable energy sources and supporting renewable energy projects amounting to 60 thousand tonnes of CO₂ in developing countries.

Similar programmes have been undertaken by a number of private companies and energy utilities, as well as athletes and artists. For example, Andrew Ference of the Boston Bruins ice-hockey team rides a bicycle or, if necessary, travels in a car using a hybrid engine, uses electric energy from wind power in his house, pays emission fees for air transport and stays in hotels, annually 24 tonnes of CO₂, emissions, or 700 dollars.

In the Czech Republic too there are companies interested in a comprehensive view of their energy management and striving for the maximum possible elimination of adverse environmental impacts. At the present time, SEVEn is consulting possible measures in this respect with representatives of companies operating in automobile transport, retail, sale of electrical appliances and the hotel trade.

Juraj Krivošík

Compact fluorescent lamps – testing their energy efficiency

Energy-efficient compact fluorescent lamps are renowned as a source of easily available and utilisable energy savings. Individual products, however, differ widely when it comes to their quality and service life. An independent test can thus reveal how they perform as regards their service life, colour of light, the speed of build-up to full output, etc.

A series of tests carried out on 191 fluorescent lamps by the German foundation Stiftung Warentest since 1983 has proved that the service life of fluorescent lamps has been constantly growing. Although they also have weaknesses, they still have the edge over technically obsolete traditional bulbs. The most recent series of tests took place in 2007 and D Test magazine published in its issue 4/2008 their evaluation for Czech readers too. Twenty-eight fluorescent lamps of several brands were put to the test. Which parameters of the fluorescent lamps are the most important?

Service life: The service life of compact fluorescent lamps is stated on the packaging. The consumer can choose between products whose service life ranges between 3,000 and 15,000 hours. The tests focused on the service life end at the moment of total drop-out of fluorescent lamps. Only in the case of a few products was the time over which they kept lighting shorter than the time declared. Good news: more than half of the tested fluorescent lamps really are able to light for a long time – as our Newsletter



goes to press, some products have been lighting for 10,200 hours and their measurement continues.

Decrease in luminous intensity: With a rising number of hours of lighting, the luminous intensity of fluorescent lamps decreases. After 2,000 hours of operation, the luminous intensity should not drop below 80% of the initial value. The worst product had lost after this time almost one quarter of its initial luminous intensity. The highest decrease in luminous intensity of spot fluorescent lamps (headlamps) was almost 50% after 10,000 hours of lighting, 36 to 40% in the case of “normal” fluorescent lamps. Lying about watts: Some manufacturers “add” watts to their products. One of the tested fluorescent lamps with the declared output of 11 W actually only had 7.2 W, while another one stating 20 W merely had 13.1 W. It is interesting that products of renowned brands have to date not appeared among the “black sheep”.

They damage health: No, they don't! Despite long-term use of fluorescent lamps, no harmful-to-human-health impacts have been proved. The results of independent tests do not give rise to any cause for concern. The tests have also focused on mercury emissions and brominated combustion inhibitors. Even though a few marginal brands have not shown good results, they are by no means harmful to health. However, they can damage the environment if they are not disposed of in an appropriate manner. Both common household electrical appliances and fluorescent lamps (and their electronic ballast) emanate electromagnetic waves shorter than visible light (ultraviolet radiation). It is not visible but can be measured. The results of measurement (at the distance of 30 and 50 cm) have proved that fluorescent lamps do not anyhow differ from traditional bulbs in this regard. Hence, the worries are entirely without foundation.

Colour of light and speed of build-up: When buying a bulb, it is sufficient for the consumer to know just the number of watts and the right thread. As regards an energy-efficient fluorescent lamp, it is also good to know the colour of light, which is mostly designated on the packaging by the number 827, and colour rendering (the colour rendering index, the Ra value from 0 to 100; the 100 value is achieved by a bulb, the value of fluorescent lamps ranges between 70 to 90), as well as how quickly it lights up. High-quality fluorescent lamps build up to full brightness within 60 seconds. Although it is not stated on the

packaging, the number of switch-on and switch-off cycles is significant too. It concerns 10,000 cycles with ordinary fluorescent lamps, and 100,000 to 500,000 cycles in the case of professional products.

Energy bill: It is true that buying and using a single fluorescent lamp does not directly reflect in our energy bill (because energy utilities mostly send three times a year only a quarterly lump overall billing and just once a year the real invoice based on real consumption), yet complete replacement of light sources (given that we light at least an hour a day) may reduce the total electricity consumption by approximately 8% (if the share of lighting is 12% and energy saving 70%), which, considering the payback period of half a year, means simple installation is well worth doing. *–jk–*



Further information: D Test magazine, April 2008, www.dtest.cz

The test of fluorescent lamps published in D Test magazine was also the subject of a report on the Czech Television programme Black Sheep – Test, in which a representative of SEVEN – Juraj Krivošík – appeared to provide information about the advantages and possibilities of using energy-efficient fluorescent lamps in households.

Do it right

➤ DĚLEJTE TO SPRÁVNĚ

Jak si vybrat úsporný spotřebič do domácnosti?

Ještě než vyrazíte na nákup, podívejte se na internet. Najdete tu návod, jak se orientovat podle energetických štítků, ale také databázi nejúspornějších spotřebičů, které jsou aktuálně v prodeji v České republice. Můžete v ní vyhledávat podle energetické náročnosti i dalších parametrů výrobku.

www.usporiespotrebice.cz

Are you considering buying a new household electrical appliance? Do you need information about the parameters of the most energy-efficient products on the market? If so, the website www.usporiespotrebice.cz is there to help you, since it provides a list of the most energy-saving appliances on the Czech market, compiled according to the criteria mainly stated on the energy labels of the products. The information was provided by the daily Lidové noviny on 19 April 2008.

FINANCING OF ENERGY PROJECTS – OVERVIEW AND INFORMATION IN ONE

The interest in energy savings and renewable energy sources grows with every announced rise in energy prices. Technological development, however, also places increased demands on monitoring of the correct energy consumption and its replacement from renewable sources. SEVen, in cooperation with Česká spořitelna, a.s., has prepared for the clients of this bank a publication describing the main principles and possibilities of energy saving and use of renewable energy sources. Individual chapters give a detailed description of the economic connections of utilising the mentioned technologies, technical and legislative conditions, the main problems and barriers, as well as their possible solutions.

The publication has the following content:

ENERGY SAVINGS

- Heating of buildings in the service and industrial sectors
- Thermal insulation of buildings and window replacement

RENEWABLE ENERGY SOURCES

- Biomass and its energy utilisation
- Solar power
- Heat pumps
- Wind power
- Water power

The manual can be obtained through the bank (Česká spořitelna, a.s., Special Programmes Department) or is available on its website:

www.csas.cz/energy

–jk–



Ministry of the Environment becomes a partner of the GreenLight programme



“Lighting has a significant environmental impact since it represents up to 40% of the energy consumed in non-residential buildings. Yet considerable savings can be attained in this area – as the research has shown, 30 to 50% of the electricity used for lighting could be saved by investing in energy-efficient lighting systems. In most cases, these investments not only pay off but also retain or improve the quality of lighting,” emphasises the publication GreenLight, issued within the European Union’s programme of the same name. The European office of the GreenLight programme has confirmed that the Ministry of the Environment of the Czech Republic has met all the conditions and therefore has become an official partner of this Europe-wide programme. The Ministry of the Environment has also been granted the right to use the GreenLight logo.

“Energy savings are a significant latent energy source throughout Europe, and this applies doubly-so in the Czech Republic,” says the Minister of the Environment, Martin Bursík, with reference to the high energy intensity of the Czech economy, as well as such sectors as transport and housing. “For a number of years, the Ministry of the Environment has striven to serve as an example by reducing its own environmental impacts. We use recycled paper, the Ministry’s building is thermally insulated, we have taken measures to save water, we use electricity in the ecological tariff, generate electric energy ourselves in a solar power plant on the building’s roof, we are making our vehicle fleet more environmentally friendly, use environmentally friendly products, etc,” Miroslav Jandura, the director of the Ministry’s Office, points out. “Energy-efficient lighting was a logical part of these measures. We are glad that now we can also use the GreenLight certificate,” he adds.

The most up-to-date energy-efficient lighting in the Ministry of the Environment’s building has been installed in the Minister’s office and boardroom – the system regulates the amount of light in dependence on the movement of the people present and the amount of light coming in from outside. The rest of the building (corridors, offices and the entrance area)

is lit by energy-saving linear and compact fluorescent lamps. In comparison with traditional bulbs, the total electric energy consumption is up to 68% lower.

GreenLight is a voluntary programme within which private and public organisations undertake to update their lighting systems, propose and take measures for energy-efficient lighting. The number of organisations, institutions and business subjects engaged in the GreenLight programme has been constantly growing. At the present time, it has some 450 partners. In the Czech Republic, besides the Ministry of the Environment, these include, for example, the cities of Kladno and Zlín, the district of Prague 8, the municipality of Hostětín, the Regional Authority of the South Bohemia region, the utility Energetika Vítkovice, a.s., Ramada Hotel Prague, and the companies CNM Textil and IKEA Czech Republic.

Further information:

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Written for the Bulletin of the Ministry of the Environment, No. 4/2008.

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issue from the applicant’s economic stability. The technical and environmental criteria are based on the values acquired from the project documentation, the building’s budget and the energy audit. The environmental relevance is assessed by specific costs for a tonne of CO₂ saved and an energy unit saved. The technical level is evaluated by the difference between the costs in the budget for individual measures and the values determined by the State Environmental Fund. For instance, in the case of replacement of windows, the maximum number of points is attained

with the specific cost of CZK 5,760/m² or lower. For illustration, given the costs of CZK 7,200/m², the points rating is half (while only the determined CZK 6,000/m² is figured in the acknowledgeable costs). This unambiguously confirms that the ideal solution would be to propose a suitable budget at the level most acceptable in terms of points.

Besides the emission abatement criterion, the thermal/technical nature of the building’s envelope structures is an extremely significant criterion for the evaluation of an application. Thermal insulation, or

possibly replacement of aperture fillings, must fulfil the recommended value of the heat-transfer coefficient for individual structures, or its average value for the building as a whole must be met. In this connection, it is, for example, suitable to treat buildings with extremely rugged façades in such a manner that only a project for window replacement, possibly for thermal insulation of the façade of the inside block, is prepared in order to satisfy the programme’s conditions as fully as possible.

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Energy saving versus energy efficiency and renewable sources

The most suitable form of supporting renewable energy sources has become a frequent subject of discussion.

Experience from the Czech Republic, the EU and other countries has revealed the advantages and disadvantages of individual support mechanisms. Valuable too are endeavours for increasing energy efficiency. Nevertheless, specific forms of support do not possess mechanisms as elaborate as those for generation of energy from renewable sources.

What is the reason, and what are the consequences?

As is generally known, demand for energy, both electric power and gas, is relatively inelastic in response to rising energy prices. This means that an increase in energy prices is not proportionally projected in reduction of consumption. Not all customers have information available about the possibilities of decreasing consumption and current energy prices. In addition, many mechanisms aimed at promoting energy efficiency focus on penalisation of increased consumption in the form of taxes, etc. Unlike renewable energy sources, energy savings do not possess mechanisms directly rewarding reduction of energy consumption.

Renewable energy sources in the Czech Republic and other countries receive wide financial support – for example, by means of the system of energy feed-in tariffs which guarantee investors fixed income. Another, frequently applied mechanism entails definition of a compulsory minimum level of putting renewable sources on the market, while the market itself determines technologies and projects on the basis of their costs, which will be used for meeting the objective. A “matter of course” is specific subsidiary mechanisms.

One of the reasons why mechanisms supporting renewable energy sources are more elaborate is the fact that energy supply to the grid or the customer is much more easily measurable and centralised than the saved energy.

On the other hand, energy efficiency is primarily sustained by binding or voluntary standards and norms, energy audits and information campaigns, combined with subsidiary means.

The consequence of this situation, however, is also the fact that otherwise more expensive renewable energy sources can from the viewpoint of the observer have better output parameters than the often cheaper energy-saving measures.

The system of feed-in tariffs for energy from renewable sources is advantageous owing to its lucidity and guarantees for investors.

Several European countries have introduced a white certificate scheme. It combines the obligation of energy savings and the possibility of trading with the certificates documenting reduced energy consumption from specific projects. Reduction of energy consumption can be attained by advanced technologies (appliances with decreased energy consumption for the given service) and changed attendance of appliances (heating temperature, setting up control, the number of kilometres driven). On the other hand, the feed-in tariff system has not yet been used to directly support energy savings, although its adoption for energy consumption reduction could also have a major significance in this regard.

Instead of discussions about the suitable taxation of the energy consumed and the effectiveness of subsidies laid out on specific projects, the scheme of feed-in tariffs for the energy saved could be an effective mechanism.

It stands to reason that when defining their rules, correct measurement of the previous and new energy consumption would have to be taken into consideration, as would external impacts such as weather and the new manner of using the given subjects. A crucial question would be determination of the mechanism of automatic flow of income for the energy

saved. The feed-in tariff scheme would define the tariff operators would receive for the energy saved, which would also limit the total level of their efforts for savings (to a new, economically returnable limit). Its level would probably correspond to the national target of total reduction of energy consumption.

Specific projects could only join the scheme on the basis of continuous measurement of energy consumption. Serving as a suitable example for the launch of the mechanism are systems of lighting and operation of electrical appliances. The project deviser would present a specific technology and the method of energy consumption reduction (by means of a new technology or attendance), and only this project would be measured and rewarded by a feed-in tariff.

Remuneration of projects based on the attained reduction of energy consumption has a major disadvantage: the complexity of measurement and evaluation of savings. On the other hand, similar problems must also be overcome by other mechanisms whose administration need not necessarily be simpler. The advantage of feed-in tariffs for energy savings could be long-term provision of projects and certainty of application for energy-saving technologies.

A specific practical solution could be extension of the feed-in tariff system for renewable energy sources to saved electric energy too. Although there has been no example of its application to date, it is definitely worthwhile having a specialist discussion about its possible impacts on economically effective support for energy consumption reduction, environmental protection and prevention of climate change. *-jk-*

The article has been drawn up on the basis of the conference paper: Bertoldi P. (European Commission - DG JRC) and Rezessy S. (Central European University): A step into the unknown: feed-in tariff for energy saving, ECEEE, France, 2007 http://www.eceee.org/conference_proceedings/eceee/2007/Panel_1/1.227/

CLEAR SUPPORT FOR ENERGY SAVINGS IN BUILDINGS

Owing to the share of energy consumption in this sector, energy savings in buildings represent one of the main areas in which it is possible to reduce energy bills. In addition to technological and financial barriers, lack of information is often a significant obstacle to utilising their potential. The international ClearSupport project (2007-2009), whose activities lead to the creation of an information support system for small and medium-sized projects, strives to facilitate the removal of these barriers.

The project's main general objective is to initiate rationalisation of energy consumption in buildings. Its tools include:

- Creation of a database of energy-saving measures applicable during reconstruction of individual types of buildings and finding the manners of overcoming obstacles during their implementation;
- Raising common interest among investors in projects in urban and residential buildings and provi-

Clearinghouse Support

ders of finance usable for project financing in the area of energy savings;

- Dissemination of information and increasing the awareness of possibilities of energy consumption reduction.

A task force has been established within the course of the project whose endeavour is to help the projects under preparation in their planning and implementation phases. The task force plays the main role in the following areas:

- Identification of and support for energy-saving projects;
- Standardisation of technological possibilities when selecting suitable measures;
- Standardisation of energy-saving potential estimates;
- Finding new and developing the current financial mechanisms (including combinations of various financial schemes);
- Overcoming barriers hindering investments in energy savings (with the assistance of suppliers of energy-saving projects and energy-service companies).

It is possible to join the task force's work on an external basis. On 11 July 2008 in Prague there will be a seminar providing information about the project's activities. For more detailed information about the project, visit www.clearsupport.cz.

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EPC project at the National Theatre

The National Theatre (ND) continues to be a significant symbol for the Czech nation. Yet the time when the theatre's reconstruction and construction of its new stage was a priority task of the government has long gone. The theatre's management must now carefully monitor all expenditures. This was one of the main reasons why the energy economy of the set of ND buildings had to be updated and why the management decided to use the EPC (Energy Performance Contracting) method as the manner of modernisation. We asked Miroslav Růžička, the deputy technical/operations manager of the National Theatre, a few questions in this regard.



How did the project originate, and how has it progressed?

The first considerations of what could be changed were discussed a long time ago. In 2005 we commissioned an analysis of the heating and air-conditioning systems and all electrical appliances with the aim to propose suitable measures concerning updating of the theatre's energy management. At the beginning of 2006 there was a selection procedure for the supplier of the "Use of waste thermal energy in National Theatre buildings by means of implementing energy-saving measures using the EPC method" project. Immediately afterwards, the project documentation followed, and all measures had been carried out by the end of 2007. The project was placed into operation in January 2008 and repayment of the investment means from future savings in operating costs will last until the end of 2017.

What energy-saving measures have been implemented?

Modernisation of the energy system applied to eight main operating sets. The heat source has been refurbished, while one of the three traditional boilers was replaced by two more efficient condensing boilers.

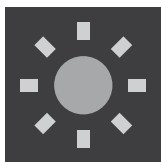
Furthermore, the central cooling system was reconstructed too, with the original cooling by water from the Vltava being supplemented by a machine which can serve for both cooling and heating (after reversion into the operation of a heat pump). The large pumps draw water from the Vltava for cooling; in this respect, installation of frequency speed converters of drives has resulted in significant reduction of electric energy consumption. Other frequency converters were installed for pumps of cooling and cooled water for air-conditioning of the ND buildings, as well as for heating water pumps. Also utilised is thermal energy originating through the heating up of hydraulic oil during lifting of stages, curtains and the orchestral pits, by means of inserting two smaller oil/water exchangers for a small heat pump. This energy was originally not made use of and the oil was cooled by drinking, or even, Vltava, water. The installation of thirteen cooling liquid exchangers in two places has resulted in the utilisation of heat from waste air through recovery. In the last operating set, which basically connects all the others, the former measurement and regulation system was in-

novated. Many of its components were replaced and the system is now controlled by almost double the number of the original 1,000 data points.

What is your current experience with the EPC method?

I can say that my experience has been indeed very good. It would have been extremely difficult to put together investments of more than thirty million crowns in partial, albeit essential, modifications to the energy system. In this manner, the investment will be paid back sooner than the service life of the installed equipment has expired. It is true that the application of the EPC method is not a simple matter. However, if appropriate attention is paid to the project's preparation and implementation, and seeking suitable partners, it is possible to establish a very good contractual relation. After the first months of operation, the savings have surpassed our expectations.

The interview was carried out on behalf of SEVEN by Vladimír Sochor (vladimir.sochor@svn.cz)



GreenLight certificate for the town of Kladno

ON 15 APRIL 2008, a certificate of the European GreenLight programme was handed over by Juraj Krivošík, deputy director of SEVEN, at a press conference to the Mayor of Kladno, Mr Dan Jiránek. The town obtained the certificate as a result of its contribution to the implementation of an energy efficient public lighting system.



Energy performance of buildings and its evaluation

Energy performance of buildings, certification and energy performance passports are conceptions frequently discussed at the present time. On 1 July 2007, Decree No. 148/2007 Coll. on energy performance of buildings, came into legal force in the Czech Republic. It is an implementing document of the Energy Management Act. These two documents are not, however, the only ones to introduce into Czech legislation the elements of Directive 2002/91/EC, on energy performance of buildings (EPBD). Other significant documents are the decree on regular checks of air-conditioning equipment (October 2007), and the decree on checking the efficiency of boilers (November 2007). Their implementation rounded off the phase of legislative development whose aim is to evaluate buildings from a much more comprehensive view than was the case of the previous decree, using a methodology comparable for individual European Union countries adapted to the conditions in the Czech Republic.



The Directive and the national legislation arising from it aim to increase the efficiency of energy use in buildings by means of assessing the energy performance of buildings (i.e. the total annual energy supplied for heating, cooling, ventilation, water heating and lighting, including auxiliary energies) and checking the buildings' most energy demanding systems – heating and air-conditioning.

At the present time, in connection with the immense zeal for obtaining subsidies from European funds for measures resulting in energy savings in buildings, there is great interest in energy performance certificates as a compulsory appendix to, for example, applications for support from the Operational Programme Environment.

The importance of this comprehensive assessment of buildings by means of the so-called balance me-

thod lies in the fact that the owner, future operator or purchaser receives a document providing more information about a building and its real condition and restrains the manner in which the current user behaves in the building (which is operatively evaluated by an energy audit).

On 1 January 2009, the provisions of point 17 of Section 6, clause 7 and point 19 of Section 6a, clause 2 will come into legal force too. The first concerns regular checks of air-conditioning systems with the output above 12 kW. Some sceptics have warned that it would mean just another bureaucratic act without any purpose. However, practice will show whether this proves to be the case or not. The second point concerns the obligation of drawing up certificates for all new buildings, as well as in the case of large modifications made to existing buildings with the floor area exceeding 1,000 m². In these cases, the certificate will be a compulsory part of the building documentation, purchase and lease contracts for all these buildings and their parts, including, for example, new family houses. The certificate can also be drawn up for a single flat. However, it is not compulsory in the event of sale or lease of a flat in an existing or unreconstructed building. Public buildings with the area of over 1,000 m² will be obliged to display the certificate in a visible place. It applies to the buildings serving for the education system, health care, culture, trade, sports, accommodation and boarding, and for customer centres in the power, transport, telecommunications and water management sectors. On the other hand, buildings in which heating does not play any role (for example, some production and agricultural buildings) are not obliged to have the document.

The main part of the document is the certificate of the building's energy performance, which is a colour label similar to the energy labels on some household appliances. The certificate also has a similar purpose – it should draw the (future) occupier's attention to the building's condition and its energy consumption in comparison with the reference value. This value is determined for basic types of buildings (family houses, multiple-dwelling houses, hotels and restaurants, administrative buildings, hospitals, schools and educational facilities, sports facilities and commercial buildings) directly in Appendix No.1 to Decree 148/2007. Other buildings which do not come within the mentioned categories are evaluated according to the European EN 15217 standard. Some specialists consider it an inappropriate solution since, for example, two commercial buildings and two hospitals can significantly differ when it comes to the manner of use, and it is difficult to compare these buildings with a single respective value stipulated in the decree.

The decree and energy performance certificates are a relatively new matter. They can, however, serve as an aid for improving the provision of information to a lay person or occupier, and can facilitate or initiate other activities leading to improvement of the energy performance of current and new buildings.

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CHALLENGE EUROPE: MORE ACTION, LESS CARBON

In June 2008 the British Council launched the European element of its global climate programme; Challenge Europe.

The Challenge is a three year campaign that aspires to make a definite and lasting impact on the climate change debate, and is ambitious in its aim to accelerate change to a Low Carbon Future.

The philosophy of the campaign is simple: to create momentum through collaboration, innovation, drive, and knowledge-sharing.



In each of 15 countries 15-20 young influencers, aged 18-35, will work together as 'Climate Advocates' to find new ways to reduce carbon use or utilise methods already found but not yet properly exploited. Each group offers a broad representation of skills, attitudes and ideas

from all walks of life, working across disciplines to seek, gather, develop and then refine scores of ideas to agree just three concrete concepts. These concepts, they believe, will have real potential to bring about a Low Carbon Future through changes to law, business practice or human behaviour. The result: a network of 200 bold and young influencers working together to develop 42 concrete, tangible ideas.

The groups will pitch these ideas to broader publics, including eminent experts, philanthropists, commercial organisations and entrepreneurs across a range of fields in an effort to make the ideas become reality.

Throughout the programme, the British Council will actively partner with a number of organisations across Europe spanning all sectors; including the corporate, non-governmental, environmental and academic worlds. Through these partnerships, the British Council will support these young Europeans on their quest, offering them access to some of the best minds in Europe through established networks of expert groups and individuals: climate change experts, policy makers, business people, entrepreneurs, environmental groups, and centres of excellence. In the Czech Republic the project is supported by Heinrich-Böll-Stiftung, Centre for transport and energy and Faculty of Environmental Science of the Czech University of Life in Prague.

In 2008, Challenge Europe will be taking place in 15 countries across Europe: Czech Republic, Denmark, Estonia, Finland, Hungary, Ireland, Latvia, Lithuania, Norway, Poland, Slovakia, Slovenia, Sweden, UK, Ukraine.

Jana Hecová, British Council,
<http://www.britishcouncil.org/czechrepublic-projects-the-low-carbon-challenge.htm?mtklink=czechrepublic-homepage-mt-link-the-low-carbon-challenge>

11TH INTERNATIONAL CONFERENCE Energy Efficiency Business Week 2008

12 – 13 November 2008 • Kaiserštejn Palace, Prague

SEVen, The Energy Efficiency Center, is preparing another edition of Energy Efficiency Business Week, already the eleventh. It is one of the most important conferences focused on efficient energy use in Central and Eastern Europe.

Every edition of the international conference is specifically centred on selected current topics. The event is characterised by its combining practical experience from the implementation of specific projects and information about all relevant aspects and trends influencing decision-making and business activities pertaining to energy efficiency.

It is our honour to hereby invite you to this year's conference, which will focus on the following topics:

• Paths to reducing energy intensity in the transport sector

- The Czech Republic's action plan for energy efficiency in the transport sector (2008 – 2010)
- Means and measures aimed at abatement of CO₂ emissions from transport
- The ECODRIVEN campaign • Examples of national policies of EU member states in relation to IAD
- Technological trends in passenger and freight transport
- The future of automobile transport (not only) in conurbations

• Financing and structural funds

- Experience with the first use of OP Enterprise and Innovation and OP Environment within the 2007 – 2013 programme period
- Preparation of projects, conditions and information from the programmes' administrators
- How to begin and continue, where to find advice and help, what can be combined, example of implementation
- Other supporting tools – CEEF, PCF
- Seminar about preparation of projects

• Third-party financing (EPC & Contracting) and energy audits

- Combination of projects – economies of scale
- Using energy audits in EPC projects and during selection procedures
- Practical experience from preparation and implementation of EPC projects
- Experience with inviting tenders for EPC projects
- Monitoring and evaluation of results

• Sustainable development of residential wholes and low-energy architecture

- Experience with designing, constructing and operating user-comfortable buildings with significantly lower consumption of energy for heating, warming up water and other systems and without increased investment costs
- Passive buildings as a higher standard of low-energy construction with multiply lower energy consumption in comparison with ordinary buildings
- “Zero” and “Plus” buildings

• Energy-efficient lighting

- Efficient lighting in households, the commercial sector and industry
- Enterprise, service marketing and use of services with a guarantee in lighting
- Public lighting – potential for saving of municipal finance
- State-of-the-art lighting systems – technologies, costs, implementation

• Renewable energy sources

- Current trends and problems in using renewable energy sources in the Czech Republic
- New EU “climate/energy” legislation and its possible impact
- Implementation of renewable energy sources in distribution and transmission systems
- Advanced technologies for higher economic competitive strength of RES
- First results and experience with ECO-ENERGY and OP Environment in the area of support for RES projects

• Municipal energy economy

- Energy planning of towns and municipalities
- Tools for energy planning at the municipal level
- Strategies of towns and municipalities during negotiations with energy suppliers and consumers
- Energy conceptions and energy audits at the municipal level
- Financing of energy projects and reconstruction of buildings owned by towns and municipalities

Further information: www.eebw.cz

« RENEWABLE ENERGY SOURCES..., continued from page 1

a questionnaire research among renewable energy stakeholders around the EU was held. As the main practical barrier, the permission procedures and grid connection procedures were considered to be too complex and time consuming.

Another main discussion topics are the guarantees of origin. The research demonstrates that currently different designs and uses have been attributed to the guarantees of origin in different Member States, which hinders transparency and allows for double counting of the same GOs.

What was the real impact of the project?

Under the Progress project, the energy model Green-X was used to elaborate the scenarios in the Renewable Energy Roadmap (COM(2006) 848) for the deployment of the goal of 20% RES in the EU in 2020,

and its Impact Assessment (SEC(2006)1719-2). The Roadmap played an important role in the adaption of the EC proposal of a binding target of 20% renewable energy in the EU by 2020.

The Progress project also contributed to the assessment of new developments achieved by individual Member States towards the national 2010 targets for electricity generation from renewable energy sources, as laid out in EC Commission document COM(2006) 849.

Recommendations with respect to the guarantee of origin are reflected in the Proposal for a Directive on the promotion of the use of energy from renewable energy sources (COM(2008) 19), such as a more detailed specification of design, harmonisation of design and use of the guarantee of origin and the introduction of the principle of redemption of the guarantee of origin

(articles 6 and 7 of the Proposal for a Directive).

Recommendations with respect to the reduction of barriers are reflected in the Proposal, which mentions the establishment of a single administrative body responsible for permitting and the establishment of time-limits for responding by authorities (art. 19).

Note: The PROGRESS project was supported by the European Commission, Directorate General Energy and Transport (DG TREN), and provides the Commission with inputs for analysis of the degree of achievement of 2010 national and Community targets under the 2001 Renewable Electricity Directive. The project was coordinated by Ecofys, SEVen Czech Republic was a consortium member. Further details about the project can be found on the website www.res-progress.eu.