

# NEWS AT SEVEN

ENERGY EFFICIENCY NEWS FROM THE CZECH REPUBLIC

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## Combining EPC and insulation subsidies from the OPE

*Readers of this newsletter need no introduction to the Energy Performance Contracting (EPC) method. What is new, however, is the possibility to combine use of this method with finance from the Operational Programme Environment (OPE), which grants subsidies for building measures resulting in further energy savings.*

The EPC method is usually applied to renovate technological energy equipment in buildings and energy systems. When efficiently combining the EPC method with thermal insulation of buildings, it is possible to attain optimal reduction of energy consumption. Yet this can also be attained by sufficiently meeting the requirements arising from the conditions for obtaining subsidies from the Operational Programme Environment. Every project that receives a subsidy from the OPE must achieve the required volume of energy savings and the required emissions abatement. When submitting an application for support from the OPE, it was usual that the assumed volume of energy savings was by reason of gaining a sufficient number of points for evaluation estimated at the maximum

level. The supplementation of the project aimed at refurbishment of technological equipment using the EPC method will in suitable cases bring a "cushion" of energy savings that will guarantee attaining a sufficient volume of savings and emissions reduction alike. We can already present examples of projects suitably combining buildings' insulation for which subsidies from the OPE were obtained and the application of the EPC method.

In 2009 the Novovysočanská Secondary Training College in Prague reconstructed its heating system by means of comprehensive replacement of gas boilers and a rather extensive refurbishment of the heating system. Measures pertaining to thermal energy were supplemented by saving mea- » cont. » page 6



## INFORMATION ABOUT THE 2<sup>nd</sup> YEAR OF THE PROGRAMME OF VOLUNTARY CERTIFICATION OF TRANSPORT COMPANIES

*The "We are seeking class A transport companies" programme, whose second edition is being launched by SEVEN this year, is primarily targeted at hauliers mainly providing long-distance road freight transportation by vehicles with the unit weight above 3.5 tonnes, or above 12 tonnes. The programme can also be joined by transport companies whose vehicle fleet is made up of off-road vehicles and vehicles for mass passenger transportation.*

The programme was officially launched at the beginning of April 2010. The registered transporters will be continuously evaluated until the announcement and handing over of certificates, scheduled for June 2010. The programme's subject matter is **granting** a certificate documenting that the transporter is a "Class A" company (in terms of economical and safe operation of its vehicles and responsible approach to environmental protection). The certificate is awarded on the basis of evaluation of the filed applications by a **professional committee**, which will be set up for this purpose and comprise independent specialists and partners of the programme. Nomination of the committee members is carried out by SEVEN, the programme's main co-ordinator. The precondition for being awarded the certificate is

the company's positive evaluation in terms of several criteria: (A) the level of the vehicle fleet, (B) the quality of driving, service and maintenance of the vehicles (including personnel provision), (C) the company's relation to environmental protection, and (D) the company's relation to increasing road-traffic safety.

The registration forms with contact data are available on the programme's website [www.dopravcetridyA.cz](http://www.dopravcetridyA.cz) and in the press of the media partners. The preliminary deadline for sending the filled-in forms is 30 May 2010.

The programme is supported by: the Ministry of Transport of the Czech Republic – ČESMAD Bohemia – Volvo Truck Czech, s. r. o. – CE Solutions, s. r. o. (participation of other entities is under negotiation). Jiří Horák, [jiri.horak@svn.cz](mailto:jiri.horak@svn.cz)

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## GREEN LIGHT TO SAVINGS PARTNERSHIP – INFORMATION PROGRAMME ABOUT ELECTRICAL APPLIANCES

*The generally known Green Light to Savings programme has been extended to include another group of products. It primarily concerns refrigerators, washing machines, dish-washers, light sources and other electrical appliances.*

The Green Light to Savings Partnership, which includes these products, is a non-subsidy and non-investment project on the basis of which the consumer obtains precise » cont. » page 3



# Support for energy savings and renewable sources within the 2<sup>nd</sup> call of the ECO-ENERGY programme

EU finance for reducing the current high energy intensity of industry in the form of energy saving and development of small and medium-sized enterprise (SME) in the area of using renewable energy sources. This programme comprises the independent priority axis No. 3 – Efficient Energy (the ECO-ENERGY programme), within which not only small and medium-sized businesses but also large companies can obtain subsidies for implementation of programmes pertaining to energy efficiency. This article describes the implementation of the 2<sup>nd</sup> call of the ECO-ENERGY programme and the presumed increase in production of electricity from renewable energy sources (RES), as well as energy savings in the case of implementation of the supported projects. In conclusion, it also outlines the implementation of the ongoing 3<sup>rd</sup> call of the ECO-ENERGY programme.



SEVEN evaluated the projects aimed at energy savings and energy generation from RES that were submitted within the 2<sup>nd</sup> call of the ECO-ENERGY programme within the OPEI, together with requests for support in the form of investment subsidies from the Ministry of Industry and Trade of the CR (MPO). This evaluation was carried out in compliance with the valid methodology of selection criteria for the 2<sup>nd</sup> call on the basis of technological-economic parameters according to the complete application and energy audit, and possibly other project documentation. SEVEN evaluated some 502 projects that had applied for investment subsidies totalling approximately CZK 5,746 million.

The 2<sup>nd</sup> call of the programme was announced on 1 October 2008, complete applications were accepted until 15 June 2009. Complete applications were evaluated until the end of April. Applications for subsidy payment will be accepted until 31 March 2012. The allocation for this call is planned to amount to CZK 4,500 million.

The minimum absolute level of a subsidy for a single project is CZK 0.5 million, the maximum absolute amount of subsidy is CZK 250 million. The maximum level of subsidy in % of eligible costs is in the case of Activity No. 1 stipulated according to the map of regional support, in the case of Activities No. 2 to No. 4 at the level of 30%, and in the case of Activity No. 5 at the level of 40%. The project must not be implemented in the territory of Prague. The projects were evaluated according to the selection criteria within the 2<sup>nd</sup> call for the ECO-ENERGY programme depending on the respective priority. Individual criteria of the selection criteria methodology and the set-up point evaluation interval took into account the main priority objectives of the ECO-ENERGY OPEI 2007–2013 programme in terms of increasing energy efficiency and energy production from RES according to the Ministry of Industry and Trade. The maximum possible number of points was 110. The projects that received at least 50 points were handed over for subsequent external evaluation pertaining to the project's feasibility, including the evaluation committee of the Ministry of Industry and Trade. Priority support is given to projects falling within Activity 1 in sequence according to the points attained. This applies on condition that the respective evaluation committee of the MPO does not find that the respective project has any other shortcomings of an economic or technical nature.

On the basis of ex-ante evaluation, implementation of the 2<sup>nd</sup> call of the ECO-ENERGY programme should increase the annual net production of electric energy from renewable sources by approximately

## Statistics of the evaluated projects of the 2<sup>nd</sup> call of the ECO-ENERGY programme using the selection criteria methodology

Type of activity	Number of projects evaluated	Subsidy required (CZK thousand)
Activity 1 – Energy-saving projects	384	3 491 871
Activity 2 – Small hydroel. power stations	57	423 121
Activity 3 – CHP and electricity production from biomass, organic bio gas and biogas from mixed municipal waste	56	1 806 416
Activity 4 – Heat pumps and solar thermal collectors	2	1 609
Activity 5 – Heat from RES (heating plants)	3	23 239
<b>Total</b>	<b>502</b>	<b>5 746 256</b>

18% as against 2008 levels and bring annual energy savings in final energy consumption amounting to 4.270 PJ. This represents a significant contribution to the fulfilment of the Czech Republic's national objectives in terms of utilisation of RES and increasing energy efficiency, i.e. the objective of achieving by 2020 a 13% share of energy from RES in gross final energy consumption (pursuant to Directive 2009/28/EC) and the objective of attaining energy savings amounting to 9% from the average final energy consumption in 2016 (pursuant to Directive 2006/32/EC).

The 3<sup>rd</sup> call of the ECO-ENERGY programme was announced on 1 February 2010. Applications can be registered between 1 March and 30 June 2010. Complete applications are accepted from 1 May to 30 September 2010. The allocation planned for this call is CZK 3,000 million. Evaluation will take place according to the priorities of the 3<sup>rd</sup> call and

the methodology of selection criteria for individual priorities. For this reason, we recommend keeping an eye on the Ministry of Industry and Trade's website, which should contain all the current information relating to the implementation of the ECO-ENERGY programme.

The table below shows the maximum proportion of the level of a subsidy from eligible costs for individual activities supported within the 3<sup>rd</sup> call of the ECO-ENERGY programme.

The experience from the implementation of ECO-ENERGY OPEI 2007–2013 has shown that this programme serves as a great impulse for the development of the implementation of projects aimed at energy savings and energy generation from RES in the Czech Republic in the area of small and medium-sized enterprises, as well as large companies in the case of energy-saving projects.

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## Level of subsidy for individual activities supported within the 3<sup>rd</sup> call

Sequence <sup>1</sup>	Supported activity – project type	Maximum subsidy
1	Increased efficiency when producing and consuming energy, use of secondary energy sources – energy savings	According to the Map <sup>2</sup>
2	RES – small hydroelectric power stations – electric energy generation	40%
3	Heat from RES (heating plants)	40%
4	Combined heat and power generation from RES (biomass, biogas) and/or use of landfill gas	30%
5	Heat pumps and solar thermal collectors (not photovoltaic cells)	30%
6	Electric energy generation from biomass and landfill gas without using waste heat	30%

<sup>1</sup>) Sequence of supported activities for the purpose of project evaluation

<sup>2</sup>) According to the Map of Regional Support of the CR: from 40% for large companies up to 60% for small companies, except for the South-West region where the range is 30% – 50%.

# Lighting by means of LED technology

*The development of LED technology has accelerated significantly in recent years. At the present time, the first applications making use of light-emitting diodes in general lighting are emerging. What are the advantages and disadvantages of this technology? And will this technology meet the expectations invested in it?*

LED technology is based on the semiconductor light-emitting diode. While the first LEDs only emanated monochromatic light, the development continued rapidly. Momentous milestones were the invention of the blue and, subsequently, white diode, and, later on, the high-power LED. Each year, diodes with a little higher specific power have been introduced. Today, we can encounter in general lighting diodes having approximately 100 130 lm/W, thus theoretically surpassing incandescent and fluorescent lamps, as well as some discharge lamps. In addition to their high efficiency, the main advantage of LED technology is considered the long service life. Nevertheless, in practice this parameter depends on many circumstances. Responsible manufacturers mostly do not state a number higher than 50,000 hours, more frequently fewer (e.g. 25,000 hours). Other advantages include their rapid start, the possibility of dimming, small size, the possibility of coloured light, resistance to vibrations and frequent switching, and other properties. Moreover, unlike discharge and fluorescent lamps, LEDs do not contain toxic mercury. However, the LED is still new, suffers from several shortcomings and has not been sufficiently tried and tested in practice. Significant problems include temperature dependence (the necessity of high-quality cooling), the necessity of a high-quality phosphor for white light, the gradual decrease in luminous flux over the service life and the high price.

## LED lamps

2009 marked the first significant development of so-called LED lamps or LED bulbs, i.e. LED light sources with E14 or E27 threads suitable for replacement of ordinary bulbs. The highest current inputs are 8W, which in the warm white light variant corresponds to a 40W incandescent lamp. LED lamps are usually offered in the E14 variant with a candle-shaped bulb or the E27 variant in the shape of an ordinary bulb. The service life of LED lamps is usually 25,000 hours, fewer with some variants. The



Development,  
new applications  
and areas of use

remaining disadvantage is their high price. The LED lamps segment is still new and it is necessary to avoid unreliable manufacturers stating a very long service life without any technical details or proclaiming replacement of bulbs by very low inputs.

## LEDs in public lighting

The development of LEDs has also resulted in their gradual application in public lighting. With their parameters, the current LEDs are able to compete with some discharge lamps with lower inputs (approx. 70 100W). Compared to discharge lamps, LEDs have several indisputable advantages: white light with a good colour rendering, usually a longer service life (the LED's luminous flux decreases gradually), easier regulation and more efficient use of luminous flux in luminaries. The disadvantage of LED luminaries is their higher price and the insufficient experience with LED luminaries in practice (a fact abused by some vendors). Yet the first applications of LED luminaries already exist. The best-known in the Czech Republic is the LED lighting pilot project in Prague's Smíchov district.

## Other uses of LED technology

LED technology offers many possibilities of use. Owing to easy implementation of various coloured options, LEDs are applied in architecture and design; they even appear in office lighting and are frequently made use of in the automotive industry. In the future, we will undoubtedly encounter more LED applications, yet this new technology will not be replacing tried-and-tested fluorescent and discharge lamps any time soon.

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For more information about the current development of LED technology: [http://re.jrc.ec.europa.eu/energyefficiency/html/Workshop\\_LED\\_26012010.htm](http://re.jrc.ec.europa.eu/energyefficiency/html/Workshop_LED_26012010.htm)

## « GREEN LIGHT TO SAVINGS..., cont.

instructions for selecting the most energy efficient appliances available on the Czech market.

The programme's basic information tool is the website [www.zelenausporam-partnerstvi.cz](http://www.zelenausporam-partnerstvi.cz), which, among other things, contains a list of specific products meeting the stringent criteria for energy efficient operation. Manufacturers must confirm the data on every product by means of energy consumption measurement in line with the legislation pertaining to energy labelling, or, in the case of products that do not have

an energy label, in compliance with the requirements of the respective international technical standard.

SEVen is participating in the launch of the programme's activities, its organisation and formulation of the criteria for selection of products. Hence, we can definitely confirm that these are products with a very low operational energy consumption ranking among the most energy efficient on the Czech market.

Further inform.: [www.zelenausporam-partnerstvi.cz](http://www.zelenausporam-partnerstvi.cz)

## GREENLIGHT AWARD 2010 FOR THE PRAGUE MARRIOTT HOTEL

*The Prague Marriott Hotel has received the GreenLight Award 2010, conferred once every two years by the Joint Research Centre within the European Commission. The award is part of the European GreenLight programme and is given to the best European projects pertaining to energy-efficient lighting.*

The saving measures included replacement of incandescent bulbs with 30 % more energy-efficient halogen lamps or 80 % more energy-efficient compact fluorescent lamps. Extremely energy-efficient LED technology, lighting entrances to individual rooms, was also used to a significant extent. In some of the premises, movement sensors were installed too.

The total savings amount to 465 MWh/year, or 590 tonnes of CO<sub>2</sub> annually. The measures not only result in energy savings but also, owing to the much longer service life of the energy-efficient lighting, reduction of waste.

The GreenLight programme is a voluntary initiative of the European Commission that stimulates non-residential electricity consumers (both public and private) to install energy-efficient lighting technologies. The Prague Marriott Hotel has been a Partner of the GreenLight programme since the autumn of 2008. The energy-efficient lighting project was designed by SEVen. -mv-

## ENERGY SAVINGS IN THE STATE ENERGY CONCEPTION AND CLIMATE PROTECTION POLICY

In October 2009, the Ministry of Industry and Trade issued the Updated State Energy Conception of the Czech Republic (SEC). One of the strategic priorities of the SEC is "Increasing energy efficiency and attaining energy savings in the economy and households". The specific indicators of this priority include fulfilment of the Energy Efficiency Action Plan, improving thermal-insulation properties of apartment houses, ensuring that all new buildings after 2010 are constructed as low-energy, as well as increasing the share of railway freight transport to 40 % and railway passenger transport to 30 % by 2030.

At the same time (in the autumn of 2009), the Ministry of the Environment issued the strategic document Climate Protection Policy of the Czech Republic (CPP). According to it, the greatest potential when it comes to additional CO<sub>2</sub> emissions abatement is represented by final energy consumption. The document states that in this area it is possible to reduce emissions by 6 million tonnes of CO<sub>2</sub> in 2020 as against 2005. (According to the CPP, the highest potential is in the energy sector, 21 million tonnes of CO<sub>2</sub>.) Within the final energy consumption, it is necessary to focus on improving energy performance of buildings, use of more energy-efficient appliances and installation of more energy-efficient luminaries.

-mv-



## NEW DESIGN OF THE ENERGY-EFFICIENT APPLIANCES WEBSITE

The database [www.usporiespotrebice.cz](http://www.usporiespotrebice.cz) has undergone a general overhaul. The result is the website's new, more user-friendly design, which makes visitors' orientation easier among the most energy-efficient products.

The transformation also encompasses new functions offered by the database, such as, for example, the possibility of depiction and comparison of selected appliances or searching among products. Added to each category will be a direct link to the selection criteria and other significant information about the selected appliances. Naturally, the database will continue to provide information about energy savings when purchasing and using household electrical appliances.

The screenshot shows the website's header with the title "ÚSPORNÉ SPOTŘEBIČE v České republice" and navigation links: "Novinky | Informace | Archiv | Kontakt | Podněty a připomínky | Databáze". Below the header are icons for various appliance categories: Chlazení, Praní, Mytí nádobí, Televizory, Domácnost, Osvětlení, and Tiskárny. A search bar is visible on the right. The main content area includes a "Úvodní stránka" section with a welcome message and a "Novinky" section with a news item about energy-saving materials.

The database [www.usporiespotrebice.cz](http://www.usporiespotrebice.cz) is in its fifth year of operation. It is an independent database providing a comprehensive overview of the most energy-efficient products on the Czech market, including household electrical appliances (refrigerators, dish-washers, washing machines, coffee makers, vacuum cleaners), office technology and consumer

electronics. In addition to general characteristics of the products, such as the brand, model and price, it also provides information about their energy output and costs for electric power throughout the products' service life. The database is administered by SEVEN in linkage to the Euro-Topten Plus project ([www.topten.info](http://www.topten.info)). -mv-

## HOW WILL THE ENERGY PRICE AFFECT THE GENERAL PRICE LEVEL?

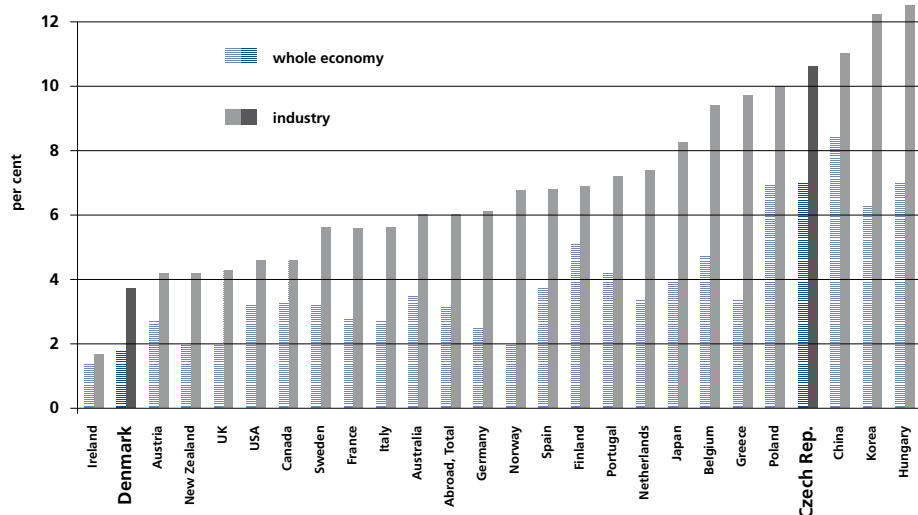
The diagram shows how energy price growth affects the general rise in prices in individual European Union countries. It documents what would happen to the price level in industry (grey) and the whole economy (blue) if energy prices were to double. It can be seen that in the case of the Czech Republic such energy price growth would result in an increase in the general price level in the whole economy by 7 % and in industry by more than 10 %. The diagram also documents the high energy intensity of the Czech economy in comparison with, for example, Denmark, where a rise in energy prices would

affect the general price level to a minimal degree (less than 2 %, or 4 % respectively).

Source: Anders Stouge, Round table on the topic "How to Promote Energy Efficiency in the Industrial Sector", organised by the Embassy of Denmark in co-operation with the Ministry of Industry and Trade of the CR and the Ministry of the Environment of the CR, 8 February 2010.

<http://www.ambprag.um.dk/NR/rdon-lyres/E173D3A2-7FE7-435F-896D-7-B79268D71CF/0/PPTAndersStouge.pdf>

Graph: Energy-price sensitivity



## THE MOST ENERGY-EFFICIENT TV SETS

The database of the most energy-efficient electrical appliances on the website [www.usporiespotrebice.cz](http://www.usporiespotrebice.cz) has been extended to include a new category: television sets. TV sets are divided into two categories according to the size of their diagonal: up to 110 cm and above 110 cm.

At the present time, almost every household has a TV set. The electricity consumption of TV sets forms a significant share (about 10 %) of the total electric power consumption, an average of 100 – 400 kWh a year, depending on the type of television set and its use. This represents a cost of CZK 450 to 1,800 for annual operation, or up to CZK 18,000 over 10 years of operation. It is expected that TV receivers will be included in the system of household appliance energy labelling. The consumer will thus have the opportunity to select a TV set according to the energy intensity of its operation too, which will be divided into energy classes A-G.

That is why the internet database [www.usporiespotrebice.cz](http://www.usporiespotrebice.cz) has been extended to include the category of the most energy-efficient TV sets available on the Czech market. Electrical appliances were selected for categories on the basis of the international criteria of the Euro-Topten Plus project ([www.topten.info](http://www.topten.info)).

The selection criteria include the maximum power in the standby mode up to 1 W (in compliance with Regulation 1275/2008/EC, on standby electric power consumption), power in the ON mode up to 170 W and the maximum energy efficiency index of 0.5 (pursuant to the draft European Commission Directive on requirements for energy labelling of TV sets, and in compliance with the IEC 62087:2008 international standards, it will correspond to energy class A and better).

Accordingly, specific products have been included in the database only on the basis of their operational parameters declared by the manufacturer, irrespective of the brand or producer.

The other categories of products listed on [www.usporiespotrebice.cz](http://www.usporiespotrebice.cz) include washing machines, refrigerators, dish-washers and sources of light. -jk-

### Jury acknowledgment in the competition Czech Energy and Environmental Project of 2008



IN NOVEMBER 2009, SEVEN received an acknowledgment from the jury of the nationwide competition Czech Energy and Environmental Project of 2008 for its "Energy Savings – Information Publication for the Services and Industry Sectors". SEVEN drew up the publication in tandem with the energy utility Pražská energetika a.s., which distributed it to its clients and partners.

The text of the publication on [www.energetickyPoradce.cz/osobni-poradenstvi/tiskoviny-poradenstvi.html](http://www.energetickyPoradce.cz/osobni-poradenstvi/tiskoviny-poradenstvi.html).

## Prague's Central Waste Water Treatment Plant has the potential to supply heat into the community heating system in Dejvice

*Owing to the launched refurbishment of the digestion tanks in the Central Waste Water Treatment Plant (ÚČOV) in Prague, the administrator of water management infrastructure, PVS a.s., has decided to order an expert opinion that would calculate and compare the energy consumption of the tanks that have not yet undergone renovation and those that already have.*

For this purpose, thorough measurement of the pivotal values (especially the temperatures and flows of septic sludge and heating water) was carried out in order to determine the quantity of heat consumed by the plant's sludge management, or, more precisely to maintain the temperature of the sludge in the tanks at the required level. The results of the measurement and the model calculation have confirmed that the share of thermal losses through transmission in the total heat consumption is very small, currently amounting to 15–20 %, and after the reconstruction less than 10–15 %.

This fact is absolutely essential since it proves that the digested sludge leaving the anaerobic stabilisation procedure conceals a great heat potential that could be re-utilised.

The realistic solution appears to be implementing heat recovery by means of simple recuperation through a suitable sludge-(water)-sludge exchanger, owing to which it would be possible to save even more than 50 % of the current heat requirements of the water treatment plant's sludge management. In annual terms, it concerns more than 20,000 MWh of heat (over 70 thousand GJ), which could be supplied to, for example, the central community heating distribution network of the nearby Juliska Heating Plant. The precondition is the construction of a connecting heating water conduit whose pay-back period, with regard to the minimal operating costs, would be very short (several years). Therefore, it was recommended to confirm this solution's feasibility by means of a detailed study.

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## Standby – what next?

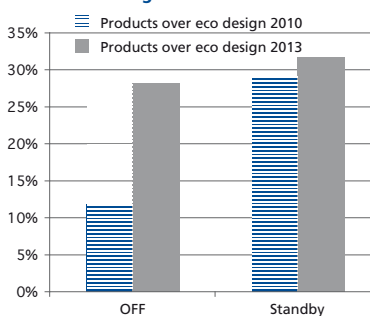
*Annual standby consumption accounts for the equivalent of at least one monthly electricity bill for an average household. Moreover, it is expected that the number of electrical appliances with the standby or OFF mode in households (and offices buildings) will further increase (today, the standby mode can even be found with refrigerators and washing machines).*

In January 2010, Regulation 1275/2008/EC, on standby electric power consumption came into force. According to this legislation, the standby consumption must not exceed 1 W, or 2 W, and the consumption in the OFF mode 1 W.

The current results of the measurements carried out in shops selling electrical appliances throughout Europe (in March 2010 the number of checked appliances was 3,000 out of the total target of 6,000) have revealed that about 30% of products do not meet the requirements pertaining to the standby mode and 10% of products the requirements for the OFF mode. The "worst" appliances include set-top boxes, loudspeakers, DVD recorders and hi-fi systems, whose average energy input in the standby mode is approximately 4–5 W.

From 2013 onwards, even stricter limits will be in force: 0.5 W in the OFF mode, and 0.5 W, or 1 W, in the standby mode. Furthermore, appliances will have to have the "auto-power down" function, i.e.

**Diagram: How many electrical appliances fail to meet the eco design's limits?**



Complete results of the measurements will be available on [www.selina-project.eu](http://www.selina-project.eu) in September 2010

they will have to automatically pass from the standby to the OFF mode.

One of the Regulation's problematic aspects is that it does not set out requirements relating to the "network" standby. Simply put, this mode means the situation when an appliance is connected to the power supply and 1) waits for reactivation through the network (either in the wireless manner or through a cable it analyses the signals arriving through various transmission routes), and/or 2) maintains external transmission routes. In other words, the network mode can be in the case of a printer connected to a computer or appliances in smart households that can be controlled through the internet.

Consumption in the network mode reaches significant values. According to expert studies initiated by the European Commission (LOT 6 and LOT 26), it represents more than 50% of the total consumption when appliances do not perform their main function (ON), in absolute figures at least 26 TWh/year for the entire European Union. With the increasing functions and interconnection of appliances, it can be expected that the consumption in this mode will further grow in the future.

The European Commission has launched a process that should result in a regulation specifying consumption in the network mode. At the present time, it is in the phase of preparation of an expert study that is scheduled to be published in February 2011. Accordingly, the respective measure cannot be expected earlier than after 2013.

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For more information, visit [www.ecostandby.org](http://www.ecostandby.org) or [www.selina-project.eu](http://www.selina-project.eu).

**SELINA**

## DECREASING FEED-IN TARIFFS FOR ELECTRICITY FROM GERMAN PHOTOVOLTAIC POWER STATIONS



*An interesting contribution to the discussion on the regulation of support for photovoltaics in the Czech Republic for 2011 is the recently declared intention of the German government to reduce, very significantly, the feed-in tariffs for electricity from photovoltaics.*

Germany has experienced a great boom in the development of photovoltaic power stations owing to the rapid decrease in solar panel prices, which makes investments in photovoltaic systems extremely advantageous given the current level of public support.

This has occurred despite the fact that in 2008 the German government adopted the amendment to the Act on support for electricity generation from renewable sources (Erneuerbare-Energien-Gesetz – EEG), which has basically doubled the hitherto year-on-year decrease in prices for new photovoltaic applications to 8% – 10% in line with the growth of the market from 2009 on.

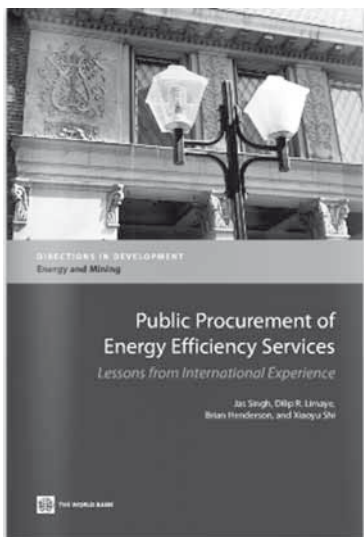
However, similarly to the Czech Republic, the growth of the market in 2009 surpassed all expectations. Whereas the EEG, given the estimated degree of support reduction, expected the market to grow between 1 and 1.5 GW in accordance with the dynamism of the previous years, i.e. year-on-year increase in installed capacity of 20 to 25%, in reality the figure was three times higher. According to estimates, up to 3 GW (!!!) was installed, which means that the market grew by more than half, and seven times more than in the Czech Republic.

The dramatic growth should be limited by prompt adoption of a special law that from July 2010 should reduce the feed-in tariffs beyond the framework of the EEG, namely, at least by 15 or even more per cent. What would the support be like then?

Also owing to the year-on-year 10%, or 11%, drop in the feed-in tariff for new power stations placed into operation after 1 January 2010, the new feed-in tariff for the most observed and controversial installations in free area from July would only be about 24 euro-cents, or even less if an even more radical decrease is approved. When converted to Czech crowns according to the current exchange rate, it represents approximately 6 CZK/kWh. i.e. roughly half of the 2010 feed-in tariff that is valid in the Czech Republic for solar power stations above 30 kWp.

-tv-

Source: <http://www.pv-tech.org>



## PUBLICATION: *Public Procurement in Energy Efficiency Services – Lessons from International Experience*

The World Bank has issued a publication titled *Public Procurement in Energy Efficiency Services – Lessons from International Experience*. It is devoted to global experience with implementation of energy services with a guarantee and the specific mechanisms applied in practice in individual countries. SEVEN has contributed to the publication with a description of its experience, case studies and EPC mechanisms in the Czech Republic. Further information about the publication is available at: [http://publications.worldbank.org/ecommerce/catalog/product?item\\_id=9323851](http://publications.worldbank.org/ecommerce/catalog/product?item_id=9323851).

# Association of Energy Services Companies in the Czech Republic

*The first energy services company in the Czech Republic was founded in 1993. Since that time, with varying degrees of success, a number of firms have tried to offer and implement the Energy Performance Contracting (EPC) method. For several years, companies dealing with energy services considered establishing a professional association. At the end of last year, they finally decided to found the Association of Energy Services Companies.*

Almost 18 years have passed since the origination of the first energy services company in the Czech Republic. The 1990s were characterised by seeking the most suitable method of provision of energy services. In the very beginning, EPC was offered (the method of energy services provision still most suitable for the public sector). Several companies applied the EPC method, which resulted in a significant amount of successful projects.

In 1995, the development of EPC was negatively affected by the adoption of the first version of the Public Procurement Act. Pursuant to the Act, the comprehensiveness of the solutions provided by energy-saving projects, encompassing the proposed solution, drawing up of project documentation, implementation of saving measures, gradual repayment of the investment laid out and the guarantee for the agreed volume of savings, was not acceptable. Nevertheless, a solution was ultimately found. Today, public procurements for the provision of energy services with a guaranteed result are routinely "tendered" in the form of a selection procedure being made public. The public procurement process continues to evolve and improve. There are also efforts aimed at finding the most suitable and the most balanced wording of the contracts on the basis of which projects are implemented by means of the EPC method. At the present time, the general wording of the contracts is frequently part of the contracting documentation, with the texts still being constantly improved on the basis of specific experience.

Despite the endeavours to disseminate informa-

tion about the EPC method and its advantages, the public sphere and, primarily, the state sector do not yet prioritise the method as much as it deserves. Interesting in this respect is the support connected with the enforcement of Directive 2006/32/EC of the European Parliament and of the Council, on energy end-use efficiency and energy services.

At the present time, further development of standard documents is also being initiated within the activities of the international EESI project and support for energy services provided to the public sector within the ChangeBest project, in which SEVEN is the Czech partner.

The mentioned topics are the main stimuli in whose development energy services companies providing EPC are interested.

Also interested in them are consultancy firms that help to prepare and process selection procedures for public procurements pertaining to provision of the respective energy services. This was the main impulse of the endeavour to formalise the professional association of those interested in supporting the provision of energy services, which is now originating in the form of the Association of Energy Services Companies.

At the present time, the foundation of the Association of Energy Services Companies is in the final phase. Its mission will be to support the development of energy services in the Czech Republic. Information about the implemented projects and energy services companies can be found on [www.epc-ec.cz](http://www.epc-ec.cz).

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## « COMBINING..., CONT.

asures aimed at electric energy and water consumption reduction. Moreover, in the second half of 2009 the school implemented complete insulation of the cladding, including replacement of the remaining original windows with plastic ones. The project was financially supported by the State Environmental Fund of the Czech Republic within the OPE. The investment in technological components of the building amounted to almost 8 million Czech crowns, while the investment in the building's thermal insulation was more than 15 million. From the amount of CZK 8 million, 6 million will be paid back from costs saved on energy consumption over the next eight years (the extensive reconstruction of the heating system was supported by CZK 2 million from the school's grantor, the Municipality of Prague). The OPE contributed approximately CZK 10 million for the building's thermal insulation. The building's owner will co-finance the overall

reconstruction in terms of energy savings by about 35 % and it is certain that the expected volume of energy savings will be attained.

A similar project has been prepared for the Josef Gočár Secondary Civil Engineering Technical School in Prague 4. In the second half of 2009, thermal insulation of the building, supported within the OPE, commenced. The insulation will be completed during the spring of 2010. The total investment will amount to over CZK 30 million. At the present time, a public procurement for provision of energy services with a guarantee, i.e. application of the EPC method during the renovation of the school's energy system, is taking place. Investment in technological equipment should amount to approximately CZK 11 million and will be implemented in the summer of this year. In this case, the participation of the building's owner (the Municipality of Prague) in financing the complete reconstruction will be less than 20 %.

The most extensive combined project has been pre-

pared for 2010 in Prague 13. The local council has confirmed the receipt of a subsidy from the OPE for thermal insulation of 15 school buildings. In addition, in 2009 an energy services company was selected in a tender to implement an EPC project in the mentioned school buildings this year. In this case, the investment amounts to more than CZK 300 million for thermal insulation and approximately CZK 90 million for technological measures with a payback period within 10 years.

These are examples of a mere 17 projects that have obtained subsidies for thermal insulation from the OPE. The total number of supported projects now exceeds one thousand. The question arises of what will happen if insulation of buildings will not result in the expected energy saving and emissions reduction. Returning subsidies for failing to meet specific indicators would certainly not be a popular solution.

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**SEVEN**

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