

ENERGY EFFICIENCY NEWS FROM THE CZECH REPUBLIC

Act supporting the use of electricity from renewables

Act No. 180/2005 Coll., on support for electricity production from renewable sources, stipulates the endeavour to meet the indicative target of 8% of the gross electricity consumption in the Czech Republic being covered by renewable sources by 2010 and defines the means of supporting electricity generated in this manner. In the European context, the Czech law is highly advantageous for owners of production plants – both in terms of the level of the support and its conditions. It favours, for example, plants generating electricity from renewable sources built and operated in the past, i.e. sources that will no longer contribute to further growth in the share of renewables and which, in addition, have often been concurrently granted investment subsidies from Czech and foreign endowment funds.

Pursuant to the Act, the basic form of support is twofold: either by means of preferential feed-in tariffs or green bonuses as surcharges to the current market price. Electricity producers are

provided with the possibility to change the form of support every year. In both instances the support is financed by the respective operators of regional distribution networks, which project these expenses into their acknowledgeable costs. When applying support in the form of feed-in tariffs, electricity is purchased by a distributor, while in the case of applying green bonuses a producer sells electricity on the market or consumes it in its own operation plants. Feed-in tariffs for each facility are fixed for the period of 15 years. In the case of electricity generation by co-firing of biomass and non-renewable energy sources, it is only possible to apply green bonuses.

Both the favoured feed-in tariffs and green bonus prices are set by the Energy Regulatory Office, which has become responsible for fulfilment of the government policy and the creation of conditions for attaining the indicative objective. By law, feed-in tariffs must not drop year-on-year by more than 5%. On the other hand,

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International Energy Agency comments on the Czech Republic's energy policy

"The Czech energy sector has undergone an impressive transformation in the last 15 years with improved environmental performance and an increasing use of competitive markets", said Claude Mandil, Executive Director of the International Energy Agency (IEA), in Prague during its September evaluation of Czech energy policy. He added, however, that further improvement would require revaluation of costs resulting from the exigency to meet national objectives, a more active climate protection policy, a greater interest in energy saving and enhancement of competition in the electric power and natural gas sectors.

The IEA pointed out that the State Energy Policy of the Czech Republic rightly considers efficient energy use to be the main principle of the new energy strategy. Even though progress has been recorded in this area, the Czech Republic lags behind its neighbours. Whereas between 1990 and 2002 energy demand in the Czech Republic decreased by 17%, Hungary recorded a 23%, Slovakia a 27% and Poland a whopping 39% reduction. This indicates that in the Czech Republic too there is considerable potential for further energy intensity abatement.

Hence, the IEA encourages the Czech government to fulfil its own resolution inherent in the State Energy Policy with concrete measures for promoting energy savings, primarily in the domains of transport and buildings. Therefore, low state support is in stark contrast to the ambitious goals the government has set itself. On the basis of cost-effectiveness criteria, the ratio between support for energy savings and renewable energy sources should be reassessed too.

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Further information:

International Energy Agency
<http://www.iea.org/bookshop/add.aspx?id=202>

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AAU sale, or will we be trading with hot air?

Even though the Kyoto Protocol came into force relatively recently, on February 16, 2005, the Czech Republic already has practical experience with trading in emission credits, or emission reductions to be more precise. Although other possibilities offer themselves for future trading, considering the surplus of emission units on the international market it will not be easy to sell them beneficially.

Portfolios of projects in the Czech Republic

At the present time, the Czech Republic possesses experience from the preparation of two multi-project portfolios which with the assistance of local intermediary subjects have been supported by foreign investors through purchase of Emission Reduction Units (ERUs) which after their implementation will be generated by these projects.

The first joint implementation (JI) projects portfolio mainly concerns projects focused on use of renewable sources, prepared by the Czech Energy Agency for the World Bank's Prototype Carbon Fund. The portfolio comprises a total of 18 projects (16 projects for construction or renovation of small hydro-electric power stations and 2 projects for environmental modernisation of district heating systems). It is presumed that by the end of 2012 these projects will have saved over half a million of tonnes of CO₂eq.

The second JI projects portfolio is the Biomass Portfolio prepared for sale-off into the national tender of the Dutch government invited for purchase of emission reductions. As the title indicates, the portfolio encompasses several smaller projects utilising biomass (largely for production of heat). The volume of aggregate savings should reach approximately 250 thousand tonnes of CO₂eq between 2008 and 2012.

The reason for associating projects is simple – the high transaction costs for preparation of the necessary groundwork documentation.

Trading in AAU emission credits

With the beginning of the monitored 2008 to 2012 period on the horizon, the Czech Republic has also been provided with the opportunity to accede to trading in another type of emission credits – Assigned Amount Units (AAUs) which will be allocated to every country that has com-

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Act supporting use of renewable sources

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green bonuses can be set annually according to the market needs and development. In principle, the support by means of green bonuses should (after inclusion of the market price obtained) be somewhat higher than the support by means of feed-in tariffs.

A draft decree of the Energy Regulatory Office on co-firing of biomass and non-renewable sources differentiates between co-firing in one boiler and parallel combustion, when biomass is burnt in a separate biomass boiler

producing steam for a bus-bar for electricity generation together with other boilers utilising non-renewable energy sources. This provides the possibility to differentiate between the level of support. The method of calculating the quantity of electricity supported proposed in the Decree also gives preference to combined heat and power generation, counting on utilising biomass preferentially for production of subsidised electricity since the support arising from the law does not apply to production of heat.

The draft decrees on co-firing and the parameters and deadlines, which are being prepared for the Energy Regulatory Office by SEVEN, have been published by the ERO for comments on its website www.ero.cz.

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Examples of institutions and programmes supporting energy-efficiency and renewable energy projects in Central and Eastern Europe

In Central and Eastern European countries, EU member states, candidates for EU membership and the countries of the former Soviet Union several important funds and financial mechanisms have been set up in order to support projects focused on energy saving and use of renewable energy sources. These funds are disbursed both from state budgets of individual governments and by international organisations and have the form of grants and bank loans. Below is a list of some of them:

International organisations

EBRD – European Bank for Reconstruction and Development

A part of the EBRD is the Energy Efficiency Team, whose task is development of investment and credit mechanisms and support for energy service companies. At the same time, it identifies energy-saving opportunities with other projects and the Bank's clients, seeks possibilities of greenhouse emission trading and promotes implementation of renewable energy projects. Since 1998, loans and investments amounting to EUR 221 million have been granted in the Central and Eastern European region.

<http://www.ebrd.com/country/sector/energyeff/index.htm>

IFC – International Finance Corporation

The IFC, in cooperation with the Global Environmental Facility (GEF), has initiated the setting up of a special programme aimed at supporting the financing of energy-saving projects in Estonia, Latvia, Lithuania, Slovakia and the Czech Republic. The programme entitled Commercialising Energy Efficiency Finance (CEEFF) provides partial guarantees to commercial banks for granting bank credits and technical assistance for subjects interested in individual projects. The programme's total budget for the five countries mentioned is USD 90 million.

<http://www.ifc.org/ceef>

UNDP / GEF – United Nations Development Programme/Global Environmental Facility

Among the numerous UNDP/GEF programmes for the Central and Eastern European region supporting projects pertaining to energy saving and renewable energy sources worthy of mention are support for energy planning in towns and municipalities, introduction of the greenhouse gas emission trading system, support for creation of energy policies in the south-eastern part of this region, support for introduction and use of energy labelling of household electric appliances and energy-efficient lighting.

<http://europeandcis.undp.org/>

REEEP – Renewable Energy and Energy Efficiency Partnership

The REEEP programme was set up as one of the outputs of 2002's World Summit on Sustainable Development in Johannesburg. In the form of grants, it promotes implementation of specific projects in Central and Eastern Europe, organises financial assistance and political support for selected individual activities.

<http://www.reeep.org/>

European Commission: Phare, Structural and Cohesion Funds, Energy Intelligent Europe (EIE)

The European Commission is the administrator of several mechanisms providing direct financial support for energy-efficiency and renewable energy projects throughout the Central and Eastern European region. The programmes applied in the Czech Republic include the Phare Energy Saving Trust and the Energy Efficiency and Renewable Energy Operational Programme. Individual activities are also carried out with the support of the Energy Intelligent Europe programme.

Besides the mentioned international mechanisms, the vast majority of governments of individual countries also provide financial assistance in the form of loans or grants reimbursed from their state budgets. The programmes' budgets range from between several to tens of millions of euros annually, including those of the EU candidate countries. An example is the Romanian Energy Efficiency Fund, financing the implementation of specific projects with the total budget of USD 2.835 million. The Bulgarian Energy Efficiency Fund has available USD 10 million.

Juraj Krivošík

Further information about individual funds:

http://energyefficiency.jrc.cec.eu.int/html/Workshop_EE_Tallinn_6-8.07.05.html

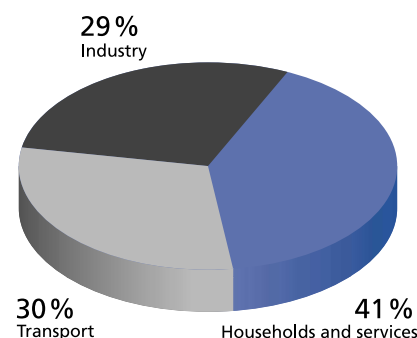
European Commission Green Paper on Energy Efficiency – ambitious goals and tools

At the beginning of the summer the European Commission adopted the Green Paper on Energy Efficiency, setting the ambitious target of 20% energy savings in the EU countries by 2020. The money necessary for energy generation estimated at EUR 60 billion, amounting to today's energy consumption in Germany and Finland combined, is proposed to be invested in saving measures resulting in the creation of one million new jobs and reduction of fuel imports. What specific measures does the EC Green Paper suggest in order to reach this goal?

The specific proposals include:

- Annual drawing up of national energy efficiency action plans, encompassing activities at both the national and local level and comparing their benefits within the entire EU;
- Improving the forms of providing information to citizens by means of information campaigns and energy labelling;
- Transformation of the tax system so that the polluter indeed pays without there being a total increase in the taxation level;
- Using procurements from public budgets for promotion of energy-efficient appliances, computing technology and automobiles;
- Using new and innovative financial mechanisms for both companies and households to introduce energy-saving measures;
- Improving the allocation of state support for energy efficiency, if this support is justified and appropriate;
- Extending the current legislation concerning energy use in buildings to include smaller buildings too;
- Supporting the creation of a new generation of energy-efficient means of transport.

Energy consumption in the EU



The European Commission presumes that in 2006, following a series of consultations about the precise form of these measures, the Action Plan determining specific measures at the level of the EU and individual member states will be drawn up.

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Further information

http://europa.eu.int/comm/energy/efficiency/index_en.htm

New SEVEN projects – local significance with a European dimension

From the beginning of 2006 SEVEN will coordinate three projects organised with the support of the European Commission whose aim will be promotion of energy efficiency by means of financial, information and legislative tools. SEVEN will organise the projects' activities within the Czech Republic and, at the same time, will coordinate similar activities in another 9 Central and Eastern European countries.

CF-SEP – Commercial Finance for Sustainable Energy Projects

The main aim of the project is to conduct the preparation of specific projects using energy savings or renewable energy sources and their financing through commercial bank credits. In addition to identification of projects, SEVEN's role will primarily encompass their preparation as regards submitting applications for credits to banks. Another part of the project, which is supported by the European Commission as well as the International Finance Corporation, a member of the World Bank, will comprise organising training for bank employees assessing credit risks and disseminating information on the possibilities of project financing by means of commercial credits among its potential organisers.

New GreenLight – The European GreenLight Programme in New Member States

The GreenLight programme was launched by the European Commission with the aim to support energy-efficient lighting in the service and public-lighting sector. The New GreenLight project commences this programme's activities in the region of new EU member states, its objective being marketing promotion of organisations and companies which install or refurbish energy-efficient lighting systems in their buildings or on outside roads. Thereafter, they will be able to present themselves as institutions striving for consolidation of active environmental protection and higher quality of services.

CEECAAP – Implementing EU Appliance Policy in Central and Eastern Europe

The main objective of the CEECAAP project is consistent use of existing and suitable adoption of new legislation on energy labelling of household electrical appliances. Through cooperation with governmental legislative and supervisory bodies, manufacturers and retailers of electrical appliances and consumer rights protection organisations, there will be a consistent endeavour to fulfil the law on energy labelling, which brings with it benefits to both customers and the environment and, in the final analysis, manufacturers and retailers of electrical appliances, as well as public institutions.

Further information about the possibilities of joining the listed projects:

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Energy performance of buildings – new European legislative requirements

On January 4, 2003, Directive EU 2002/91/EC, the Energy Performance of Buildings Directive, came into force. This Directive should begin to be valid in individual member states on January 4, 2006 and will have a profound impact on enhancement of investments in energy savings in both private and public buildings. Why has the Directive been adopted and what specific requirements does it contain?

Energy consumption in buildings

In European Union countries there are approximately 160 million buildings. They consume about 40% of total energy, therefore accounting for 40% of greenhouse gas emissions. According to the European Commission, by 2010 it is possible to slash this consumption by up to 22% with economically advantageous parameters. That would mean GHG emission abatement by 45 million tonnes of carbon dioxide in 2010, or 13.6% of the EU's commitment within the Kyoto Protocol.

Basic requirements

The Directive's new basic requirements include the following:

- Introducing a mechanism for evaluating the energy performance of buildings;
- Regular inspections and evaluations;
- Stricter standards for reconstructions of large buildings; and
- Stricter standards for new buildings.

New methodology

The Directive requires that all member states apply a methodology of calculating energy performance of buildings. Among other things, it must include thermal properties of building constructions, including their air-tightness, thermal insulation and hot water supply, air-conditioning and ventilation, lighting, the building's orientation and outdoor climate, passive solar energy, natural ventilation and indoor climate conditions.

Considerations about possible use should include: solar and other renewable heating energy sources, electricity from combined heat and power generation, district heating, day lighting. Calculations concerning their possible use must apply to all new building projects with the total useful floor exceeding 1,000 m² and buildings with the floor area above 1,000 m² undergoing reconstruction.

Specific calculations in individual countries will differ between existing and planned buildings and between different categories of buildings. Requirements will be reviewed at regular five-year intervals and, if necessary, updated in order to reflect technical progress in the building sector.

Energy performance certificates

If a building is under construction or is a subject of sale or lease, the owner or tenant must have access to a certificate containing a calculation of the building's energy performance. Certificates must not be more than ten years old. In the case of apartments or independent units, it may concern certificates relating to a representative apartment in the given building or a common certificate for a building if it has a common heating system.

Every certificate must state reference values from current legal standards and benchmarks, as well as recommend cost-effective improvement of energy performance.

Every building with the total useful floor exceeding 1,000 m² owned by a public institution or regularly visited by a large number of people

will have to have this certificate on display in a clearly visible place.

Regular inspections

Governments of member states must implement specific measures for regular inspection of efficient serviceability of heating systems and air-conditioning units, or specific information activities.

In the case of heating systems, it primarily concerns boilers fired by fossil fuels of an effective rated output above 20 kW, or provision of a sufficient flow of information to operators of heating systems regarding their renovations, replacements and conversions to other types of fuel. Specific information activities, if selected instead of regular boiler inspections, will have to be assessed and submitted by governments to the European Commission every two years. Similar measures may also apply to air-conditioning units with the rated output exceeding 12 kW.

Entry into force

All member states must bring into force the legislation necessary to comply with Directive 2002/91/EC no later than by January 4, 2006. In the event of a specific problem or lack of experts, a particular country may be granted an additional period of three years to apply the Directive. When making use of this option, the government of the given state must notify the Commission and provide the appropriate justification together with a time schedule for implementation of this Directive.

As regards the Czech Republic, full application of the Directive is presumed next year through the update of the Energy Management Act and related regulations being drawn up at the present time.

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Further information

European Building Performance Directive
Concerted Action:
<http://www.epbd-ca.org/>

Materials used

The Energy Performance of Buildings Directive – A summary of its objectives and contents
http://www.diag.org.uk/pdf/CIBSE_Briefing.pdf

AAU sale, or will we be trading with hot air?

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mitted itself to reducing national greenhouse gas emissions within the Kyoto Protocol.

For the first five-year period the Czech Republic will be allocated quintuple the emission production recorded in the reference year, 1990 (around 190 million tonnes of CO_{2ekv}), and reduced by 7%. This corresponds to approximately 175 million AAUs (or tonnes of CO_{2ekv}).

However, compared with the current level of greenhouse gas production in the Czech Republic (in 2002 it was less than 140 million tonnes of CO_{2ekv}) and with regard to its estimated development over the next few years, it is

surpluses of Ukraine (200 – 300 million tonnes/year) and Russia (500 and more million tonnes/year).

The figures indicate that the AAU market will be a purchaser's market – with the price, quality of units and time of bidding being decisive. What precisely is meant by "quality" in this connection? It is the evidence that the possibly purchased AAUs have brought or will bring about a really quantifiable emissions reduction.

In addition to the still lacking procedural and technical framework for actual trading in this type of emission credits (its establishment is presumed within the next one or two years), this

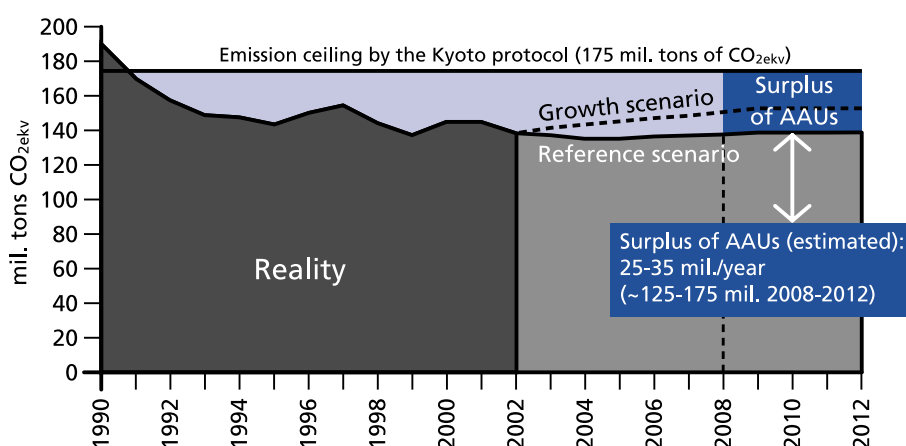
vestors are now under way. However, the suggested models work with the still non-existent institutional provision, which raises doubts about their credibility and functionality.

On the other hand, this may work to the advantage of the Czech Republic, which can make use of the experience and capacity of the current state executive constituents supporting energy efficiency and use of renewable energy sources. With respect to the AAU surplus potential the Czech Republic has at its disposal (see graph), preparations for GIS should be launched here as soon as possible.

The necessity to accelerate GIS preparation has also been accentuated by the Ministry of the Environment. At the end of July it ordered the drawing up of a specialist study for the purpose of proposing the scheme's possible form. Following its completion (this autumn) the relevant material should become a starting point for commencing negotiations with potential investors.

Tomáš Voříšek

Development of greenhouse gas emissions in the CR 1990-2012 period and the potential of tradeable AAU units for the period 2008-2012



Source : Third national report of the CR

annually 25 to 35 million tonnes more than the country actually produces. Thus, it indirectly means that the Czech Republic will be able to sell this surplus on the international market.

Nevertheless, owing to the fact that the USA has refused to join the Kyoto Protocol, there will be a significant excess of AAUs on the market. Presumably, the expected lack of emission units on the part of the 15 "old" EU members (estimated at almost 200 million tonnes of CO_{2ekv} a year) can be fully covered by the new EU member states.

Bulgaria and Romania, however, have at their disposal more than 150 million tonnes of "free" units, which more or less corresponds to the needs of, say, Canada or Japan. A huge supply reserve is represented by the expected

dubiousness is the main reason why within international trading in AAUs merely one pilot contract (sale of 200,000 AAUs from Slovakia to Japan's Sumimoto Corp.) has been concluded to date.

A way of finding a purchaser for these emissions is "AAU greening" – i.e. the seller's commitment that the finance acquired shall be used for active support of greenhouse gas emission savings.

The terms of this Green Investment Scheme (GIS) shall to a significant extent be defined by the purchaser.

The GIS system was set up due to minimisation of the so-called hot air effect that originated as a result of the steep decline in emissions in the countries of the former Eastern bloc as a consequence of fundamental economic changes occurring after 1990 and which was not taken into consideration when the Kyoto Protocol was formulated. Thus, the emission saving potential for the mentioned countries was created virtually free of charge.

It is presumed that after 2007 the project mechanism of the JI type will be transformed into the GIS since, by reason of its being economically expedient only for larger projects (with the saving amounting to tens of thousands of CO_{2ekv} a year), its potential has been running out quickly.

The GIS system has not been implemented by any country to date. Nevertheless, two states (Bulgaria and Romania) have proposed its possible form and negotiations with potential in-

Countries with an excess of AAU units	Amount (mil. AAU/year)
Russia	500 - 850
Ukraine	200 - 350
Rumania	80 - 100
Bulgaria	50 - 65
New EU members from the CEE region (8 countries)	200 - 250
Of which:	
Poland	80 - 125
Czech Republic	30-40
Countries with a lack of AAU units	
EU-15	180 - 220
Japan	150 - 180
Canada	130 - 150

Source: JBIC, ClimateFocus, own calculations of SEVEN

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If you sing in the shower, choose shorter songs

Such was the slogan of a 2003 advertising campaign aimed at accelerating reduction of energy consumption in New Zealand. This and other campaigns were organised in many countries in order to attain rapid reduction of power consumption for the case of a sudden lack of energy as a consequence of natural disasters, technical problems or limited production capacities.

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If you sing in the shower, choose shorter songs.

Water heating can account to almost half the power usage of an average home, so having shorter showers will shorten your spending of power. Call 0800 55 11 55 or visit www.target10.co.nz

T A R G E T 1 0 %

Source
 Saving Energy in a Hurry, International Energy Agency, Paris, 2005
<http://www.iea.org/bookshop/add.aspx?id=201>

How to turn energy price rises to your advantage Projects saving energy costs

The growth of global oil prices has not only been reflected in higher petrol prices. Increases have also been recorded in the price of natural gas many municipalities have converted to, often using state subsidies for gasification. The market prices of all energy forms are interlinked. Hence, it is merely a matter of time when this trend, if it continues, projects itself in prices of coal, electricity and other energy types too – albeit with a certain delay and to a differing extent. On the other hand, state policy supporting the use of renewable sources has increased the prices of hitherto relatively cheap “waste” timber and biomass. Does this mean that we will have to pay more and more for heating?

Well, not exactly. Higher energy prices make investments in energy-efficient use more attractive. Implementation of reasonably proposed energy-saving measures not only serves to reduce heating costs and improve thermal comfort in heated buildings, but also brings a profit on the money laid out. Thus, the growth of energy prices can be fully outweighed by an overall decrease in energy consumption.

Table: Examples of implemented projects

	Investment [CZK mil]	Guaranteed annual saving [CZK mil]
Na Bulovce Hospital	72	19
15th Primary School, Pilsen	2.5	1.3
Jablonec nad Nisou	16.6	5.2
Jilemnice Hospital	21	4.5
Three primary schools, Rakovník	2	0.5

Pursuant to Act 406/2000, on energy management, towns and municipalities have recently had to invest significant sums in drawing up energy audits for their buildings. Energy audits describe

feasible energy-saving measures and assess which measures pay off at the given energy price. With rising energy prices, these possibilities have become ever more interesting.

However, the problem many municipalities face is securing financing for energy-efficiency projects or doubts as to whether projects implemented in line with compulsory energy audits really bring about the promised cost savings. But here too a solution exists.

Energy Performance Contracting

EPC means implementation of turnkey energy-saving projects, with a guarantee of achieving the planned project results and secured financing. After analysing a building, the contractor designs and executes technical measures aimed at energy consumption reduction. It guarantees attainment of the outcome – lower energy consumption throughout the duration of the contract – and finances investment from its own sources. Investment are paid up only if energy savings really attain at least the guaranteed level.

At first glance, this possibility looks too good to be true. Is it not merely a theory?

Over more than 10 years, dozens of projects using the EPC method have been implemented in the Czech Republic – from projects in city schools to the largest hospitals. Investments, covered by a contractor and paid up from savings achieved, have ranged between one to hundreds of millions of Czech crowns. All projects implemented to date have resulted in the expected savings – to the satisfaction of both the contractors and building owners.

EPC is a somewhat unorthodox project implementation method, therefore, preparation of these projects is in a way specific too. Prior to inviting a tender for an EPC service provider, it is necessary to prepare a high-quality analysis of the current status, describing the initial energy consumption level and its possible changes resulting from the manner of using a facility (extension of a hospital ward, change in using a laundrette or kitchen, etc.), the method of conversion to average climate conditions and the like. Even for the actual selection of tenders, simple comparison of bids does not suffice. A number of special criteria with different weighing are applied – and only their correct choice and combination will allow municipalities to select the ideal offer that best meets their specific requirements in both technical and economic terms. Hence, for preparation of technical groundwork for EPC tenders, municipalities make beneficial use of specialists who already have practical experience with preparation of EPC tenders. In several cases, when municipalities decided to prepare tenders for EPC projects on their own without specialist consultations, they had to cancel and repeat the tenders until they had gained at least basic experience with preparation of these specific, though beneficial EPC projects.

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Energy services and our largest hospital

The Motol Hospital in Prague is the largest state health-care facility in the Czech Republic using EPC energy services provided by a private subject. Over the eight years of the agreed contract's duration, it will save at least 150 million Czech crowns (5 million euros).

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The health-care facility in Prague-Motol is probably the largest hospital in Central Europe, with its complex of buildings being comparable with a town of ten thousand inhabitants. There are nearly three thousand beds. The hospital is visited by more than two thousand patients a day. Over five thousand employees take care of them.

At the beginning of the third millennium, the hospital management was offered the opportunity to reduce energy management costs. After assessing the potential for energy saving, the necessary finance, its own sources and, above all, risks during implementation of energy-saving measures, the hospital chose the route of purchasing energy services.

The EPC (Energy Performance Contracting) method allows for transfer of responsibility for provision of energy services to a third party in supplies of heat, electric power, water and other commodities for prices agreed in advance. The company EPC Motol from the ECM group was victorious in a selection procedure. The energy services company has subsequently operated energy management and implemented

saving measures. Over the eight years of the contract, it has guaranteed for the hospital savings exceeding 150 million Czech crowns as compared to the initial status. It concerns the first application of energy services in a state health-care facility of such a large size.

The contract was concluded at the end of 2002 for a period of eight years. It was preceded by almost two years of preparations, during which time an energy audit was carried out and a tender for a services provider took place. Subsequently, heat management in particular has changed beyond recognition. Multiply oversized low-efficiency steam boilers have disappeared from the boiler room. Now, instead of steam the boiler plant supplies hot water with a better possibility of regulation. Steam only comes to places where the technology requires it, for example, in the laundry. The energy services provider maintains and operates energy management in the entire scope, from heating through ventilation and air-conditioning, electricity sources to water management. Annually it supplies some 300,000 GJ of heat and 34,000 MWh of electric power.

Mutual cooperation is stipulated until the final year, 2010, by a “Contract on provision of energy services”. Such contracts can be compared to running on a long track. The agreed performance must

adapt to the changing external conditions. On the other hand, the resulting amount of guaranteed savings is a fixed point. Thus, both the hospital and the energy services company must react to legislative changes. Hence, last year's main problem was the conversion of services provided to a new value added tax rate. After long negotiations, it has been resolved.

Over the next few years cooperation will be burdened by another test, technical measurement. The high-rise building of the children's hospital, built in the 1970s, will be gradually reconstructed under full operation. Capital expenditure runs into billions of Czech crowns. The energy services company must continue supplying energy even during the construction works in progress.

Cooperation between the public and private sectors in the Prague's Motol Hospital can serve as a model example for other projects – and not only in the health-care system.

SEVEN participated in the EPC project for Prague's Motol hospital by drawing up the energy audit, assisting during the selection of a competent tenderer and participating in negotiating contractual arrangements. At present, it is the hospital's consultant and its role is to verify the fulfilment of contractual obligations.

Laďislav Tintěra



Conferences, exhibitions and presentations October – December 2005

3. – 7. 10.

MSV 2005
47th international mechanical engineering trade fair
Veletrhy Brno, a.s.
Contact:
www.bvv.cz/msv
msv@bvv.cz

4. – 5. 10.

ESCO Europe 2005
Vienna, Austria
Synergy Events
Contact:
www.esco-europe.com
elisabeth@synergy-events.com

6. – 7. 10.

4th European Conference on Green Power Marketing Between Voluntary and Mandatory Markets
Berlin, Germany
Green Power Marketing
Contact:
www.greenpowermarketing.org
info@greenpowermarketing.org

6. – 9. 10.

Wood Energy Exhibition
Juraparc, Lons le Saunier, France
BioEnergie Events and Services
Contact:
www.boisenergie.com
info@boisenergie.com

6. -7. 10.

International Conference Solar Air-Conditioning
Kloster Banz, Germany
Contact:
OTTI KOLLEG
gabriele.struthoff-mueller@otti.de
www.otti.de

13. - 15. 10.

International Conference and Exhibition Ecological Building Retrofit
Weiz, Austria
Contact:
AEE INTEC
seminare-aeintec@aee.at
www.aee-intec.at

17. – 20. 10.

Hydro 2005 Policy into Practice
Villach, Austria
Contact:
hydro2005@hydropower-dams.com

17 – 21. 10.

14th European Biomass Conference and Exhibition, Biomass for Energy, Industry and Climate Protection
Paris, France
ETA-Florence and WIP-Munich
Contact:
www.conference-biomass.com
biomass.conf@wip-munich.de

18. – 19. 10.

Energy 2005: Challenges Across Europe
Hesperia Madrid, Spain
Contact:
Institute of Economic Affairs
www.marketforce.eu.com/energy2005

18. - 20. 10.

Sustainable Energy and Energy Efficiency Expos
London, UK
Contact:
Event Connexions
richard@eventconnexions.co.uk
<http://www.energy-expo.info/>

19. – 23. 10.

TZB
13th international exhibition of building equipment
Incheba Praha, a.s.
Contact:
www.incheba.sk
incheba@incheba.sk

21. - 23. 10.

'EnergieTage Hessen 2005' and 'Passiv-Haus 2006'
Wetzlar, Germany
Contact:
ereuerbare energien, Kommunikations und Informationsservice GmbH
redaktion@energie-server.de
www.energetage.com

3. – 5. 11.

Ekoenergie
Exhibition and conference about renewable energy sources
Omnis Olomouc, a.s.
Contact:
www.omnis.cz/stavo
nasadi@omnis.cz

9. – 12. 11.

For Arch České Budějovice
11th construction exhibition
ABF, a.s., Kulturní Dům Metropol
Contact:
www.forsystem.cz
cb@abf.cz

22. – 26. 11.

Aqua - Therm Praha
12th international trade fair of heating, ventilation, air-conditioning, measuring, regulating and environmental technology
Progres Partners Advertising, s.r.o.
Contact:
www.tzb-info.cz
aqua@ppa.cz

24. - 25. 11.

Renewable Energy in Europe - Removing Barriers, Developing Trading, Meeting Targets
London, UK
Contact:
AEPUK
smerrick@aepuk.com
www.aepuk.com

28. – 29. 11.

1st Annual European Energy Policy Conference – 'Shaping the future of the Energy Industry in Europe'
Brussels, Belgium
Contact:
Epsilon Events Ltd
info@epsilonevents.com
<http://www.epsilonevents.com/>

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