

ENERGY EFFICIENCY NEWS FROM THE CZECH REPUBLIC

Czech Senate passes Bill on support for use of renewable energy

The Bill on support for use of renewable energy sources (RES) was passed by the Senate of the Parliament of the Czech Republic on March 31, 2005. If the Act is signed by the President, it will mean the "legalisation" of the existing system of support for electric power generation from RES that up to now has provided relatively large financial subsidies but has left great uncertainty for the future. The new Act supports electricity generation from renewables, including landfill and sludge gases, as well as electricity generation from firedamp from shutdown mines. The Act anchors support not only for generation of electricity supplied to the grid but also generation of electricity for one's own consumption. Producers can choose one of the two forms of support: either sale of electric power to a regional distributor for guaranteed feed-in tariffs or sale of electricity on the market for the

current market price provided that the regional distributor pays the extra so-called green bonus to the producer. Support – but only in the form of green bonuses – also applies to biomass co-combustion, or cogeneration of electric power from both renewable and fossil fuels. The Act does not determine either the actual level of feed-in tariffs or green bonuses; however, in the case of new facilities it prescribes for the period of 15 years a level of support that can ensure a 15-year capital payback period and guarantees for existing facilities the present level of support over the period of the next 15 years. Feed-in tariffs for newly installed facilities will be announced by the Energy Regulatory Office (ERO) annually; nevertheless, from 2007 on they must not be lower than the feed-in tariffs in the previous year. The Energy Regulatory Office

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What's new in technical legislation on energy performance of buildings?

At the beginning of this year an Amendment to the standard Heat Protection of Buildings ČSN 73 0540: Requirements was issued. The reason was the revision of other parts of this standard, the adoption of some European standards (for example, ČSN EN 13830), the development of requirements in other EU countries with a similar climate and the preparation of Directive 2002/91/ES, on energy performance of buildings (the Energy Performance of Buildings Directive, "EPBD").

Amendment 1:2005 stipulates that the standard also applies to unheated buildings if a certain condition of the interior environment is required; for example, for storage or operation of technical equipment. It contains a new table of the required values of the heat-transfer coefficient and also specifies the definition of a partially heated space with the temperature between the temperature of the heated and unheated space.

Evaluation of construction-thermal properties is replaced by determination of a building's energy performance. The average heat-transfer coefficient of a building used in the new assessment is the starting structural data for determination of the total primary energy consumption within the framework of the EPBD.

Structural and energy properties of a building are complied with if either individual structures on the system boundary of a building fulfil the required heat-transfer coefficient values or the entire cladding of a building fulfils the value of the average heat-transfer coefficient. The requirement is valid for new buildings and in the case of repairs of more than 25% of a cladding since the completion of a building or since the most recent evaluation of the structural and energy properties of a building and in the case of drawing up an energy audit or energy certificate of a building. If an energy audit or energy certificate proves the requirement's technical, environmental or economic unfeasibility with regard to a building's service life and its operational purposes, the required structural and energy properties of the building can be exceeded at most in such a manner that

failures and defects do not evidently occur during the building's use.

The energy label of a building expresses and classifies the building's structural and energy properties by means of a scale of values of the degree of the energy performance of a building and graphic coloured expression. The level of the newly set values only slightly differs from the values formerly acquired from the specific requirement of energy for heating. The expression is in compliance with the EPBD. The record for a building's energy label is newly concluded by calculation of the average heat-transfer coefficient.

Devoted to the implementation of the current and prepared EU Directives into Czech legislation was the autumn EEBW: Energy Efficiency Business Week 2004 international conference's section Low-energy construction and energy performance of buildings. It is gratifying how work in this respect has progressed since that time. According to information from the State Energy Inspection, the third version of the amendment to Act 406, on energy management, is being discussed. The Act serves as the basic document for the implementation of EU directives into Czech legislation, a process that must be completed by the end of 2005.

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As regards the content of Directive 2002/91/ES, on energy performance of buildings, we were also provided with information from Irena Plocková:

"Article 2 of the Directive defines the certificate as a document specifying the energy performance of a building, determined using the method issuing from the general framework according to the Directive's annex. Proposals for the form and content of the certificate, which are now presented, are based on the work of CEN/TC 89/WG 4 with the application of national procedures of the countries that already work with the energy

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Emissions trading – interest from all continents, prices differ

Growing alongside the developing market for trading in greenhouse gas emissions has also been the number of parties interested, as well as the programmes within which it is possible to sell one's own "surplus" emissions. The parties concerned hail from all corners of the world, while the prices and other conditions under which greenhouse emissions can be sold differ too. We give you a brief overview of the main interested parties, as well as the tools and prices applied recently.

- Carbon funds
 - World Bank Carbon Fund PCF, IFC Renewable Energy Efficiency Fund, Fund of the Dutch Government – ERUPT/CERUPT, German KfW Carbon Fund, EBRD/Fondelec, etc.
- Trade between companies
 - EU Emission Trading Scheme 2005

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Czech Senate passes Bill on support for use of renewable energy

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will thus have certain scope for independent determination of the level of support practically only in the case of green bonuses for electricity generated from biomass co-combustion.

The Act does not solve the problem of equal division of additional financial costs connected with supporting electricity from RES among individual distribution companies. The current practice of this redistribution is reckoned with. If a special legal regulation is necessary here too, is a matter that will be decided in the future.

The current level of electricity feed-in tariffs and development of support in previous years is shown in the following table.

Development of feed-in tariffs in CZK/kWh

	2005	2004	2003
Hydropower (up to 10 MWeI)	2.05***	1.55	1.50
Biomass	2.52	2.50	2.50
Biogas	2.42****	2.40*	2.50**
Biomass co-combustion	0.5-0.9	2.00	2.50
Wind power	2.60	2.70*	3.00**
Geothermal energy	3.5	3.00	3.00
Solar energy	6.04	6.00	6.00

Note: * Applies for facilities put into operation after 1.1. 2004.

** Applies for facilities put into operation before 1.1. 2004.

*** For small hydroelectric stations put into operation before 1.1.2005 the redemption price of 1.60 CZK/kWh applies.

****The price for biogas combustion in facilities put into operation before 1.1.2004 is set at 2.52 CZK/kWh.

The full wording of Price Decision No. 10/2004 of the ERO can be found at the address www.ero.cz - Price Decisions section.

The Act on support for electric power generation from renewable energy sources and on modification of some Acts was passed by the Chamber of Deputies on 23.2.2005 and the Senate on 31.3.2005. The text of the version approved by the Senate is available at:

<http://www.senat.cz/xqw/xervlet/pssenat/hlasovani?action=tisk&O=5&T=40>

http://www.senat.cz/xqw/xervlet/pssenat/historie?cid=pssenat_historie.pHistorieTisku.list&forEach.action=detail&forEach.value=1635

Emissions trading – interest from all continents, prices differ

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–National systems – DK, UK, SK

- Exchanges
 - NordPool (N), EEX (D), EXAA (A), International Petroleum Exchange, Chicago Climate
- Exchange
 - Banks, brokers, OTC, firms...
 - The first cash-settled forward trade with EUAs – Dresdner Kleinwort Wasserstein and Sampo Bank

Trading system	USD tCO2eq..
EU ETS – EUAs	6-8
UK auction	23
UK market	4-20
Erupt/Cerupt	3-5
PCF	3-5
Denmark	0.5-5
North America	1-3
NordPool	9.3-12.66
Other	0.5-5

What's new in technical legislation on energy performance of buildings?

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certificate. It primarily concerns Denmark and Germany.

The energy certificate cannot, however, replace energy audits since the two tools have a totally different purpose. The certificate provides information about the real energy performance in the context of its prescriptive values, contains classification of a building according to the adopted scale and the list of measures that should be carried out to attain the optimal total energy performance. On the other hand, the purpose of an audit is, on the basis of evaluation of the initial status of energy consumption, to determine the utilisable energy-saving potential and the usability of renewable or secondary energy sources in the evaluated system and, on the basis of an energy, ecological and economic assessment, to recommend the optimal variant of subsequent measures. Accordingly, it results from the mentioned facts that the basis for the drawing up of an energy certificate is the carrying out of an energy audit. In accordance with the Directive, the energy certificate is only drawn up for the purposes of presenting the energy quality of a building in linkage to its procurement, sale or lease, and has a limited time of validity of 10 years, and besides buildings should also be drawn up for dwelling units.

Arising from Article 4 of the Directive is that new buildings should be designed in such a manner that they meet the minimum requirements for energy performance; in the Czech Republic, for the present it concerns fulfilment of the requirements of Regulation No. 291/2001 Coll. and the standard ČSN 73 05 40.

A novelty in Article 5 of the Directive can be considered, for the case of new buildings, evaluation of the feasibility of alternative systems, such as decentralisation of energy supplies based on the use of renewable energy sources, use of cogeneration, long-distance or block central heating or cooling, or installation of heat pumps under certain conditions."

Irena Plocková – authorised engineer in building construction and energy auditing

Emissions trading – only limited impact on green energy production?

The beginning of 2005 saw the launch of trading in carbon dioxide emissions in most EU member states. The trading process means that emissions will have their monetary value. However, its impact on generation of renewable energy will be minimal.

Emissions trading pertains to large environmental polluters, such as energy producers and steelworks. It does not concern non-emitters; for example, producers of energy from renewable sources. These producers will not have any licences and thus will not be able to take part in emissions trading.

Hence, emissions trading will not represent a fundamental breakthrough in generation of green energy, but will contribute to enhancement of its competitive strength. According to estimates, owing to emissions trading costs for generation of so-called black, brown or grey energy will increase by approximately 0.2 to 0.4 EUR/MWh. Green energy will not, of course, suffer from this cost increase.

Another contribution to the wider application of green energy will be obligatory displaying

of the quantity of CO₂ emissions and nuclear waste on electricity bills, which in the EU has been compulsory since July 1, 2004 but has only begun to be implemented in individual member states in 2005.

According to the European Renewable Energy Council (EREC), a barrier to further development of renewable energy sources could paradoxically be additional market opening to competition. Primarily because energy prices still do not include full pollution costs according to particular fuels and technologies, as well as the fact that in some EU countries third parties have problematic access to distribution networks. Another problem is the market dominance of producers in individual countries and insufficient international interconnection of distribution networks.

Source:

www.greenprices.org/eu/newsitem.asp?nid=840

www.greenprices.com/eu/newsitem.asp?nid=833

Compulsory recycling of electrical appliances

A large quantity of household electrical appliances, such as refrigerators, washing machines, computers, TV sets and others, will have to be compulsorily recycled in the near future. Manufacturers and importers in individual EU countries should see to the so-called historical "scrap" according to their market shares. Manufacturers will factor recycling costs into the prices of their products. However, these sums are not expected to be high. For example, in the case of a fridge it should mean on average an extra 300 crowns, while with a large appli-

ance, such as a TV set, 200 crowns, and when it comes to small food processors virtually nothing. In addition, as regards computing technology, a halt to price decline is not presumed following the implementation of this measure. What is important, however, is that recycling serves for preventing tonnes of contaminating substances getting into the environment.

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Further information:

<http://europa.eu.int/scadplus/leg/en/lvbl/l21210.htm>

Tradeable guarantees of origin as the most effective mechanism of promoting renewable energy sources?

In individual European Union countries there exist several forms of supporting electric power generation from renewable energy sources. All of them have been introduced with the aim to attain wider application of these sources on the total electricity market and for the sake of environmental protection. Which of them are the most effective and least disruptive of the market environment in the area of production and supply of electric power?

All current systems promoting renewable energy sources, such as regulated feed-in tariffs, tax exemptions, or direct subsidies, have appeared to be effective tools of support for renewable energy sources. But their drawback is that they distort the market environment in electric power

generation and supply and do not always lead to the selection of the most effective solutions. Another disadvantage is the differences in individual national systems of support. According to Eurelectric and RECS International, these drawbacks are not part of the so-called tradeable guarantees of origin based on renewable energy sources (REC GoOs). These certificates, nowadays already used in a number of European countries, guarantee effective support for renewable sources without significantly distorting electricity markets themselves. Their forte is the possibility of uniform pan-European use and the preference given to economically effective technologies. The combination of certificates' tradability on the free electricity market and

the revenue from their sale on financial markets creates an economic and financial basis for investment in and operation of renewable sources technologies.

The main preconditions for operating a system of tradeable certificates are clear rules for their issuance, registration, trading and payment.

Introduction of tradeable guarantees on a uniform pan-European level would, according to Eurelectric and RECS International, reduce costs for supporting renewable energy sources and augment the market for their implementation.

Eurelectric is an association of the European electro-energy industry, and the Czech Union of Employers in the Energy Industry is also a member. RECS International secures the possibility of reliable certification of the origin of electric power from renewable sources and its services are used by major energy producers and distributors from 16 European countries.

Source:

www.eurelectric.org/News/Articles/art151.htm
www.eurelectric.org/PublicDoc.asp?ID=31681

Heat pumps and changes in electricity prices

The year 2005 has been characterised by the accelerated opening up of the energy market. More groups of electric power consumers have entered the group of "eligible" customers able to choose their own supplier. Next year this possibility will be afforded to households too. Consequently, according to their own preferences, they will be able to select consumption of "clean" energy from renewable energy sources or, contrariwise, "grey", but cheaper, electricity from fossil fuels and nuclear power plants.

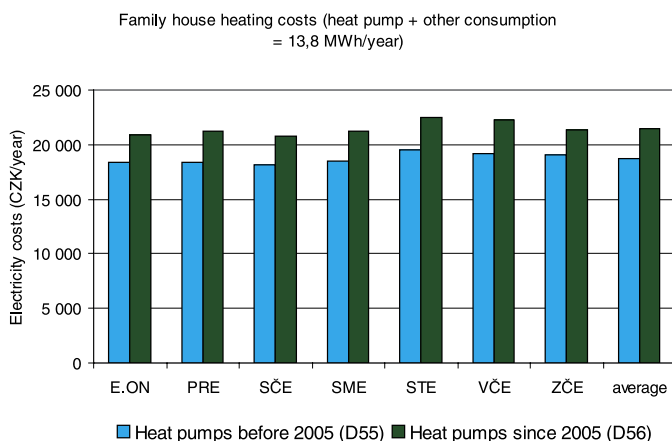
Price Decision No. 12/2004 of the Energy Regulatory Office dated November 29, 2004 applies to household customers who still cannot choose their supplier. It sets maximum prices for electricity supply from low-voltage networks to eligible customers. They can select any tariff stated in the Price Decision if they fulfil the conditions for its acknowledgement.

As for the heat pumps segment, the document defines what is understood by heating with them: "Heating by a heat pump – a heating system in which the basic heating system is a heat pump with possible completion by another heat source for covering peak heat requirements. A heat pump is a device which, using a compressor driven by electric power, converts heat contained in air, ground and surface water or in the ground to heat suitable for he-

ating or heating-up of service water. This technology belongs to the category of renewable energy sources". Accordingly, it is evident that it is possible to use an air-air system, but it is necessary to fulfil another precondition: that a heat pump's capacity covers heat losses of the heated structure. All heating appliances must be blocked over the time of the high tariff. The Price Decision's most important signal for family house owners is the disadvantaging of heat pumps placed into operation after 1.4.2005. They are subject to a special tariff, D56, with a higher fixed payment.

Through the Energy Regulatory Office, the state possesses the possibility of regulating building owners' behaviour. It is sufficient to bear in mind the flexible reaction of builders when it comes to renewable sources – such as wind power plants, or those producing electricity by combusting or co-combusting biomass. Thus, it can be said that price regulation for protected customers affects building owners' behaviour much more significantly than investment-supporting state programmes (Czech Energy Agency, State Environmental Fund). Bearing witness to this are the builders of family houses who come to advisory centres to ask for information about the new economics of heat pumps' operation.

Ladislav Tintěra



Comparison of costs for an old and a new heat pump in a family house with the total consumption of 13.8 MWh/year. According to the region, costs for newly installed heat pumps increase by 13 to 16%.

Proceedings from the EEBW 2004 conference available on the internet

Visitors to the EEBW: Energy Efficiency Business Week 2004 conference, as well as those who could not attend in person but are interested in energy saving, renewable energy sources and power engineering in general, can read papers from all speakers on the conference website: www.eebw.cz, section "Proceedings (pdf)". You can also ask for a printed or electronic version on a CD-Rom carrier. Contact: eebw2004@svn.cz



Electricity generation and consumption grows

Last year, both electric power generation and consumption in the Czech Republic again rose to the highest level ever recorded. Gross electricity production grew by 1.3% to 84.3 terawatt-hours (TWh), with year-on-year total domestic consumption being higher by almost 3%. The data has been published by the Energy Regulatory Office of the Czech Republic. According to specialists, demand for electric power will continue to increase. Last year's total net consumption rose to 56.4 TWh. The greatest growth (4.7%) has been recorded by bulk consumers, to a total of 32.8 TWh. Entrepreneurs consumed nearly 3% more electricity, while consumption of households remained at 14.5 TWh. Total demand grew despite rising electricity prices.

District heating – how to implement a successful project



Modernisation of district heating systems is in many Central European countries a pressing matter owing to the age and condition of their infrastructure. On the other hand, a host of successful district heating instal-

lations in not only Western, but also Eastern European states can serve as an appropriate example of supplying heat to the population, as well as energy saving and reduction of polluting greenhouse gas emissions.

District heating companies must frequently take difficult decisions and have few possibilities. Even though district heating systems are often supported for social and environmental reasons, their maintenance and development encounter political and financial barriers. An inconsistent regulatory environment encourages customers to disconnect themselves, which decreases the effectiveness of the current systems' operation. However, there are many examples of successful district heating companies that have modernised their systems in both technical and organisational terms.

A group of experts from 7 European countries, including the Czech Republic (represented by

SEVEN, o.p.s.), prepared within the DHCAN project a series of manuals for managers and technical specialists pertaining to the following topics:

- District Heating System Ownership Guide Options for public and/or private ownership models
- District Heating System Institutional Guide Background policy and regulatory issues
- District Heating System Modernisation and Rehabilitation Guide Key issues for refurbishing networks
- District Heating System Management Guide For district heating company managers

All these publications are available in English for free downloading from the following websites:

www.euroheat.org/workgroup4/index.htm
www.euroheat.org/workgroup4/generic.htm

The International Energy Agency has also drawn up a publication with similar content: "Coming in from the Cold: Improving District Heating Policy in Transition Economies". It provides managers at the national and local level with a summary of the problems related to district heating and ways of resolving them. For more information about the publication, visit: www.iea.org/dbtw-wpd/bookshop/add.aspx?id=184

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World Bank buys green electricity

Representatives of the World Bank have decided to fully supply the institution's central building in Washington D.C. with electric power from renewable energy sources. By so doing, they will save 60,000 tonnes of CO₂ emissions a year.

Approximately 85 million kilowatt hours of electric power will come from wind power plants on the east coast of the USA. Purchase will be carried out in the form of so-called green certificates, while the amount of electricity bought would suffice for supplying 8,000 family houses.

The World Bank has thus become the fourth-largest green electricity consumer within the programme of the USA's Environmental Protection Agency (EPA), whose goal is annual purchase of two billion kilowatt hours of green electricity a year.

By taking this step, World Bank representatives wanted to demonstrate to other institutions in Washington D.C. and worldwide that use of alternative energy sources is a practical and feasible manner of decreasing the environmental burden.

The biggest "consumers" of green electricity in Europe include Austrian and Swedish Railways, British Telecom, the British branch of Procter and Gamble, Oxford University, the Ministry of Defence of the Netherlands, banks, towns etc.

Information sources:

www.worldbank.org
www.greenprices.org/eu/usertop.asp

Energy subsidies in Europe

In 2001 the fifteen EU member states allocated EUR 29.2 billion in the form of subsidies for energy generation. According to a study of the European Environmental Agency, merely EUR 5.3 billion of this sum was dedicated to renewable energy sources.

"Although the environmental impacts of fossil fuel combustion are generally known, subsidies for this type of fuel remain high, primarily in the case of coal," the study points out. "On the other hand, support for renewable energy sources has gradually increased too, owing to the introduction of regulatory stimulating mechanisms."

The absolutely highest proportion of subsidies was granted to solid fuels; however, when considering a unit of energy generated, renewable sources were allocated sums considerably higher than those for other types of fuel. It thus appears that individual governments are aware of the fact that renewable sources form a specific sector of the energy industry that is yet to achieve the degree of development of other sectors. Hence, in the case of renewable sources it is necessary to promote technology and the market to a more significant degree so as to create in this area the preconditions for full commercial development.

Furthermore, the study also presumes that a reduction in production costs for renewable energy sources will also result in a decrease in the subsidies granted.

The study's authors point out that from a historical viewpoint support for renewable energy sources is lower than support for other forms

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Green purchasing – Handbook on green public procurement



If all public institutions in European Union countries were to purchase for their needs exclusively electric power derived from renewable energy sources, CO₂ emissions would be reduced by 60 million tonnes a year and the EU would thus

meet 18% of its obligation within the Kyoto Protocol. Similar savings could be attained if public administration only used buildings of a high environmental standard. If public administration used more energy-efficient computers, it would stimulate the market and result in savings of up to 830 thousand tonnes of CO₂ a year. How then can it be ensured that public authorities and institutions' purchases are as environmentally friendly as possible and at the same time economically viable with regard to the financial means at their disposal?

To answer these questions, the European Commission has prepared a publication entitled "Green purchasing – Handbook on green

public procurement", providing public institutions with specific instructions in this respect.

It concerns procurement of computing technologies, buildings, office paper, organisation of transport, catering, purchasing electric energy, air-conditioning units etc. Since it appertains to large-scale purchases, they also have a significant effect on the general manufacturing programme and other offers of producers and service providers from which the general public can profit too.

The above-mentioned publication also provides an overview of European legislation and procedures serving for organising these purchases in as simple and effective a manner as possible.

Further information and the full wording of the publication can be found on the following websites:

www.environmental-expert.com/resultteachticle4.asp?codi=3651

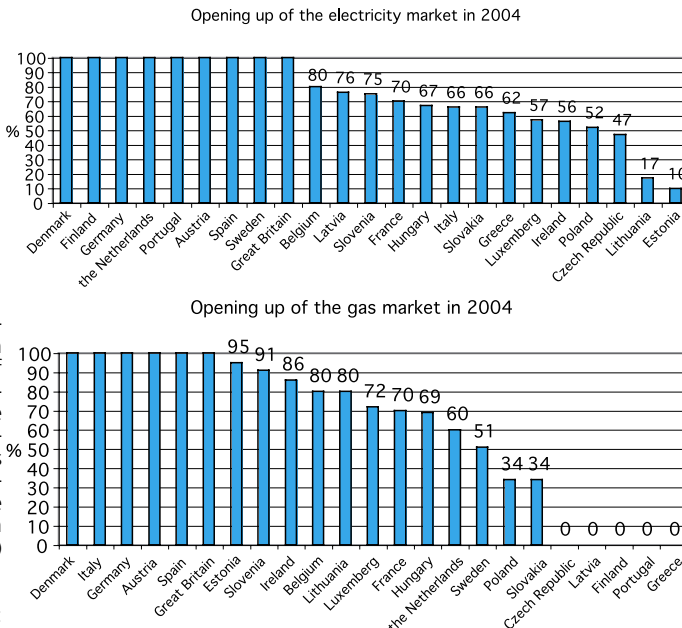
europa.eu.int/comm/internal_market/public-procurement/docs/keydocs/gpphandbook_en.pdf

europa.eu.int/comm/environment/green_purchasing/cfm/fo/greenpurchasing/index.cfm?lang=en

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Electricity and gas market liberalisation – status in 2004

In all European Union countries, electric energy and natural gas markets have been gradually opening up, although the progress of individual phases of opening differs. Full opening up of these markets in all EU countries has been set for 1.7. 2007. Here we bring to you a graphic representation of the degree of market liberalisation in terms of the proportion of electric power and gas sales open to competition from the total market (sale in individual countries) in 2004.



Source: Josef Firt, Chairman of the Energy Regulatory Office of the Czech Republic, "Implementation of EU Directives with focus on energy utilisation and environmental protection", speech at the international EEBW 2004 conference: www.eebw.cz/sbornik-pdf/sekceA/Firt.pdf

Costs and potential of biomass use in the CR

Wide-scale biomass utilisation is in the Czech Republic the cheapest way of increasing the share of renewable energy sources (RES) in energy generation since the potential of inexpensive energy from other renewable sources is severely largely limited. Although current energy production from biomass forms 66% of energy production from RES in the Czech Republic, in total it only concerns 1.5% of primary sources utilisation.

Promoting the development of the biomass market was one of the aims of the "Forbiom" project co-funded by the European Union's SAVE programme. The subject of the solution was helping investors to find the best places for economical biomass use for heat generation, both in terms of demand for biomass on the part of district heating systems and the potential supply of biomass in the Czech Republic, Slovakia, Slovenia and Poland.

The graph below shows the cost curve of potential biomass utilisation in the Czech Republic, depicting costs and the potential of fuel supply from individual biomass resources. It is evident that, on the one hand, it is possible to acquire a small potential of biomass at a relatively low price and, on the other, that a significant potential from energy crops is available at a high price. For the average price of CZK 73 per GJ of the energy content of fuel, it is possible to procure 2.7 PJ of fuel from agricultural residues. For a somewhat higher average price of 90 CZK/GJ, we can use another 0.9 PJ of fuel from the wood-processing industry, and for the price of 114 CZK/GJ also 1.4 PJ from forest residues. Available for the average price of 184 CZK/GJ is the most expensive potential from energy crops at the level of 14.5 PJ. In general, the potential of biomass utilisation has been estimated at almost 20 PJ – but this amount is only attainable given several presuppositions. The key precondition here is using approximately 30% of agricultural land for energy farming. The differences between individual regions as regards the potential and costs result from the soil yield capacity, gradient of the ground, production of the wood-processing industry and other factors.

The aim of the Forbiom project was to serve as a guideline for investors to prepare successful projects utilising biomass for district heating. Unfortunately, it is not possible to specify the model of a biomass utilisation project that would be viable to implement anywhere in the Czech Republic or Central Europe as a whole. Since the prices of biomass and the price of heat in individual localities may vary by as much as three-fold, the difference in economic effectiveness of the same project can be up to ten-fold, in dependence on its localisation. In addition, selection of technologies depends on the availability and price of particular types of fuel.

Nevertheless, several key factors characterising successful biomass utilisation projects have been identified:

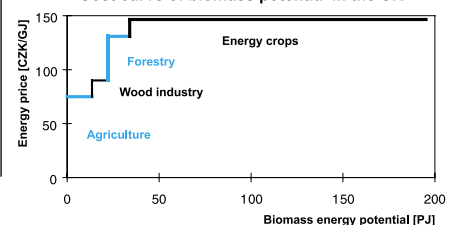
- a possible guarantee of long-term fuel supplies;
- the fuel price in a lower price band;
- the existing demand for economically effective biomass application for heat generation;
- the relatively high current heat price;
- the technologies that should be replaced are out-of-date and not environmentally-sound.

The decision about the suitability of a certain locality for implementing a biomass utilisation project requires an in-depth analysis of specific conditions. On the basis of the above-mentioned factors, it can be generally said that primarily convenient for biomass utilisation will be older district heating systems using as their fuel coal or heating oils, which usually significantly damage the environment and are in a more expensive price band.

Jana Szomolányiová

For more information about the results of the Forbiom project, visit: <http://www.svn.cz/forbiom/>

Cost curve of biomass potential in the CR



Green Low-energy house in Železný Brod handed over to tenants

In early December 2004 the first tenants moved into a new low-energy house in Železný Brod. The house is located in the centre of the town, close to the main square. It comprises twelve dwelling units: six two-room and five three-room flats, plus one studio. The town representatives selected the tenants according to neediness, with families with children being given preference.

Since the building's thermal insulation is two to three times more effective than that of common constructions, it was also necessary to meet high health and safety requirements as regards noise resistance of windows. As Václav Horáček, the town's Mayor, said at the gala opening of the house for tenants, "It really is impossible to hear even a braking lorry on the 1/10 international road right next to the house".

The house's construction cost 22 million Czech crowns. Almost four million was contributed through a subsidy from the state, the rest was financed from the town's budget. The project design was drawn up within the „Low-energy low-cost residential houses in the Czech

Republic" project initiated and organised by SEVEN, o.p.s., whose aim was, in cooperation with towns, to build these apartment houses as demonstration projects. The primary intention was to collect and disseminate domestic and foreign experience among the professional and non-professional public, to gain practical experience with construction of low-energy houses whereby towns operate as building owners and subsequently design other similar constructions. The project obtained the sponsorship of the Charles University Environment Centre and was financed from means of the UN Development Programme (UNDP) in the Czech Republic.



Energy subsidies in Europe

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of energy in the process of fuel recovery and development of technologies. For example, natural gas distribution and consumption is at its present level owing to the building up of an extensive infrastructure over the past few decades.

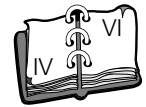
Consequently, given the current situation the European Union will fail to meet its goal for green energy generation by 2010. But the

European Energy Agency expects that economic support for renewable energy sources will grow along with increased knowledge of their role in safe and domestic energy supply and reducing the environmental impacts of energy production.

Full wording of the Study:
http://reports.eea.eu.int/technical_report_2004_1/en/Energy_FINAL_web.pdf
http://reports.eea.eu.int/briefing_2004_2/en/Briefing_energy_EN_web.pdf - EN

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Conferences, exhibitions and presentations



April – June 2005

AMPER 2005

13th international trade fair of electrical technology and electronics

5 -8.4.

Terinvest s.r.o. – PVA Letňany, Prague
www.amper.cz

CONECO – Racioenergia - Climatherm

International trade fair of energy efficiency and rationalisation of energy utilisation, civil engineering and air-conditioning equipment

5 -9.4.

Incheba, a.s. Bratislava
www.incheba.sk

ELEKTRO

2nd international trade fair of lighting technology, electrical equipment and system integration of buildings

19 -23.4.

Veletrhy Brno, a.s. – Výstaviště
http://node0.bvv.cz/elektro

ENVIRO Nitra

10th international exhibition of environmental protection and planning engineering and technology

21 -24.4.

Agrokomplex – Výstavnictvo Nitra
www.agrokomplex.sk

Raciotherm Košice

Exhibition of rational use of energy, heating, ventilation and air-conditioning, building equipment and sanitary technology

26 -28.4.

1. kvs, s.r.o. Košice
www.kvs.sk

Heating Days 2005 and Renewable Energy Sources

International specialist exhibition of heat supply engineering and technologies, electric power engineering, and renewable energy sources

26 -28.4.

Parexpo, s.r.o. Pardubice
www.parexpo.cz/oze

Ekotechnika Bratislava

12th international exhibition of environmental planning and protection engineering

10 -12.5.

Incheba, a.s. Bratislava
www.incheba.sk

EMA Nitra

5th international exhibition of electro engineering, measurement, automation and regulation

24 -27.5.

Agrokomplex – Výstavnictvo Nitra
www.agrokomplex.sk

FOR – Habitat

12th trade fair of housing, real estate, renovation and reconstruction

26 -29.5.

ABF, a.s. Praha – PVA Letňany
www.forhabitat.cz

We invite you to visit our project websites:

WWW

CLEARCONTRACT

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<http://czech.clearcontract.net/>



TREAM

Choose your energy-saving appliance!

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FORBIOM

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<http://www.svn.cz/forbiom/>



GREENEFFECT

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



RUSE

How to finance energy projects from EU Structural Funds

<http://www.ruse-europe.org/>



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