

In March, the incentive for utility-scale projects, such as the one shown in the picture, was abolished in the Czech Republic.

Photo: Bisol

The repercussions of the solar boom

Until recently, the Czech Republic was regarded one of Europe's most attractive PV markets. However, the repercussions of the sudden PV boom in the country are still felt by the sector today – and, for most part, they were negative.

The Czech Republic took its time before joining the renewable energy market with a first incentive scheme in 2005. But then the industry aimed for the fast lane. In particular, the PV sector saw an unexpected boom. With the introduction of an attractive feed-in tariff, the installed PV capacities climbed from 66 MW to 1,953 MW between 2008 and the end of 2010. During the following years, the Czech Republic developed into one of Europe's most lucrative markets. But the rush on the PV market led also to problems that affected not only the distribution grid but also the energy providers and the public authorities. In February 2010, the policy-maker reacted with a temporary freeze on all RES projects to prevent blackouts due to erratic energy supplies. Installations not in operation by that time were put on hold – a rule that has remained unchanged for PV and wind projects.

Freeze with consequences

In an effort to temper the unexpected boom, the Czech government decided to review the promotion of solar power in the country at the beginning of the year. The incentive was restricted to rooftop PV systems with a capacity lower than 30 kW. All other installations of larger size are now no longer eligible for a premium. Besides this, the tariff rates were drastically reduced to a price of 0.30 €-ct/kWh. Furthermore, the Czech Republic imposed a 26 % tax on solar energy production that will be retroactively applied for all systems connected between 2009 and the end of 2010. Although the Czech Republic enjoys rather high solar radiation levels when compared to other European countries, the market quickly collapsed. "It's a shame. But the PV market has virtually ended in January", says Richard Bejlek, CEO of the Czech installer company SolarVolt. Even though the former tariff was not completely abolished, "the power distribution companies stopped connecting new PV and wind energy plants to their grids." Bejlek estimates that about 200 MW were newly installed during the transition phase until March and that another 100 MW will follow in the course of the year 2011.

The news of the solar tax led to heated protests in the PV sector and investors warned they would file a

complaint of unconstitutionality at the Supreme Court. In March, a group of Czech senators followed through with that threat, which means that the courts will now have the final say. In view of substantial losses due to the retroactive solar tax, however, the PV operators will hardly be comforted. The freeze is now scheduled for review in September. "According to the energy providers, it will be summer before the effects of solar energy on the distribution grid become clear", says Bejlek.

In his opinion, the collapse of the market is not affecting the Czech Republic as a production location in a negative way. Kyocera, Schott Solar and other local module manufacturers produce with export rates of almost 100%. Schott Solar, the country's largest module manufacturer with an annual production capacity of 300 MW, maintains a factory in the eastern Valašské Meziříčí. In 2005, the Japan-based company Kyocera established its 150 MW module production in the northern city of Kadaň. Solartec, which is the largest domestic solar cell and module producer in the Czech Republic, runs a 30 MW facility in Rožnov pod Radhoštěm. This means that the repercussions of the crisis are mostly felt elsewhere: "It is the installers who are now looking for work – if they have not already turned towards Slovakia or Bulgaria", says Bejlek.

Biogas sector gaining momentum

Agriculture is a significant aspect of the Czech Republic and has led to a large biomass potential. According to the Czech Biogas Association (CzBA), the still moderate Czech market for biogas systems will have grown five times as large as today by 2020. "There has been a strong interest after the biogas market was opened in 2007", says Hajo Schierhold, Head of Sales and Marketing of WELtec BioPower. The German expert for biogas systems believes that the Czech Republic, Hungary and Latvia are some of the biggest markets in Eastern Europe. Five biogas plants are already in operation, another twelve are currently under planning or under construction.

Biogas is so far mostly used for the production of electricity. The majority of agricultural plants are based on the fermentation of agro products such as maize, silage or manure in plants for decentralized heat and power production. "Biogas has gained in importance particularly in the agricultural sector as an alternative to livestock farming", says Schierhold. Backed by subsidies from the Czech Ministry of Agriculture through the European structural funds, the construction of agricultural biogas plants has now also become profitable for mid-sized agricultural companies.



Agriculture is an important aspect of the Czech Republic. Experts believe that the market for biogas plants could grow by five times until the year 2020.

Photo: Weltec Biopower



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Key figures for Czech Republic:

Area	78,867 km ²
Capital	Prague
Population	10,190,200 (2011e)
GDP per capita	US\$ 25,600 (2010e)
Global radiation	1,000 – 2,500 kWh/(m ² a)
Primary energy sources	coal: 43 % petroleum: 21 % natural gas: 16 % nuclear power: 15 % renewables: 3 % others: 2 %
Installed capacities	
PV:	1,953 MW (2010)
Solar thermal:	147,854 m ²
Wind:	215 MW (2010)

Source: National institutions

Since 2007, about 150 biogas systems have been built on the basis of the incentive. On average, the EU subsidies cover up to CZK 17.8 million (€ 77,000) of the investment sum. In addition, the Czech Republic offers a fixed feed-in tariff over a period of 20 years. The tariffs ranges at about 17 €-ct/kWh for agricultural and at about 14 €-ct/kWh for industrial and communal biogas plants. Selling biogas to the energy providers is not yet profitable as financial incentives are not offered. The freeze on new renewable energy projects is also felt in the biogas sector. "About 50 % of the projects currently under

planning are on hold. They are either lacking a connection agreement with the grid operators or a construction permit from the local authorities", says Schierhold of Weltec.

Wind sector faced with protests

In contrast, the wind energy potential is still rather small in the Czech Republic. Suitable locations for the construction of wind turbines are only found in the Ore Mountains or in southern Moravia. What is more,

these wind projects often face resistance on the local level. In the last year, the newly installed capacities barely outreached 23 MW – a collapse of 45 % compared to the year 2009. At the end of 2010, the total installed wind capacity arrived at about 215 MW.

With an annual projected growth of 50 MW, the National Renewable Energy Action Plan would in theory provide sufficient opportunities for the development of wind projects in the country. The current targets envisage a total installed capacity of 743 MW by the year 2020. "The problem is that the plan by itself is not enough", says Pavla Cinková at the Czech Wind Energy Association (CSVE). In her opinion, the Czech wind sector is in need of further institutional measures – first of all a simplification of the licensing processes. "Since 2008, the bar for obtaining license has been drastically raised", says Cinková. "The projects have become smaller and often concern only one or two turbines." There is also a need for a change of attitude on the level of local administration, says the wind expert. "Especially, the municipalities are often in the way of new projects. They put forth development plans that make the construction of wind farms impossible", says Cinková.

So far, the domestic manufacturers act widely unaffected by the crisis. This is illustrated by a subsidiary of the Germany-based Schaaf Industrie AG, which is headquartered in Chrudim and produces towers and component parts for the wind industry. Another important domestic manufacturer is Wikov,

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Solar thermal: uncertain future

In April 2009, the Czech government launched its Green Light to Savings ("Zelená úsporám") programme for the promotion of energy efficiency measures in buildings and eco-friendly heating systems such as solar thermal and biomass furnaces. Up to 65 % of the total investment sum for a solar thermal system can be claimed through the incentive, which significantly increased the interest of home owners and other smaller investors. In the weeks before the programme was scheduled to phase out in October 2010, the Ministry of the Environment received more than 10,000 applications – far more than initially expected. In consequence, the programme was put on hold and not prolonged in February 2011. Experts doubt that it will be repeated in its original form.

It is this lack of planning security on the political level that is frequently criticised in the Czech Republic. It is also widely believed that the lack of political will in the area of renewable energy is due to the close ties between the political leadership and the energy providers. "Unfortunately, the political will to foster the promotion of renewable energy is currently missing. The current government is meeting the coal and nuclear power lobby half way", says Richard Bejlek of



SolarVolt. His sober conclusion: "We will first have to vote the policy-makers out of office before we will be able to move on."

Rouben Bathke

Further information:

Czech Biogas Association (CZBA): www.czba.cz

Czech Wind Energy Association (CSVE): www.csve.cz

Green Savings programme (Zelena Usporam):
www.zelenausporam.cz

Solartec: www.solartec.cz

Weltec Biopower: www.weltec-biopower.de

Wikov Wind: www.wikov.com

The Czech government aims at installing a total wind capacity of 743 MW by the year 2020. But the target alone will not do the job, say industry representatives.

Photo: Ecoenergy

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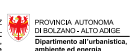
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