CZECH REPUBLIC COUNTRY PROFILE

Overview

The Czech Republic has a population of approximately 10.32 million, with a GDP of approximately USD 216,485 million. The total primary energy supply in 2007 was 45.76 Mtoe (million tons of oil equivalent), of which 0.4% is hydro power, 45.1% is coal/peat, 4.5% is combustible renewable and waste (including biomass, biogas and waste), 15.2% is natural gas, 20.3% is oil and geothermal/solar/wind is 0.1%. Net imports are around 11.52 Mtoe. CO₂ emissions are 122.14 (measured as Mt of CO₂). As a member of the European Union (EU), the Czech Republic is obliged to comply with the EU energy acquis, which includes the improvement of sector competitiveness, security of energy supplies and the protection of the environment.

1. Institutional structure

The Ministry of Industry and Trade (MIT) is charged with primary responsibility for the energy sector; regulatory implementation is the responsibility of the Czech Energy Regulatory Office (ERO), which was established on 1 January 2001 pursuant to the Act No. 458/2000 (the Energy Act). ERO is a legally autonomous body in charge of regulation for electricity, gas and district heating.

ERO is a single-person entity, headed by a Chairman who is appointed for a term of five years by the Government. The Government may dismiss the Chairman before the expiry of his/her five year term in the case of illness permanently preventing him from performing his assignments, gross breach of obligations, or on the basis of a court’s final judgment on commission of a crime, or if he/she himself resigns his/her chairmanship.

ERO has currently 100 staff members and is financed from a separate chapter in the national budget, which is yearly determined by the Ministry of Finance; for 2009 its budget amounts to 121,625,000 CZK.

Conflict of interest provisions preclude the Chairman and his key staff from being members of the Parliament or the Government, or serving on an executive government body; moreover, they cannot own shares or stakes or perform any work or hold any material interest in any energy undertaking to which the Energy Act applies.

The law expressly assigns to ERO the task of market regulation with a view to substituting market mechanisms in the areas of energy industries in which competition is not feasible and in which there exists danger of abuse of a dominant position. ERO participates in the drafting of relevant laws, supporting MIT with technical advice. It is authorised to issue regulations (primarily public notices and price decisions), through which it regulates, inter alia, the following: the quality of supply and services related to regulated activities, tariff methodologies, tariffs level and price control procedures. Further, ERO decides on the award, amendment, or revocation of licences.

Within its powers, ERO can propose that the State Energy Inspectorate check compliance with the obligations set out in the Energy Act and, as applicable, propose the imposition of penalties; it can also notify the Office for the Protection of

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22 Information herein is drawn primarily from the Czech Energy Regulatory Office (ERO), from answers to questionnaires provided by this project, and from ERO’s 2008 Annual Report.

23 As of October 2009, CZK 121.625 million is equivalent to approximately USD 7.1 million, and EUR 4.8 million.
Competition (OPC) of cases of abuse dominant position. OPC is the only administrative authority responsible for assessing any potential breach of the Competition Act (No. 143/2001).

Appeals against ERO’s decisions can be lodged in second instance proceedings with its Chairman and, beyond that, with ordinary courts, or, in the case of licensing issues, with administrative courts. No other authority than a court of law may change the Office’s decisions.

2. Electricity sector

a. Market framework

The step-by-step opening of the Czech electricity market started in 2002. Since 1 January 2006, when household customers became eligible and acquired the right to choose their supplier, the market has been fully liberalised: one and a half years earlier than required by Directive 2003/54/EC. The market sectors in which competition is feasible are not subject to regulation; these include electricity generation, imports, and trade.

The electricity industry is dominated by three vertically integrated private run enterprises: ČEZ Group, E.ON Energie a.s., and Prašká Energetika a.s. These companies operate, and hold licences, both in distribution and supply, but through companies that have been legally unbundled.

As suppliers, the three groups have a joint market share of more than 95% of final customers’ total consumption, with a clear dominance of ČEZ. As for small household customers, their share is more than 99%. There are also about ten independent suppliers actively operating in the retail market. To date, they have been offering electricity, bought from smaller generators or imported from other countries, mainly to large industrial customers.

The generation sector is similarly concentrated, consisting of a single generator (ČEZ) that accounts for 73% of national production capacity, and a number of much smaller generators, none of which has a share more than 3% of the total.

It is noteworthy to mention that, per capita, the Czech Republic is consistently the largest net exporter of electricity in the world (only Norway can export more during a rainy year). In power generation coal is dominant and in 2008 accounted for roughly 65% of electricity output. The Czech Republic has two nuclear complexes, Temelín and Dukovany. ČEZ is the operator of both complexes and is planning to install two additional reactors at Temelín, which would increase nuclear capacity by 2100-3400 MW.

As for transmission, a nation-wide system operator, EPS, a.s. has been established as a separate state-owned company and is fully ownership unbundled. The Transmission System Operator (TSO) is also responsible for the development of the transmission system, and for providing the system services that ensure safe and reliable operation of it.

A recent development on the electricity market has been the establishment of the Prague Energy Exchange in 2007. Actual trading was started on 17 July 2007. Currently, monthly, quarterly and yearly products are traded (base load and peak load). In general, these financial products are traded without any need to supply electricity.
b. Network access and tariffs

Access rules and charges are applied *ex-ante* and details are published. Non-discriminatory access to the network is required in accordance with EU directives and implemented through the grid codes.

There are no bottlenecks in the Czech transmission system. As regards electricity exports/imports, the TSO offers all available cross-border line capacities using non-discriminatory market mechanisms, i.e., annual, monthly and daily explicit auctions are organised for all interconnections.

The TSO also procures all ancillary services (primary, secondary and tertiary control, fast start, and operating reserve) through market mechanisms, i.e. via long term and medium-term tendering processes.

Regulated prices are set for transmission, distribution and ancillary services. To calculate average charges for electricity transmission and distribution ERO uses an incentive-based revenue cap methodology, which has been applied throughout the second regulatory period (1 January 2005 to 31 December 2009). The methodology and the tariff structure are defined in two ERO’s Public Notices: Notice No. 404/2005, which lays down the financial information that regulated entities are required to provide and Notice No. 150/2007, which determines the procedures for price control. Somewhat simplified, the general formula applied is as follows: \( PV = N + O + Z \) (where \( PV \) represents allowed revenues, \( N \) costs, \( O \) depreciation, and \( Z \) profit). Each year the allowed revenues are adjusted by an incentive factor.

Electricity generation and imports and commercial activities related to electricity supply to final customers are not controlled and are fully subject to market mechanisms. As a consequence the regulatory framework above-described, the electricity price to all end-users, including households, is made up of regulated and unregulated items.

c. Operational environment

Monitoring expected future demand, foreseeing the need for additional production capacity and ensuring security of supply are under the responsibility of MIT.

Planning offices of local jurisdictions authorise new generation capacity by granting permits. In the case of electricity generating plants having a total installed capacity of 30 MW or more, there is also the need to obtain an authorisation for the construction, which is issued by MIT. In general, the national budget does not provide support for investment in new generating capacity; however, certain subsidies can be obtained from governmental and non-governmental agencies and funds. For plants having an installed capacity of up to 1 MW the generator may benefit from tax exemptions for the first five years of operation.

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24 This method consists in the regulator setting the cap on allowed revenues regulated companies may achieve irrespective of costs. By this separation of revenues from costs, regulated companies are motivated to reduce costs and improve efficiency.

25 Detailed information on the regulatory formula and its parameters can be found on the ERO’s website at www.ero.cz, in “Report on the approach to setting the key parameters of the regulatory formula and prices for the second regulatory period” (also in English).
ERO participates in the monitoring of quality and level of maintenance of the networks through the reporting requirements it places on its licensees.

The Czech Republic has fully implemented the obligations of public service and consumer protection which are required by the Directives 2003/54/EC and 2003/55/EC. This was done primarily through the Act No. 670/2004, which amended the existing Energy Act.

In particular, the legislation provides for a supplier of last resort, obliged to supply electricity, at prices set by ERO, to households and small customers. The supplier of last resort is a holder of an electricity trading licence, and is selected by the Office for each defined area. 26

ERO is charged with primary responsibility for quality of supply and services provided by electricity companies. The Energy Act stipulates that the TSO and the Distribution System Operators (DSOs) have the obligation to continuously supply customers with electricity at a high level of quality. Quality standards are currently laid down in ERO’s Public Notice No. 540/2005, “On the quality of electricity supplies and related services in the electricity industry”.

The Office’s price decisions are published in the Energy Regulation Gazette, as well as in the Collection of Laws and in its official website: www.eru.cz.

Annually, ERO publishes an Annual Report on the Operation of the Czech National Electricity Grid, though only in Czech. An executive summary of the report is also published in English. The annual report is submitted for approval by the Government and Parliament’s Chamber of Deputies through MIT. Monthly reports are also published on the Office’s website.

ERO’s hearings are not held in public and the law does not provide for public consultation, but in practice public consultation are often conducted when discussing activities that affect market structure and operations. ERO also collects and publishes performance indicators for licensees.

ERO may grant Third Party Access exemptions to new investments.

Foreign capital investment in energy companies is not restricted in any manner, except for transmission assets.

3. Gas sector

a. Market framework

On 1st January 2007 all final gas consumers became eligible customers.

The Czech Republic’s gas needs are almost exclusively met by imports, three-quarters of which are provided by Russia, with Norwegian producers supplying the balance.

There is a single importer, the private run RWE Transgas (RWE), which is at the same time the dominant wholesale supplier. RWE has also majority control over six of the eight regional distribution companies, legally unbundled since 1st January 2007. This results in RWE accounting for about 84% of gas sales in the Czech Republic.

26 The same rules apply to the gas sector.
In addition to that, RWE has complete control over its subsidiary RWE Transgas Net, s.r.o., which holds the exclusive gas transmission licence in the Czech Republic, and was legally unbundled in 2007.

At the wholesale level, starting from 1 September 2009 the coupling of the Czech and Slovak day-ahead electricity markets entered into force. This means that day-ahead bids and offers of registered traders of both countries could be traded together up to available cross-border capacity without obligation on the part of the trader to reserve cross-border capacity.

As of January 2009, besides RWE, a number of bundled small distribution companies, which operate their own local grids, are present on the Czech market. The Czech Republic has used the option to implement unbundling solely with respect to companies that have a large number of customers (“the 100,000 customers” rule).

Since market liberalisation, a number of new traders have entered the market and the regulator has issued 88 gas trading licences. However, the extent to which these traders are active in the gas market is unclear, since few of these are actually supplying and, so far, the switching supplier ratio has been very small.

b. Network access and tariffs

Non-discriminatory Third Party Access to the transmission and distribution systems is guaranteed by law. ERO is responsible for regulating such access and for settling disputes which may arise from access refusal.

Tariffs are regulated for gas transmission and distribution. Grid codes for the TSO and DSOs are in place.

This part of the market in the Czech Republic is relatively small and the charges for natural gas transmission are therefore unified for the whole Czech natural gas market, independently from distance, according to the so-called “postage stamp” principle.

Throughout the second regulatory period (from 2005 to 2009, inclusive) the revenue cap method has been used in setting tariffs.

The charges are exclusively capacity-based - i.e. they do not include an energy component related to the volumes of gas actually transported – and are set for one calendar year.

Similarly to transmission, distribution tariffs are determined on the basis of the revenue cap methodology. The charges are set out yearly and separately for the operator of each regional distribution system.

To make sure that the respective TSO or DSOs do not take a discriminatory approach, distribution and transmission charges are set as fixed prices. Thanks to the sufficient capacity in the transmission and distribution systems, the interruptible capacity charge is set at the same level as the charge for firm capacity, with discounts granted upon interruption.

Contrary to firm capacity, this type capacity is contractually subject, under given and pre-defined circumstances that may affect the transmission and distribution systems (i.e. technical or emergency reasons), to be interrupted. For this reason is normally sold at a lesser price than firm capacity.
c. Operational environment

MIT is responsible for overseeing the gas system and for awarding authorisations for new investments.

Under the Energy Act, all the operators of gas transmission, distribution and underground storage facilities have the obligation to prepare an annual report on the quality and level of maintenance of those facilities, alongside with emergency plans. The reports and the plans are submitted to the MIT for review and approval.

In line with Directive 2003/55/EC and the Energy Act, the so-called authorisation principle has been enforced in order to smooth the procedures for investment in new gas facilities. In 2008 the MIT awarded 30 authorisations, 29 of them for high-pressure gas pipelines and one for an underground gas storage facility.

4. Renewable energy sources/energy efficiency

In 2005 the Government of Czech Republic issued a National Programme for energy management and the use of renewable energy for the 2006–2009 periods. The document sets out the government’s priorities and indicative targets for electricity produced from a large variety of renewable energy: small hydro power plants, biomass, biogas, solid municipal waste, wind power plants and photovoltaic systems.

The Czech Republic’s legislative framework in relation to renewable energy was significantly strengthened by Act No. 180/2005, “On support for the use of renewable resources”, which was followed by a number implementing regulations issued by ERO.

With respect to power generation, distribution and transmission companies are obliged, through a nominated trader, to buy electricity from renewable energy producers.

The new legislation has broadened the feed-in system for renewable energy and cogeneration, originally established in 2000, allowing the choice between a feed-in tariff and “green bonus”, i.e. an amount paid on top of the market price. The choice has to be made yearly.

Under ERO’s Price Decision No. 8 of 18 November 2008, feed in tariffs and bonuses are set for all sizes of renewable energy (only hydro plants with installed capacity higher 10 MW are excluded from support.). Feed-in tariffs are based on a return of investment time of 15 years and on technology specific costs and net present value calculations, including 7% rate of return (nominal, after tax).

Since 2006, premiums to the electricity price have been also granted to all categories of cogeneration plants in the form of a fixed tariff. The amount of the premium depends mainly on two factors: market natural gas and electricity prices.

The use of bio-fuels is being encouraged through the Air Protection Act (2002), which requires that a minimum amount of bio-fuel or other fuels produced from renewable energy is made available to the market. Between 2007 and 2012 this should amount to 4.2 million tons.

As for environmental protection, the Environmental Impact Assessment procedure was introduced into the Czech legislation by the Act 100/2001, “On assessment of environmental impacts”, which lays down the list of business activities that are
subject to environmental impact assessment and the criteria and procedures that have to be followed.

Emissions of dust, SO₂, NO₂ and greenhouse gases are taxed.

The Czech Republic signed the Kyoto Protocol on 23 November 1998 and subsequently ratified it on 15 November 2001, with a reduction commitment for 2012 of 8%. The Ministry of the Environment (MoE) is the national entity with overall responsibility for the national inventory system. The Czech Hydrometeorological Institute, established by the MoE, has been designated as the coordinating and managing organisation responsible for the compilation of the national greenhouse gas inventory.

5. Conclusion

The Czech Republic performs well overall and with respect to its grouping (Group A). Within its Group, Czech Republic has an electricity sector score of 0.946 relative to the Group average score of 0.93, and a natural gas sector score of 0.902 relative to the Group average of 0.864.

Although the institutional structure and the regulatory framework are well-designed and fully meet the benchmark, both electricity and the gas market are very concentrated.

The coupling of the electricity market with Slovakia, effective since September 2009, will significantly increase the cross-border trading and is likely to make both markets more attractive for industry players and investors.

In the gas market the private-run RWE is enjoying a near-monopoly position (84% of gas sales) and is controlling de facto the entire gas chain. This may deter new players to enter the market, which, with a total consumption above 9 bcm/y and its proximity to the largest continental gas market (Germany), offers potential interest for energy traders and investors.
Electricity spider graph – Czech Republic

Note: The diagram presents the electricity sector results of the Czech Republic, in accordance with the benchmarks and indicators identified in the assessment model. The extremity of each axis represents an optimum score of 1.0, that is, full compliance with international best practices. The fuller the “web”, the closer the overall electricity regulatory framework approximates international best practices. The results for the Czech Republic are represented by the thick bold line. For comparison purposes, the shaded area presents the electricity sector average of the Group A countries.

Electricity Sector - Comparative view of Group A countries
Note: The diagram presents the gas sector results of the Czech Republic, in accordance with the benchmarks and indicators identified in the assessment model. The extremity of each axis represents an optimum score of 1.0, that is, full compliance with international best practices. The fuller the “web”, the closer the overall gas regulatory framework approximates international best practices. The results for the Czech Republic are represented by the thick bold line. For comparison purposes, the shaded area presents the gas sector average of the Group A countries.

Gas Sector - Comparative view of Group A countries