National Report of the Energy Regulatory Office on the Electricity and Gas Industries in the Czech Republic in 2017

List of frequent abbreviations and acronyms

ACER	Agency for the Cooperation of Energy Regulators				
CEER	Council of European Energy Regulators				
ČR, CZ, CR	Czech Republic				
EC, Commission	European Commission				
Energy Act	Act No 458/2000 on conditions of business and state administration in energy industries and amending certain laws				
EP	European Parliament				
ERO, Office	Energy Regulatory Office				
EC	European Community				
EU, Union	European Union				
market operator, OTE, a.s.	OTE, a.s., the market operator				
PCI	Projects of Common Interest				
REMIT	Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency				
TYNDP	Ten Year Network Development Plan				
V4	The Visegrád Four				

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1 Foreword by the ERO Board

For the fourteenth time, the Energy Regulatory Office ('the ERO' or 'the Office') is presenting its *National Report on the Electricity and Gas Industries* to the European Commission (EC) and the Agency for Cooperation of Energy Regulators (ACER), thereby meeting its reporting and notification obligation set out in the applicable EU Directives and Regulations.

The Energy Regulatory Office has been operating under Act No 458/2000 on conditions of business and state administration in energy industries and amending certain laws (the Energy Act), as amended by, in particular, Act No 131/2015 and amendment to Act No 165/2012 on supported energy sources, as amended, as an administrative authority for regulation in the energy industries since 1 January 2001.

The year 2017 was a major milestone for the Energy Regulatory Office. Until 31 July 2017, Chairwoman Alena Vitásková headed the Office. Under the Energy Act, the Government of the Czech Republic had appointed a five-member ERO Board, which took over on 1 August 2017. Thus, the ERO is managed by a collective body; this is one of the most fundamental changes in the ERO's 16-year history. Every year, a new Board member will be appointed for five years to replace the one for whom the term ends. A Board member is appointed as the ERO Board Chairman for the period remaining to the end of his service on the ERO Board, but for no more than three years. The ERO Board's deliberations follow its Rules of Procedure. The ERO Board Chairman), Jan Pokorný, and Vladimír Vlk have been appointed to the ERO Board.

The ERO Board approves proposals for implementing acts, proposals for the principles of price regulation, and proposals for price decisions, the plan of the ERO's activities, the budget proposal, the final account, and the *Report on the Activities and Finances of the Energy Regulatory Office* [the Annual Report]. The ERO Board also decides on remedies lodged against the first-instance decisions issued by the ERO.

In 2017, the Office focused on preparing and migrating to the new system of ERO governance in addition to its standard activities arising from its duties and competences specified in the Energy Act and related to the higher-level legislation. The departing management therefore prepared lists of activities and agendas with a view to the new management having, right upon taking over, a complete picture of the progress in the various tasks, including their prioritisation, on which the new management started to work immediately.

The ERO made an effective use of the opportunities opened by the election of CEER's new Board of Directors and elections to the leading positions in CEER and ACER working groups and task forces. As the result of intensive international cooperation, in October 2017 an ERO representative became a CEER Vice-President and other ERO representatives hold various positions in several working groups.

2 Main developments in the electricity and gas markets

The Energy Regulatory Office operates under the Energy Act, into which the Czech Republic has incorporated the relevant provisions of the third energy package and Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (REMIT).

The consultation process for an extension of the *Price Control Principles for 2016-2018 for the Electricity and Gas Industries and for the Market Operator's Activities in the Electricity and Gas Industries* until 2020 took place in 2017. The price control principles for 2016-2018 have been set with a view to energy system operators having sufficient funds and motivation for system upgrade and development while preventing them from channelling the funds collected from customers out of their companies; they should use the funds for maintenance and development over the long term. On the strength of this public consultation the decision was taken to extend the fourth regulatory period from three to five years. This caused an extension of the applicability of the rules applicable to 2016-2018. The drafting of the *Price Control Principles for the Fifth Regulatory Period*, which should begin in 2021, was also started in 2017.

In early 2017, the ERO completed the legislative process for amending public notice no. 262/2015 on regulatory reporting. The amendment was necessitated by amendments to certain laws and regulations on accounting, which have changed the chart of accounts and also the arrangement and designation of items in the profit and loss account. To ensure continued clear and understandable reporting based on financial statements, the ERO amended public notice no. 262/2015 on regulatory reporting and modified the regulatory reports to match the modified financial statements.

Two meetings of Visegrád Four (V4) countries' regulators took place in 2017. The meeting on 7 September in Krynica, Poland, was the first opportunity to introduce the new ERO Board to the partner regulators. The V4 regulators' representatives held panel discussions on the dilemmas of the energy policy. On 14 November, V4 representatives met at the Hungarian regulator's head office in Budapest to discuss the Winter Package (the *Clean Energy for All Europeans* package), which is intended to boost the market foundations of the European energy sector while preserving free choice of the energy mix, and competitiveness.

During the year, ERO representatives attended several conferences, the Florence, Madrid, and London forum meetings, and workshops. They also participated in the meetings of regional groups responsible for listing Projects of Common Interest (PCI). Other bilateral and multilateral meetings concerned electricity market integration, gas market integration, and competitiveness.

Almost 360,000 customers switched their electricity supplier, approximately the same as in the preceding year. The market as such is consolidated. Several years in a row have seen similar numbers of supplier switches and the most important changes are caused by mergers & acquisitions. The electricity market is fully competitive and customers are benefiting from the strong competition amongst electricity traders, for they are able to negotiate low prices. One of the results of this high level of competition is the fact that in 2017, some traders failed to manage their business risk and discontinued their business. In all these cases the mode of the supplier of last resort worked well, and customers were not left without electricity supply. We can also see an upward trend in the country's electricity demand, which is related to the economic growth in the Czech Republic.

The Czech electricity transmission system operator, ČEPS, a.s., put four PST (Phase Shifting Transformers) in operation at the Hradec substation near Kadaň. On the lines interconnecting the Czech Republic with the eastern part of Germany, control room operators are therefore better able to control electrical energy flows and keep them within safe limits. The setting of the PST's controlling parameters is coordinated with foreign partners as part of scheduling, with the primary objective to ensure the reliability of electrical grids throughout the Central European region.

Regulated prices related to electricity supply decreased year-on-year for customers connected to the medium voltage and high voltage levels, while increasing somewhat for households and small businesses. In addition to the off-take type, the changes in regulated prices also depend on the locality, i.e. the distribution area within which the customer is located. The year-on-year increase in regulated prices for customers connected to low voltage was 2.5 per cent on average; net of inflation, the change was tenths of per cent.

The retail gas market saw a continuing upward trend in the number of gas supplier switches: 227,000 customers changed their gas supplier in 2017. In terms of the level and effectiveness of gas market opening and competition it can therefore be noted that the current legislative framework for supplier switching meets the requirements for putting in place a competitive and safe consumer-focused environment. In view of the number of gas suppliers, the gas market can be said to be saturated. Going forward, changes can primarily be expected to be caused by changes in the ownership structure of certain suppliers or by the potential folding of certain suppliers. Of the above changes, the most notable one was the end of the trader VEMEX in the Czech gas market. The company transferred its retail and wholesale operations to WINGAS GmbH, organizační složka Česká republika, in a controlled manner, and none of its customers was exposed to the risk of illegal off-take.

In 2017, the high level of gas market competition also caused four cases of gas traders being no longer able to supply gas to their customers. In such cases, the customers could use the accelerated supplier switching procedure or, where they met the conditions laid down in the Energy Act, their supply points were transferred to a supplier of last resort.

Cold weather, idle wind farms in Germany, and shutdowns of NPPs in France caused the price of day-ahead electricity in the Czech spot market to surge from EUR 40-50/MWh on average in January to up to EUR 133/MWh. This situation was reflected in gas consumption in the Czech Republic, because it was profitable to use large gas-fired and combined-cycle power stations given their lower production costs, primarily represented by the gas price, and the high price of electrical energy.

From the perspective of market liquidity the upward trend in the trades executed in the market organised by the market operator, OTE, a.s., is important. In 2017, the volume of trades in the within day gas market climbed to a new annual maximum of 3,747 GWh, up by 79.4% on 2016 when market participants executed trades totalling 2,088 GWh.

Regulated prices related to gas supply in 2018 will be comparable to those applicable in 2017. Depending on the off-take type and on the distribution area, they will either not change at all or rise by units of per cent. The proportion of the change for low demand and high demand customers will be opposite to the change relating to electricity, while households face a rather small increase. Regulated prices will go up by 2.8 per cent on average, but their impact on the resulting gas prices will be weaker than in the case of electricity thanks to the smaller proportion of the regulated component of prices.

3 The electricity market

3.1 Network regulation

The issue of network regulation is currently going through dynamic development. The Czech market is completely open, and customers can find their way around it and fully use all benefits offered by the liberalised market.

3.1.1 Unbundling

Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity (Directive 2009/72/EC) constitutes a fundamental European legislative act for the electricity industry, laying down, *inter alia*, the rules for the market participants' operation in the electricity market. The implementation of Directive 2009/72/ES has brought a major change for the participants in the Czech electricity market. First and foremost, the legislation on unbundling has been significantly amended, and the implementation was very important from the perspective of the provisions on the electricity transmission system operator's and distribution system operators' unbundling and also because it has vested the Office with much broader competences in oversight and inspections, and penalisation for violations of the unbundling rules.

In respect of distribution system operators' unbundling, Article 26 of Directive 2009/72/EC had been implemented through a relevant provision of the Energy Act earlier, specifically through Section 25a of the Energy Act. As regards unbundling, the past period saw modifications to distribution system operators' information systems, which has also considerably influenced service provision to customers (supplier switching, changing the distribution tariff, etc.). Nevertheless, the Czech energy market is stable in terms of unbundling from the perspective of the changes that have taken place.

Unbundling has also necessitated some measures for meeting the obligation of nondiscriminatory access to distribution systems; for oversight in this respect, a compliance programme has been established. DSOs must adopt a compliance programme in their internal regulations. A compliance officer, appointed or otherwise installed by the DSO, oversees the implementation of the programme. Compliance officers prepare annual reports on measures adopted for compliance programme execution for the past year and submit them to the ERO by 30 April.

3.1.2 Technical functioning

The responsibility for the system, and hence the balancing energy, rests with ČEPS, a.s., which ensures the quality and reliability of electricity supply at the level of the transmission system using system services. The funds to pay for these services are provided through regulated prices billed to customers for the electricity quantity they take.

Under Section 17(7)(g) of the Energy Act, the Office approves or lays down the grid code/operating rules for the transmission/distribution systems. In 2017, it approved a modification to the existing rules for transmission system operation and also a modification to the rules for distribution system operation. The key objective of the approval process was to ensure that grid codes/operating rules were the basis for the transparent and predictable performance of the licensed activity and did not cause any disequilibrium between the various electricity market participants. Another requirement is that the codes/rules contain provisions deriving from legislation and also findings gathered in the activities of the transmission system operators.

3.1.3 Network tariffs for connection and access

Under the Energy Act, public notice no. 194/2015 on methods of price regulation and procedures for price controls in the electricity and heating industries, and public notice no. 196/2015 on methods of price regulation and procedures for regulating the prices for the market operator's activities in the electricity and gas industries, the Energy Regulatory Office determines, every year, the charge for 'the related service' in the electricity industry, which is composed of the charge for electricity transmission/distribution, the charge for system services, the component of the price covering support for electricity from supported energy sources (SES) and the charge for the market operator's services. This charge is heavily influenced primarily by system operators' investment activity, the size of overall consumption and the price of electrical energy for covering losses in networks.

The charges for electricity transmission/distribution are further broken down to the charge for booked capacity, set as a standing monthly charge related to electric power taken, and the charge for network use per unit of electricity taken.

The charge for using transmission system networks is influenced by losses in the transmission system and the price of energy for covering these losses. Expected losses increased by 4.2% year-on-year. The charge for network use was favourably influenced by a drop of 9.2% in the price of electrical energy for covering losses. The other input that negatively influenced the charge for network use was the correction factor for 2015. The result of all these factors was that the charge for using transmission system networks rose by 13.5%. The charge for capacity booking in the transmission system increased by 9.6% year-on-year, mainly due to the TSO's increased investment activity.

The charge for using distribution system networks for 2017 was also favourably influenced by the drop in the price of electrical energy, while the planned demand of customers remained at approximately the same level year-on-year. The growth in the charge for using the transmission system networks had a negative impact on the charge for using distribution system networks. The charge for network use at the extra high voltage level ('EHV' [\approx high voltage]) declined by 0.7% year-on-year, while at the high voltage level ('HV' [\approx medium voltage]) this charge dropped by 10.5% compared with 2016. The charges for booked capacity at the various voltage levels are mainly influenced by the agreed technical parameters of booked capacity, the amount of investment at the respective voltage level, and the charge for capacity booking in the higher-level transmission system. The unit price for booked capacity at the EHV and HV levels increased by 1.7% and 2.4% respectively in the year under review.

Since 2016, the component of the price for support of electricity from SES has been primarily related to the value of the customer's booked input power, but the maximum payable amount of the price component for support of electricity from SES was set as the product of the electricity quantity taken and CZK 495/MWh. Thus, in 2017 no customer paid more towards the price component for support of electricity from SES, in terms of the MWh of electricity taken, than they had had to pay in 2016. The costs of operating aid for electricity, which are not covered by income from the payments of the price component for support of electricity, which the Government had set at CZK 26.185 billion for the year under review. For 2017, the planned costs of aid for electricity and heat from supported sources totalled CZK 45.673 billion, including the correction factor.

The charge for the provision of system services is intended to cover the costs of balancing the generation and consumption electricity. The transmission system operator primarily ensures balancing by purchasing ancillary services. The charge for system services dropped by 5.8% year-on-year thanks to a negative correction factor.

Connection conditions did not change in 2017. The conditions for connecting new electricity customers and producers to the distribution and transmission systems, including the method of calculating the applicant's share of the costs incurred in the connection and in supplying the required power, are set out in public notice no. 16/2016 on the conditions of connection to the electrical grid. The technical conditions for connection are stipulated in the rules of transmission/distribution system operation.

Cross-subsidies are prevented by the suitable design of regulatory reporting that, following the accounting and legal unbundling, strictly requires that costs directly allocable to each of the regulated activities be reported. As part of secondary legislation, the Office also promulgates the rules for overhead cost allocation, which are applicable to companies operating more than one regulated activity.

3.1.4 Cross-border issues

3.1.4.1 Access to cross-border infrastructure

The Czech electrical grid is part of the synchronised area of continental Europe, which means that it is synchronously integrated within continental Europe. The Czech electrical grid has cross-border interconnections on the national borders with Germany, Poland, Austria and Slovakia, constituting cross-border interconnections with five transmission systems: 50Hertz and TenneT (Germany), PSE (Poland), SEPS (Slovakia), and APG (Austria). At the respective cross-border point transmission capacities continue to be allocated on the basis of coordinated calculation within the Central and Eastern European region (known as Central Eastern Europe, CEE)¹, which also includes Slovenia and Hungary in addition to the neighbouring countries.

The CEE region and the CWE region were merged into a single region called CORE in 2017. Within this region, common implementation of requirements, i.e. network codes, is taking place with a view to harmonising the procedures in the electricity market and creating a single electricity market. The key element of this harmonisation is the preparation of a methodology for transmission capacity allocation based on physical flows, i.e. the flow-based method. Methodologies for transmission capacity allocation in the day-ahead and within day markets were submitted to the CORE region's national regulatory authorities for approval in the autumn of 2017. However, both of these methodologies had considerable shortcomings, and the proposals for these methodologies for the day-ahead and within day markets have been approved the forward capacity allocation methodology based on the flow-based method will also be prepared.

Cross-border transmission capacity is allocated for various periods of time: a year, a month, or a day. Cross-border capacities are allocated on a coordinated basis by an auction office, Joint Allocation Office $(JAO)^2$. JAO provides services to 22 TSOs in 19 countries. JAO organises

¹ The regions for coordinated congestion management are defined in point 3.2 of Annex I to Regulation (EC) No 714/2009, while Commission Regulation (EU) 2015/1222 sets out the method for determining capacity calculation regions; these may differ in terms of their composition.

 $^{^2}$ The Joint Allocation office (JAO) emerged on 1 September 2015 from the merger of two regional auction offices, CAO and CASC.EU. Originally, it started its activities by auctions of annual transmission rights for 2016. Since 2016, it has been offering the full range of auctions for annual, monthly and daily capacities. In

auctions of annual, monthly and daily capacities for 29 cross-border interconnectors and also acts as a fall-back for European market coupling (MC), i.e. day-ahead markets' interconnection. In connection with Commission Regulation (EU) 2016/1719, in 2017 national regulatory authorities approved JAO as the single allocation platform responsible for auctions of long-term transmission rights on the national borders of all EU member states.

Transmission capacity allocation for cross-border transmission takes place under auction rules, which in fact constitute the rules for coordinated auctions of transmission capacity and also set out the terms and conditions for access to cross-border infrastructures within the meaning of Article 37(6)(c) of Directive 2009/72/EC. Available transmission capacities continue to be calculated on the basis of netting and the calculation applies to the cross-border interconnectors with the 50 Hertz, TenneT, PSE, and APG transmission systems. On the bidding zone interconnector with Slovakia, a different cross-border capacity allocation method is used. Long-term nominations take place there without the need to book separately cross-border transmission capacity, for which market participants can apply until two days before the cross-border transmission is to take place. The transmission capacity so used is free of charge. Should it be exceeded, the matched values of nominations in the respective trading hours are curtailed. The curtailment is proportional for all matched values of nominations in the respective integers.

Thanks to the historical interconnection between the Czech and Slovak transmission systems, a high transmission capacity is available in the cross-border interconnector with SEPS. In previous years, contractual congestions occurred only infrequently, but this trend has begun changing in recent years and the number of curtailments is rising. In response to this fact and also to Article 30 of Commission Regulation (EU) 2016/1719, in 2017 the national regulatory authorities, i.e. the Czech Energy Regulatory Office and the Slovak ÚRSO (Úrad pre reguláciu sieťových odvetví [Regulatory Office for Network Industries]) agreed that coordinated allocation of transmission capacities would take place on the cross-border interconnector between the Czech Republic and Slovakia from 2019.

JAO facilitates daily allocation of capacities on the cross-border interconnectors with TenneT, 50Hertz and APG using explicit auctions while with SEPS, allocation is based on implicit auctions, i.e. market coupling. The interconnection of day-ahead electricity markets is organised under the 4M MC project, in which the Czech Republic (CZ), Slovakia (SK), Hungary (HU) and Romania (RO) participate. In other words, the requirements for electricity purchase/sale for the following day are satisfied from the adjacent market place without the need to obtain cross-border transmission capacity in an explicit auction.

In the case that market decoupling is declared, fall-back solutions are used at the various cross-border interconnectors of the 4M MC countries in the form of a daily explicit shadow auction organised by ČEPS, a.s. on the cross-border interconnector with SEPS.

Transmission capacity allocation through implicit auctions has certain advantages over explicit auctions. On the one hand, the market participants can skip the step whereby they first have to bid for available transmission capacity and can nominate the capacity only then based on the result of the auction. On the other hand, it is visible that implicit auctions can result in a gradual convergence of the price differentials between the various markets. Whereas the previous period saw a gradual price convergence, 2017 saw more of price divergence. Compared with 2016, on the CZ-SK cross-border interconnector the number of cases where the price was the same for both markets decreased by 16.77%. In the CZ-SK-HU area,

^{2017,} the EU's national regulatory authorities approved JAO as a single allocation platform under Commission Regulation (EU) 2016/1719.

a decrease also occurred, specifically by 28.95%. For the 4M MC area (i.e. CZ-SK-HU-RO), the decrease was 22.23%. In other words, while in 2016 the CZ-SK area recorded 95.25% of cases where the price was the same for both markets, in 2017 there were only 78.48% of such cases. For the CZ-SK-HU area, the same prices occurred in 50.15% of the cases in 2016, while 2017 saw the same prices only in 21.2% of the cases. For the CZ-SK-HU-RO area, in 2016 the same price occurred in 35.34% of cases while in 2017 the figure was only 13.10% of the cases.





On all Czech cross-border interconnectors, intraday transmission capacities are allocated on the First Come First Served basis. The current system of capacity allocation does not make charges possible, and therefore does not support the efficient pricing of the limited resource, i.e. transmission capacities. This change should be brought by the intraday capacity pricing methodology under Commission Regulation (EU) 2015/1222, the first draft of which was presented to national regulators for approval in 2017.

The intraday allocation of cross-border transmission capacities and the contracting for crossborder transmission over all of ČEPS's cross-border interconnectors takes place identically and in this respect ČEPS, a.s. operates as the main Transmission Capacity Allocator, including the cross-border interconnectors that do not directly fall within ČEPS's control area (i.e. PSE/50Hertz, PSE/SEPS, MAVIR/APG, and SEPS/MAVIR). Intraday cross-border capacity is allocated in several alternative forms, either for six four-hour sessions or for 24 one-hour sessions always for the following hour (in the cases of time changes, there are either 23 or 25 sessions).

Since 2012, intraday transmission capacity has been allocated for individual trading hours on the cross-border interconnector with SEPS. On other cross-border interconnectors with 50Hertz, TenneT, PSE and APG, transmission capacity is allocated for six four-hour intervals (sessions).

3.1.4.2 Cooperation with other regulatory authorities and ACER

In 2017, the Office's involvement in ACER and CEER working groups focused on continuing work on the relevant electricity issues related to the development and amendment of European energy legislation and its implementation at the national level, and also on preparing the future implementation of the Commission's legislative proposals discussed as part of Clean Energy for All Europeans, i.e. the Winter Package.

Source: OTE, a.s., the ERO's editing

For ERO employees involved in the activities of the ACER and CEER electricity working groups 2017 was primarily marked by intensive work on the implementation of network codes. In their respective working groups, the ERO's specialist units actively participated in meetings on the implementation of the network code on capacity allocation and congestion management, the network code on forward capacity allocation, the network code for grid connection of generators, the network code for demand connection, and the network code on high voltage direct current connections and DC connected power park modules. Within the relevant groups, the ERO's specialist units also actively participated in meetings concerning the drafting of the network code on electricity balancing, the network code on electricity transmission system operation and the network code on electricity emergency and restoration.

The activities of ERO employees in international working groups are coordinated, on a longterm basis, with other entities in the Czech Republic with a view to achieving the maximum possible in promoting Czech interests and minimising the potential negative impacts. The ERO employees actively participated in and contributed to these groups through continuously providing the relevant information, the requested documents, and their own feedback. The ERO is also represented in the working group for the XBID (Cross-border Intraday Market) Project, where it serves as the delegated representative of national regulatory authorities in relation to the EU.

As regards long-term activities in the Central European region, the ERO pursues cooperation with the regulatory authorities of the V4 countries.

3.1.4.3 Monitoring of the investment plan and assessment of its consistency with the Community-wide network development plan

Under Section 24(10)(j) of the Energy Act, ČEPS, a.s., i.e. the TSO, is obliged to prepare a ten-year plan for the development of the electricity transmission system, including an investment plan, every other year. Subject to arrangements with ČEPS, a.s., the decision was made to issue this plan also for the 2017-2026 period for consistency between the ten-year plan for the development of the electricity transmission system and the European TYNDP (Ten Year Network Development Plan), to which a selection of projects of common interest (PCI) further relate. In 2017, the European Commission adopted the third list of PCIs, which follows up on the preceding lists of 2013 and 2015. Since the list of PCIs is adopted every other year, the preparations for the fourth list of PCIs will start in 2018.

PCIs are projects helping to achieve the European objectives in the development of the European transmission system with a view to ensuring the safety of the operation of the entire integrated system. ČEPS, a.s. currently has five PCIs included in the TYNDP. The projects largely aim at double-circuiting inland 400 kV lines (please see Table 1).

Table 1 PCI list – PCI 3.11

Project name	Project description
The Vernéřov-Vítkov inland line	New 400kV double circuit, V487/488, including new 420kV substations in Vítkov and Vernéřov
The Vítkov-Přeštice inland line	New 400kV double circuit, V490/491
The Přeštice-Kočín inland line	New 400kV double circuit, V432/429, including the extension and refurbishment of the 420kV substation in Kočín
The Kočín-Mírovka inland line	New 400kV double circuit, V406/407, including the extension and refurbishment of the 420kV substation in Mírovka and the V413 line loop for this substation
The Mírovka-Čebín inland line	New 400kV double circuit, V422/421

Source: ČEPS, a.s., the ERO's editing

ČEPS, a.s. supplemented its 2017-2026 ten-year plan with a detailed description of its development plans; this description now forms a considerable part of the content of the ten-year plan. The description and assessment of the development plans includes projects that have a significant positive impact on the operation of the transmission system, in terms of increasing its transmission capacity and the flexibility of its configuration, and improving the reliability of electrical energy supply. In addition to the detailed description of the projects, also the chapter on the results of calculations was drawn up in detail, with the above changes helping to improve the quality and transparency of the transmission system development plan.

ČEPS's investment plan of 21 November 2016 covers the period from 2017 to 2026 and contains capital expenditure totalling CZK 47.8 billion allocated in line with the timing of the execution of each of the development plans and the renovation of installations in the transmission system. In addition to the need to export output from new capacities, the planned investments are also necessitated by the effort to support both domestic and international cooperation in the market and by the policy adopted for the gradual upgrade of the transmission system. The capital expenditure is planned for the short, medium and long term. The purpose of short-term and medium-term investments is to find less time consuming solutions helping to increase the transmission capability before long-term investments can be carried out, such as converting the existing 220 kV double circuit lines to 400 kV double circuit lines, double circuiting 400 kV lines, and comprehensive retrofits or expansions of substations. The short-term solutions that are acceptable in both operating and financial terms include, in particular, the following: an upgrade of lines to 80 °C, dynamic loading of lines, the complete modernisation of lines without any major interventions with the pylon structure, automatic power limiting systems and the planned limitations on the output from generating capacities.

The increasing power in unplanned flows from other countries, mainly Germany, is posing a risk to the safety of the Czech electrical grid. Over the short term, the safety and reliability of the transmission system's operation is being ensured by modernising crossings and reinforcing the loadability of the phase conductors in selected sections of the most heavily loaded lines. ČEPS is also preparing some other solutions included in the ten-year development plan, such as erecting new lines and double-circuiting certain lines. With a view to preserving safe operation and meeting the N-1 safety criterion in the transmission system, ČEPS continued, following agreement with the German side, in the erection of phase shifting transformers (PST) in the Hradec substation. In January 2017, two PST out of the total of four PST were put into operation and the other two PST were put into operation in September 2017.

The Office received ČEPS's ten-year development plan from 2016 for the period 2017-2026, including the endorsement by the Ministry of Industry and Trade, on 27 December 2016 and then started administrative proceedings. In these administrative proceedings the Office also assesses the consistency of the transmission system development plan with the Community-wide ten-year network development plan under Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity.



Figure 1 Development of the Czech electricity transmission system until 2026

Source: ČEPS, a.s.

Legend: 400 kV lines 220 kV lines New installations built in 2017-2026 Installations in progress in 2026 Power station Electrical station

3.1.5 Compliance

The Energy Regulatory Office is the national regulatory authority under Directive 2009/72/EC concerning common rules for the internal market in electricity and under Regulation No 714/2009/EC. The ERO acts in the capacity of the relevant regulatory authority under Commission Regulation (EU) 2195/2017 establishing a guideline on electricity balancing and in the capacity of the competent regulatory authority under Commission Regulation (EU) 1485/2017 establishing a guideline on electricity transmission system operation, and in analogous capacities under other European legislation on the electricity industry.

In terms of national law, the ERO exercises its powers under the Energy Act. Its competences include, without limitation, price controls, supervision over energy markets, promotion of the use of renewable energy sources, and protection of customers' and consumers' interests.

The ERO contributed to the preparations for a Ministry of Industry and Trade amendment to the Energy Act, which was expected to come into effect in 2018, in connection with the need to legislate on conditions of business in electrical energy storage.

In 2017, the scope of the amendment to the Energy Act was extended to include issues related to the European Commission's reservations raised under the EU Pilot scheme under no. 7809/15/ENER. In 2015, the Commission opened investigation concerning the implementation of Directive 2009/72/EC in the Czech legislation, with a view to evaluating a potential non-compliance with EU legislation. The investigation mainly concerned the unbundling of the electricity transmission system, and the independence and the duties and powers of the national regulatory authority. The resulting list of Commission's the Commission's reservations is contained in the opinion of 7 December 2017.

In the electricity industry, the Energy Act is implemented through, in particular, the following statutory instruments: public notice no. 408/2015 on Electricity Market Rules, public notice no. 194/2015 on methods of price regulation and procedures for price controls in the electricity industry, public notice no. 16/2016 on the conditions of connection to the electrical grid, and other public notices issued by the ERO or the Ministry of Industry and Trade. Of the above, in 2017 the Electricity Market Rules were amended. Based on the continuous evaluation of the application of the Electricity Market Rules in practice and the development of the electricity market the ERO concluded that the various market participants adopted different interpretations of the provisions of the Rules in certain areas of the energy market (for example, in the process of supply point registration, in the interpretation of the provisions on capacity booking and first category producer, supplier switching, and start of supply by the supplier of last resort).

Act No 165/2012 on Supported Energy Sources and Amending Certain Laws (the SES Act) is a separate piece of legislation on the promotion of electricity generation from supported sources. In its price decisions the ERO sets out the extent and amount of aid for electrical energy generation from renewable and supported sources. The ERO is also the inspection authority as regards compliance with this law.

As the Energy Act, the SES Act was also amended in 2017. The fundamental amendment prepared during 2017 was expected to come into effect in 2018. Its content is to be, in particular, provisions ensuring the implementation of the obligations deriving from the European Commission's notifications of decisions whereby the EC declares certain aid schemes as compatible with the EU internal market. One of the key obligations is putting in place a control mechanism after ten years from installation commissioning, intended to prevent the provision of excessive aid to those aid schemes where the payment of aid was started before the relevant decisions were notified.

On 7 March 2017 the European Commission issued decision SA.45768, in which it declared promotion of electricity from high-efficiency combined heat and power generation installations commissioned between 2016 and 2020 to be compatible with the internal market. On 15 December 2017 the European Commission issued decision SA.38701, whereby it notified that it did not raise objections to the promotion of electricity from high-efficiency combined heat and power generation installations commissioned between 2013 and 2015 and support for heat from RES heat installations commissioned before the end of 2020.

3.2 Promoting competition

3.2.1 Wholesale markets

Monitoring the level of prices, the level of transparency, and the level and effectiveness of market opening and competition

On 21 June 2016, European Energy Exchange (EEX) and POWER EXCHANGE CENTRAL EUROPE (PXE) signed an agreement in which they announced plans for their closer cooperation. As the result EEX has acquired 66.67% of PXE shares, thereby becoming its majority owner. As of 15 June 2017, EEX and PXE successfully migrated the contracts previously listed at PXE to the EEX T7 platform. These contracts are financially settled electricity futures for the Czech Republic, Hungary, Slovakia, Romania, and Poland. The trades on this platform follow the EEX rules.

In the Czech Republic, electricity trades take place on the EEX platform, through bilateral [OTC] contracts, and at spot markets organised by OTE, a.s., the electricity and gas market operator. While the standard products traded at PXE and the products at the spot market of OTE, a.s. have fixed expiry dates, these rules do not apply to bilateral contracts. The terms of bilateral contracts vary; an electricity producer and an electricity trader, or a trader and a customer, usually enter into one-year agreements. In 2016, 1,505 contracts with settlement in 2017 and totalling 11.3 TWh were traded (1,222 contracts totalling 10.7 TWh concerned the annual product), and in 2017 (with settlement in 2018) the figure was 1,464 contracts totalling 9 TWh (892 contracts totalling 7.8 TWh concerned the annual product). The traded quantity therefore decreased by 20.41%.

Electricity traders can use any combination of bilateral contracts and energy exchange products, including OTE's platforms and foreign exchanges, for buying and selling. It is therefore not feasible clearly to determine the structure of electricity procurement for final customers after the supplier has bought or sold electricity in various market places in Europe. Chart 2 indicates the prices of PXE products traded via the EEX platform in 2017.





Data source: PXE, a.s.

A part of the electricity quantity is traded under OTC (bilateral) contracts (not registered at the energy exchange) and also at the spot market (day-ahead, intraday, balancing, and block markets) organised exclusively by OTE, a.s. In 2017, 21,751 GWh of electricity was traded at the day-ahead market; under bilateral contracts registered in the OTE system between market participants, 99,953 GWh was traded, 34 GWh was traded in the block market, and 545 GWh of electricity was traded on the intraday market. All cleared entities (= balance responsible parties), i.e. not only traders and producers but also the customers who are responsible for imbalances, can go to the spot market to procure electricity.

On 28 March 2018, a total of 113 participants operated in the electricity market³.

3.2.2 Retail market

Monitoring the level of prices, the level of transparency, and the level and effectiveness of market opening and competition

The ERO website offers customers information about the energy market's functioning and information related to consumer protection. On the website, the Office advises citizens of the opportunities and procedures for electricity supplier switching. Electricity price calculators are also available on the Office's website. One of them helps to compare the various electricity traders' price quotations while the other helps to check electricity billing. Data from price lists comes from the traders who have voluntarily sent their price lists to the Office.

Since 2006, all customers have been able to change their electricity supplier. Since then, approximately 3.1 million electricity supplier switches have taken place. Electricity suppliers use a number of tools for approaching customers, such as door-to-door sales, participation in mass-scale e-auctions, and the acquisition of weaker competitors. In 2017, almost 358,000 customers changed their electricity supplier, i.e. approximately the same number of customers as in 2016. This is illustrated by Chart 3, which shows the numbers of electricity supplier switches between 2005 and 2017.

³ Calculation based on the *Seznam všech registrovaných účastníků CZ* [*List of all registered participants CZ*] file, OTE, a.s. (<u>http://www.ote-cr.cz/registrace-a-smlouvy/seznam-ucastniku-trhu</u>) as at the current day



Chart 3 Annual electricity supplier switching in the main customer categories between 2005 and 2017

Source: OTE, a.s., the ERO's editing

Under Section 11a of the Energy Act, electricity trading licence holders shall publish, in a manner allowing remote access, their terms and conditions of electricity supply and electricity supply prices for households and for sole proprietorships taking electricity at the LV level. Licence holders shall publish changes in electricity supply prices and changes in other electricity supply conditions not later than 30 days before the effective date thereof. This ensures price transparency and customer protection.

The overall price of electricity supply for customers at the LV level is made up of the charge for the distribution system service and the unregulated price of electrical energy, which is determined by the supplier selected by the customer. The Office sets out the charge for the distribution system service in its binding price decisions, where the charge for system services, the component of the price for support of electricity from supported energy sources, and the charge for the market operator's services are the same for all final customers in the Czech Republic regardless of the connection point or selected supplier. The charge for electricity distribution depends on the place of connection, i.e. on the distribution system to which the supply point is connected. However, customers at the LV level can change their distribution tariff subject to meeting the conditions for obtaining the tariff; or, by changing the main switch upstream of their electricity meter they can influence the fixed component of the regulated charge for electricity distribution.

Customers have the right to select, at their own discretion, any supplier of electrical energy and the most suitable product on offer with regard to the nature and size of their demand. The number of supplier switches is published, on a monthly basis, in the statistics section of the website of the electricity and gas market operator, broken down by voltage level and by customer category. Table 2 shows electricity supplier switching in 2017.

Turne of	2016	2017					
demand	Number of supplier switches	Number of supplier switches	Year-on- year change [%]	Total number of supply points *	Switching [%]		
High-demand customers	14,278	13,849	-3.00	25,306	54.7		
Low-demand customers – businesses	81,415	71,768	-11.85	763,613	9.4		
Low-demand customers – households	263,073	272,010	3.40	5,214,300	5.2		
Total	358,766	357,627	-0.32	6,003,219	6.0		

Table 2 Electricity supplier switching

* The number of customers' supply points and delivery points of producers and local distribution systems Source: OTE, a.s., the ERO's editing

Chart 4 shows the percentage shares (including the VAT and electricity tax) of the various components in the resulting price of electricity supply for households in 2017.





Note: The charge for OTE's services includes a special fee for the ERO's activities under Section 17d of the Energy Act.

Source: ERO

MOO: Low demand customers - households

Traders must provide distribution system operators with identification details of the customers whom they supply under agreements on bundled supply services. Electricity traders' obligation is to promote energy services and offers thereof. Electricity traders have the right to receive, from the market operator, the information that they need for billing electricity supply to customers whose supply point is registered with the market operator.

Recommendations on supply prices, investigations and measures to promote effective competition

Under Section 17(7)(1) of the Energy Act and in accordance with Article 37(1)(o) of Directive 2009/73/EC, the Office publishes recommendations in relation to electricity supply prices for households. Section 17c of the Energy Act provides for the Energy Regulatory Office's cooperation with the Office for the Protection of Competition (ÚOHS). Under this Section the ERO is required to advise ÚOHS of market participants' practices where good reasons exist to believe that they distort or restrict or result in the distortion or restriction of competition, of the use of restricting or unfair terms and conditions in contracts in the electricity market, and of the methods of electricity pricing for households.

In 2017 the Office continuously monitored, within its remit and in line with Section 17 of the Energy Act, the use of restricting or unfair conditions in contracts on the electricity market, restricting or excluding customers' rights, and also monitored competition on the wholesale and retail electricity markets. In 2017, the Office did not find any barriers to the functioning of effective competition in the electricity market, and it therefore did not have to impose any measures. The Office has certain reservations to the system of fixed-term contracts with automatic extension. Although traders and customers enter into such contracts on a voluntary basis this type of contract is, in particular when combined with other obligations (lease of bulbs, discounts paid in advance etc.), usually unclear for customers, mainly in terms of identifying the dates and conditions on which contracts can be terminated. The Office has long sought to push through the option of specifying the contract term in bills for consumers.

The electricity market appears to be fully liquid with strong competition and minimum margins for traders. Under these circumstances, suppliers may even collapse. The year under review saw four small traders collapsing, and their customers were switched over to the supplier of last resort.

3.3 Security of supply

As in the preceding year, incentive-based electricity quality control is currently in place. In this context the ERO has determined the required values of the continuity indicators and related parameters for each of the regional distribution companies. The purpose of incentive-based quality control is to reduce the number and duration of both planned and unplanned electricity distribution interruptions.

Furthermore, in respect of electricity supply quality, the Office primarily monitored the level of electricity supply quality achieved and compliance with the quality standards required by public notice no. 540/2005 on the quality of electricity supply and related services in the electricity industry. The level of quality in distribution systems is measured by electricity supply continuity indicators under Section 21 of public notice no. 540/2005. The basic continuity indicators are defined in the public notice as follows: System Average Interruption Frequency Index in the period under review (SAIDI), system Average Interruption Duration Index in the period under review (CAIDI). The results of the monitoring of continuity indicators for 2017 are shown in Table 3.

Indicator*	ČEZ Distribuce	E.ON Distribuce	PREdistribuce	Czech Republic
SAIFI [interruptions/year]	3.41	2.34	0.57	2.76
SAIDI [minutes/year]	501.47	466.68	40.34	431.45
CAIDI [minutes]	146.88	199.17	70.21	156.18

 Table 3 Electricity distribution continuity indicators in 2017

* System indicators covering all categories of interruption under Appendix 4 to public notice no. 540/2005 Source: ERO

4 Gas

In 2017, annual gas consumption in the Czech Republic totalled 8,527.5 mcm, i.e. 90,996.2 GWh (the average GCV in the country amounted to 10.67 kWh/m³, i.e. 38.42 MJ/m³). Compared with 2016, actual consumption rose by 3.3%. The average annual temperature was 8.8 °C with a difference of +0.9 °C from the long-term normal temperature and a difference of -0.2 °C compared with 2016. Gas consumption in the heating season accounted for approximately 70% of total annual demand. The lowest monthly consumption was recorded in August and amounted to 325.8 mcm (3,471.1 GWh), while the highest consumption was recorded in January, 1,455.9 mcm (15,543.1 GWh). The fourth quarter saw the largest decrease in consumption compared with the same period of 2016, while the greatest increase was recorded in the first and third quarters of the year. Adjusted to long-term normal temperatures using the temperature gradients of consumption, gas consumption in 2017 amounted to 8,726.5 mcm, i.e. 93,117.9 GWh with a year-on-year growth of 3.5%.

Despite minor variations in some years, natural gas demand in the Czech Republic has declined since 2001, when it reached the highest ever level, although over the last three years it increased, mainly due to the colder weather and the growth in natural gas consumption in electricity generation. Between 2001 and 2017, consumption dropped by 12.7%. The difference between the highest consumption in 2001 and the lowest consumption in 2014 amounted to approximately 2.5 bcm (26.2 TWh). The largest year-on-year drop in consumption, by 12%, was registered in 2014 when it totalled 7.3 bcm (77.5 TWh), the lowest ever gas consumption since 1995. In terms of natural gas consumption, 2017 was similar to 2008, but with temperatures that were lower in 2017. On a long-term basis, average annual temperatures are still above the long-term normal temperature (one exception was 2010 with a negative difference of 0.4 °C). Chart 5 shows an overall evaluation of gas consumption in the Czech Republic between 2000 and 2017, indicating consumption adjusted to long-term normal temperature. Chart 6 shows the development of gas consumption for electricity generation, the Počerady combined cycle unit dominates; its demand is depicted in Chart 7.



Chart 5 Overall evaluation of gas consumption in the Czech Republic between 2000 and 2017 (also showing adjustment to the long-term normal temperature)

Source: ERO



Chart 6 Gas consumption for electricity generation between 2008 and 2017

Source: ERO





Source: ERO

4.1 Network regulation

4.1.1 Unbundling

The Czech transmission system operator, NET4GAS, s.r.o., was granted an independence certificate in 2013. In 2017, the ownership structure of NET4GAS, s.r.o. did not change and no circumstances inconsistent with the ERO's decision or the European Commission's opinion of 2013 occurred, and so no reasons were found for TSO re-certification.

Under Section 59a(1) of the Energy Act, where the distribution system operator is part of a vertically integrated gas undertaking it shall, as of 1 January 2007, be independent in terms of its legal form, organisation and decision-making of any other activities unrelated to gas distribution, gas transmission and gas storage. The unbundling under the Energy Act is not required in the case of vertically integrated gas undertakings that provide services for less than 90,000 connected customers.

Under Section 60a(1) of the Energy Act, a similar condition also applies to storage system operators.

Thus, based on evaluating compliance with their obligations by the transmission system operator, distribution system operators and storage system operators, the Energy Regulatory Office did not have to take any measures for ensuring compliance with the obligations under Directive 2009/73/EC of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC.

4.1.2 Technical functioning

The Czech gas system is comprised of the transmission system gas pipelines, and regional distribution and local distribution system gas pipelines. The gas transmission system is comprised of 3,822 km of high-pressure gas pipelines serving for both transit and inland gas transport. The branches of the system are interconnected at the key distribution hubs in Malešovice, Hospozín, Přimda and Rozvadov. The required pressure is provided by compressor stations at Kralice nad Oslavou and Kouřim in the northern branch and compressor stations at Břeclav and Veselí nad Lužnicí in the southern branch. In 2017, the installed capacity of compressor stations totalled 243 MW.

From the transmission system, gas is further delivered via delivery stations into distribution systems, to supply points of customers directly connected to the transmission system, or to gas storage facilities. Table 4 lists the lengths of the gas pipelines and service pipes of regional distribution companies.

Table 4 Lengths of gas pipelines and service pipes on 31 December 2017 by pressure level

	HP [km]	IP [km]	LP [km]
Pražská plynárenská Distribuce, a.s.	372	2,870	1,207
GasNet, s.r.o.	11,277	41,076	12,606
E.ON Distribuce, a.s.	1,221	2,979	394

HP – high pressure, IP – intermediate pressure, LP – low pressure Source: ERO

Gas storage facilities located in the Czech Republic are at a good standard in terms of both capacity and technical parameters. In 2017, three storage system operators operated in the Czech Republic eight storage facilities with an aggregate capacity of 3.176 bcm. Operating stores peaked at 3.069 bcm of gas.

Supply security and reliability standards, quality of service and supply

As part of its competences, the Energy Regulatory Office monitors and evaluates compliance with the security standard (BSD) for gas supply in the Czech Republic. The obligation to provide for this standard is laid down in Regulation (EU) No 994/2010 concerning measures to safeguard security of gas supply. This regulation has been implemented in Czech law through the Energy Act and Ministry of Industry and Trade Public Notice 344/2012 on states of emergency in the gas system and on methods for ensuring the security standard of gas supply. In response to interest shown by market participants and expert circles, the Office has introduced Monthly Reports on the Evaluation of the BSD in the Czech Republic, which the Office posts on its website on a regular basis during the heating season. The Office has repeatedly stated that one of the key pillars of its activity is adopting measures that will ensure

safe and reliable gas supply to customers in the Czech Republic, including review mechanisms, and the Office therefore devotes great attention to monitoring gas traders' compliance with the obligation to keep the BSD.

Having evaluated the experience with compliance with the BSD obligation and the related findings, the ERO has drawn up a proposal for legislative changes intended to eliminate the cases where gas traders take an ambiguous approach to BSD or where effective measures help to mitigate the impact of any disruption in gas supply in the Czech Republic only insufficiently.

Monitoring time taken to connect and repair

Under the applicable legislation, the TSO, DSOs and SSOs are obliged to specify plans of shutdowns of their gas facilities and to post these plans on their websites. Shutdowns must be notified at least 30 days, or 15 days in the case of DSOs, before the day on which the shutdown is to start.

Based on monitoring all the relevant time limits related to the start/end of curtailments or interruptions in gas transmission, distribution or storage, in 2017 the ERO did not find any breach of obligations by licence holders.

Furthermore, the repair work did not impair the required quality of the supply and services provided by the respective gas infrastructure operator. However, some cases appeared where the repairs had been planned for the period when increased quantities of gas are taken for heating.

Monitoring access to storage, line pack and other ancillary services

In the Czech gas infrastructure, storage facilities play a major role consisting in compensating for the seasonal surpluses/shortfalls between gas sources and gas consumption and, in particular, improving supply security and continuity. In 2017 the planned increase in the storage capacity of the virtual storage facility was carried out, and the daily injection and withdrawal capacities were increased at storage facilities owned by MND Gas Storage a.s. and Moravia Gas Storage a.s. MND Gas Storage a.s. increased its storage capacity from 255 to 280 million m³ and Moravia Gas Storage a.s. increased its storage capacity from 115 million m³ to 190 million m³. The latter company plans to reinforce its storage capacity gradually until 2021 to reach 448 million m³.

Table 5 Share of the highest achieved level of gas stores as a percentage of the Czech Republic's total annual consumption

	Total capacity [million m ³]	Highest level of operating stores [million m ³]	Share of stored gas as a percentage of total annual consumption in the CR [%]
innogy Gas Storage, s.r.o.	2,706	2,607.20	29.87
MND Gas Storage a.s.	280	273.00	3.12
Moravia Gas Storage a.s.	190	189.20	2.16

Source: ERO

Table 5 shows the percentage contributed by the highest achieved level of gas stores to the Czech Republic's total annual consumption, which amounted to 8,527.5 million m³ in

2017. However, in terms of its role in compensating for the variability in demand, the storage facility's ability to offer sufficient withdrawal capacity to its customers is crucial. The period of low temperatures at the end of March and the beginning of April 2017 has demonstrated that storage facilities in the Czech Republic are, thanks to their technical parameters, capable of providing sufficient withdrawal capacity in this part of the year as well, even under such load and with low levels of stored gas volumes.

As in 2016, the filling of storage facilities before the coming winter season was also monitored in 2017. Compared with preceding years, increased attention was paid to the stores because of the significantly greater exhaustion of gas stores over the withdrawal period, which ended on 31 March 2017. Chart 8 shows the percentages to which storage facilities were filled during 2017. The fact that the storage capacity was filled almost completely during the injection period confirms that storage system operators are also able to offer high injection capacities.





Note: The black dashed line in the Chart separates the end and the beginning of withdrawal seasons Source: ERO

The offered withdrawal and injection capacities together with the aggregate storage capacity therefore provide gas suppliers with certainty that their business model can rely on the use of storage facilities as a dependable element of the infrastructure for covering variable demand.

4.1.2.1 Monitoring the correct application of the criteria that determine the model of access to storage facilities

In the Czech Republic, access to storage facilities is based on the principle of negotiated thirdparty access (TPA). In the relevant regulations, the Office sets out the particulars of which applicants for storage capacity must be aware before storage capacity is sold using an auction mechanism. The terms and conditions of every auction are posted on the SSO's website. The Office continuously monitors and evaluates these terms and conditions. In 2017, no discriminatory treatment of gas market participants occurred.

Monitoring safeguard measures

No crisis in the gas market or threat to the physical safety of people, apparatus or installations or system integrity occurred in 2017 and so no safeguard measures had to be taken in 2017.

4.1.3 Network tariffs for connection and access

Tariffs

Under Section 17(11) of the Energy Act, the Energy Regulatory Office is authorised to regulate, in the gas industry, the charges for related services in the gas industry and the gas prices of the supplier of last resort. The prices of the supplier of last resort are controlled on the cost-plus basis. The charge for the related service in the gas industry is understood to be the charge for the gas transmission service, the charge for the distribution system service and the charge for the market operator's activities.

The regulated prices for each of the years in the fourth regulatory period are fixed in accordance with the Energy Act, public notices no. 195/2015 on methods of price regulation and procedures for price controls in the gas industry and no. 196/2015 on methods of price regulation and procedures for regulating the prices for the market operator's activities in the electricity and gas industries, and the published Price Control Principles for 2016-2018 in the Electricity and Gas Industries and for the Market Operator's Activities in the Electricity and Gas Industries (price control principles). The methodology in place ensures that the tariffs for access to the network include remuneration for the owners of the relevant segment of the system, which provides for adequate remuneration of the relevant assets and of any new investments made therein, provided they are economically and efficiently incurred.

Under the above legislation and the price control principles, the Office fixed adjusted allowed revenues for the year, applicable to the distribution system operators, the transmission system operator and the market operator, from which the relevant regulated prices were calculated. The revenue cap regulatory method is used for calculating the allowed revenues for distribution system operators and the market operator. In the case of the transmission system operator's revenues, a combination of the revenue cap and price cap principles is used.

The TSO's adjusted allowed revenues are allocated to the entry and exit points in the transmission system based on the expected use of these points. The charge for gas transmission determined for customers in the Czech Republic (to the 'domestic point') is integrated within gas distribution charges, and is therefore billed to customers as part of the charge for the distribution system service.

Gas transmission charges are set as double-component prices and have a fixed and a variable component. The fixed component is the payment for the booked firm transmission capacity at the respective entry/exit point in the transmission system. The variable component of the charge is determined so as to cover the TSO's costs related to the gas quantity actually transported via the exit points of the transmission system.

Adjusted allowed revenues are determined for each operator of a distribution system that is directly connected to the transmission system on the basis of the data reported by the operator. Depending on booked distribution capacity and the gas quantity planned to be distributed, the adjusted allowed revenues so determined are then allocated to the prices for each customer category, which are as follows: categories of high-demand customers, medium-sized demand customers, low-demand customers, and households.

Operators of distribution systems connected to other distribution systems can use regulated prices up to the level of the prices set for the higher-level distribution system, or request the Office to determine individual prices for them.

Regulated prices for the distribution system services are also usually double-component prices with a fixed and a variable component, similarly as the gas transmission charge. The fixed component of the prices for high-demand and medium-sized demand customer categories depends on the total daily booked capacity and is calculated using a formula set out in the applicable price decision. For the low-demand and household category customers, the fixed component of the price is determined by the amount of the standing monthly charge in the relevant off-take band. For all customer categories, the variable component of this price is the fixed price for gas taken, which is related to the quantity of gas consumed.

Every year, the Office also sets adjusted allowed revenues for the market operator's services, on the basis of which the fixed charge for clearing, related to the gas quantity taken, is then calculated.

Due to the fact that the Czech gas market has been liberalised the Office only sets the prices for the above activities, which are necessary for ensuring gas supply to customers' supply points. Uncontrolled prices, which include the charge for commercial services and the charge for gas supply structuring and flexibility, are fully within the respective gas trader's competence, and fully depend on the trader's business strategy and are subject to its contractual relationships with customers.

The Office did not apply any special tariffs for LNG in the Czech Republic in 2017.

Chart 9 Structure of the average price for the gas supply service for household customers in 2017



Note: The charge for OTE's services includes a special fee for the ERO's activities under Section 17d of the Energy Act. Source: ERO

Prevention of cross-subsidies

The suitable structure of regulatory reporting that, following the accounting and legal unbundling, strictly requires the reporting of costs directly allocable to each of the regulated activities prevents cross-subsidies.

Regulated and negotiated access to storage

Gas storage facilities play an irreplaceable role in the Czech gas infrastructure: they balance out the seasonal differences in gas demand and, above all, enhance supply security and continuity. Gas storage facilities make it possible for gas suppliers to respond flexibly to unexpected surges in gas demand, mainly in the cold months of the year.

In 2017, SSOs called a total of 23 auctions for storage capacities, in which a broad-ranging portfolio of storage products was offered.

4.1.4 Cross-border issues

Procedures for capacity allocation and congestion management

When determining the mechanisms for congestion management, the Energy Regulatory Office primarily expects a rational behaviour of the entities that have booked transmission capacity, their economic interest being to maximise their profit, i.e. minimise the size of the transmission capacity booked. The key element of this approach is transmission capacity trading at the secondary market so that unused capacity is offered back to the market. Where the gas trader does not use this instrument, the transmission system operator shall take transparent measures to maximise the offered capacity with a view to meeting the objective set out in the preceding sentence.

Since the objective is a most effective application of the congestion management procedures, the firm day-ahead use it or lose it (FDA UIOLI) mechanism and the long-term use it or lose it (LT UIOLI) mechanism have been effective in the Czech Republic since 2017. These mechanisms are in compliance with the settings at the interconnecting points of the upstream/downstream entry/exit systems.

Cooperation with other regulatory authorities and ACER

Two regulations intended to provide for common principles resulting in the creation of a single internal market in natural gas in the EU were adopted in 2017: Commission Regulation (EU) 2017/460 establishing a network code on harmonised transmission tariff structures for gas and Commission Regulation (EU) 2017/459 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013. The gas working groups, in the activities of which the staff members of the gas industry department participate, therefore focused on activities geared towards facilitating the implementation of the relevant provisions of these regulations in the national gas market models.

In terms of the contribution to gas market integration, the rules for a pilot project for mutual direct access to the gas market between the Czech Republic and Austria were approved based on the results of the talks between the Czech Republic, Slovakia and Austria.

Monitoring of the investment plan and assessment of its consistency with the Community-wide network development plan

Based on the implementation of Directive 2009/73/EC in the national legislation, in the form of Section 58k of the Energy Act, the Office assesses the ten-year plan for the development of the gas transmission system (TYNDP) and approves it by its decision; the TSO prepares the plan and submits it to the Office every year.

Under Section 58k of the Energy Act, the TYNDP shall contain justifiable measures in the form of investments in the transmission system so that it meets the requirements necessary for ensuring security of gas supply while guaranteeing the adequacy of the system.

Under Section 58k(4) and (5) of the Energy Act, the TSO consulted its TYNDP with the current and prospective gas transmission system users whose justified interests may be directly affected by the TYNDP and submitted TYNDP to the ERO for approval together with the record of the public consultation process.

However, the requirements of Section 58k of the Energy Act place emphasis on transparency in decision-making on the submitted plan, and the consultation process is therefore conducted by the TSO as well as by the ERO.

The ERO therefore published the submitted plan under Section 58k(6) of the Energy Act, in a manner enabling remote access, for ten working days thereby making it possible for the current and prospective gas transmission system users whose justified interests may be directly affected by the TYNDP to lodge their reasoned comments on the TYNDP with the Energy Regulatory Office.

The ERO assesses the compliance of the submitted plan with the statutory requirements contained in Section 58k of the Energy Act, while also assessing its compliance with the Union-wide Ten Year Network Development Plan prepared by ENTSOG.

The ERO assessed the submitted TYNDP and in respect of the TRA-N-133 project contained in the submitted plan it did not find compliance with the applicable legislation as regards the requirement for the investment in the transmission system to be justified, since it is not possible to expect a situation where positive externalities and benefits outweigh the negative externalities associated with the project. The ERO thereby emphasises primarily the costs incurred in the implementation of the project, which the users of the system in the Czech Republic would have to pay.

The ERO already advised the TSO of this circumstance as part of the public consultation process conducted by the TSO, when the ERO requested the TSO to remove the project from the plan.

In compliance with Section 58k(9) of the Energy Act, based on the above facts on 21 December 2017 the ERO issued a decision ordering the TSO to change its Ten-year Plan for the Development of the Gas Transmission System 2018-2027. In 2017, the Ten-year Plan for the Development of the Gas Transmission System in the Czech Republic 2016-2025 therefore continued to be applicable.

4.1.5 Compliance

Meeting the obligation of non-discriminatory access to distribution systems is also directly related to unbundling; for oversight in this respect, a compliance programme has been drawn up. DSOs must adopt a compliance programme in their internal regulations. A compliance officer, appointed or otherwise installed by the DSO, oversees the execution of the programme. Compliance officers prepare annual reports on measures adopted for compliance programme execution for the past year and submit them to the Office by 30 April of every year.

In 2017, the Office received annual reports on measures adopted for compliance programme execution for 2016 from all the distribution system operators to which this obligation applies.

Based on evaluating the DSOs' compliance with the obligations, the Energy Regulatory Office therefore did not have to take any measures to ensure compliance with obligations under Directive 2009/73/EC.

The Energy Regulatory Office is the national regulatory authority under Directive 2009/73/EC and Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks. The ERO acts in its capacity in compliance with other European legislation such as Commission Regulation (EU) 2017/460, Commission Regulation (EU) 2017/459 and Commission Regulation (EU) No 312/2014 establishing a Network Code on Gas Balancing of Transmission Networks. The ERO also significantly contributes to measures to safeguard the security of gas supply under Regulation (EU) 2017/1938.

In terms of national law, the ERO exercises its powers under the Energy Act. As in the electricity industry, its competences in the gas industry include, without limitation, price controls, supervision over energy markets, and protection of customers' and consumers' interests. In the gas industry, the Energy Act is implemented through, in particular, the following statutory instruments: public notice no. 349/2015 on the Gas Market Rules, as amended, and public notice no. 195/2015 on methods of price regulation and procedures for price controls in the gas industry.

The Czech Government has tasked the Minister of Industry and Trade with drafting a bill amending the Energy Act, providing for the basic rules for regulation in the energy industries and those in administrative justice for penalising breaches of obligations under the Energy Act, and in this connection the ERO participated in the drafting of the amendment to the Energy Act in 2017. The drafting exercise also entailed very intensive discussions on issues related to the safeguarding of the security of natural gas supply in the Czech Republic, the storage system operators' authorisation to buy gas for the purposes of a flexible utilisation of storage facilities' capacities, and the issue of carrying on the LNG business.

As regards the statutory instruments influencing the gas industry, 2017 saw an amendment to public notice no. 330/2017 on the required content of the Electricity Transmission System Operation Rules, Distribution System Operation Rules, Gas Transmission System Operator's Grid Code, Distribution System Operator's Grid Code, Storage System Operator's Grid Code, and the market operator's commercial terms and conditions. The amendment updates the required content of the rules, codes and commercial terms and conditions with regard to findings from the application of these documents in practice and also reflects the European Union's extensive legislative activities in energy, whereby primarily in the gas industry new procedures and new information provided to participants, on the basis of which they can decide in the gas market, are required.

4.2 **Promoting competition**

4.2.1 Wholesale markets

Monitoring the level of prices, the level of transparency, and the level and effectiveness of market opening and competition

In compliance with the third energy package, the Czech gas market has been fully liberalised since 2007. The ERO does not have the competence to set the prices of the gas traded at wholesale markets. Effective competition exists in the wholesale market, which does not have to be substituted by ERO regulation. Wholesale prices are created on the basis of agreement between the entities in relation to the current market situation.

Traders operating in the wholesale gas market can buy gas at commodity exchanges, under long-term contracts, or from other traders. Long-term contracts are currently no longer preferred by gas suppliers. However, a significant quantity of gas which is traded between gas market participants is imported into the Czech Republic under historical contracts.

Spot gas market

Under Section 20a of the Energy Act, the spot gas market is organised by the holder of the exclusive licence for the activities of the market operator. In 2017 only the within day (intraday) gas market was organised due to the gas market participants' negligible interest in the day-ahead gas market.

Compared with 2016, the within day gas market experienced a significant increase in its use, which proves its attraction and the correct design of the rules for its functioning. In 2017, a total of 3,747 GWh of gas was traded at the within day market, up by 79% year-on-year.

The weighted average of the prices of the gas traded at the within day gas market stood at EUR 18.02/MWh in 2017.



Chart 10 Traded gas quantities in 2016 and 2017

The weighted average of the prices at the within day gas market organised by the market operator in 2017 copied the profile of the weighted average of the prices of the comparable product on the NCG platform, traded at the spot market of European Energy Exchange AG (EEX, the PEGAS platform). A more detailed comparison of the prices at some within day markets is shown in Chart 11.

Chart 11 Comparison of the OTE Index price with NCG



Data source: OTE, a.s.

Weighted daily averages of the prices of the gas traded at the within day market in 2017 directly correlated with the development of prices at the other trading platforms in neighbouring countries, on which gas is traded (NCG, TTF, Gaspool, and CEGH).

Data source: OTE, a.s.

The upward trend in gas market participants' interest in using the within day market continued in 2017, and it can therefore be regarded as a fully-fledged platform on which commercial plans can be carried out. The execution of transactions at the within day gas market, which runs on a 24x7 basis, is based on the principle of automatic bid and offer matching. Trading takes place in the euro and one gas day is the trading period. Executed trades can be cleared in the euro or Czech crowns. The delivery point for gas under executed trades is the Czech virtual trading point (VTP) organised by the market operator.

It can therefore be noted that the within day gas market organised by the market operator in the Czech Republic is a fully-fledged and well-functioning tool for gas procurement in the wholesale market. An important aspect for gas market participants is that the within day gas market has the capacity to satisfy occasional bids for large daily gas volumes for prices comparable with other key trading platforms relevant for the Czech Republic, while the price remains lower than at the Austrian CEGH hub.

POWER EXCHANGE CENTRAL EUROPE

POWER EXCHANGE CENTRAL EUROPE (PXE) also operates an exchange market for gas trading in the form of derivative products with delivery at the virtual trading point in the Czech market. As part of gas trading, 1,520 contracts totalling 2,737 GWh and valued EUR 49,474,045.36 were traded at PXE in 2017. On 8 December 2017, all the spot products and futures that are currently available at the PXE gas market were opened on the PEGAS pan-European trading platform. All PXE products that concern gas trading are now listed under the Powernext licence.

4.2.2 Retail market

An environment where gas traders offer and sell services related to gas supply to customers is understood to be the retail market. As at 31 December 2017, the ERO held records of 2,844,257 supply points (in the Czech Republic) of gas customers connected to regional distribution systems. The number of recorded supply points therefore rose by 3,786 compared with 2016. The increase was attributable to the addition of supply points in local distribution systems, the monitoring of which started on 1 January 2017. A more detailed overview of the structure of customers taking gas in the Czech Republic is contained in Table 6 (the numbers of supply points in each of the customer categories are shown inclusive of the number of supply points used for CNG fuelling stations).

Customer category	Number of supply points	Share [%]
High-demand customers	1,703	0.06
Medium-demand customers	6,817	0.24
Low-demand customers	203,138	7.14
Households	2,632,599	92.56
Total	2,844,257	100.0

 Table 6 Number of gas supply points in 2017

Source: ERO

A total of 227,545 gas supplier switches were registered in 2017; of those, 199,678 took place in the most populated customer category, i.e. households. Table 7 shows the structure of gas supplier switching in more detail.

Customer category	2011	2012	2013	2014	2015	2016	2017
High-demand customers	537	979	449	330	329	617	305
Medium- demand customers	1,142	2,951	3,061	1,572	1,326	1,973	1,357
Low-demand customers	26,994	27,829	29,091	23,704	21,642	28,411	26,205
Households	333,268	316,297	264,680	174,783	154,465	172,949	199,678
Total	361,941	348,056	297,281	200,389	177,762	203,950	227,545

 Table 7 Number of gas supplier switches between 2011 and 2017

Source: OTE, a.s.

Table 8 shows the number of supplier switches to the number of supply points (the switching rate) broken down by customer category in 2017.

Table 8 Number of gas supplier switches in 2017

Customor	Number of	Total number of	Switching
category	supplier switches	supply points	[%]
High-demand customers	305	1,703	17.91
Medium-demand customers	1,357	6,817	19.91
Low-demand customers	26,205	203,138	12.90
Households	199,678	2,632,599	7.58
Total	227,545	2,844,257	8.00

Source: ERO

In 2017, the ERO registered 110 active traders that supplied gas to customers during the year. In terms of the gas quantity supplied, in 2017 the largest market share was held by innogy Energie, s.r.o. with 34.95%, followed by Pražská plynárenská, a.s. with 11.29% and E.ON Energie, a.s. with 10.88%. Chart 12 depicts a more detailed breakdown of gas traders' shares in gas supply to customers.





Note: Traders supplying less than 1% are included in the Others item Source: ERO

4.2.2.1 Monitoring the level of prices, the level of transparency, and the level and effectiveness of market opening and competition

Complying with its obligations laid down in the Energy Act, the Energy Regulatory Office continuously carries out monitoring and investigation concerning the gas market functioning in order to see whether effective competition exists in this market. This activity also includes assessing the conditions for the functioning of the liberalised Czech gas market. Based on its monitoring in 2017 the Office notes that effective competition exists in the gas market and the conditions for the functioning of the liberalised gas market have been put in place correctly. Every customer has the right to select a gas trader that will best meet their requirements. However, compared with the other EU countries, a relatively small part of customers are using their options for supplier switching. As the result, the competitive

pressure on gas traders is not so strong and many traders can therefore offer their services for higher prices, because their customers accept such prices.

4.2.3 Recommendations on supply prices, investigations and measures to promote effective competition

Satisfying the requirements of Directive 73/2009/EC, implemented in the Czech legislation, the Energy Regulatory Office puts in place rules that provide for the gas market's secure functioning and promote a competitive environment. The gas market has been fully liberalised since 2007 and the Office only controls the prices that cannot, for technical or organisational reasons, be formed by market mechanisms in a competitive environment. In the Czech gas market several dozen gas traders offering their services to customers have been operating on a long-term basis. The Czech gas market works on the basis of a non-discriminatory approach, where every trader can approach any customer, and, vice versa, every customer can enter into a contract with any trader. The prices of the gas supply service and other terms and conditions of gas supply depend only on their agreement with each other. The well-developed competitive environment in the gas market has spawned a broad range of traders' quotations in terms of both the price and the related commercial terms and conditions. The market's dynamics therefore depends more on customers' ability and willingness to change their supplier and so gain better conditions. The Energy Act and the implementing acts based thereon guarantee the right to switch their gas supplier to all customers. This change is free of charge. Subject to the existing commercial terms and conditions, every customer therefore has the right and opportunity to select their gas supplier.

In 2017, the Office continued in the continuous monitoring, within its remit and in line with Section 17 of the Energy Act, of the use of restricting or unfair conditions, restricting or excluding customers' rights, in contracts on the gas market and also monitored competition in the wholesale and retail gas markets. In this monitoring, the Office did not find any practices or instruments restricting customers' rights or distorting competition in the gas market, and in 2017 it therefore did not impose any measure to eliminate the causes preventing effective competition in the gas market.

In line with its duty to protect consumers, the Energy Regulatory Office continued posting indicative prices for the gas supply service on its website with a view to enhancing consumers' awareness. These prices constitute an indicative value for consumers. Indicative prices constitute non-binding information for customers on whether the prices for which they are buying the gas supply service reflect the actual situation in the retail gas market.

Indicative prices of supply services reflect the wholesale prices of gas (as the commodity) traded at energy exchanges, for which gas traders are able to buy gas for a particular period. They also contain traders' margin, which covers traders' costs incurred in providing the gas supply service for their customers and a reasonable profit.

Indicative prices of supply services constitute an average value that already includes the price for gas taken and also the standing monthly charge for gas supply. However, it does not contain the regulated prices for distribution and for the market operator's services, which are laid down in ERO Price Decisions and customers cannot influence them through gas supplier switching.

4.3 Security of supply

In this respect, the Ministry of Industry and Trade is the competent authority.

As part of its competences, the Energy Regulatory Office monitors and evaluates the performance of the obligation to meet the security standard for gas supply in the Czech Republic. Based on evaluating data received from gas traders, the Office prepares monthly reports on BSD, which are periodically posted on the Office's website. In these reports the Office monitors the achievement of one of its key priorities, i.e. identifying all factors that may constitute impediments to the provision of secure and reliable gas supply to final customers in the Czech Republic.

5 Consumer protection and dispute settlement in electricity and gas

5.1 Consumer protection

As part of its competences, the Office protects primarily customers' and consumers' justifiable interests in the energy industries.

The power to decide such disputes is established by Article 3(7) of Directive 2009/72/EC (similarly Article 3(3) of Directive 2009/73/EC), under which the Member States shall ensure high levels of consumer protection also with respect to dispute settlement mechanisms. In this connection, the amendment to the Energy Act enacted in Act No 211/2011 had transposed the relevant provisions of Directive 2009/72/EC and Directive 2009/73/EC, taken together with Annex I, into the Energy Act earlier, with effect as of 18 August 2011.

Under Section 17(7)(e) of the Energy Act, the ERO decides, upon motions filed by customers in the position as consumers taking electricity, gas or heat for household consumption or customers who are sole traders, on the following:

- 1. Disputes between customers and licence holders over the performance of obligations under agreements on electricity, gas or heat supply or distribution;
- 2. The ERO declares whether the legal relationship between the customer and licence holder, the business of which is electricity, gas or heat supply or distribution, has come into existence, continues to exist, or has ceased to exist, and when this happened.

In procedural terms, the ERO proceeds under Section 141 of Act No 500/2004, Rules of Administrative Procedure, as amended. Adversarial proceedings are initiated upon the consumer's motion, the electricity/gas/heat supplier/distributor being the respondent party. In such proceedings the ERO relies on the evidence adduced by the parties to the proceedings. If the adduced evidence is not sufficient for finding the state of affairs, the administrative authority (ERO) can also take other evidence.

Under Section 20e (c) of Act No 634/1992 on consumer protection, as amended, the ERO has been appointed as one of the entities for alternative dispute resolution for consumer disputes, and has been included in the Commission's list of ADR bodies. Thus, the ERO is competent to decide disputes initiated by consumers, i.e. natural persons who act outside their business activities, if any, or outside the performance of their independent profession, if any, against traders in energy industries.

In 2017 the ERO started, in cooperation with the largest electricity and gas traders, to prepare a model Code of Conduct, which is intended to contain the basic rules and procedures of ethical treatment of customers in the position as consumers.

5.2 Dispute resolution

Under Article 37(11), Article 37(4)(e) and Article 37(5)(c) of Directive 2009/72/EC, in 2017 the Energy Regulatory Office conducted 87 sets of adversarial proceedings where persons in the position as consumers were the persons who moved for the adversarial proceedings to be commenced. Of this number, 46 sets of adversarial proceedings were concluded by a final decision in 2017.

Under Article 41(11) and Article 41(4)(e) of Directive 2009/73/EC, in 2017 the Energy Regulatory Office conducted 88 sets of adversarial proceedings where persons in the position

as consumers were the persons who moved for the adversarial proceedings to be commenced. Of this number, 67 sets of adversarial proceedings were concluded by a final decision in 2017.