National Report of the Energy Regulatory Office on the Electricity and Gas Industries in the Czech Republic for 2019

Content

Abbreviations

ACER ..... Agency for the Cooperation of Energy Regulators
ANRE ..... Romanian Energy Regulatory Authority
GSS ..... gas supply standard
EEX ..... European Energy Exchange
PXE ..... POWER EXCHANGE CENTRAL EUROPE
CACM ..... Commission Regulation (EU) 1222/2015 establishing a guideline on capacity allocation and congestion management
CMP ..... Congestion management procedures within the meaning of Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005
CEER ..... Council of European Energy Regulators
CWD ..... capacity weighted distance reference price methodology
CTIA ..... The Czech Trade Inspection Authority (*Česká obchodní inspekce*)
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, as amended
ERRA ..... Energy Regulators Regional Association
ERO, Office ..... Energy Regulatory Office
EU, Union ..... European Union
FB ..... Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing
FCA ..... Commission Regulation (EU) 2016/1719 establishing a guideline on forward capacity allocation
FERC ..... the United States' Federal Energy Regulatory Commission
LNG ..... liquefied natural gas
MIT ..... Ministry of Industry and Trade of the Czech Republic
MFA ..... Ministry of Foreign Affairs of the Czech Republic
EU Regulation ..... Regulation of the European Parliament and of the Council
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 (REMIT)
NC CAM ..... Commission Regulation (EU) No 984/2013 of 14 October 2013 establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems and supplementing Regulation (EC) No 715/2009
Board/ERO Board ..... the Board of the Energy Regulatory Office
NN ..... low voltage (in Czech *NN*, ***n****ízké* ***n****apětí*, i.e. 'low voltage'
VN ..... medium voltage (in Czech *VN*, ***v****ysoké* ***n****apětí*, i.e. 'high voltage')
VVN ..... high voltage (in Czech *VVN*, ***v****elmi* ***v****ysoké* ***n****apětí*, i.e. 'extra high voltage')

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1 Foreword

The Energy Regulatory Office (the 'ERO' or 'Office') is presenting the *National Report of the Energy Regulatory Office on Electricity and Gas Industries for 2019*. The 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, as an administrative authority for regulation in the energy industries since 1 January 2001. The Office regulates the electricity industry, the gas industry, the heat supply industry, and supported energy sources.

The Office is headed by a five-member collective body, the Board, the members of which are appointed by the Czech Government. The Board had four members until May 2019, as the position of the Chairman had been vacant since December 2018. On 1 May 2019 Mr Ladislav Havel was appointed to the Board as a new member and Mr Jan Pokorný was appointed as the Board's Chairman. The Czech Government decided to completely change the Board as of 31 July 2019 and removed two of its members, Mr Vladimír Outrata and Mr Vladimír Vlk, and did not extend the mandate of another member, who then also served as the Board's Chairman. As of 1 August 2019 the Czech Government appointed new members: Mrs Martina Krčová, Mr Petr Kusý and Mr Stanislav Trávníček, who was appointed as the Board's Chairman. Mr Rostislav Krejcar, whom the Government had appointed for a term of three years in 2017, remained the fifth member of the Board.

The *National Report of the Energy Regulatory Office on Electricity and Gas Industries for 2019* offers a detailed view of the developments in the energy sector and the changes that the Office underwent in 2019. The Office's objective was to continue pursuing its key missions; it continuously ensured consistent consumer protection, supervision over the energy market, and support for competition in energy industries. It also performed its duties in support for renewable energy sources, combined heat and power generation, and decentralised power generation, which are frequently discussed issues.

The Office also played an important role in the protection of customers' and consumers' interests and the protection of the justified interests of the licence holders who are subject to regulation, which is one of its key missions. The continuously rising number of complaints that the Office receives from consumers testifies to the necessity of such protection. Compared with 2018, the increase was almost 6%; in particular, reported problems with energy intermediaries are surging: their number doubled year-on-year in absolute terms. The Office's response is adequate to the gravity of the problem; the Office systematically seeks to introduce appropriate amendments to the legislation, having initiated changes and closely cooperated on their incorporation in the relevant pieces of legislation. At the practical level, the Office continuously informs consumers about imminent problems through the media and personal training. For example, in 2019 the Office started

cooperation with the Czech National Disability Council (*Národní rada osob se zdravotním postižením ČR, z.s.*).

In 2019 the Office received more than 800 suggestions to investigate the practices of energy suppliers or persons whom the applicants believed were breaching their obligations in the energy sector.

Less than a month from the reconstruction of the Board, the Office launched the planned public consultation process on the rules proposed for the fifth regulatory period, i.e. a seminal document setting out the mainstay conditions under which monopoly companies would carry on their business from 2021.

On the expected dates in the second half of the year the Office issued six important price decisions: three for the electricity industry, two for the gas industry, and one for supported energy sources. The Office's participation in the drafting of new national and international legislation and its practical application was continuous and trouble-free.

In respect of the transparency and integrity of wholesale energy markets (REMIT), 2019 saw the first decision on a breach of Article 8 REMIT. The Office also issued a measure to rectify incorrect data in the National Register of Market Participants and instituted new proceedings on a breach of Article 8 REMIT.

The Office also intensified its activities in the national environment of research, development and innovations and in programme support for the various areas of the energy sector. Cooperation with the Technology Agency of the Czech Republic (TA ČR) is crucial; it is under way primarily in the BETA 2 programme and in the THETA programme, where in 2019 the Office played the role of the application guarantor for 12 projects focused on the current issues in the regulator's activities.

The international activities of the Office's representatives were primarily directed towards the working groups of the Agency for Cooperation of Energy Regulators (ACER) and the Council of European Energy Regulators (CEER). An important milestone was the approval of several legislative acts in the Clean Energy for All Europeans package (the winter package), from which new duties and tasks arise for the regulator.

Cooperation with ACER and CEER mainly consisted of active participation in the meetings of working groups and task forces for the electricity industry, the gas industry, consumer protection, and REMIT; these platforms also prepared the underlying materials for the development and amendment of the European energy legislation and the framework guidelines and guidance for its implementation at the national level. CEER and ACER working groups' activities in the electricity industry focused on the preparations for the implementation of the winter package. Attention was also paid to network codes. Working groups for the gas industry focused on monitoring the implementation of network codes, and the Office's representatives contributed to these groups' activities by, *inter alia*,

preparing documents on the Czech gas market and documents for the relevant questionnaire surveys. Issues such as market transparency and competitiveness, cross-border interconnections, consumer protection, supply security and quality, sustainable development, and cyber security were addressed. As part of their activities in these groups the Office's representatives sought to convey experience from the Czech Republic to the groups and to monitor new and emerging trends.

In 2019 the Office joined the activities of the Energy Regulators Regional Association (ERRA). In parallel with its activities in international relations the Office devoted increased attention to developing regional cooperation and promoting bilateral contacts, emphasising cooperation with the V4 countries' regulators.

During the year, the Office's representatives attended several conferences, the Florence, Madrid, Copenhagen and Dublin forum meetings, and various workshops; they also participated in the meetings of regional groups for listing projects of common interest (PCI).

Two high-level bilateral meetings with regulators' representatives took place in Prague in late 2019. The meeting with Mr Neil Chatterjee, Chairman of the United States' Federal Energy Regulatory Commission (FERC), was an opportunity to share findings concerning the growing competition on energy markets and improved access to energy resources. The regulators also discussed the critical challenges and recommended procedures for cyber security. In response to a request of the President of the Romanian Energy Regulatory Authority (ANRE) a meeting was organised; the agenda also included discussion of the current situation on the regional and European markets, supply security in our region, and barriers to and roles for trading and responsibility for balancing in the case of both electricity and gas.

The Office joined the project dedicated to conveying experience from the process of energy market formation and liberalisation to representatives of the Georgian energy sector. The project was carried out under the Aid for Trade programme for the support and promotion of trade in partner developing countries within the remit of the Ministry of Industry and Trade (MIT) and is part of the Czech Republic's international development cooperation. Other bilateral and multilateral meetings concerned electricity market integration, gas market integration, and competitiveness.

2 Main developments in the gas and electricity markets

2.1 Evaluation of the market development and regulation

The Czech electricity market has been going through fundamental changes over the first two decades of this century. These changes are being caused by a number of factors: those related to climate (air quality and climate protection), resources (primary energy sources are being depleted), and security (ensuring smooth and uninterrupted energy supply), as well as economic (seeking savings in electricity generation and consumption and the development of new technologies) and political (international obligations to achieve societies' sustainable development) factors.

While the first decade of this century was marked by a gradual liberalisation of electricity markets and slow phasing-out of centrally controlled systems, the second decade experienced an accelerating integration of the EU electricity market and the formation of transnational centralised control structures. The gradual harmonisation of the procedures for managing national electricity markets (including the Czech market) is precipitating a large number of changes in many areas, such as the legislation, network operation and control, and electricity generation and trading and, equally importantly, consumption. In other words, the electricity market is undergoing a fundamental transformation in all of its facets.

The electricity market experienced a number of major developments in 2019. One of them was the connection of the Czech intraday market to the single EU cross-zonal intraday electricity market, Single Intraday Coupling (SIDC), the result of the effort of nominated electricity market operators, transmission system operators, and regulatory authorities for many years.

Further to the implementation of network codes and guidelines, or legislative acts in the EU's 'third energy package', modifications to the transmission system operating rules and the distribution system operating rules were approved.

In gas industry regulation, the methodology for determining the gas transmission prices at each of the entry and exit points of the transmission system was changed in 2019. In compliance with the EU legislation the new capacity weighted distance (CWD) reference price methodology was adopted. The transaction, announced in April 2018, related to the European Commission's conditional approval of the planned exchange of assets between RWE Group and E.ON Group, subject to both groups selling some of their assets to third parties, was closed with effect as of 1 April 2019. Since that date GasNet, s.r.o. has not been part of innogy Group, and so the complete ownership unbundling of this distribution system operator from the vertically integrated undertaking has taken place.

A new annual maximum on the within day gas market organised by OTE, a.s. (the market operator) was achieved in 2019, with 4,670 GWh of gas traded. The increase was 52.7% on

2018 when the market participants executed trades for 3,059 GWh (all reports for 2018). As at 31 December 2019, 98 participants had access to the spot gas market.

An important element in the gas system, which significantly influenced gas consumption in 2019, was the Počerady combined cycle unit; in 2019 its gas consumption for electricity generation increased by 48%.

In 2019 NET4GAS, s.r.o., the Czech transmission system operator, continued to carry out its Capacity4Gas project, the objective of which is to satisfy demand for long-term transmission capacity, which was confirmed in a Europe-wide capacity auction on the PRISMA platform in March 2017.

Capacity4Gas will interconnect the Czech gas system with the EUGAL pipeline in Germany and increase the capacity at an entry point of the Czech gas system by approximately 1,119 GWh/d, which implies that the volume of gas transported across the German-Czech national border will increase by approximately 35 bcm/yr (372 TWh/yr). Most of this volume will be transited to other countries and some of it will also be available for gas supply to the Czech Republic.

All of the changes were taking place in the course of routine operation. It was therefore all the more necessary for the market supervision and regulation to work well. It was important to ensure that non-transparent or discriminatory practices between market participants did not take place or that procedures causing such practices were not applied. On the single market, this can be achieved through effective coordination at the international level and also effective regulation at the national level. These two areas are closely intertwined and the Office continued to be active in both of them in 2019.

2.2 Report on the implementation of the Clean Energy Package

At the end of November 2016, the European Commission presented a package of legislative proposals with broad-ranging impacts on the working of the European electricity market, i.e. Clean Energy for All Europeans, the winter package, comprising eight legislative acts:

- (Recast) Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity, in force since 1 January 2020 (certain provisions since 4 July 2019);
- (Recast) Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators, in force since 4 July 2019;
- Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC, in force since 4 July 2019;
- Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive

2012/27/EU, with transposition by 31 December 2020 (Article 70 (5) (a) by 31 December 2019; Article 70 (4) by 25 October 2020);

- Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council, in force since 24 December 2018 (certain provisions from 1 January 2021);
- Directive (EU) 2018/844 of the European Parliament and of the Council of 30 May 2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency, with transposition by 10 March 2020;
- (Recast) Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources, with transposition by 30 June 2021;
- Directive (EU) 2018/2002 of the European Parliament and of the Council of 11 December 2018 amending Directive 2012/27/EU on energy efficiency, with transposition by 25 June 2020 (certain provisions by 25 October 2020).

On 22 May 2019 the Council adopted, following prior approval by the European Parliament, the remaining four of the above eight legislative acts in the winter package: the regulation on the internal market for electricity (2019/943), the directive on the common rules for the internal market for electricity (2019/944), the regulation on risk preparedness (2019/941) and the regulation on ACER (2019/942), for which the Office is responsible in the Czech Republic.

During the course of the drafting and finalising of the above texts the Office closely cooperated with the Ministry of Industry and Trade, the Ministry of Foreign Affairs, and the Office of the Government, and with other European regulators within CEER, where the working groups whose meetings the Office's representatives attended focused on the implementation of the approved new legislation, including the drafting of position papers and methodologies.

The implementation of the winter package generates new duties and tasks for the regulator, such as amendments to public notices, market monitoring, risk assessment, tackling unfair practices, fair determination of network charges, resolution of disputes between aggregators, recommendations, safeguarding customers' rights, grant of exceptions, public consultations, etc.

The winter package legislation will be implemented primarily through a new Energy Act and an amendment to the law on supported energy sources. Work on the two laws was started in 2019 and the Office participated in the drafting of both laws.

The Office is responsible for the statutory instruments (public notices) that have to be gradually amended, further to the new/recast legislation in the winter package and the future decarbonisation package, to perform the obligations arising from the winter package. They are, in particular, the following public notices:

- No 408/2015 on the Electricity Market Rules;
- No 16/2016 on the conditions for connection to the electricity grid;
- No 70/2016 on the billing of supply and related services in energy industries;
- No 404/2016 on the particulars and structure of the returns required for preparing reports on the operation of systems in the energy industries, including the dates, scope and rules for preparing the returns (the 'statistics public notice');
- No 401/2010 on the required content of the Electricity Transmission System Operating Rules, Distribution System Operating Rules, the Gas TSO Code, DSO Codes, the SSO Code, and the market operator's commercial terms and conditions;
- No 8/2016 on the details of licensing for business in energy industries;
- No 540/2005 on the quality of electricity supply and related services in the electricity industry.

3 The electricity market

The Czech electricity market is experiencing a number of changes that are reshaping it. These changes have mainly been precipitated by the EU policy's visions for electricity market integration, environmental and climate protection, and security of electricity supply. Some of these changes are quite minor ones, but some are transforming the market participants' hitherto deep-rooted behavioural patterns in electricity generation, transmission, distribution, trading, and consumption.

The dynamics of these changes is also visible in respect of electricity network regulation. The Czech electricity market is currently in a condition that can be described as a free market. Customers are becoming increasingly empowered and also have opportunities to be active as electricity market participants (for example, as prosumers, or they can become part of the ancillary services system and actively offer these services). So far, customers have largely been using the advantages of the free electricity market when, for example, massively switching electricity suppliers depending on the price and quality of the services provided.

The Czech intraday market was interconnected with the rest of Europe in 2019. It was the result of the nominated electricity market operators', transmission system operators', and regulatory authorities' effort for many years. Liquidity has significantly increased since the very first day.

A number of major developments took place in the electricity market in 2019. In terms of electricity market integration, fundamental changes occurred in intraday trading, as the Czech intraday electricity market became part of the single EU cross-zonal intraday electricity market referred to as Single Intraday Coupling (SIDC) on 19 November 2019.

The Czech Republic has joined a group of countries (Belgium, Denmark, Estonia, Finland, France, Lithuania, Latvia, Germany, the Netherlands, Norway, Portugal, Austria, Spain, and Sweden) together with Hungary, Poland, Croatia, Romania, Bulgaria and Slovenia. The successful interconnection of intraday markets is the result of the nominated electricity market operators', transmission system operators', and regulatory authorities' effort for many years, and already the first month of trading brought positive and expected results. This is very visible in the increased liquidity, in the form of traded electricity quantities of 10 to 100 MWh/day, compared with those traded before joining SIDC.

3.1 Network regulation and technical functioning

ČEPS, a.s. is the company responsible for the operation of the Czech electricity grid's backbone system (the transmission system that includes 400 kV and 220 kV lines and selected 110 kV lines), and hence for the reliable operation and overall balance between generation and demand.

ČEPS provides for the quality and reliability of electricity supply at the level of the transmission system by using system services over the short term, while over the long term it seeks to further reinforce and develop the transmission system by building new lines and installations for electricity transmission. Distribution system operators are responsible for the operation of the Czech electricity grid at the level of 110 kV and at lower levels.

Network regulation takes place along two lines, the technical line and the pricing line. Along the technical line, the Office approves the operating documents and issues the statutory instruments within its remit. Under Section 17 (7) (g) of the Energy Act, the Office approves or lays down the operating rules for the transmission/distribution systems. In 2019, the Office approved an amendment to the electricity transmission system operating rules and also amendments to the distribution system operating rules. Most of the amendments to both of these documents were related to the implementation of network codes and guidelines, i.e. the legislation in the EU's third energy package. The key objective of the approval process was to ensure that the 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 operating rules comply with the applicable legislation and also contain the findings gathered in the transmission system and distribution system operators' activities. In 2019 the Office also started the consultation process for the drafts of two public notices: the draft of a completely new public notice on electricity supply quality in the electricity market (now known under number 540/2005) and the draft of the Electricity Market Rules (now known under number 408/2015).

Along the pricing line the Office determines the charges for network use. The funds to pay for these services, related to operating the system at all levels of the electricity grid, are provided through regulated prices billed to customers for the electricity quantity that they take. In 2019 new price decisions for 2020 were approved; they regulate prices in line with the applicable methodology.

3.1.1 Unbundling

Directive 2009/72/EC of the European Parliament and of the Council concerning common rules for the internal market in electricity (Directive 2009/72/EC) is the EU's fundamental legislation for the electricity industry, which also lays down the rules for market participants' operation in the electricity market. The implementation of Directive 2009/72/ES has resulted

in a major change for the Czech electricity market participants. Primarily, legislation has been significantly amended as regards unbundling, and the implementation has been extremely important not only in terms of the legislation on the actual unbundling of the TSO and DSOs but also in terms of the broadening of the Office's competences in supervision, oversight, and sanctions for breaches of rules in this respect.

In the case of the DSOs' unbundling, Article 26 of Directive 2009/72/EU had been earlier implemented through the relevant provisions of the Energy Act, specifically Section 25a. As regards unbundling, the past period saw modifications to DSOs' information systems, which has also considerably influenced service provision to customers (supplier switching, changing the distribution tariff, etc.).

Unbundling has also necessitated some measures for meeting the obligation of non-discriminatory 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 Office by 30 April.

3.1.2 Network extension and optimisation

As the decentralisation of electricity generation progresses, the condition of networks is being reviewed and, in particular, their readiness for these changes is being discussed. To this end, digital technology for network control and digital remotely controlled devices to meter electricity consumption at customers connected to the lowest voltage levels are being rolled out, and new requirements for the format and structure of the data exchanged between market participants and new requirements for the connection and control of generating plants are being formulated.

In 2019, the Office adopted two different approaches to network development and optimisation. At the national level it participated in discussions with operators active in the electricity grid, held during the process of the development and approval of amendments to the Electricity Transmission System Operating Rules and Electricity Distribution System Operating Rules. Most of these amendments responded to the new conditions for connecting generation and demand arising from network codes and guidelines.

In relation to amendments to public notice 540/2005 on electricity supply quality in the electricity market and 408/2015 on Electricity Market Rules, the Office held talks with market participants, and in the process of drafting the public notice on electricity supply quality it held talks with DSOs, reflecting the reconsideration and redesign of the existing parameters of electricity supply quality, which contribute – through bonuses and penalties –

to DSOs' motivation to develop and invest in the electricity grid and to roll out new technology.

The Office also contributed to network development and optimisation at the national level by participating in various seminars on technical issues, at which the issue of network development and optimisation was discussed with DSOs in the light of the new trends and the national legislation's new requirements. This exchange of experience has resulted *inter alia* in better communication with DSOs at the local level and cultivated to some extent the market in which local DSOs operate.

At the international level network development and optimisation is primarily a matter of coordination. The Office participated in the meetings of ACER's and CEER's working groups and also other expert working groups headed by EC representatives. The working groups jointly coordinated the implementation of network codes' and guidelines' requirements at the national level. These mainly included the requirements of Regulation (EU) 2016/631 establishing a network code on requirements for grid connection of generators, Regulation (EU) 2016/1388 establishing a network code on demand connection, Regulation (EU) 2017/1485 establishing a guideline on electricity transmission system operation, and Regulation (EU) 2017/2196 establishing a network code on electricity emergency and restoration.

3.1.3 Network tariffs

Under the Energy Act, public notice 194/2015 on methods of price regulation and procedures for price controls in the electricity and heat supply industries, and public notice 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, every year the Energy Regulatory Office determines 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 price of electrical energy for covering losses in networks, and the size of overall electricity consumption.

Fully in compliance with the applicable methodology and the best regulatory practice, the Office seeks the best possible cost-causative linkage between the cost driver and the price paid by customers.

The electricity transmission charge is composed of the charge for reserved transmission capacity and the charge for using transmission system networks. The charge for reserved transmission capacity is the result of dividing adjusted allowed revenues from electricity transmission by the value of the capacity reserved in the transmission system. The charge for using transmission system networks is determined by the cost of electrical energy for

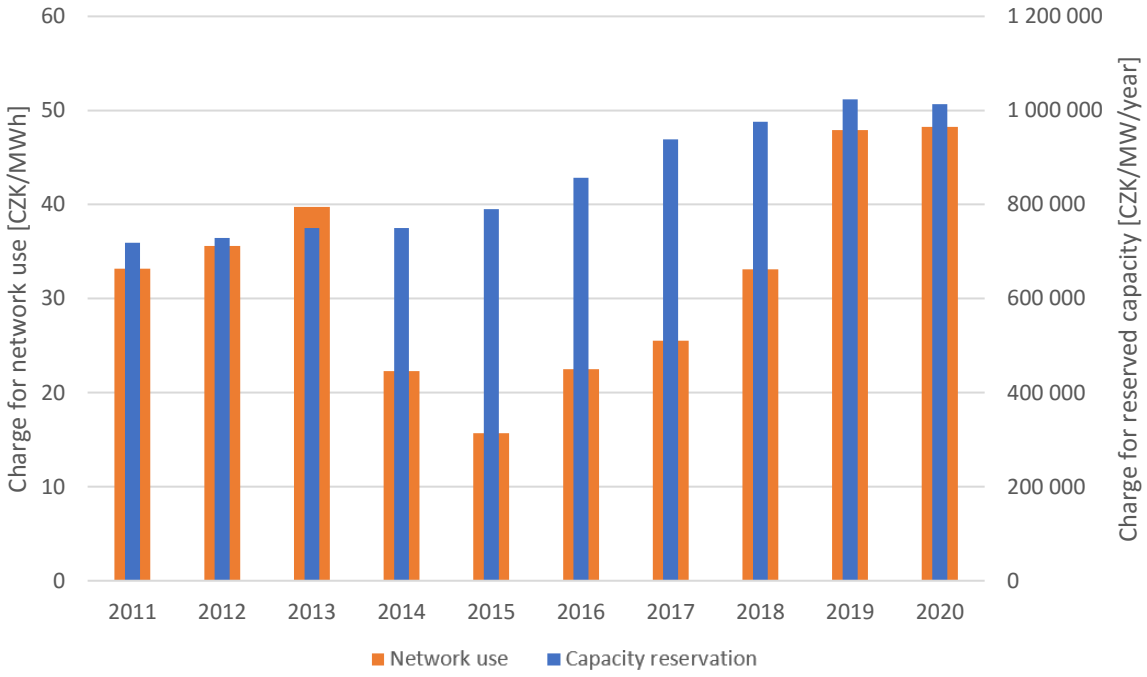
covering losses in the transmission system. The two items are adjusted by the correction factor, which reflects the surplus or deficit in revenue in previous years, and then divided by the values of the technical parameters, i.e. the expected sum of reserved transmission capacities and the total electricity quantity planned to be transmitted.

The charge for reserved transmission capacity for 2019 increased by 4.8% year-on-year, one of the key factors being the inclusion of major capital projects in progress and with completion planned in a long time in the calculation of allowed revenues. This approach, which is a standard procedure in the price control principles, has been applied for the first time in the case of 2019 prices.

The rising price of electrical energy is reflected in the rising costs of infrastructure: the charge for transmission system use increased by 45% between 2018 and 2019.

The charge for network use in the transmission system in 2019 increased by 44.7% year-on-year, which was due to the continuing growth of electrical energy prices at exchanges and also the large positive correction factor for network use in the transmission system for 2017. For 2020, the charges for electricity transmission changed only slightly; the charge for reserved transmission capacity decreased by 0.97% for 2020, and the charge for using transmission system networks in 2020 increased by 0.69%. Chart 1 shows the charges for electricity transmission between 2011 and 2020.

Chart 1 Charges for reserved capacity and use of transmission system networks



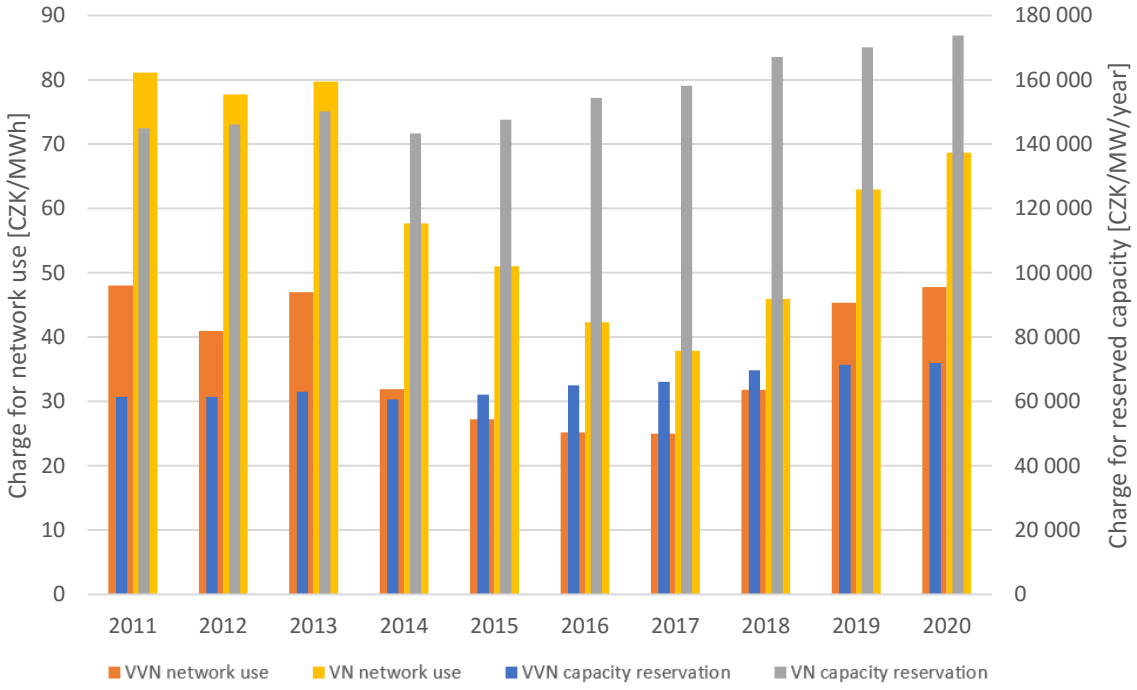
Source: ERO

The charge for system services is the result of dividing the TSO's adjusted allowed revenues from system service provision by the electricity quantity expected to be taken by customers connected to the electricity grid. The charge for system services for 2019 dropped by 18.6% year-on-year, primarily due to the lower cost of ancillary services and also thanks to the significant negative correction factor. For 2020 the charge for system services increased by 1.22% on 2019. The increase is due to a negative correction factor lower than in 2019; the costs being similar, the charge has therefore slightly increased.

The charge for electricity distribution at high voltage and medium voltage levels is composed of a charge for capacity reserved in the distribution system and a charge for network use in the distribution system. The charges for reserved capacity at the various voltage levels are mainly influenced by the agreed technical parameters of reserved capacity, the amount of investment at the respective voltage level, and the charge for capacity booking in the higher-level transmission system. The charge for capacity reserved in the distribution system at the VVN level rose by 2.4% year-on-year and at the VN level by 1.8% year-on-year for 2019. The reasons included investments in distribution systems and higher charges for electricity transmission, which are some of the inputs into the calculation of the electricity distribution charges. For 2020 the charge for reserved capacity at the VVN level rose by another 0.9% and at the VN level by 2.2%, due to investments in distribution systems again.

The charge for distribution system network use increased by 42.5% year-on-year at the VVN level and by 37% at the VN level for 2019; again, an important factor was the rising price of electrical energy at power exchanges, similarly as in the case of the charge for network use in the transmission system. In 2020 the charge for distribution system network use rose by 5.4% at the VVN level and by 9.1% at the VN level. As in the case of the transmission system, the increases resulted, in particular in 2019, from the rising prices of electrical energy at exchanges over the reference period used in the calculation of the price of electrical energy for covering losses. Chart 2 shows the development of the two components of the charge for electricity distribution between 2011 and 2020.

Chart 2 Charges for reserved capacity and use of VN and VVN distribution system networks



Source: ERO

Investments in the future of our electricity infrastructure are the main cause of the gradual growth of regulated prices. The ERO oversees their usefulness.

At the low voltage (NN) level (the household and low-demand business customer categories) the regulated prices are calculated in a more complicated way for a larger number of distribution tariffs. The charge for electricity distribution at the NN level is composed of a charge for power input determined by the rated current of the main circuit breaker upstream of the electricity meter and the charge for the electricity quantity distributed. The year-on-year changes in the various electricity distribution charges at the NN level for 2019 differ depending on the agreed distribution tariff and average values therefore have to be used for the purposes of year-on-year comparisons. The charge for electricity distribution at the NN level rose by 4.2% year-on-year on average; combined with the other regulated prices, this caused an increase in the average regulated component of the price for electricity supply at the NN level by 2.07% year-on-year. For 2020, the distribution charge rose by 2.6%, regulated prices therefore growing by 1.5% year-on-year. Investments in distribution systems were again the main cause of the price hikes.

The charge for the market operator's services in the electricity industry increased by 28.3% year-on-year and was set at CZK 6.93/supply point/month for 2019. The main reason was the higher costs of the administration and payment of aid to supported energy sources, which are, together with the operations related to imbalance settlement, included in the charge for

the market operator's services in the electricity industry. On the other hand, for 2020 this charge dropped by 26.7% to CZK 5.08/supply point/month. The charge for the ERO's activities, which is part of the charge for the market operator's services, did not change and is CZK 2.39/supply point/month.

3.1.4 Security and reliability of regulation

In the electricity industry, 2019 was the fourth year of the extended fourth regulatory period. The regulatory methodology described in the *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,* with their effect extended to 31 December 2020, is being applied in a standard manner. In the electricity industry the Office issued three price decisions for 2020, which had been prepared in line with this methodology.

In the interest of secure, reliable, and transparent regulation, in 2019 the Office drew up draft *Price Control Principles for 2021-2025 in the Electricity and Gas Industries and for the Market Operator's Activities in the Electricity and Gas Industries, and for Mandatory Buyers*. On 30 August 2019 it launched a public consultation on this document. When drafting the *Principles* the Office sought to develop a serviceable and systemically correct methodology for the hitherto absent individual modifications, ensuring that the rules for the fifth regulatory period be simple while preserving fairness and stability, that customers pay a reasonable price for the service on a value-for-money basis, and that the system operators receive revenues making it possible to maintain and adequately develop the quality of the services that they provide. The draft also takes into account the dynamics of the environment and enables flexible responses to changes during the regulatory period.

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 540/2005 on the quality of electricity supply and related services in the electricity industry, as amended. The level of supply quality in distribution systems is measured by electricity supply continuity indicators under Section 21 of the above public notice. The basic continuity indicators are defined in the public notice as follows: System Average Interruption Frequency Index in the period under review (SAIFI), System Average Interruption Duration Index in the period under review (SAIDI), and Customer Average Interruption Duration Index in the period under review (CAIDI). The results of the monitoring of continuity indicators for 2019 are shown in Table 1.

Table 1 Electricity distribution continuity indicators in 2019

Indicator*	ČEZ Distribuce	E.ON Distribuce	PRE distribuce	CR
SAIFI [interruptions/year]	2.90	1.97	0.36	2.32
SAIDI [minutes/year]	348.52	281.20	29.61	288.73
CAIDI [minutes]	120.35	142.48	81.87	124.38

Source: ERO, *) System indicators covering all categories of interruption under Appendix 4 to public notice 540/2005

3.1.5 Monitoring balance of supply and demand

In 2019, the Office issued five reports on the operation of the electricity grid. They include quarterly reports for 4Q 2018 and for 1Q, 2Q and 3Q 2019, and also the yearly report for 2018. These reports contain purely technical information such as electricity generation broken down by technology and by fuel, electricity consumption broken down by customer category and by sector, cross-border flows, installed capacities, and other statistical data. One of the new features is tariff statistics and their development over the past ten years. The yearly report also includes a chapter on electricity supply quality, evaluating the continuity of supply; its data constitutes inputs into the regulatory mechanism.

3.1.6 Cross-border issues

The Office promotes relationships with the regulatory authorities of the V4 countries on a long-term basis. In respect of electricity, for 2019 some specific examples include its participation in the project for coupling the day-ahead markets in the Czech Republic, Hungary, Slovakia, Romania, and Poland with the countries involved in Multi Regional Coupling (MRC). This coupling should simplify cross-border trading in electricity and increase liquidity in the electricity market.

3.1.7 Implementation of network codes and guidelines

The development of decentralised electricity generation precipitates new demands on, in particular, distribution networks and the Office therefore devotes increased attention to their readiness for the expected changes in the energy sector. Electricity self-generation in small plants producing a few kW, the evolving use of power storage (accumulators) in households, prosumers' activities in the market (supply of self-generated electricity to the grid and offer of ancillary services) etc. require that networks have the right size and sufficient capacity and are optimally controlled. The rollout of digital technology for network control and digital remotely controlled devices to meter electricity consumption at customers connected to the lowest voltage levels, and the formulation of new requirements for the format and structure of the data exchanged between market participants and new requirements for the connection and control of generating plants, etc. should contribute to this.

At the national level the Office held discussions with system operators during the process of the development and approval of amendments to the Electricity Transmission System Operating Rules and the Distribution Systems Operating Rules. A number of these amendments primarily responded to the new conditions for connecting generation and demand, arising from network codes and guidelines. The Office also held talks with market participants in relation to amendments to public notice 540/2005 on the quality of electricity supply and related services in the electricity industry and 408/2015 on Electricity Market Rules; it also held talks with DSOs, reflecting the reconsideration and redesign of the existing parameters of electricity supply quality, which contribute – through bonuses and penalties – to DSOs' motivation to develop and invest in the electricity grid and to roll out new technology. Improved communication with DSOs is definitely worth mentioning, and the market in which local DSOs operate has been cultivated to an extent.

The network codes and guidelines adopted at the EU level as EC Regulations and the methodologies for their implementation are becoming increasingly important. There are three groups of network codes and guidelines:

- Connection:
    - Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (text with EEA relevance),
    - Commission Regulation (EU) 2016/1388 of 17 August 2016 establishing a network code on demand connection (text with EEA relevance), and
    - Commission Regulation (EU) 2016/1447 of 26 August 2016 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules (text with EEA relevance);
- Operation:
    - Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation, and
    - Commission Regulation (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration (text with EEA relevance);
- Trade:
    - Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (text with EEA relevance),
    - Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation (text with EEA relevance),
    - Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing (text with EEA relevance).

The implementation of the above network codes and guidelines is under way at several levels: the Union level, the national level, and the regional level. The work done previously is being continued in the case of the connection network codes. The fulfilment of the relevant network codes' requirements was under way at the national and international levels in 2019. At the national level, work and discussions took place in expert working groups (set up by the ERO in cooperation with MIT, or active under the auspices of DSOs). The requirements of the network codes on the connection of generation, on demand connected to the transmission system, and on high voltage direct current systems were transposed (laid down) in the operation documents (Electricity Transmission System Operating Rules and Distribution System Operating Rules).

The process was complex and challenging, and the implementation therefore had to be carried out at two stages; first, the requirements for the transmission system and then the requirements for distribution systems were set out. This approach was adopted with a view to ensuring continuity and system cohesion, since these requirements have a significant impact on the operation of networks and generating plants. It is very clear already now that these requirements will cause heavy investments on the part of the entities being connected. On the other hand, such investments can be expected to bring about changes in the development of generating and consuming equipment and technologies.

The operation regulations were again implemented at two levels, national and international. In 2019, national implementation focused on developing and adopting the methodologies that are of a purely national nature under the relevant regulation. These mainly included methodologies under Commission Regulation (EU) 2017/2196 on electricity emergency and restoration. These methodologies lay down the basic procedures for defending the system against widespread disturbances and for re-energisation after such disturbances.

In respect of Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing, most of the discussions centred on the establishment of platforms for exchange of balancing energy and for imbalance netting, constituting a central (Trans European) solution for balancing energy sourcing. The TERRE implementation project will serve for exchanging balancing energy from replacement reserves, and the Czech transmission system operator, ČEPS, has been its member since November 2019. The project brings together TSOs from 14 European countries (the platform was successfully launched in January 2020). The MARI implementation project is a project for the creation of the European mFRR platform (platform for the exchange of balancing energy from frequency restoration reserves with manual activation). The launch of the platform under the Regulation is expected in the third quarter of 2022. The PICASSO implementation project is a project to establish a European platform for the exchange of balancing energy from frequency restoration reserves with automatic activation (aFRR). The launch of the platform under the Regulation is planned for the third quarter of 2022. The IGCC implementation project is a project for a European platform for the imbalance netting process. IGCC serves for

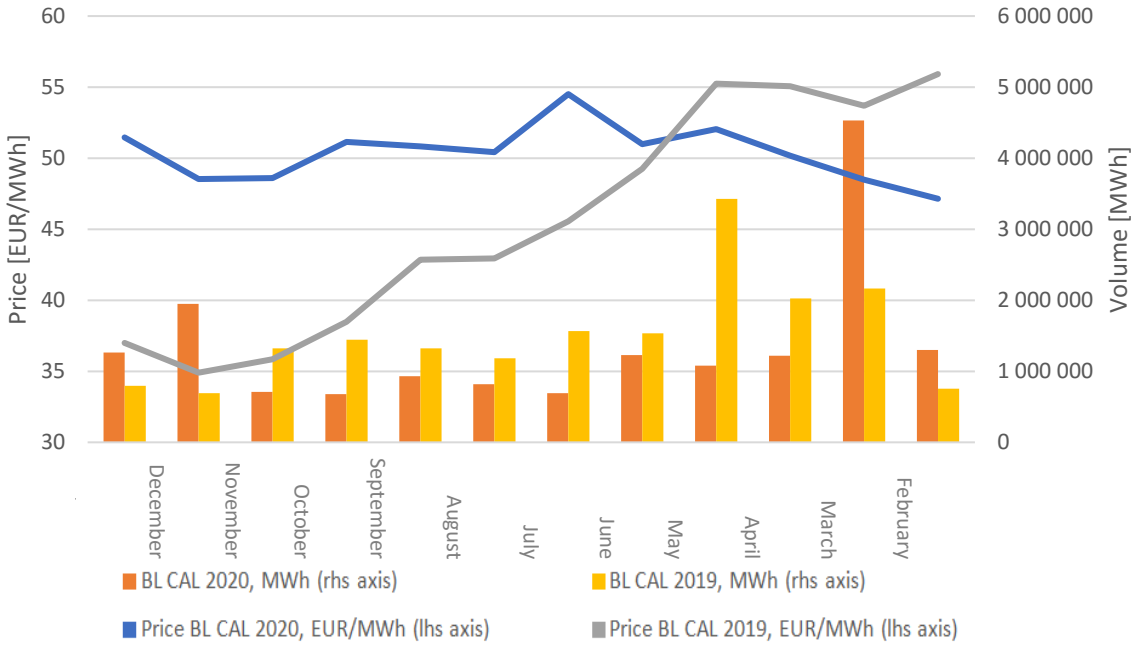
exchanging imbalances in real time using cross-border transmission capacity remaining after intraday gate closure time. The project started in 2011 and the Regulation has firmly established it among the tools for commercial balancing.

3.2 Competition and market functioning

3.2.1 Wholesale markets

In the Czech Republic, electricity trading takes place on the EEX (European Energy Exchange) platform (formerly the PXE energy exchange), through bilateral [OTC] contracts, and on spot markets organised by OTE, a.s. In 2019, a total of 30.4 TWh of electricity (48% less than in 2018) was traded via EEX (both directly on the trading platform as well as only cleared OTC transactions) for the Czech market for the long term. Of this amount, 16.4 TWh was with settlement in 2020. Chart 3 shows a comparison of the volume and prices of the BL CAL 2019 products traded at EEX in 2018 and the same statistics of the BL CAL 2020 product traded in 2019.

Chart 3 Comparison of year-ahead products for BL CAL 2019 and BL CAL 2020 futures



Source: PXE, a.s.

Spot trading takes place via OTE organised markets (day-ahead, intraday, balancing, and block markets) or under OTC (bilateral) contracts (not registered at the energy exchange). In 2019, 21,712 GWh was traded in the day-ahead market; under bilateral contracts registered in the OTE system between market participants a total of 75,396 GWh was traded. In the block market 5 GWh was traded and in the intraday market 670 GWh was traded. There was a significant increase in that market compared with 2018 due to the coupling of the Czech organised intraday market with other EU countries (SIDC, earlier also known as XBID).

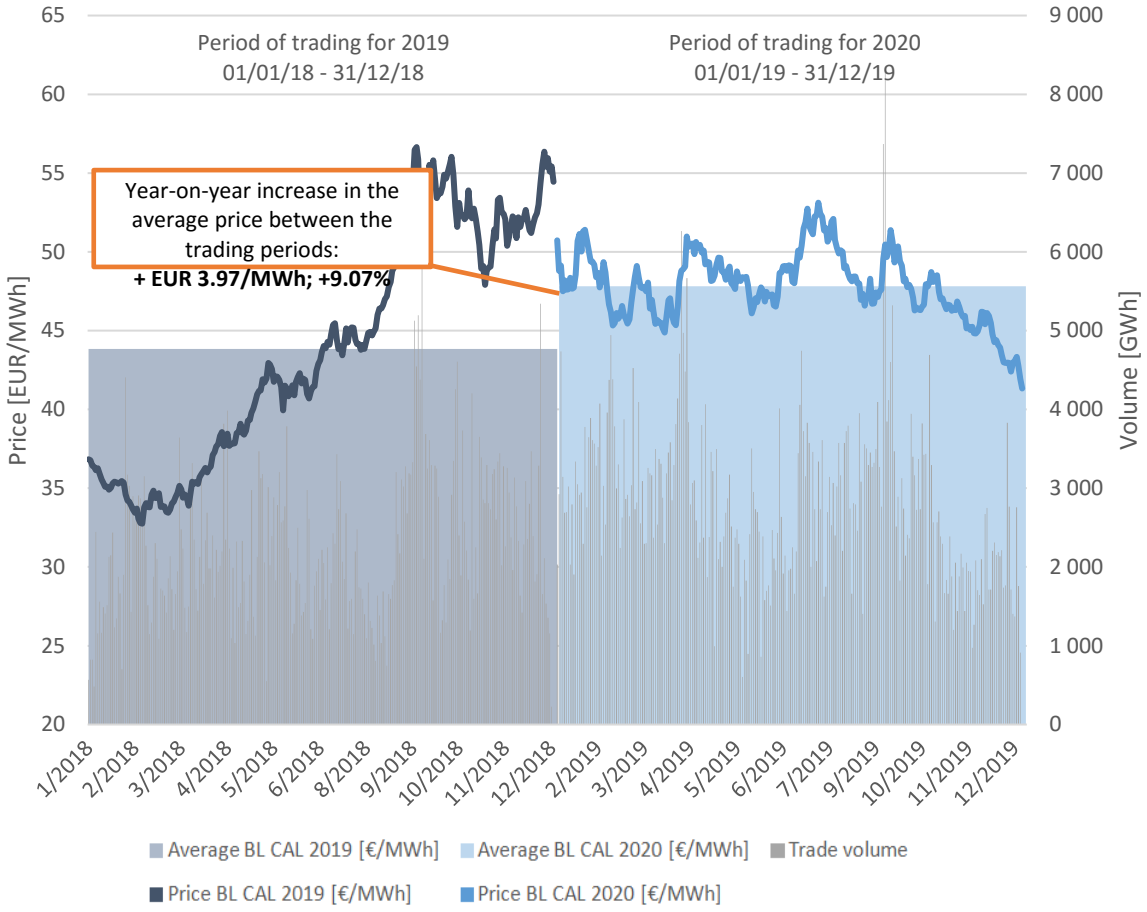
Table 2 Electricity wholesale market indicators

Electricity wholesale market indicators	2016	2017	2018	2019
Electricity production	83,302 GWh	87,038 GWh	88,000 GWh	86,989 GWh
Participants in spot electricity markets	105	106	113	121
Total electricity demand	72,418 GWh	73,818 GWh	73,941 GWh	73,931 GWh
Imports volume	8,608 GWh	10,388 GWh	10,431 GWh	10,955 GWh
Exports volume	19,447 GWh	23,576 GWh	24,310 GWh	23,622 GWh
Number of traders active in the wholesale market	328	357	378	397
Traded volume in the spot electricity market	132,033 GWh	135,471 GWh	132,392 GWh	120,667 GWh
Total traded volume	160,603 GWh	152,599 GWh	163,097 GWh	148,573 GWh
Weighted average of prices in the day ahead market	31.18	37.00	46.81	40.80

Source: OTE, a.s., PXE, a.s., ERO

Germany is the decisive wholesale market for the Czech market due to the several times higher liquidity in the German forward market. Chart 4 shows prices of electricity in year-ahead products in EUR/MWh at EEX, with delivery in the German-Luxembourgian bidding zone, including the volume of transactions in 2018 and 2019 to buy electricity for 2019 and 2020. The price of the year-ahead base load product gradually climbed over EUR 50/MWh and oscillated around it throughout the period under review in 2019. The rising price of electrical energy was also reflected in higher regulated prices for using transmission and distribution system networks.

Chart 4 Electricity prices in EUR/MWh at EEX



Source: EEX

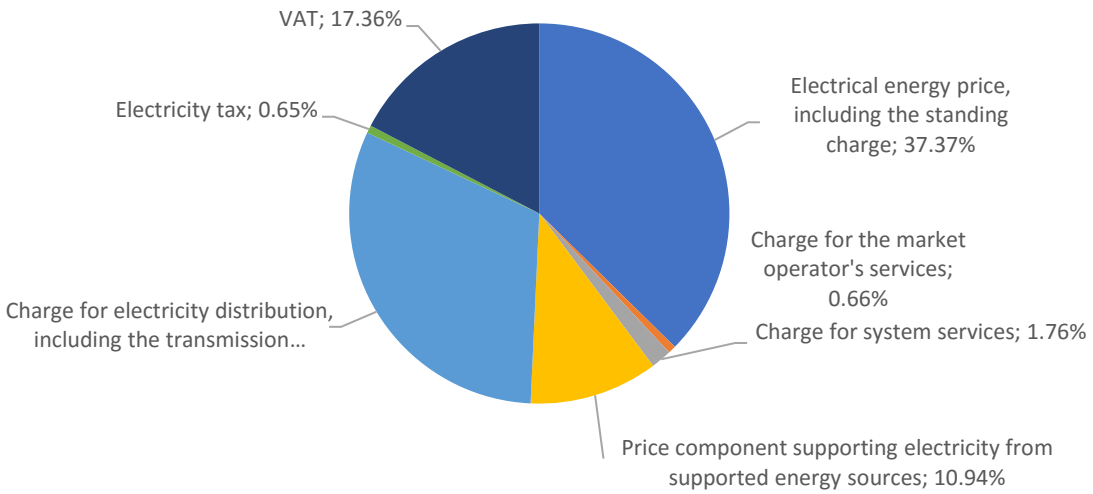
3.2.2 Retail market

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

The overall price of electricity supply for customers at the NN level is made up of the charge for the distribution system service and the price of electrical energy. The price of electrical energy is not regulated and it 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. 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 NN level can change their distribution tariff subject to meeting the conditions for obtaining the tariff; or they can influence the fixed component of the regulated charge for electricity distribution by changing the main circuit breaker upstream of their electricity

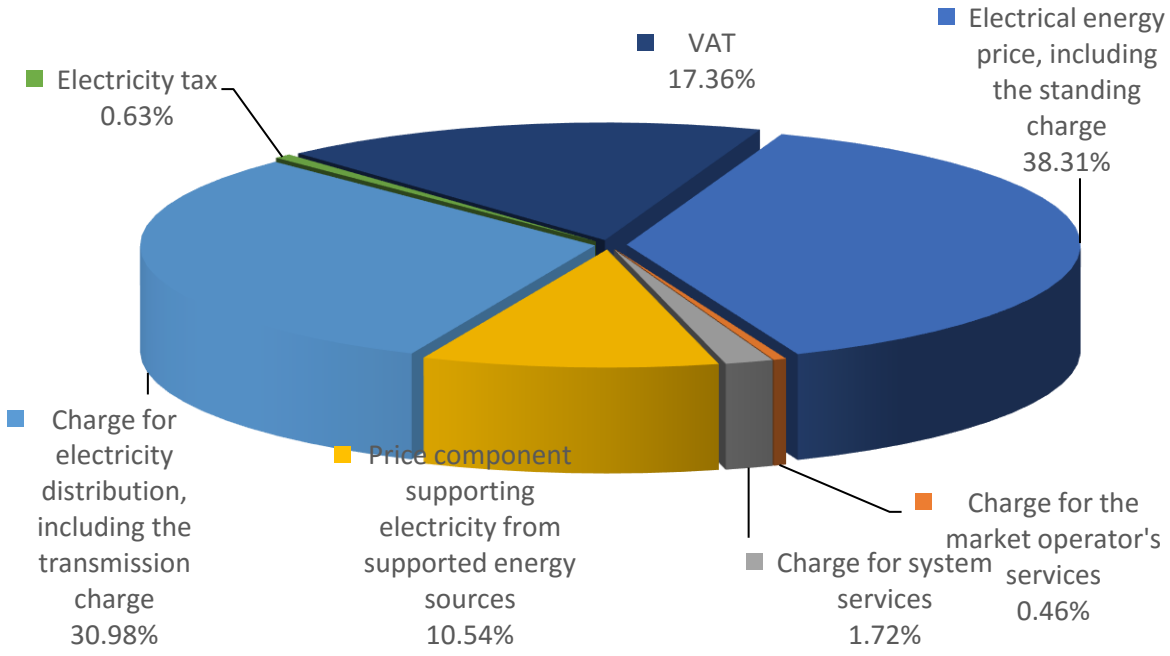
meter. Chart 5 shows the percentage shares (including the VAT and electricity tax) of the various components in the resulting price of electricity supply for households in 2019.

Chart 5 Percentage shares taken by each of the components of electricity supply price for households in 2019



Source: ERO

Chart 6 Estimated percentages of the components of the electricity supply price for households for 2020



Source: ERO

Traders must provide distribution system operators with the identification details of the customers whom they supply under agreements on bundled electricity 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.

Section 17c of the Energy Act provides for the ERO's cooperation with the Office for the Protection of Competition (OPC). Under this Section the Office is required to advise OPC 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.

We monitor competition in energy markets on an ongoing basis. We can therefore note that effective competition exists in retail markets. For example, the steadily rising number of suppliers indicates this. On the other hand, only a minority of customers actively look for the best quotation in the market. Thus, more than ten years since market liberalisation the former monopolists still have the largest market share.

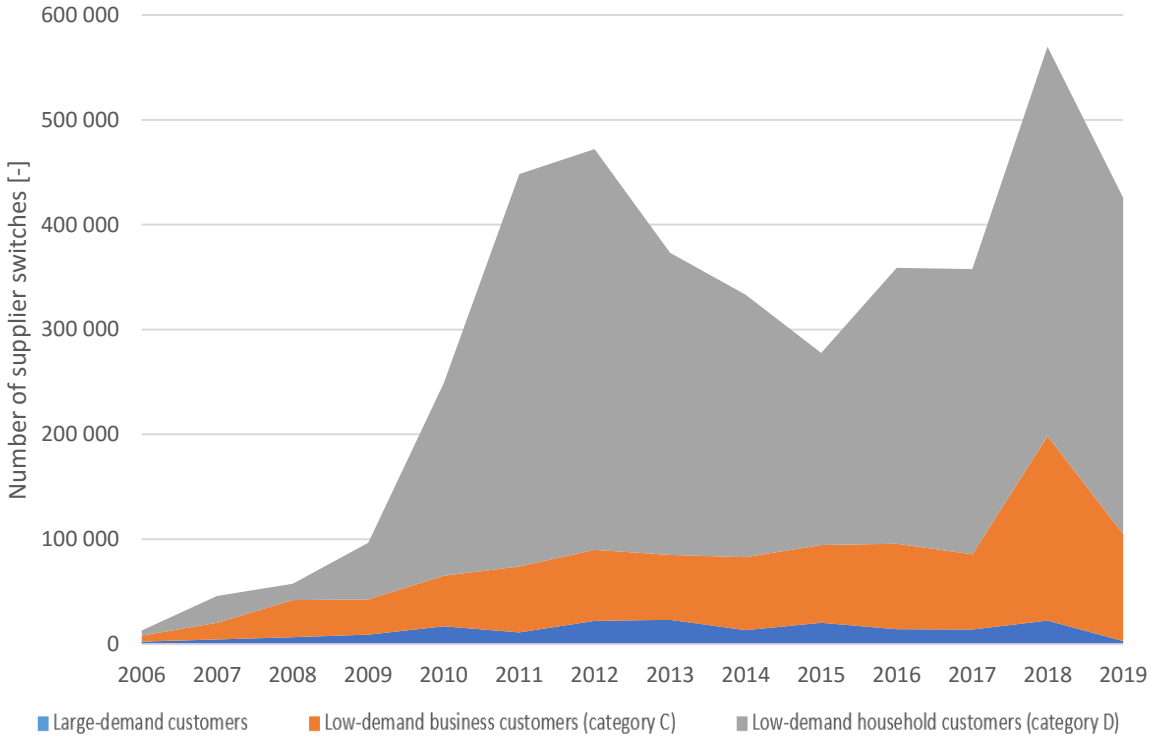
The Office continuously carries out monitoring and investigation concerning the electricity market's functioning in order to see whether effective competition exists in this market. Based on its monitoring in 2019 the Office notes that effective competition exists in the electricity market and the conditions for the functioning of the liberalised market have been put in place correctly. Every customer has the right to select a supplier 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 suppliers is not so strong and many suppliers can therefore offer their services for higher prices because their customers accept such prices.

At the end of the year there were 83 suppliers in the retail electricity market, which were cleared entities (balance responsible parties). Energy 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. The Office offers one of the tools for supporting the retail electricity market: a calculator comparing electricity suppliers, where the various electricity suppliers' current quotations can be found. Every electricity trading licence holder that provides the Office with its public and traceable quotation for inclusion in the calculator has the opportunity to be included. Data is provided and the calculator is operated on a voluntary basis.

In 2019 approximately 450,000 customers changed their electricity supplier, down by 21% year-on-year compared with the record values for 2018. In terms of the customer categories, the structure of the supplier switching varied significantly. In the high-demand segment, the number of supply point transfers to a different supplier plunged by 86.3%, and in the

low-demand business segment the number of electricity supplier switches dropped by 42.1%. In the household segment, electricity supplier switching declined by 13.6%. The year-on-year changes in each of the categories are illustrative only, since the market operator has changed its reporting and the number of cases where the customer category was not specified increased year-on-year.

Chart 7 Annual electricity supplier changes in the main customer categories



Source: OTE, a.s., edited by ERO

Tables 3 and 4 show the evolution of other relevant indicators. In particular the fact that over the last four years the number of active suppliers increased by almost one third can be viewed positively. On the other hand, supplier switching has not changed much. Similarly, market concentration remains at the same level.

Table 3 Selected retail electricity market indicators (households)

Retail market indicators (households)	2016	2017	2018	2019
Electricity consumption [GWh]	14,819.10	15,211.30	15,049.50	15,256.80
Number of electricity customers	5,170,861	5,213,261	5,251,142	5,282,898*
Number of registered electricity suppliers	380	388	399	411

Number of active electricity suppliers	61	68	79	83
Market share of the three largest suppliers by metering points [%]	n.a.	n.a.	n.a.	69.5
Number of retailers with market shares > 5 %	5	5	5	5
External switching rate [%]	5.09	5.22	7.07	6.07
Legal switching time under the Market Rules	10 business days	10 business days	10 business days	10 business days
Evolution of the price of electricity for an average customer [CZK/MWh]	1,458	1,465	1,456	1,618

*) The number of supply points for 2019 is not final; it does not include supply points in local distribution systems. Source: OTE, a.s., ERO

Table 4 Selected retail electricity market indicators (businesses)

Retail market indicators (non-households)	**2016**	**2017**	**2018**	**2019**
Electricity consumption [GWh]	39,251.10	40,102.60	40,588.40	40,177.60
Number of customers	788,928	781,837	786,649	773,106*
Number of registered suppliers	380	388	399	411
Number of active suppliers	61	68	79	83
Number of retailers with customer shares > 5 %	5	5	5	5
Switching rate [%]	10.32	9.18	22.36	13.17
Legal switching time under the Market Rules	10 business days	10 business days	10 business days	10 business days
Customers under regulated tariff	0	0	0	0

*) The number of supply points for 2019 is not final; it does not include supply points in local distribution systems. Source: OTE, a.s., ERO

3.2.2.2 Consumer protection and dispute settlement

In 2019 the ERO continued in its activities geared towards a legal solution to the problem of the intermediation of agreements on bundled electricity supply services. That year saw the culmination of the work on an amendment to the Energy Act in respect of consumer protection and on new legislation on intermediation in energy industries. At the same time, the Office supported, together with MIT and CTIA, and publicly and by way of participation in the working group, suppliers' efforts, as part of self-regulation, to boost the protection of customers in the position of consumers for the purpose of boosting the protection of these customers. In 2019 the ERO's intensive cooperation with other state administration authorities and with self-governments continued as regards consumers' complaints about the practices of entities carrying on business outside the Energy Act and offering consumers the intermediation of contracts for electricity supply on the basis of the results of tendering procedures or auctions.

Aware of the importance of prevention for consumer protection, in particular before new legislation on intermediation in energy industries is adopted, the ERO focused on prevention intensively. It has started cooperation with the organisations and authorities closest to consumers, in particular a number of consumer organisations, counselling services for citizens, and also self-governments. Besides the above activities, in respect of consumer protection the ERO continuously addressed ordinary consumers' everyday problems when it handled informal complaints. Thanks to its consulting activities and information provision, a large number of customers' complaints were resolved without any conflict or the need to conduct adversarial proceedings. Some of suppliers' practices, which were the subject of some complaints, continue to be addressed in the Office's oversight activities for suspicion of a breach of the Energy Act or the Consumer Protection Act.

The Ten Commandments of Defence against Energy 'Scumbags', *which we have posted on our website, continues to be a most current document to help consumers when they are entering into energy contracts. We also use it in the campaign promoting suppliers' self-regulation under the auspices of the Czech Confederation of Commerce and Tourism (Svaz obchodu a cestovního ruchu) titled Electricity and Gas Market Participants' Declaration for Consumer Protection, which we have welcomed, while some seminars on related topics take place under our aegis. We also actively present the* Ten Commandments *on the occasion of lectures on defence against energy 'scumbags', which we deliver across the Czech Republic.*

The ERO is competent to decide consumer disputes. These are cases where at the request of an electricity, gas or heat consumer or of a sole trader such person's dispute with a licence holder is decided. Consumer disputes concerned the performance of obligations under agreements on electricity/gas supply/distribution and also the question of the existence of a legal relationship, in particular in cases of withdrawal from contracts. Typical

cases included failure to perform the obligation to bill electricity/gas properly. In 2019 the Office considered 72 consumer disputes, 33 of which were concluded with finality in 2019.

The Office also completed other investigations concerning traders' failure to keep officially set prices in their billing of bundled electricity supply services to customers.

In 2019 we considered 72 consumer disputes, 33 of which were concluded with finality.

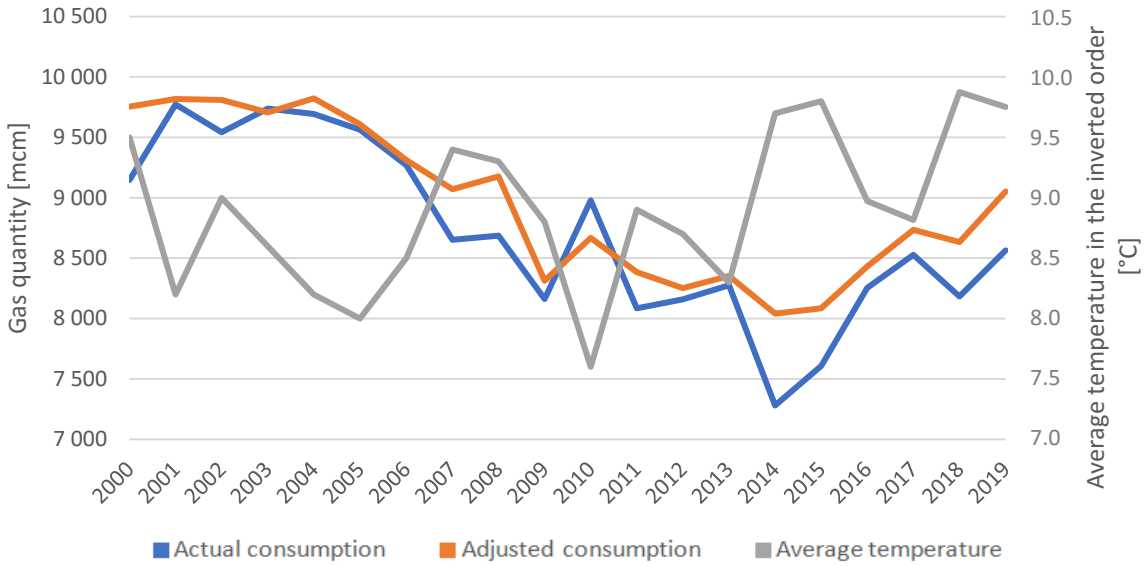
4 The gas market

In 2019, natural gas consumption in the Czech Republic totalled 8.565 bcm, i.e. 91.398 GWh (in the Czech Republic, the average gross calorific value was 10.67 kWh/m^3). Compared with 2018 actual consumption increased by 4.7%. The average annual temperature was 9.8 °C and the difference from long-term normal temperature was +1.8 °C and from average temperature in 2018 it differed by -0.1 °C. After 2018, 2019 was the second warmest year over the past 30 years. Gas consumption in the heating season accounted for about 68% of total annual consumption. The lowest monthly consumption was measured in June (378 mcm, i.e. 4.027 GWh) while the peak consumption was registered in January (1,284 mcm, i.e. 13.725 GWh). An increase in consumption compared with the same period of 2018 was mainly registered in the second and third quarters. Adjusted to long-term normal temperature using temperature gradients, in 2019 natural gas consumption amounted to 9.052 mcm, i.e. 96.600 GWh, up by 4.8% year-on-year.

Additional interesting information can be found on the ERO's website where we post detailed statistics on gas consumption every quarter.

Over the past 13 years, natural gas consumption in the Czech Republic did not exceed 9 bcm (96 TWh), an amount that was not unusual at the beginning of this millennium. Natural gas consumption in the Czech Republic is heavily influenced by ambient temperatures, which have been above the long-term normal temperature due to the climate change. The only exception was 2010 when also the highest consumption over the past ten years was registered. On the contrary, the lowest consumption was registered in 2014. The difference between the highest consumption in 2010 and the lowest consumption in 2014 was approximately 1.7 bcm (17.7 TWh). The largest drop in consumption, by 12%, was observed in 2014 when it totalled 7.3 bcm (77.4 TWh), the very lowest gas consumption since 1995. In 2019 actual consumption of natural gas was almost the same as in 2017, but at a much higher temperature measured (+1 °C).

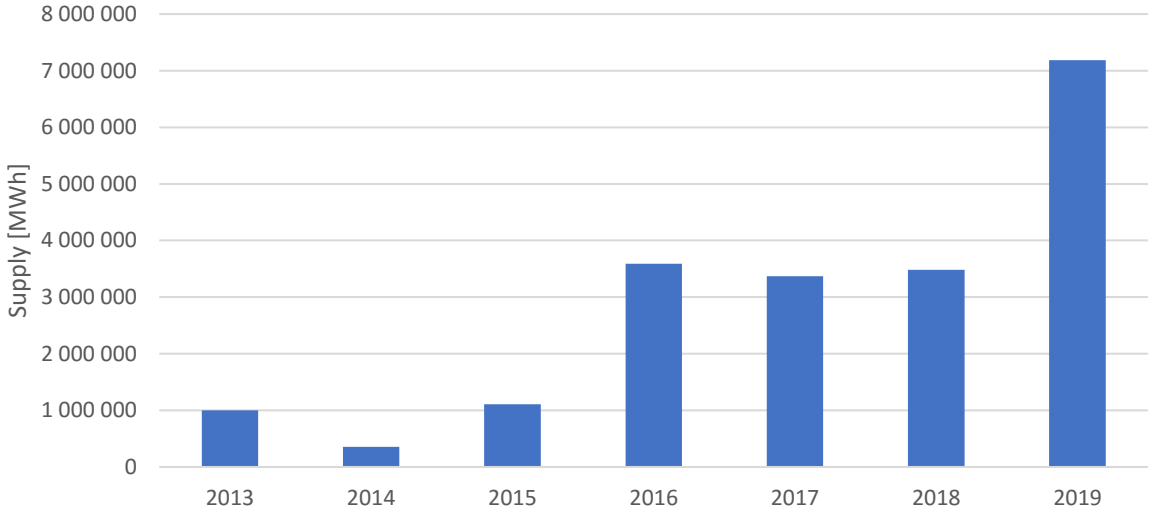
Chart 8 Overall evaluation of gas consumption in the Czech Republic between 2000 and 2019 (also showing adjustment to long-term normal temperature)



Source: ERO

The long-term decline in natural gas consumption has been slightly offset by natural gas consumption for power generation and, to some extent, gas supply to CNG stations in recent years. The Počerady combined cycle unit, an increasingly important element in the gas system, was operated almost continuously in 2019. This increase in electricity generation is attributable to more favourable conditions for the economics of operation as the gas price had dropped significantly. The Počerady power station's consumption surged by 106% year-on-year to 7,182 GWh of gas. Higher electricity generation from gas was reflected in the rising curve of the quantities traded on spot markets as described below.

Chart 9 The Počerady combined cycle unit – natural gas supply via the Bečov delivery and metering point between 2013 and 2019



Source: ERO

4.1 Network regulation

The methodology for determining gas transmission prices at each of the entry and exit points of the transmission system was changed in 2019. In compliance with the EU legislation the new capacity weighted distance (CWD) reference price methodology was adopted.

The transaction, announced in April 2018, related to the European Commission's conditional approval of the planned exchange of assets between RWE Group and E.ON Group subject to both groups selling some of their assets to third parties, was closed with effect as of 1 April 2019. In this operation a consortium headed by Macquarie Infrastructure and Real Assets increased its equity interest in innogy Grid Holding, a.s. to 100%. Czech Grid Holding, a.s., as innogy Grid Holding, a.s. has been renamed, therefore completely owns GasNet, s.r.o., which operates the largest gas distribution system in the Czech Republic. Since that date GasNet, s.r.o. has not been part of innogy Group, and so the complete ownership unbundling of this distribution system operator from the vertically integrated undertaking has taken place.

An important element in the gas system, which significantly influenced gas consumption in 2019, was the Počerady combined cycle unit; in 2019 its gas consumption for electricity generation increased by 106%.

A new annual maximum in the within day gas market organised by the market operator was achieved in 2019, with 4,670 GWh of gas traded. The increase was 52.7% on 2018 when the market participants executed trades for 3,059 GWh. As at 31 December 2019, 98 parties had access to the spot gas market.

In 2019 NET4GAS, s.r.o., the Czech transmission system operator, continued to carry out its Capacity4Gas project, the objective of which is to satisfy demand for long-term transmission capacity, which was confirmed in a Europe-wide capacity auction of transmission capacities on the PRISMA platform in March 2017.

Capacity4Gas will interconnect the Czech gas system with the EUGAL pipeline in Germany and reinforce the capacity at an entry point of the Czech gas system by approximately 1,119 GWh/d, which implies that the volume of gas transported across the German-Czech national border will increase by approximately 35 bcm/yr (372 TWh/yr). Most of this volume will be transited to other countries and some of it will also be available for gas supply to the Czech Republic.

4.1.1 Network and LNG tariffs for connection and access

Under Section 17(11) of the Energy Act, the 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 charge for the related service in the gas industry is understood to be the charge for the gas transmission service or the charge for the distribution system service,

which also include the charge for the market operator's services. The gas prices of the supplier of last resort are controlled on the cost-plus basis.

The regulated prices for each of the years in the fourth regulatory period are fixed in accordance with the Energy Act, public notices 195/2015 on methods of price regulation and procedures for price controls in the gas industry and 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*, the effect of which has been extended to 31 December 2020.

Under the above legislation and the price control principles, the Office determined adjusted allowed revenues, applicable to the distribution system operators, the transmission system operator and the market operator, from which the regulated prices were calculated for the year. 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 algorithm used for calculating adjusted allowed revenues also includes factors that increase the pressure for improving quality through elementary regulatory efforts to minimise the regulated component of the price. For gas distribution and for gas transmission intended for gas supply to supply points in the Czech Republic, revenue cap regulation is used. For gas transmission intended for gas supply to adjacent entry-exit zones, price cap regulation is used.

The tariffs for access to the transmission system (use of the system's entry and exit points) are calculated using the reference price methodology under NC TAR. Charges for distribution capacity booking are calculated using a tariff model that takes into account the gas quantity consumed and the size of booked capacities while respecting the off-take bands.

The TSO's adjusted allowed revenues are one of the inputs to the calculation of the regulated prices of gas transmission; the revenues are allocated to the entry and exit points in the transmission system based on the expected use of these points. The charge for the gas transmission service to the 'domestic point' (i.e. for customers in the Czech Republic) is integrated within gas distribution charges, and is billed to customers as part of the charge for the distribution system service. The prices for the gas transmission service 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 price covers the TSO's costs related to the gas quantity actually transported via the exit points of the transmission system.

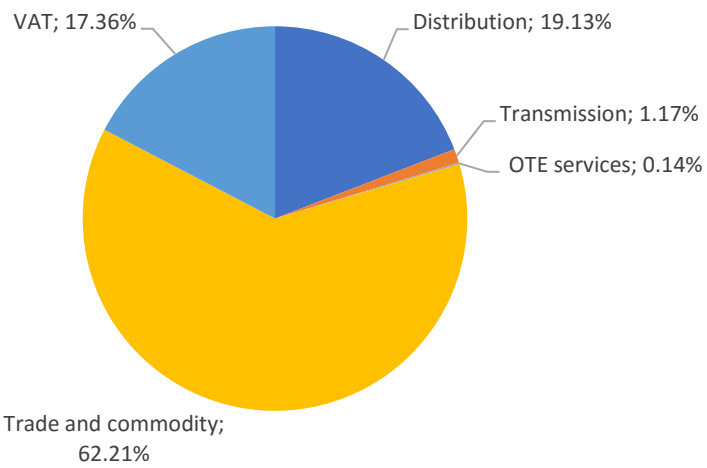
Operators of the distribution systems that are directly connected to the transmission system are subject to a unified pricing method. Their adjusted allowed revenues are determined on the basis of the data reported. Depending on booked distribution capacity and the gas quantity planned to be distributed, the adjusted allowed revenues are then allocated to the prices for each customer category, which are as follows: categories of high-demand customers, medium-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 usually double-component prices with a fixed and a variable component, similarly as the price for the gas transmission service.

The fixed component of the prices for high-demand and medium-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 business 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. The variable component of this price is the fixed price for gas taken, which reflects the gas quantities consumed by different customer categories.

There is no charge for connection to the gas system. Those who want to be connected have the right to be connected if the required capacity is available and the connection will not have a negative impact on the safe and reliable operation of the system. Adjusted allowed revenues, on the basis of which the fixed charge for clearing, related to the gas quantity taken at the customer's supply point, is then calculated, are also determined for the market operator every year.

The Czech gas market has been fully liberalised since 2007, which in practice means that the Office only sets the prices for the above activities that are necessary for ensuring gas supply to customers' supply points. The Office is not competent to determine the charge for commercial services and the charge for gas supply structuring and flexibility. These are uncontrolled prices and are fully within the respective gas trader's competence, 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 2019.

Chart 10 Structure of the average price for the gas supply service for household customers in 2019



Source: ERO *) Note: The charge for the market operator's services contains a special charge for the ERO's activities under Section 17d of the Energy Act.

Regulated and unregulated access to storage facilities

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.

Storage system operators follow an Equal Treatment Programme, the purpose of which is to provide for an equal and non-discriminatory position of all gas market participants who are using or want to use the company's services. Access to storage facilities is based on the principle of negotiated third-party access (TPA). The Office does not regulate the price for gas storing in storage facilities; this price is made by the market based on the results of auctions in which available storage capacity is offered as part of various products (packages). In the relevant legislation, the Office sets out the particulars, i.e. the framework of minimum conditions, of which applicants for storage capacity must be aware before storage capacity is offered using an auction mechanism. The terms and conditions of every auction, including the reserve price, are fully within the SSO's competence and are posted on the SSO's website. The Office continuously monitors and evaluates these terms and conditions. Auction results are published in a manner allowing remote access. Thus, the Czech storage capacity market is one of the most transparent in the EU. No discriminatory treatment of gas market participants occurred in 2019.

In 2019, storage system operators, innogy Gas Storage, s.r.o., MND Gas Storage a.s., and Moravia Gas Storage a.s., called a total of 46 auctions to sell storage capacities. Seasonal price differentials (spreads) continue to be the main instrument for storage capacity valuation.

Another criterion for assessing the rules applicable to access to storage facilities is the level to which they are filled before the beginning of the heating season and at the end of the storage year when, in case of temperature changes, for technological reasons storage facilities are unable to offer the full withdrawal capacity when gas stores in them are too low. On 1 October 2019, the day that is regarded as the beginning of the heating season and when conventional customs dictate the start of gas withdrawal from facilities, all storage facilities were filled to almost 100% of their capacities. The main reason was the favourable gas price and moderate autumn and winter 2018/2019, when storage facilities were filled to more than 25% after the season. Because of the moderate autumn and winter and also in response to the higher seasonal spread of gas prices and the uncertain transit situation in Ukraine, storage facilities were more than 95% filled even on 31 December 2019. Table 5 shows the date of the maximum value of gas stores in facilities.

Table 5 Dates on which gas stores reached the maximum percentage of capacity in 2019

Company	Date of the maximum	Maximum achieved percentage of filling the facility (%)
Innogy Gas Storage, s.r.o.	18 October 2019	99.99%
MND Gas Storage a.s.	8 November 2019	98.34%
Moravia Gas Storage a.s.	16 November 2019	96.22%

Source: www.innogy-gasstorage.cz; www.gasstorage.cz; www.moravia-gs.cz

Balancing

With effect since 1 January 2019, modified rules for balancing actions by the TSO have become applicable. This change resulted from the continuous evaluation of the efficiency of the model for gas balancing in the system, which had been in place from 1 July 2016. The new rules directly responded to the need to modify the procedure for the TSO to undertake balancing actions because the evaluation of the variations on days with an extreme increase in demand (February/March 2018) helped to identify differences between the set procedures and the TSO's possibilities to control the system safely and reliably. The new process for the TSO to undertake balancing actions therefore reflects these legitimate requirements; at the same time, opportunities have been reduced for speculative operations by the traders who have the potential to generate costs that subsequently have to be paid in order to achieve the cost neutrality of the balancing system.

The Office sets out all procedures and dates/times related to system balancing in the Gas Market Rules. The model applied in the Czech Republic differentiates between physical balancing (the TSO is responsible) and commercial balancing (the competence of the market operator who evaluates and settles imbalances in the gas market). In the gas business it is possible to use flexibility through the linepack for evaluating and settling imbalances. It enables the oscillation of BRPs' commercial positions within the set flexibility amount so that no additional costs of levelling emerging imbalances are generated if these limits are not

exceeded. Flexibility through the linepack is therefore the only instrument that makes it possible for BRPs to use a natural property of the gas system, change in the linepack, which does not influence the trouble-free and safe operation of the gas system. This flexibility is provided free of charge to the BRPs who have booked capacity at cross-border points or storage facility points (however, only when the OBA allocation rule, i.e. 'allocate as nominate', does not apply to them for the relevant gas day), and BRPs who are balance responsible at the customers' supply points. The size of provided flexibility derives from the size of the booked capacities and their utilisation, or in a substitute manner for supply points with non-continuous type C or CM metering.

4.1.2 Cross-border issues

CMP

The procedures and dates/times that are required for the proper implementation of CAM and CMP rules are set out in the Gas Market Rules. The Office continuously reviews the efficiency of regulation in order to ensure that the set rules match the development in the gas market in the Czech Republic and in the international context.

CMP rules are set out in the Gas Market Rules. The TSO informs the Office and the BRP or the foreign participant concerned about unused booked transmission capacity following the end of the period under review.

Monitoring of investment plans and assessment of consistency with Community-wide network development plans

Under Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC, implemented in the national legislation through Section 58k of the Energy Act, the Czech transmission system operator, NET4GAS, s.r.o., draws up ten year network development plans (TYNDP).

TYNDP contains an overview of the measures adopted with a view to ensuring an adequate capacity in the Czech gas transmission system so that it meets the requirements necessary for ensuring reliable and safe operation, thereby maintaining gas supply security while guaranteeing the objective of system adequacy.

The requirements of Section 58k of the Energy Act emphasise transparency in the decision-making on the submitted TYNDP, and the public consultation process is therefore conducted by the TSO as well as the ERO, to which the final version of the plan is submitted for assessment by 31 October under Section 58k (8) of the Energy Act. The Office is obliged to decide on the plan within two months from its submission.

The Office examines the content of TYNDP from the perspective of the requirements of the national legislation and the higher EU legislation represented by Directive 2009/73/EC,

Regulation (EC) No 715/2009, Regulation (EU) No 347/2013, Regulation (EU) No 994/2010, and Regulation (EU) No 984/2013, and also in the context of its benefits for the continuous development of the gas market and the needs of gas consumers in the Czech Republic, and overall impacts on final consumers.

Under Section 58k (6) of the Energy Act the Office conducts a public consultation on the plan; subsequently, having dealt with the comments received, it decides to approve the submitted version of the plan or obliges the TSO to recast the plan. In 2019 the Office was deciding on the Ten Year Czech Transmission System Development Plan for 2020-2029.

In the version intended for public consultation at the level of the TSO this plan contained several major changes versus TYNDP 2019-2028, both in the technical and economic parameters of the various projects and in the list of projects.

On the basis of the responses received during the public consultation process the TSO modified the plan and submitted it to the Office for assessment together with the record of this public consultation.

On 17 December 2019, after the public consultation at the ERO level and having dealt with the responses received, the Office approved the Ten Year Czech Transmission System Development Plan for 2020-2029.

Cross-border cooperation

The pilot project of a service enabling the interconnection of the Czech and Austrian gas markets was running until the end of the gas year ending on 30 September 2019. The Austrian and Czech TSOs designed the service, called Trading Region Upgrade (TRU), and they started to offer it to gas market participants in 2018. To the network users who succeeded in an auction offering the TRU service, TRU granted the right to nominate the required gas quantity that was to be transported via an exit point of the Czech transmission system. This nomination was automatically matched with the nomination of transport via an entry point of the Austrian transmission system (the Austria East zone). This principle was also applicable in the direction from Austria to the Czech Republic. This pilot project could be implemented on the basis of contractual cooperation with the Slovak TSO, which provided a part of its infrastructure. The project was based on the Czech and Austrian TSOs renting capacity in the Slovak transmission system, i.e. a virtual gas pipeline (pipe-in-pipe) was created. To the users the two gas markets therefore appeared as if they were connected directly.

4.1.3 Implementation of network codes and guidelines

Commission Regulation (EU) 2017/460

In 2019 the Office continued to draft a motivated decision required in Article 27 (4) of Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on

harmonised transmission tariff structures for gas (NC TAR), on the basis of which the relevant prices for the gas transmission service would be set from 2020.

In October 2018 the Office launched, under Commission Regulation (EU) 2017/460, a three-month public consultation on the applied methodology (the capacity weighted distance reference price methodology) for calculating reference prices and on the prices set. Responses were accepted until 31 December 2018. Under Article 26 (3) NC TAR, on 31 January 2019 the Office published these responses, including their summary. An English translation of the responses was also forwarded to ACER.

In January 2019 the received responses were published under Article 26 NC TAR. Under Article 27 of this Regulation, ACER analysed the consultation document and assessed the responses delivered. Within the set period of two months following the end of the consultation, i.e. on 28 February 2019, ACER sent the conclusions of its analysis to the Office and Commission. The conclusions of its analysis were published in March 2019. On 21 May 2019 a motivated decision was adopted and published under Article 27 (4) NC TAR, whereby the EU regulation was implemented in full. This decision was published in the *Energy Regulation Gazette*, issued by the Office, in Part 3/2019.

Publication requirements under Articles 29 to 32 NC TAR

Under Article 29 the Office published the reserve prices of standard capacity products for firm and interruptible capacity and the multipliers applied to the reserve prices of non-yearly standard capacity products, doing so by way of issuing its Price Decision 1/2019 of 21 May 2019 on regulated prices related to gas supply. On 29 November the Office published the information required in Article 30 NC TAR on its website. The Office is now obliged to publish and update the information required by Articles 29 and 30 NC TAR every year.

Commission Regulation (EU) 2017/459

With effect as of 1 March 2019 the establishment of virtual interconnection points was completed at the interconnection points of the transmission system, as required by Article 19 (9) of Regulation (EU) 2017/459. The interconnection points between the German NCG zone and the Czech Republic were integrated into the VIP Waidhaus NCG in the area of the Waidhaus delivery point as of the same date. As regards the congestion management procedures in cases of contractual congestion, no measures were adopted. On the basis of its continuous review of the efficiency of regulation the Office did not identify any reasons for amending the rules in place.

4.2 Competition and market functioning

Satisfying the requirements of Directive 73/2009/EC, implemented in the Czech legislation, the Office puts in place rules that provide for the gas market's secure and non-discriminatory

functioning and promote a competitive environment. The gas market has been fully liberalised and the Office is only authorised to control the prices that cannot, for technical or organisational reasons, be formed by market mechanisms in a competitive environment – the gas transmission service, the gas distribution service, and the market operator's services. The Office is not competent to set the charge for commercial services and the charge for gas supply structuring and flexibility. These uncontrolled prices are fully within the respective gas trader's competence, and depend on the trader's business strategy and its contractual relationships with customers.

The Czech gas market works on the basis of a non-discriminatory approach, where every trader can approach any customer and enter into a contract with the customer and vice versa. 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 and services. The market's dynamics therefore depend 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 2019, the Office carried on with the continuous monitoring, within its remit and in accordance 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. In 2019 it also monitored competition in the wholesale and retail gas markets. The Office did not find any restricting of customers' rights or distorting of competition in the gas market, and it therefore did not impose any measure to eliminate the causes preventing effective competition in the gas market.

Complying with its obligation to protect consumers under Section 17 (4) of the Energy Act, the Office continued to post indicative prices of gas supply services on its website with a view to improving information for consumers.

The indicative prices constitute non-binding information for customers on whether the prices for which they are buying gas reflect the actual situation in the retail gas market. The indicative prices of gas supply services reflect the wholesale prices of gas traded at energy exchanges, for which gas traders are able to buy gas for the relevant period.

They also contain traders' margin, which covers their costs incurred in ensuring the gas supply service for their customers, and reasonable profit. Indicative prices therefore represent the average value for gas taken and the standing monthly charge for gas supply. On the contrary, they do not include regulated prices for distribution and for the market

operator's services, which are set out in the Office's price decisions and customers cannot influence them by changing their gas trader.

4.2.1 Wholesale markets

The REMIT Regulation also applies to the wholesale gas market; its purpose is to ensure a fair and competitive environment for trading in this commodity, and prevent commercial practices of market abuse and profits drawn from market abuse. For meeting these objectives effectively, cooperation between energy and financial regulators and competition authorities is required.

Trading takes place through buying and selling at commodity exchanges, where transactions are executed under short-term and long-term contracts or market participants enter into bilateral contracts. Since the Czech Republic does not have any significant indigenous gas resources most of the gas is imported and then traded between gas market participants.

Table 6 Gas wholesale market indicators

Gas wholesale market indicators	2016	2017	2018	2019
Gas production [GWh]	1,473	1,580	1,477	1,410
Spot market participants*	95	97	97	98
Total gas demand [GWh]	88,243	90,996	87,306	91,398
Imports volume [GWh]	362,845	373,374	424,107	385,378
Exports volume [GWh]	276,070	278,592	338,775	283,857
Number of traders active in the wholesale market	n.a.	n.a.	n.a.	n.a.
Traded volume in the spot gas market [GWh]	2,088*	3,747*	6,542	11,198
Traded volume in futures market [GWh]	n.a.	n.a.	4,210	2,554
Total traded volume [GWh]	n.a.	n.a.	10,752	13,752
Weighted average of prices on the within day market [EUR/MWh]*	15.09	18.02	23.88	14.12

Source: OTE, a.s., PXE, a.s., ERO; *) only OTE, a.s.

4.2.1.1 Monitoring the level of prices, the level of transparency, 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 Office does not have the competence to set the prices of the gas traded in 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.

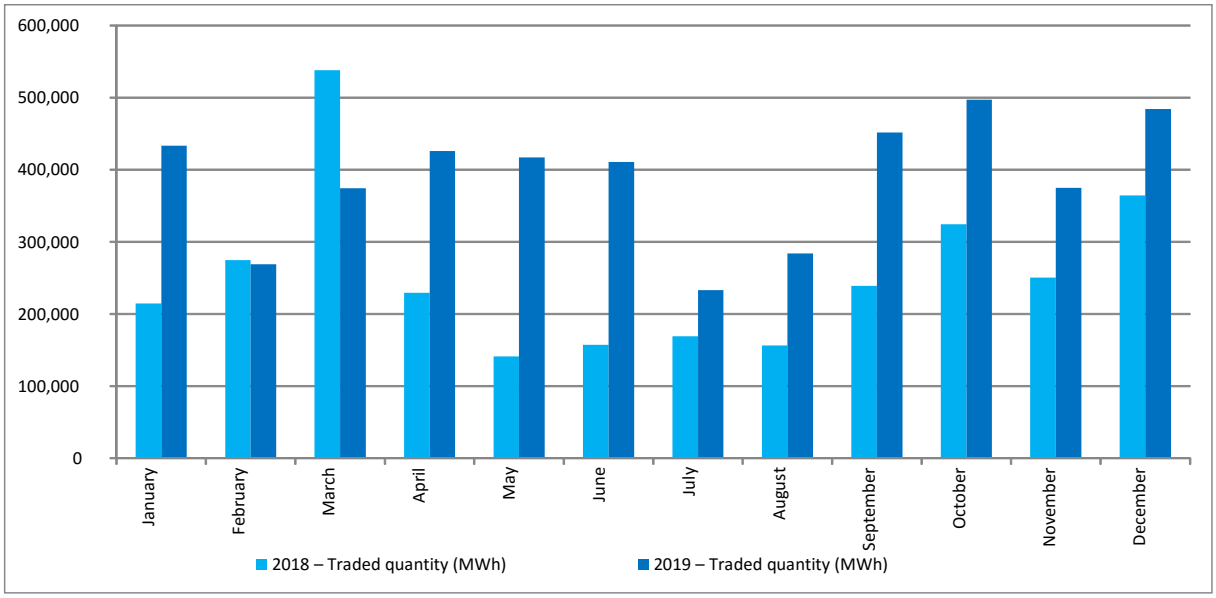
Traders operating in the wholesale gas market can buy gas at commodity exchanges, under long-term contracts, or from other traders. Long-term contracts are currently no longer preferred by gas suppliers. However, a significant quantity of the gas traded between gas market participants is imported into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

Spot gas market

Under Section 20a of the Energy Act, the spot gas market is organised and operated by the holder of the exclusive licence for the activities of the market operator. The Czech market operator currently organises only the within day gas market because market participants were not interested in the day-ahead gas market in the past years. The execution of transactions in the within day gas market, which operates on a 24x7 basis, relies on the principle of automatic bid and offer matching. Trades are cleared in the euro or Czech crowns and gas is supplied through the Czech virtual trading point, also operated by the market operator.

In 2019 a significant increase in trading in the within day gas market was registered, which was positively reflected in the traded gas quantity. This is one of the reasons why it can be regarded as a fully-fledged platform on which the participants' commercial plans can be carried out. In 2019, 4,670 GWh of gas was traded in that market, another significant year-on-year increase on 2018 when 3,059 GWh of gas had been traded. The weighted average of the prices of the gas traded in the within day market declined by approximately EUR 10/MWh, since it was EUR 14.12/MWh in 2019 while in 2018 it was EUR 23.88/MWh. In the spot market, natural gas prices even dropped under EUR 10/MWh in the summer of 2019. The main reason for such low prices was the surplus of LNG being shipped to Europe, and also its lower prices on other global markets.

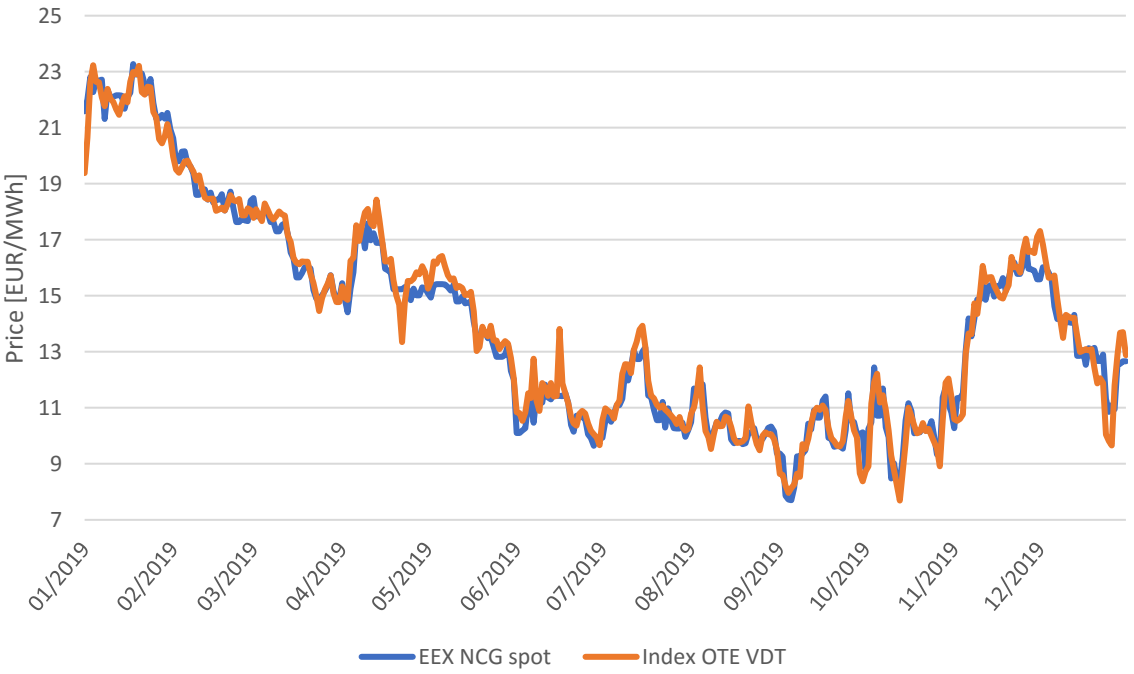
Chart 11 Comparison of gas quantities traded on the OTE spot market in 2018 and 2019



Source: OTE a.s.

In recent years, the weighted average of the prices in the within day gas market organised by the market operator has copied the profile of the weighted average of the prices of the comparable product on the NCG platform, traded in the spot market of European Energy Exchange AG (EEX, the PEGAS platform), and it was no different in 2019. Chart 13 clearly depicts the significant correlation of the development of prices on selected within day markets.

Chart 12 Comparison of the OTE Index and EEX NCG spot prices in 2019



Source: OTE, a.s. and Powernext SAS

Development similar to the above could also be seen in the weighted daily average of the prices of the gas traded in the within day markets on other trading platforms in adjacent regulatory areas (TTF, Gaspool, CEGH) in 2019. It can therefore be noted that the within day gas market organised by the market operator in the Czech Republic is a fully functional tool for gas sourcing 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. At the same time, the price remains lower than at the Austrian CEGH hub (operated by Central European Gas Hub AG).

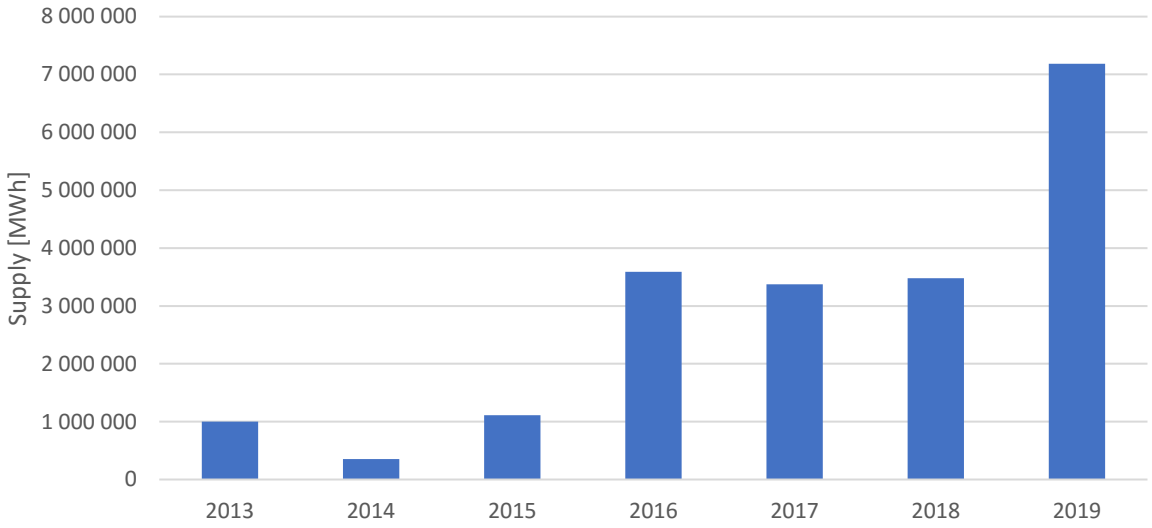
POWER EXCHANGE CENTRAL EUROPE

Since the end of 2017 POWER EXCHANGE CENTRAL EUROPE (PXE) has been an integral part of the PEGAS pan-European trading platform operated by POWERNEXT. In cooperation with POWERNEXT and CEGH, PXE operates the PEGAS CEGH Czech Gas Market exchange for trade in gas, specifically derivative products for delivery to the virtual point for trading in the Czech market. Thanks to this cooperation the PXE energy products are traded on the EEX platform, and the parties have the opportunity to trade in 16 different futures markets across Europe.

Through PXE in the Czech Gas Futures market, 2,195 contracts totalling 2,554 GWh were traded in 2019. The value of these contracts totalled EUR 44,632,818.58, which in terms of the traded quantity is a drop of more than 60% on 2018 when 4,210 GWh of gas was traded. In the PXE spot market (Czech Gas Spot) 240,018 contracts totalling 7,012 GWh and EUR 97,148,489 were traded in 2019. Compared with 2018, when 3,483 GWh of gas was traded, PXE registered an over 100% increase in the gas quantity traded and the number of executed contracts.

The rising curve of the quantities traded in the above spot markets can also be attributed to operators of gas-fired power stations: during the year, they leveraged the positive price differential between electricity generated by gas-fired plants and by other plants, primarily coal burning, which was heavily felt in gas consumption. In the Czech Republic this was primarily the Počerady power station, whose combined cycle unit has been effectively playing its role of a readily available source of electricity since 2016. In the year of commissioning this power station unit produced 1,813 GWh of electric energy, consuming 3,586.8 GWh of gas. In 2019 as much as 7,182 GWh of gas was consumed for electricity generation; compared with 2018 this is an increase of 48%. The original plans envisaged the use of the power station in a ‘half peak load’ mode or when other plants were shut down. Nevertheless, it was operated almost continuously in 2019. This increase in electrical energy generation was attributable to more favourable conditions for the economics of operation, since the market gas price had dropped significantly.

Chart 13 Development of annual gas consumption in the Počerady combined cycle unit (the Bečov delivery point)



Source: ERO

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 2019, the Office held records of a total of 2,834,509 supply points connected to regional distribution systems in the Czech Republic. Compared with 2018 the number of registered supply points therefore declined by 6,110. A more detailed overview of the structure of customers taking gas in the Czech Republic is contained in Table 7.

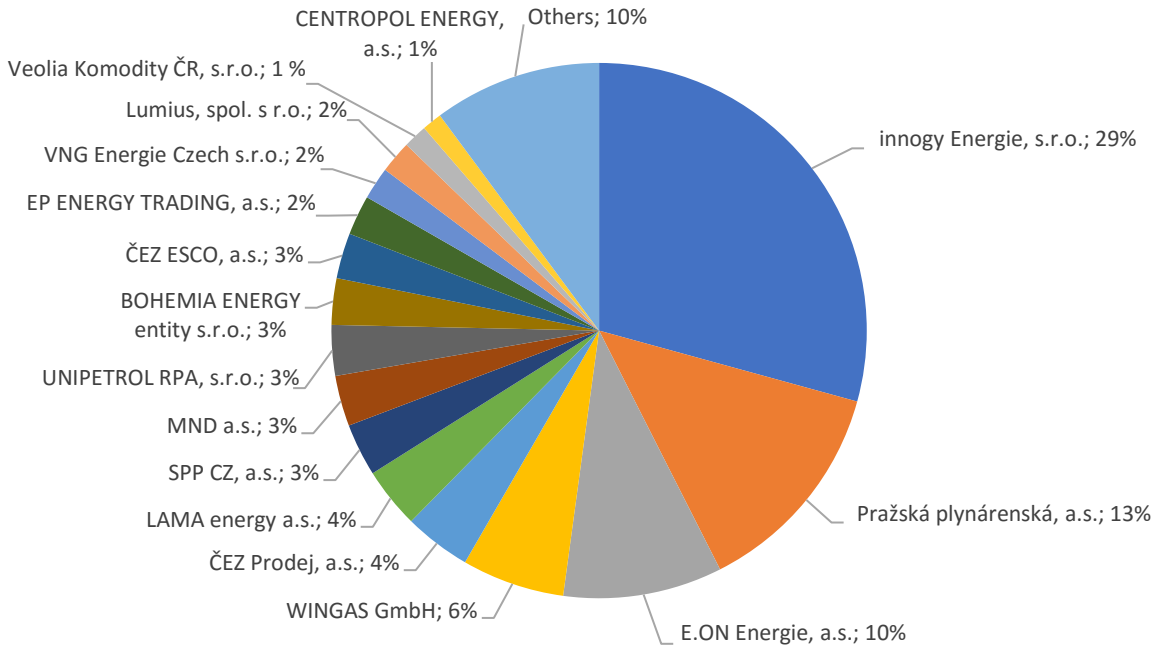
Table 7 Number of gas supply points in 2019

Customer category	Number of supply points	Share [%]
High-demand customers	1,692	0.06%
Medium-demand customers	6,760	0.24%
Low-demand customers	206,264	7.28%
Households	2,619,793	92.42%
Total	**2,834,509**	**100.00%**

Source: ERO

In 2019, there were 125 active gas traders. Of those, only 81 traders had more than 100 gas supply points registered in the OTE system at the end of 2019. In terms of the gas quantity supplied, in 2019 the largest market share was held by innogy Energie, s.r.o. with 29.27%, followed by Pražská plynárenská, a.s. with 13.27% and E.ON Energie, a.s. with 9.61%. Chart 14 depicts a more detailed breakdown of gas traders' shares in gas supply to customers.

Chart 14 Traders' shares of gas supply in 2019

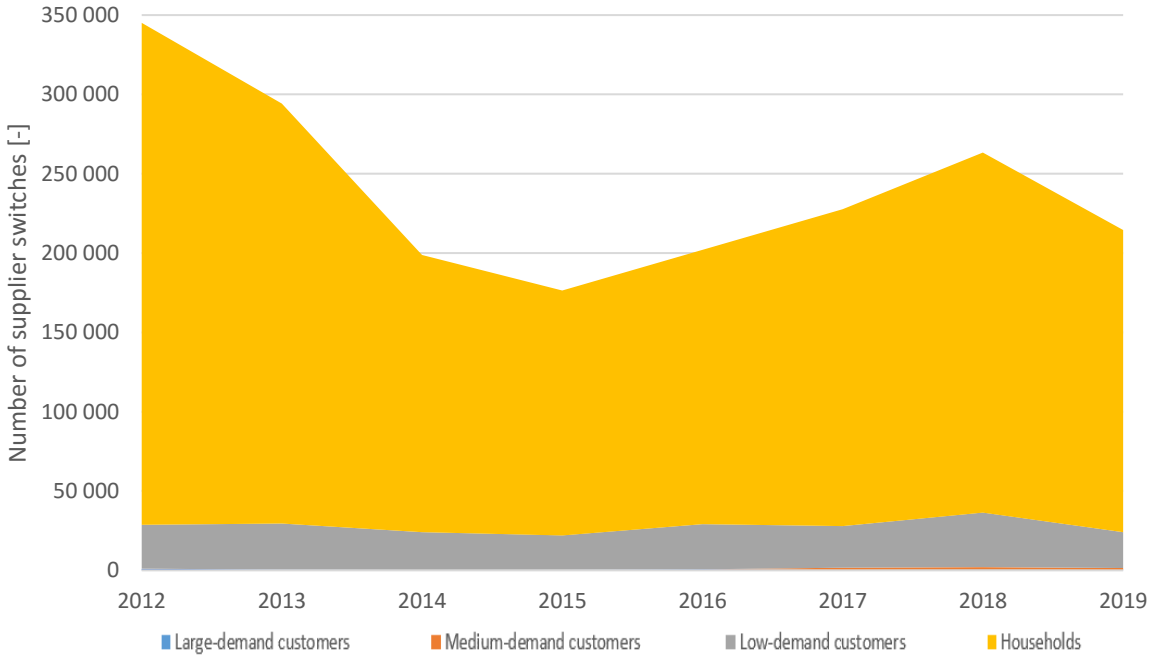


Source: OTE *) Note: Traders supplying less than 1% are included in the Others item

Supplier switching

A total of 214,428 gas supplier switches were registered in 2019; of those, 190,446 took place in the most populated customer category, i.e. households. Chart 15 shows the structure of gas supplier switching in more detail.

Chart 15 Number of gas supplier switches between 2012 and 2019



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 2019.

Table 8 Number of gas supplier switches in 2019

Customer category	Number of supplier switches	Total number of supply points	Switching [%]
High-demand customers	314	1,692	18.6
Medium-demand customers	1,123	6,760	16.6
Low-demand customers	22,545	206,264	10.9
Households	190,446	2,619,793	7.3
Total	**214,428**	**2,834,509**	**7.6**

Source: ERO

Other relevant indicators related to the evolution of the retail market can be found in Tables 9 and 10.

In particular the fact that despite the keen competition on the market the number of active suppliers is continuously rising can be viewed positively. In the context of the above,

a negative feature is the gas prices for the average customer where the large number of active suppliers is not reflected in livelier dynamics of the final gas price for the average customer, which oscillates around CZK 1,100–1,200/MWh.

Table 9 Selected retail market indicators (households)

Retail market indicators (households)	2016	2017	2018	2019
Gas consumption [GWh]	25,309	25,902	24,278	23,200
Number of customers	2,632,037	2,632,599	2,626,417	2,619,793
Number of registered suppliers*	213	227	236	243
Number of active suppliers	86	99	95	105
External switching rate [%]	6.6	7.6	8.6	7.3
Legal switching time	10 business days	10 business days	10 business days	10 business days
Evolution of the price of gas for an average consumer [CZK/MWh]**	1,219.46	1,149.03	1,106.70	1,171.19

The number of supply points for 2019 is not final; it does not include supply points in local distribution systems.
*) Values without foreign licences; inclusive of recognised foreign licences they would be 242 – 254 – 263 – 272
**) Prices for the first half of the year shown by Eurostat in the table "Gas prices for household consumers - bi-annual data (from 2007 onwards)" for the D2 customer category
Source: OTE, a.s., ERO's Report on Activities and Finances for 2019

Table 10 Selected retail market indicators (non-households)

Retail market indicators (non-households)	2016	2017	2018	2019
Gas consumption [GWh]	61 906	63 942	61 618	66 582
Number of customers	208 436	211 658	214 202	214 716
Number of registered suppliers*	213	227	236	243
Number of active suppliers	73	86	97	111
Switching rate [%]	14,9	13,2	17,0	11,2
Legal switching time	10 business days	10 business days	10 business days	10 business days

The number of supply points for 2019 is not final; it does not include supply points in local distribution systems.
*) Values without foreign licences; inclusive of recognised foreign licences they would be 242 – 254 – 263 – 272
Source: ERO, OTE, a.s., ERO's Report on Activities and Finances for 2019

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

Complying with its obligations laid down in the Energy Act, the Office continuously carries out monitoring and investigation concerning 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 2019 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 since their customers accept such prices.

4.2.2.2 Consumer protection and dispute settlement

In 2019 the Office pursued activities aimed at more effective protection of consumers' interests with a view to satisfying all reasonable requirements for gas supply. These activities and their main direction are similar to those for consumers in the electricity market and are described in detail in the electricity chapter above.

As regards dispute resolution, under Section 17 (7) (a) of the Energy Act the Office is competent to decide disputes over contract conclusion under the Energy Act between licence holders, or between a licence holder and a customer. In 2019 the Office decided with finality a dispute over a decision to enter into a contract for connection to the transmission system on the terms set by the proponent, a storage system operator.

The ERO considered that the proponent's proposal to conclude a contract was justified and therefore decided that the TSO was obliged to enter into an agreement on connection to the transmission system with the SSO, modifying the content of the draft agreement received from the SSO.

4.3 Gas supply standard (GSS)

As part of its competences, the Office monitors and evaluates adherence to the security standard for gas supply in the Czech Republic. In response to the expert circles' interest, the Office has created a Monthly Report on the Evaluation of the GSS in the Czech Republic; it is based on data received from gas traders and subjected to periodic evaluation, and posted on the Office's website since the 2015/2016 winter season. In these reports the Office also pursues one of its key priorities: identify all factors that might stand in the way of ensuring secure and reliable gas supply to final customers in the Czech Republic. Under the applicable legislation, all gas traders send information concerning the obligation to provide for GSS to the Office before every the winter season.

In 2019, GSS was provided for January to March and October to December. Most gas traders supplied a confirmation that they had another gas market participant providing for their GSS, i.e. one trader provides GSS for several other traders, including through gas storage for 30% of GSS.

In the light of suspicion that certain companies failed to ensure the required 30% of GSS in a storage facility at the end of the 2018/2019 winter season, the Office requested storage system operators to provide data on the daily quantities of gas stored in the relevant period, broken down by gas trader. Based on this poll, the Office conducted inspections at some of the companies with a view to checking each of the traders' actual provisions for GSS, since customer protection in the Czech Republic is one of the Office's key missions.