



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

**for 2020**

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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 2020*. 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, and the heat supply industry, and determines aid for supported energy sources.

The Office is headed by a five-member body, the Board, the members of which are appointed by the Czech Government for a predefined term in office. In 2020, Stanislav Trávníček was the ERO Board Chairman, and Rostislav Krejcar, Ladislav Havel, Martina Krčová and Petr Kusý were the other members. During the year, Markéta Zemanová became a new member of the Board for a term from 1 August 2020 to 31 July 2025, replacing Rostislav Krejcar whose term had ended on 31 July 2020.

The ERO National Report for 2020 offers a detailed view of the developments in the Czech energy sector. The Office pursued international activities mainly in the ACER and CEER working groups in the electricity and gas industries, consumer protection, and the REMIT issues. In 2020, the Office continued its cooperation within ERRA. The Office devoted increased attention to pursuing regional cooperation and promoting bilateral contacts, emphasising cooperation with the V4 countries' regulators. Other lines of cooperation had the form of bilateral and multilateral meetings concerning 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 electricity industry

In 2020, the activities related to the Czech electricity market development continued, *inter alia*, in the context of the development of the EU's synchronous area (for more details see points 0 and 0). This effect was felt the most strongly in the intraday electricity market; thanks to the integration under the Single IntraDay Coupling scheme, the number of executed contracts has significantly increased, the price relations of hourly contracts have changed (the spread between the minimum and maximum price of hourly contracts has shrunk), the market's speed and flexibility in response to the current conditions prevailing in it have improved, and additional commercial tools have been developed.

In the intraday electricity market organised by the market operator, 4,439 GWh of electricity was traded, i.e. up by approximately 300% on 2019. In 2020, the weighted average of the prices of electricity traded in the intra-day market declined to EUR 37.25/MWh, i.e. by 5.8% on 2019. The minimum average market price was approximately EUR 23.6/MWh, i.e. down by 24.4% on 2019. The maximum average market price was approximately EUR 44.9/MWh, down by 8.6% on 2019. In 2020, the spread between the minimum and maximum prices, the average difference being EUR 21.26/MWh, declined by approximately 19% on 2019.

At the end of 2020, 119 market participants had access to the electricity spot market.

In terms of a long-term comparison, the electricity intraday market experienced the largest ever amount traded, which can be attributed primarily to the positive effect of the integration of intraday markets in the EU.

#### The gas industry

The settlement of liabilities between the RWE AG and E.ON SE groups continued in 2020, and the implementation of the Capacity4Gas project also continued (more details in point 4.1).

A total of 4,311 GWh of gas was traded in the within-day gas market organised by the market operator, OTE, a.s., down by 7.7% on 2019. In 2020, the weighted average of the price of gas traded in the within-day market dropped to EUR 9.52/MWh, i.e. down by 32.6% on 2019. In mid-2020, natural gas prices in the spot market even dropped under EUR 6/MWh. Such low prices resulted from low demand caused by the mild winter and the COVID-19 pandemic, and also from the increasing offer of LNG imports into Europe.

At the end of 2020, 104 market participants had access to the spot gas market.

In recent years, the prices in the Czech within-day gas market have closely followed the prices of comparable products in the German bidding zone, NCG, traded at the EEX spot market (the PEGAS platform), and it was the same in 2020.

In terms of a long-term comparison, 2020 saw the highest actual gas consumption over the last ten years. This consumption is also attributable to the growing gas demand for electricity generation at the Počerady and Vřesová power stations (more details in chapter 4, including Chart 9).

## Extraordinary Price Decisions

In April 2020, the Office responded to the declaration of the state of emergency by the Czech Government in connection with the COVID-19 pandemic: it issued extraordinary price decisions, two for the electricity industry (see point 3.1) and one for the gas industry (see point 4.1).

Despite the continuing COVID-19 pandemic, in the autumn of 2020 the Office did not issue any additional extraordinary price decisions. The customers were prepared for the second wave of the pandemic and were able to continue benefitting from the terms and conditions that they had arranged in the spring.

## The fifth regulatory period

Under Section 19a(9) of the Energy Act, on 9 June 2020 the Office published the *Price Control Principles for the 2021-2025 Regulatory Period in the Electricity and Gas Industries and for the Market Operator's Activities in the Electricity and Gas Industries, and for Mandatory Buyers* in the interest of secure, reliable and transparent regulation. In preparing the Price Control Principles, the Office focused on developing a functional and systemic methodology without any personalised modifications, intending to keep the rules for the fifth regulatory period simple while preserving fairness and stability. The core principle is that customers should pay reasonable, value-for-money prices for services, with the system operators recovering revenues allowing them to maintain and reasonably develop the quality of their services. The Price Control Principles also take into account the dynamic nature of the environment and make possible flexible responses to any changes during the regulatory period.

## 2.2 Report on the implementation of the Winter Package

At the end of November 2016, the EC 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 in force since 1 January 2020 (certain provisions since 4 July 2019);
- (Recast) Regulation (EU) 2019/942 in force since 4 July 2019;
- Directive (EU) 2019/944 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 in force since 24 December 2018 (certain provisions since 1 January 2021);
- Directive (EU) 2018/844 with transposition by 10 March 2020;
- (Recast) Directive (EU) 2018/2001 with transposition by 30 June 2021;
- Regulation (EU) 2019/941 with effect since 4 June 2020.

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.

The implementation of the Winter Package generates new duties and tasks for the Office, such as 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 Office also has to amend the following statutory instruments (public notices) for which it is responsible in order to follow the rules of the Winter Package and the future 'decarbonisation package' for the Green Deal for Europe:

- 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 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.

During the drafting and finalising of the above texts, the Office closely cooperates with the Ministry of Industry and Trade, the Ministry of Foreign Affairs, and the Office of the Government at the national level, and with other European regulators within ACER and CEER, where the working groups' attention has focused on the implementation of the approved new legislation, including the drafting of position papers and methodologies.

### 3 The electricity market

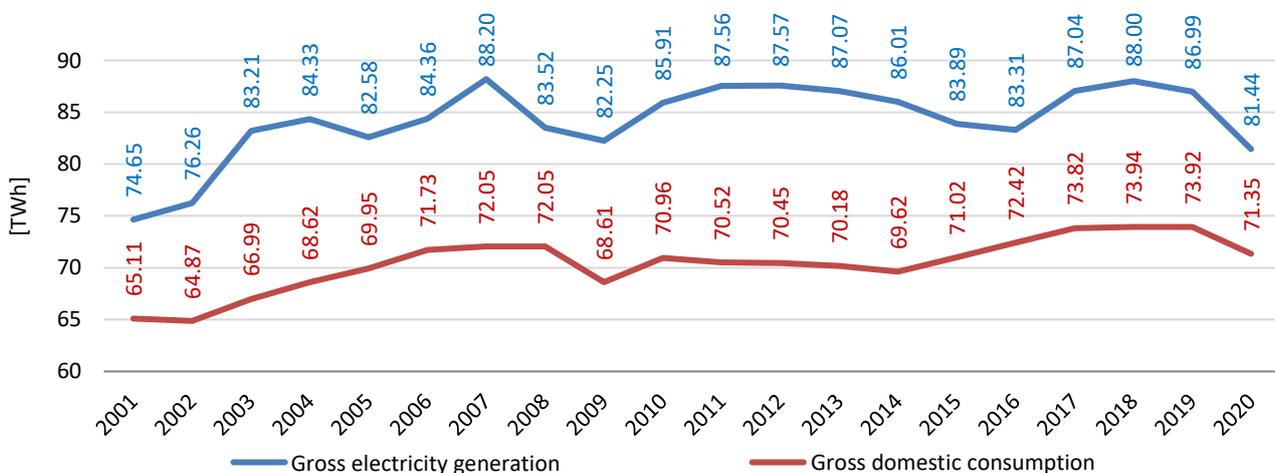
The EU policy’s visions for electricity market integration, environmental and climate protection, and security of electricity supply are shaping the Czech electricity industry. This entails fundamental changes that are transforming the market participants’ hitherto deep-rooted behavioural patterns in electricity generation, transmission, distribution, trading, and consumption.

The changes are also reflected in 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, while having 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 switching their electricity suppliers depending on the price and quality of the services provided.

The year 2020 was marked, in professional terms, by the COVID-19 pandemic. There were no fundamental changes in respect of electricity market integration. The implementation of a single method for calculating day-ahead market capacities incurred a delay; the date set by ACER (originally December 2020) was not kept and the expected implementation was moved to 2022. The project for integrating the day-ahead markets in the 4M MC countries (the Czech Republic, Hungary, Romania, and Slovakia) with those that already have a functioning inter-regional coupling was also delayed and its launch was moved to mid-2021. SIDC (Single Intraday Coupling), of which the Czech Republic had become a part in 2019, can be viewed favourably. The positive results of intraday market coupling were fully visible in 2020 when the volume of trades increased several times compared with the preceding years. The growth in liquidity, in the form of electricity traded in amounts from 10 to 100 MWh/day, in comparison with the volumes traded before acceding to SIDC, is evident.

In 2020, gross electricity generation totalled 81.4 TWh, down by 5.5 TWh (-6.4%) from 2019. Lower electricity generation was last registered in 2002. The country’s gross electricity consumption also declined, to 71.4 TWh (-3.5%), the lowest value over the last five years. Electricity consumption declined in almost all demand categories, except households where, on the contrary, it increased by 716 GWh (+4.7%).

**Chart 1 Electricity generation and consumption between 2001 and 2020**



Source: ERO

### **3.1 Network regulation and technical functioning**

ČEPS, a.s., the operator of the Czech transmission system, 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, a.s. 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 2020, the Office approved amendments thereto. Most of the amendments to both of these documents were related to the implementation of network codes and framework 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 contain the findings gathered in the transmission system and distribution system operators' operation. In 2020, the Office conducted consultation processes: on 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 amount that they take. In April 2020, the Office responded to the declaration of the state of emergency by the Czech Government due to COVID-19 and issued two price decisions for the electricity industry, namely ERO Price Decisions 2/2020 and 3/2020 of 23 April 2020, amending the applicable price decisions for 2020, namely for the period from April to June 2020 when the economy was suffering the most. This helped customers to respond to the situation more flexibly, mainly through a flexible approach to reserved capacity. The Office also approved new routine price decisions for 2021 in line with the applicable methodology set out in the Price Control Principles.

#### **3.1.1 Unbundling**

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 primarily brought into the Czech environment significant amendments to the legislation 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**

The condition of the network is being continuously assessed so that it is ready for developments in the electricity market. Electricity self-generation in small plants producing a few kW, the evolving use of power storage (including batteries) in households, prosumers' activities in the market (supply of self-generated electricity to the grid and offer of ancillary services), and other expected changes require that networks have the right size and sufficient capacity and are optimally controlled. The rollout of digital technology for network control and remotely controlled electronic devices to meter electricity consumption also at customers connected to the low voltage level, and the 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.

In 2020, 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 framework guidelines, and new conditions for system operation and procurement of ancillary services. Worth mentioning is the better communication with DSOs at the local level, which has cultivated the market to some extent.

In relation to amendments to public notice 540/2005 on electricity supply quality and 408/2015 on Electricity Market Rules, the Office held talks with market participants. In the process of drafting the amendment to 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 (the introduction of new electricity supply quality standards, reporting, and the introduction of automatic procedures for claiming compensations for failure to keep supply quality standards), which contribute – through incentive-based quality control, i.e. bonuses and penalties – to DSOs' motivation to develop and invest in their electricity networks and to roll out new technology. In respect of the Electricity Market Rules, talks were held with market participants (representatives of the TSO, DSOs, traders, generators, and interest groups) with a view to modifying and/or redesigning the procedures laid down therein. In 2020, the Office issued an amendment to public notice 408/2015, whereupon discussions on the next amendment were opened.

The Office also attended discussions on the National Action Plan for Smart Grids (NAP SG), the objective of which is to prepare the electricity industry for new trends.

At the international level, network development and optimisation are primarily a matter of coordination. The Office participated in the meetings of ACER's and CEER's working groups and of other expert working groups headed by EC representatives. These teams jointly coordinated the implementation of network codes' and framework guidelines' requirements at the national level. These mainly included the requirements of Regulation (EU) 2016/631, Regulation (EU) 2016/1388, Commission Regulation (EU) 2017/1485, and Regulation (EU) 2017/2196. Work related to meeting the obligations laid down in the new Regulation (EU) 2019/943 was also started in 2020. In this context, the Office used the provisions of this Regulation and granted the TSO two derogations. One concerned compliance with Article 16 of Regulation (EU) 2019/943, which requires a percentage limit on the provision of cross-border transmission capacities by the TSO. The other concerned compliance with Article 6 of Regulation (EU) 2019/943, which requires that a certain part of ancillary services be procured at the day-ahead balancing energy market. The Office also attended ACER working groups focused on optimised control of the European synchronous areas of electricity systems, particular attention being paid to the new design of operation regions, within and between which the TSOs cooperate with each other. In this connection, new operating hubs were also established.

### **3.1.3 Network tariffs**

Under the Energy Act and public notices 194/2015 and 196/2015 (both concerned with price regulation), every year the Office determines the charge for 'the related services' 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, the size of overall electricity consumption, and the amount of funds from the national budget for subsidies allocated to aid to electricity generation from supported energy sources.

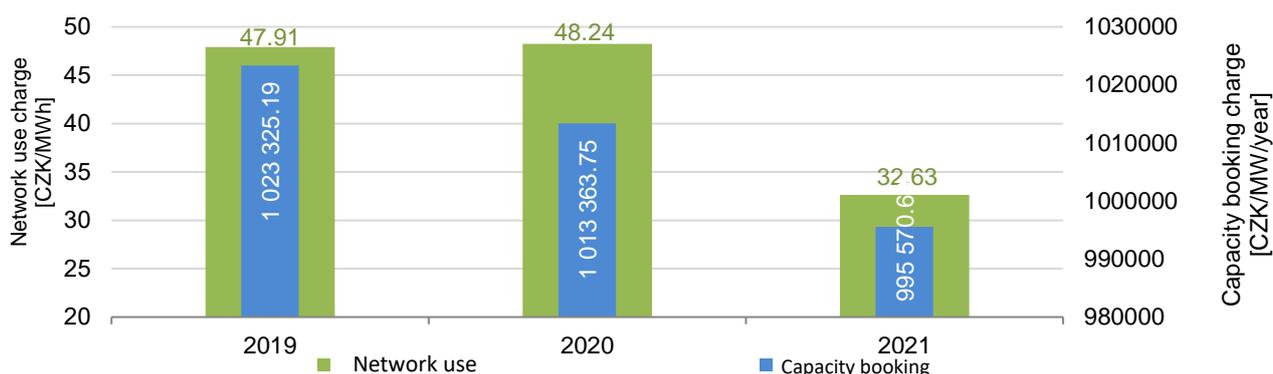
Fully in compliance with the applicable methodology and the best regulatory practice, the Office seeks the best possible cost-causative linkage between the cost driver and the price paid by customers.

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 based on adjusted allowed revenues from electricity transmission. The charge for using transmission system networks depends on the cost of electrical energy for covering losses in the transmission system and the planned 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 sum of reserved transmission capacities and the total electricity quantity planned to be transmitted.

The charge for reserved transmission capacity for 2020 decreased by 0.97% year-on-year; the impact of the TSO's capital expenditure, which caused an increase in adjusted allowed revenues from electricity transmission, was offset by an increase in reserved capacity. The charge for using networks in the transmission system increased by 0.69% in 2020 year-on-year.

Chart 2 shows the charges for electricity transmission between 2019 and 2021.

**Chart 2 Charges for reserved capacity and use of transmission system networks**



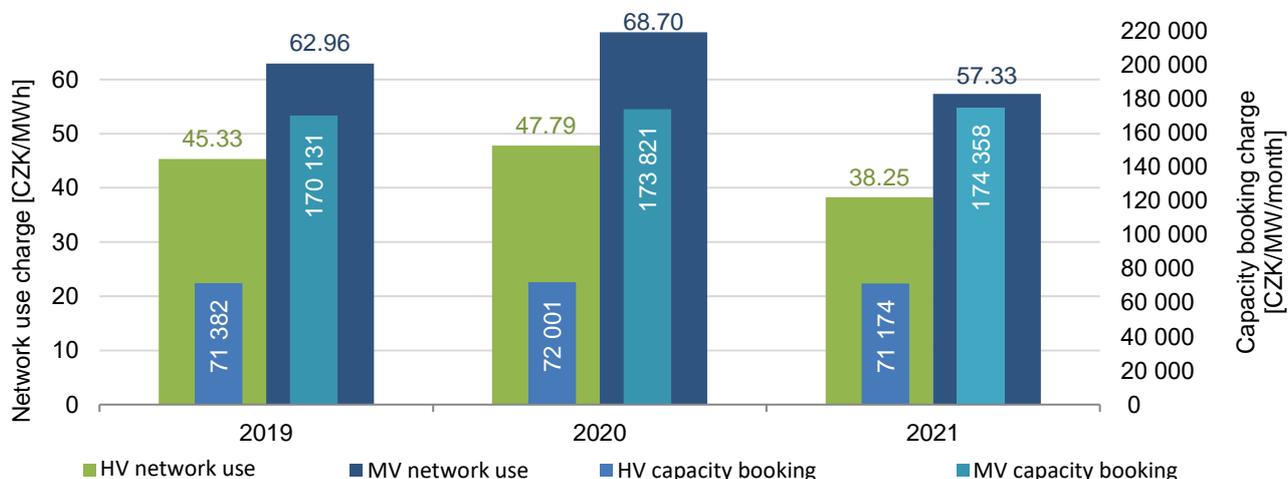
Source: ERO

The charge for system services is the result of dividing the TSO's adjusted allowed revenues from system service provision by the electricity amount expected to be taken by customers connected to the electricity grid. The charge for system services for 2020 rose by 1.22% year-on-year due to the lower cost of ancillary services and 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 an increase in the charges for balancing services, which are reflected in adjusted allowed revenues.

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 each of the 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 HV level rose by 0.9% year-on-year and at the MV level rose by 2.2% year-on-year for 2020. The reasons included investments in distribution systems.

The charge for distribution system network use increased by 5.4% year-on-year at the HV level and by 9.1% at the MV level for 2020; 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. Chart 3 shows the development of the two components of the electricity distribution charge between 2019 and 2021.

**Chart 3 Charges for reserved capacity and use of MV and HV distribution system networks**



Source: ERO

At the low voltage 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 LV 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 amount distributed. The year-on-year changes in the various electricity distribution charges at the LV level for 2020 differ depending on the agreed distribution tariff, and therefore average values must be used for the purpose of year-on-year comparisons. The charge for electricity distribution at the LV level rose by 2.6% 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 LV level by 1.5% year-on-year.

The charge for the market operator's services in the electricity industry dropped by 26.7% year-on-year and was set at CZK 5.08/SDP/month for 2020. The charge for the ERO's activities, which is part of the charge for the market operator's services, did not change and was CZK 2.39/SDP/month.

### 3.1.4 Security and reliability regulation

2020 was the last 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, was applied in a standard manner.

The Office published the *Price Control Principles for the 2021-2025 Regulatory Period in the Electricity and Gas Industries and for the Market Operator's Activities in the Electricity and Gas Industries, and for Mandatory Buyers*, see point 2.1.

Under Section 21 of public notice 540/2005 (on quality), the Office monitors electricity supply quality in distribution systems measured by electricity supply continuity indicators. The public notice sets out the basis indicators of supply reliability, which are 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 2020 are shown in Table 1.

**Table 1 Electricity distribution continuity indicators in 2020**

Indicator*	ČEZ Distribuce, a.s.	E.ON Distribuce, a.s.	PREdistribuce, a.s.	CR
SAIFI [interruptions/year]	2.87	1.92	0.39	2.30
SAIDI [minutes/year]	311.60	272.42	32.92	264.30
CAIDI [minutes]	108.47	142.22	85.27	115.15

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 2020, the Office issued four reports on the operation of the electricity grid. They include quarterly reports for 4Q 2019 and for 1Q and 2Q 2020. The fourth publication was the yearly report for 2019.

These reports contain 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, tariff statistics, including their development for the last ten years, and other statistical data. 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 integration of the day-ahead markets in the Czech Republic, Hungary, Slovakia, Romania, and Poland with the countries involved in the Multi Regional Coupling (MRC) project continued to be a key cross-border cooperation project in 2020. This coupling will simplify cross-border trading in electricity and help to further increase liquidity in the electricity market.

### **3.1.7 Implementation of Network Codes and guidelines**

The network codes and framework guidelines adopted at the EU level as Commission Regulations (EU) and the methodologies for the implementation thereof are becoming increasingly important. There are three groups of network codes and framework guidelines:

- Connection: Commission Regulation (EU) 2016/631, Commission Regulation (EU) 2016/1388, and Commission Regulation (EU) 2016/1447;
- Operation: Commission Regulation (EU) 2017/1485 and Commission Regulation (EU) 2017/2196;
- Market: Commission Regulation (EU) 2015/1222, Commission Regulation (EU) 2016/1719, and Commission Regulation (EU) 2017/2195.

The implementation of the above network codes and guidelines is under way concurrently at several levels: the Union level, the regional level, and the national level. In respect of the connection codes, earlier cooperation continued. At the national level, 2020 saw work and discussions in expert working groups (set up by the Office in cooperation with the MIT, and those operating under the auspices of DSOs). At the international level, ACER working groups were active and focused on drawing up guidance and supervising the implementation of requirements at the national level (monitoring was conducted through questionnaire polls).

The most intensive activities were in the working group supervising the implementation of Commission Regulation (EU) 2017/2195. Here, 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 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. Activities also focused on harmonising the main features

of the imbalance settlement system, where the Office obtained a derogation that would make it possible to keep the national mode until 2025.

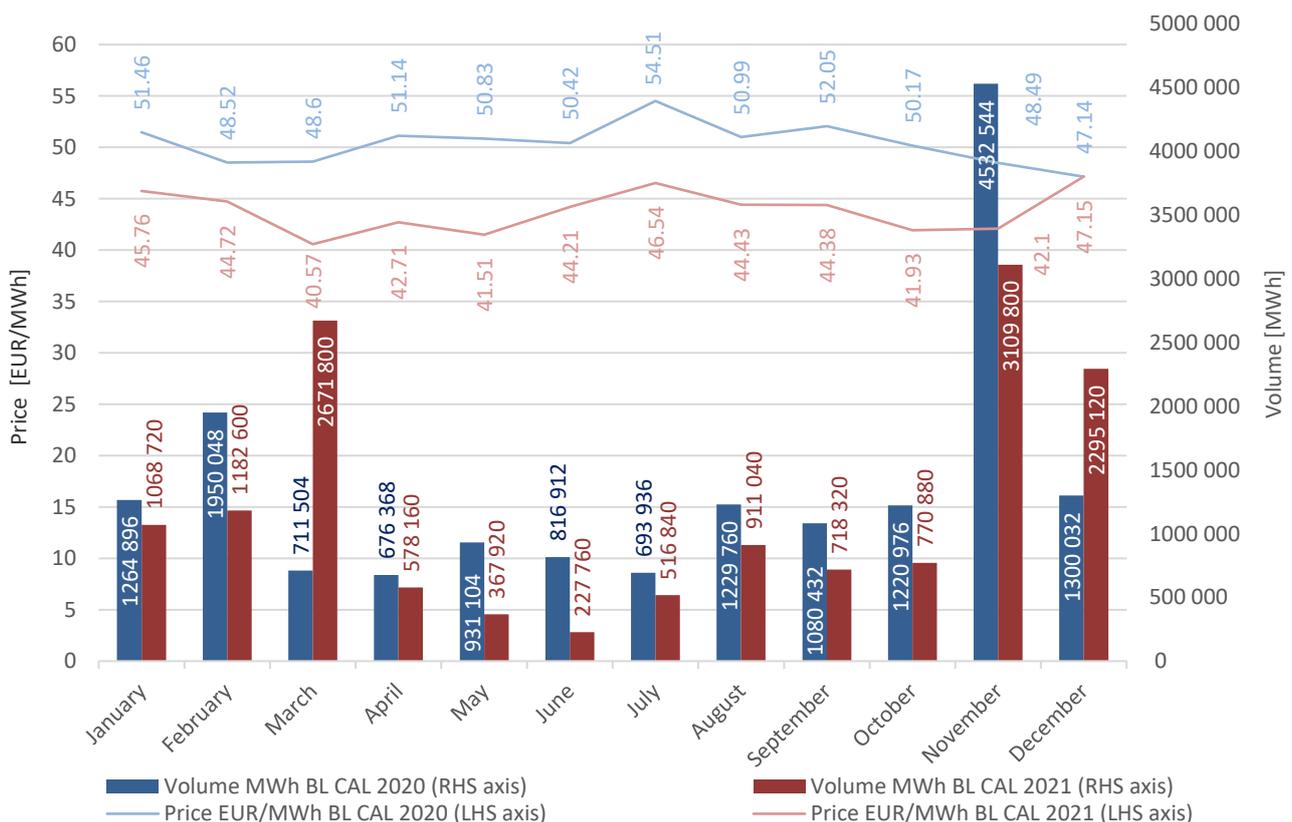
The requirements of Regulation (EU) 2019/943 had a significant impact on the working groups' activities. Under this Regulation, the Office granted two derogations, namely in respect of the procurement of ancillary services (balancing services) and in respect of the limits on the percentages of cross-border transmission capacities (for more details see point 3.1.2).

### 3.2 Competition and market functioning

#### 3.2.1 Wholesale markets

At the wholesale level in the Czech Republic, electricity is traded on the EEX (European Energy Exchange) platform (formerly the PXE energy exchange), through bilateral [OTC] contracts, and in spot markets organised by the market operator. In 2020, a total of 27 TWh of electricity (15% less than in 2019) 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 2021.

**Chart 4 Comparison of year-ahead products for BL CAL 2021 and BL CAL 2020 futures**



Source: PXE, a.s.

Spot trading takes place via the market operator's organised markets (day-ahead, intraday, and block markets) or under OTC (bilateral) contracts (not registered at the energy exchange). In 2020, 22,409 GWh was traded in the day-ahead market; under bilateral contracts registered in the market operator's system between market participants, a total of 76 334 GWh was traded. In the block market 5 GWh was traded and in the intraday market 4,439 GWh was traded. Here, the trend

continued of a significant increase in that market due to the coupling of the Czech organised intraday market with other EU countries (SIDC, earlier also known as XBID) in 2019.

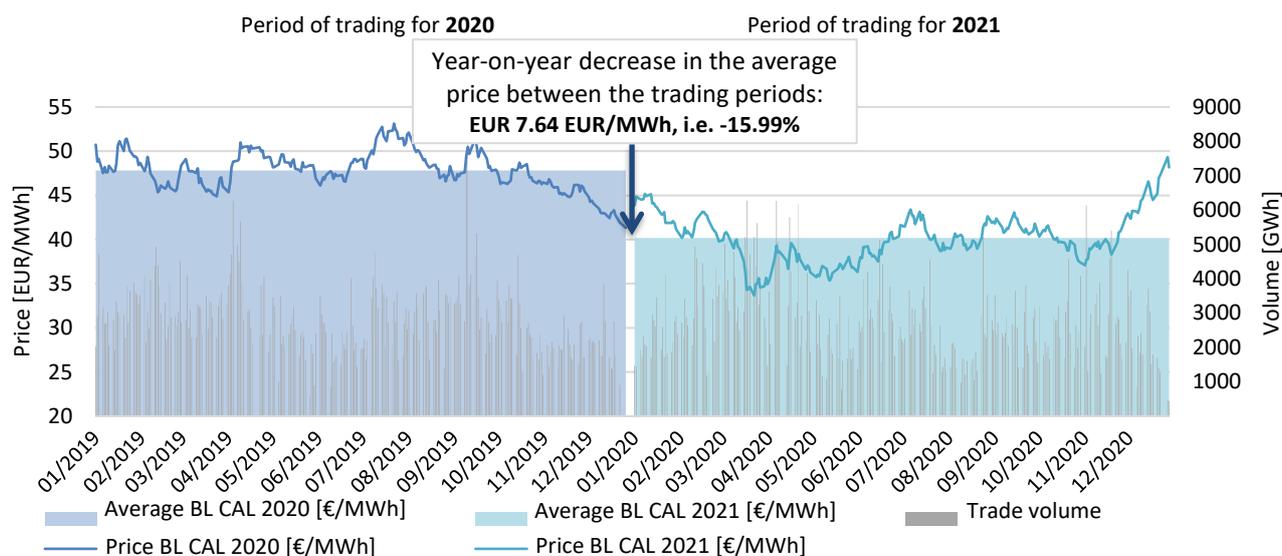
**Table 2 Electricity wholesale market indicators**

Indicators	2016	2017	2018	2019	2020
Electricity production [GWh]	83,305	87,041	88,002	86,991	81,443
Participants in spot electricity markets [-]	105	106	113	121	120
Total electricity demand [GWh]	72,420	73,819	73,942	73,932	71,354
Imports volume [GWh]	8,608	10,388	10,431	10,955	13,126
Exports volume [GWh]	19,447	23,576	24,310	23,622	22,856
Number of traders active in the wholesale market [-]	328	357	378	397	418
Volume traded in the spot electricity market [GWh]	20,377	22,329	23,459	24,909	26,853
Volume traded at PXE futures market [GWh]	19,856	17,358	26,410	31,511	27,063
Total traded volume [GWh]	40,233	39,687	49,869	56,420	53,916
Average incremental price in the day-ahead market [EUR/MWh]	31.15	36.46	46.02	40.21	33.62

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. Because of the interconnection of electrical grids, the development of the wholesale price in the Czech and the German-Luxembourgian bidding zones is also correlated. Chart 5 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 2019 and 2020 to buy electricity for 2020 and 2021. The price of the year-ahead base load product in 2020 was heavily affected by the global COVID-19 pandemic, with the price responding to the market uncertainties related to the pandemic. Nevertheless, as 2020 progressed the price gradually returned to the pre-pandemic level. The declining price of electrical energy was also reflected in lower regulated prices for using transmission and distribution system networks.

**Chart 5 Electricity prices in EUR/MWh at EEX**



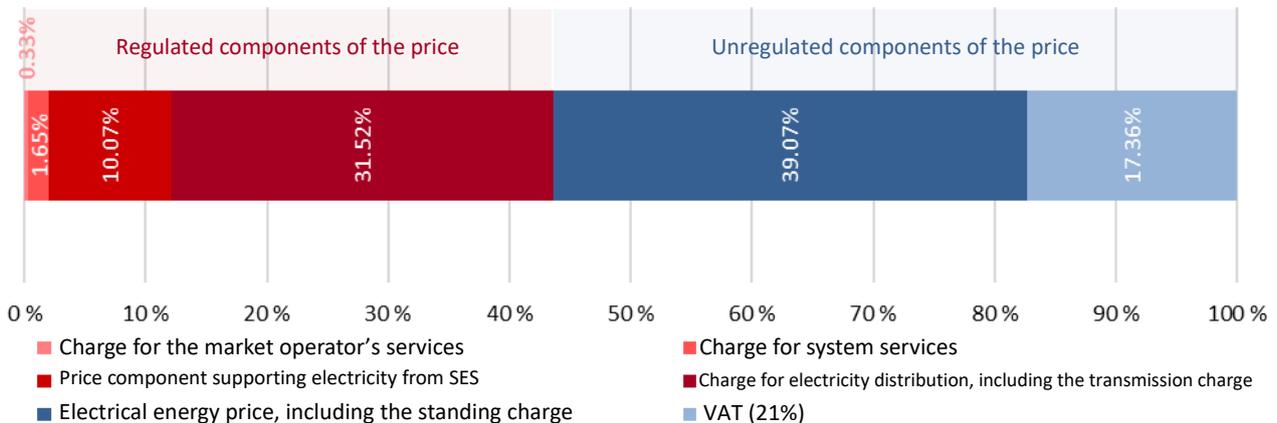
Source: EEX

### 3.2.2 Retail markets

#### 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 LV 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 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 LV 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 6 shows the percentage shares (including the VAT and electricity tax) of the various components in the resulting price of electricity supply for households in 2020.

**Chart 6 Percentage shares taken by each of the components of electricity supply price for households in 2020**



Source: ERO

In the low-demand business segment, the average planned regulated component of the price related to electricity supply for 2020 was approximately CZK 2,214/MWh, and for 2021 it is approximately CZK 2,220/MWh. For households, the average planned regulated component of the price related to electricity supply for 2020 was approximately CZK 2,042/MWh, and for 2021 it is approximately CZK 2,007.8/MWh.

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.

Under Section 17c of the Energy Act, the ERO shall advise the Office for the Protection of Competition (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.

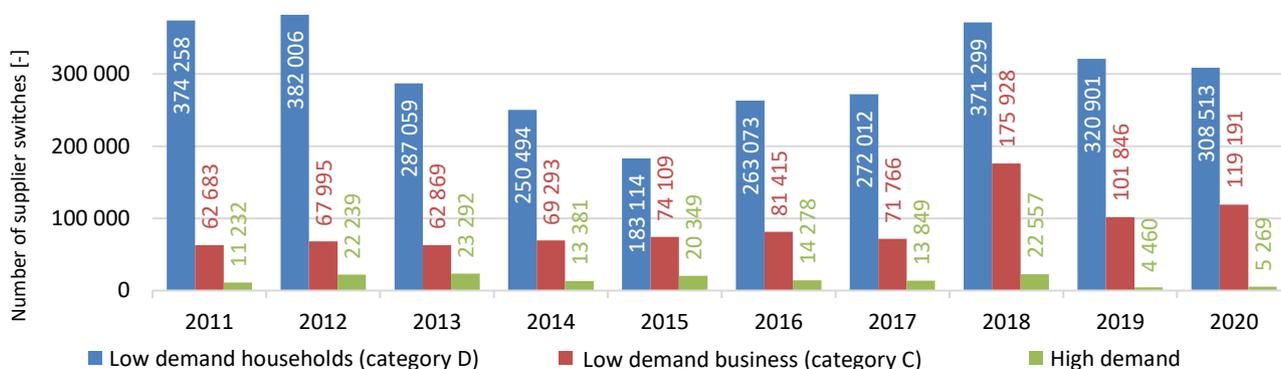
Based on its monitoring of the electricity market's functioning in 2020, the ERO notes that effective competition exists in the electricity market and the conditions for the functioning of the liberalised market have been put in place correctly. Every customer has the right to select a supplier that will best meet their requirements. However, the supplier switching rate is not sufficient for the competitive pressure on suppliers to be strong enough. Many suppliers can therefore offer their services for higher prices, which are accepted by their customers.

At the end of 2020, the retail electricity market had 119 suppliers each with more than 100 SDP. Energy suppliers use many 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 instruments for supporting competition in the retail electricity market: a calculator comparing electricity suppliers' current quotations. Every electricity trade licensee that provides the Office with its public and traceable quotation for inclusion in the calculator can be included. Data is provided and the calculator is operated on a voluntary basis.

In 2020, approximately 446,000 customers changed their electricity supplier, down by 1% on 2019. In terms of the customer categories, the structure of the supplier switching varied significantly.

In the high-demand segment, the number of SDP transfers to a different supplier rose by 18.1%, and in the low-demand business segment the number of electricity supplier switches increased by 17%. In the household segment, electricity supplier switching declined by 3.9%. The numbers of supplier switches over the past ten years are shown in Chart 7.

**Chart 7 Yearly electricity supplier switches in the key customer categories**



Source: OTE, a.s., ERO editing

Table 3 below lists the development of other indicators of the retail market in the household segment. Last year, the Office started to monitor the commonly accepted measure of market concentration, Herfindahl-Hirschman Index (HHI). Its value over 2,000 points (together with a large market share of the three largest suppliers) shows that the Czech retail electricity market is heavily concentrated. Another result yielded by monitoring in 2020 is the market concentrations by the former monopoly areas, which correspond to the current areas of the three regional distribution systems. The former monopolies (incumbents) enjoy a very strong position in their ‘home’ areas; they typically control almost 70% of the market in terms of SDP. This is also reflected in the very high level of HHI, considering the historical structure of the Czech market: 5,030 points (a weighted average of the values for the three regional distribution areas). This geographically more detailed view thus paints a picture different from that of the approach whereby the whole Czech Republic is regarded as the relevant market with 2,440 points.

**Table 3 Selected retail electricity market indicators – households**

Retail market indicators (households)	2016	2017	2018	2019	2020
Number of active electricity suppliers [-]	61	68	79	83	119
Market share of the three largest suppliers by metering points [%]	-	-	-	72.4	71.9
Number of retailers with market shares > 5% [-]	5	5	5	5	5
Herfindahl-Hirschman Index [-]	-	-	-	2,496	2,440
Switching rate, households [%]	5.09	5.22	7.07	6.07	5.82

Source: OTE, a.s., ERO

### 3.2.2.2 Consumer protection and dispute settlement

In 2020, 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 the Czech Trade Inspection Authority (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. In 2020, 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 based on the results of tendering procedures or auctions.

Aware of the importance of prevention for consumer protection, the Office focused on intermediation in energy industries intensively. The Office addressed 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 certain complaints, continued to be addressed in the Office's oversight activities for suspicion of a breach of the Energy Act or the Consumer Protection Act.

The Office 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 the question of the existence of a legal relationship, including, without limitation, cases of withdrawal from contracts. Typical cases included the supplier's failure to perform the obligation to bill electricity/gas properly. In 2020, the Office conducted 135 sets of proceedings on consumer disputes under Section 17(7)(e)(1) and (2) of the Energy Act; 110 of them were concluded with finality in 2020.

In the electricity, gas, and heat supply industries the Office was conducting 109 sets of proceedings under Section 17(7)(a) to (d) in 2020; it concluded 34 of them with finality.

Under Section 17(7)(a) to (c) of the Energy Act, the subject matter of those proceedings included disputes over the conclusion of a contract under the Energy Act, disputes over the curtailment, interruption, or restoration of electricity/gas supply/distribution on account of illegal offtake or illegal distribution, and disputes over connection or access to installations in the electricity grid or the gas system.

A special type of disputes in the electricity industry was those under Section 17(7)(d) of the Energy Act taken together with Section 52 of the SES Act. In 2020, the ERO registered, in consequence of a judicial interpretation of Section 52(2) of the SES Act, an increased number of disputes over the surrender of unjustified enrichment and over damages due to unauthorised receipt of aid for electricity produced. These cases are complex as to both the facts and the law and require an individual assessment of the electricity market participant's rights and obligations related to the entitlement to aid for electricity or heat.

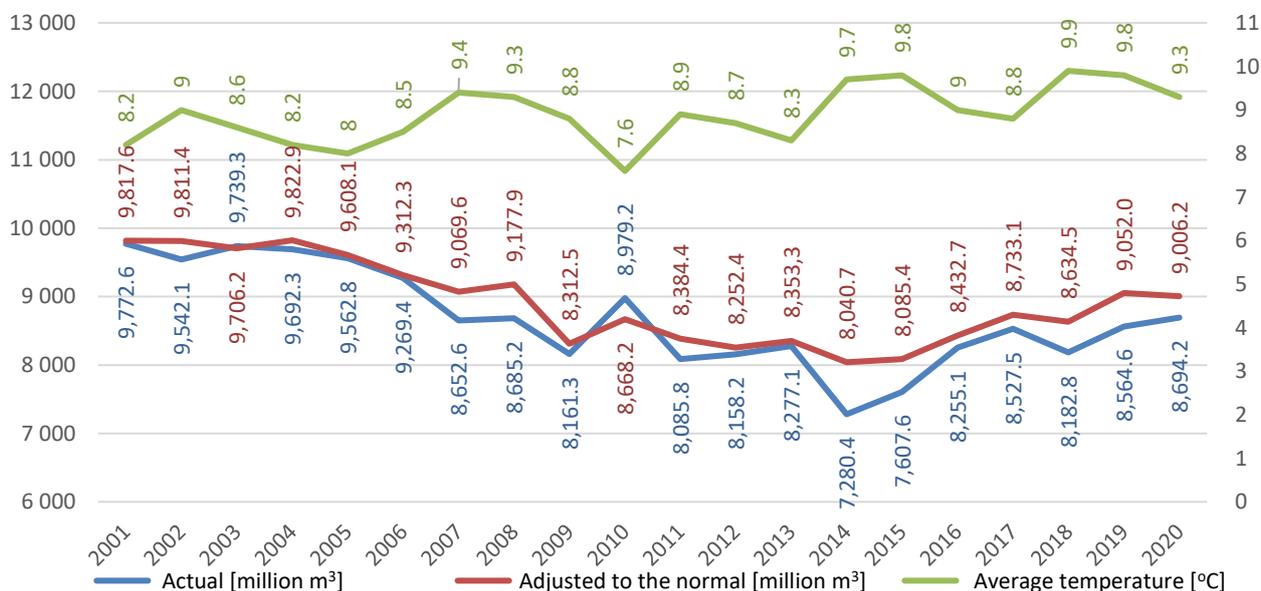
For a long time, the smallest number of disputes has been occurring in the gas and heat supply industries. In many cases disputes between gas market participants and between licence holders and customers in the heat supply industry are resolved by the parties' agreement without a need for the ERO's decision.

## 4 The gas market

In 2020, gas consumption in the Czech Republic totalled 8,694 mcm, i.e. 92,894 GWh (in the Czech Republic, the average gross calorific value was 10.68 kWh/m<sup>3</sup>, i.e. 38.46 MJ/m<sup>3</sup>). Compared with 2019, actual consumption increased by 1.5%. The average annual temperature was 9.3 °C and the difference from long-term normal temperature was +0.8 °C and from average temperature in 2019 it differed by -0.4 °C. Gas consumption in the heating season accounted for about 69% of total annual consumption. The lowest monthly consumption was measured in August (401 mcm, i.e. 4,302 GWh) while the peak consumption was registered in January (1,216 mcm, i.e. 12,976 GWh). An increase in consumption compared with the same period of 2019 was registered mainly in the fourth quarter. Adjusted to long-term normal temperature using temperature gradients, in 2020 gas consumption amounted to 9,006 mcm, i.e. 96,225 GWh, down by 0.5% year-on-year.

Natural gas consumption in the Czech Republic slightly increased over the last ten years and 2020 saw the highest value of this period. The higher increase in natural gas consumption in recent years is mainly attributable to gas supply for electricity generation and, to some extent, gas supply to CNG stations. However, over the long term, natural gas consumption has been under 9 bcm (96 TWh) since 2007, even though between 1996 and 2006, this level was significantly exceeded each year. Natural gas consumption in the Czech Republic is heavily influenced by air temperatures, which have been above the long-term normal temperature for the whole of this ten-year period. The difference between the highest consumption in 2020 and the lowest consumption in 2014 was approximately 1.4 bcm (15.5 TWh). The largest drop in consumption, by 12%, was observed in 2014 when consumption totalled 7.3 bcm (77.4 TWh), the very lowest gas consumption from 1995.

**Chart 8 Overall evaluation of gas consumption in the Czech Republic between 2001 and 2020 (also showing adjustment to long-term normal temperature)**

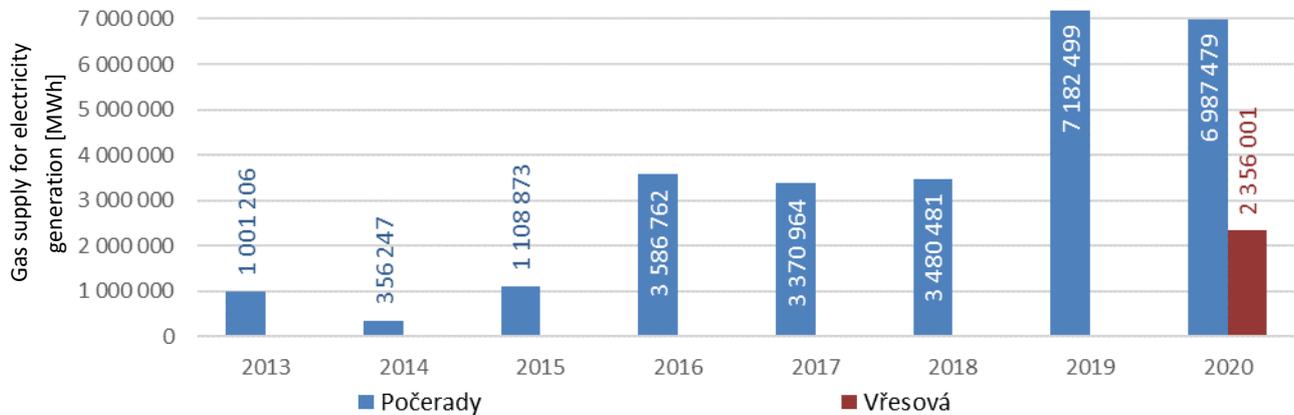


Source: ERO

The Počerady combined cycle unit, which has become an important element in the gas system, was operated throughout 2020 except for September. Its consumption declined by 2.7% year-on-year to a total of 6,987 GWh of gas. Due to the conversion of the Vřesová combined cycle plant in the Karlovarský Region to natural gas, total natural gas consumption significantly increased from July 2020. This power station used 2,356 GWh of natural gas for electricity generation between July and

the end of 2020. Higher electricity generation from gas was reflected in the rising curve of the quantities traded in spot markets as described below.

**Chart 9 The Počerady and Vřesová combined cycle plants – natural gas supply between 2013 and 2020**



Source: ERO

#### 4.1 Network regulation

In 2020, the Groups continued to perform their mutual obligations arising from the European Commission’s conditions related to the 2019 agreement on a RES asset swap between RWE AG Group and E.ON SE Group, such as in the form of the sale of a part of retail operations of E.ON SE held in the innogy energy group. In mid-2020, it was announced that Hungary-based MVM Group had become the new owner of the innogy group in the Czech Republic.

At the end of 2020, E.ON Distribuce, a.s. announced its rebranding and as of 1 January 2021 the company has been operating under the name EG.D, a.s. This step is geared towards meeting the requirement of unbundling in the Czech and EU legislation.

GasNet, s.r.o., a DSO in the Czech Republic, presented its new visual identity in October 2020. GridServices, s.r.o., a servicing company, also started to operate under the GasNet, s.r.o. brand and, accordingly, was renamed GasNet Služby, s.r.o. All these steps are related to the change in the ownership structure and the building of the identity of a separate distribution group of GasNet, s.r.o. Further to the above agreement, innogy Gas Storage, s.r.o. was included in RWE AG Group as of 1 July 2020 and renamed RWE Gas Storage CZ, s.r.o. at the same time.

In 2020, NET4GAS, s.r.o., the Czech transmission system operator, continued to carry out its Capacity4Gas project. The objective of the Capacity4Gas project is rolling out a new gas infrastructure and integrating it with the existing transmission system and the new EUGAL gas pipeline in Germany. The gas pipeline will 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 approximately by 35 bcm/yr (372 TWh/yr). Most of this volume will be transited to other countries and some of it may also be used for gas supply to the Czech Republic.

In April 2020, the Office responded to the COVID-19 pandemic and issued an extraordinary price decision, ERO Price Decision 1/2020 of 23 April 2020 amending ERO Price Decision 4/2019 for 2020. This price decision set out the conditions for calculating certain prices and payments concerning fixed costs in the period from April to June 2020. The measures were targeted at customers in the

high-demand, medium-demand, and business low-demand categories. If the entity's consumption in the period from April to June 2020 dropped by 40% or more versus the same month of 2019, for determining the booked capacity charge the entity could use its value for an indefinite time for the given gas month, minus 20%. The Office also approved new routine price decisions for 2021 in line with the applicable methodology set out in the Price Control Principles.

#### **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 the charge for the gas transmission service and 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 2020, i.e. the last year in the fourth regulatory period, were determined in accordance with the Energy Act, public notices 195/2015 and 196/2015, and the published *Price Control Principles for the 2016-2018 Period in the Electricity and Gas Industries and for the Market Operator's Activities in the Electricity and Gas Industries* with effect extended to 31 December 2020.

The Office published the *Price Control Principles for the 2021-2025 Regulatory Period in the Electricity and Gas Industries and for the Market Operator's Activities in the Electricity and Gas Industries, and for Mandatory Buyers*, see point 2.1.

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.

In compliance with the EU legislation and the decision under Article 27(4) of Commission Regulation (EU) 2017/460 (NC TAR), the tariffs for gas transmission at the transmission system's entry and exit points for 2020 were calculated for the first time using the capacity weighted distance (CWD) reference price methodology. Charges for distribution system services are calculated using a tariff model that considers the gas quantity consumed and the size of booked capacities while respecting the off-take bands.

The variable component of the price covers the TSO's costs related to the gas quantity transported via the exit points of the transmission system.

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 transported via the exit points of the transmission system.

The TSO's adjusted allowed revenues for 2020 rose by 10.63% year-on-year. The main reason is the positive correction factor, which reflects the difference between the planned allowed revenues and actual revenues for 2018. Because of the planned development of consumption and transmission

capacity bookings in 2020, the average charge for the service of gas transmission to the domestic point rose by 4.73% on 2019 to CZK 18.08/MWh. This charge is integrated in the regulated prices of the distribution system service and, depending on the customer category (households and low-demand business, medium-demand, or high-demand customers), accounts for around 1-2% of the total price for the gas supply service.

Operators of the distribution systems that are directly connected to the transmission system are subject to a single pricing method. Their adjusted allowed revenues are determined based on 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. 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; or, in the case of supply points taking more than 63 MWh, the charge for daily booked capacity. The variable component of this price is the fixed price for gas taken, which reflects the gas quantities consumed by different customer categories.

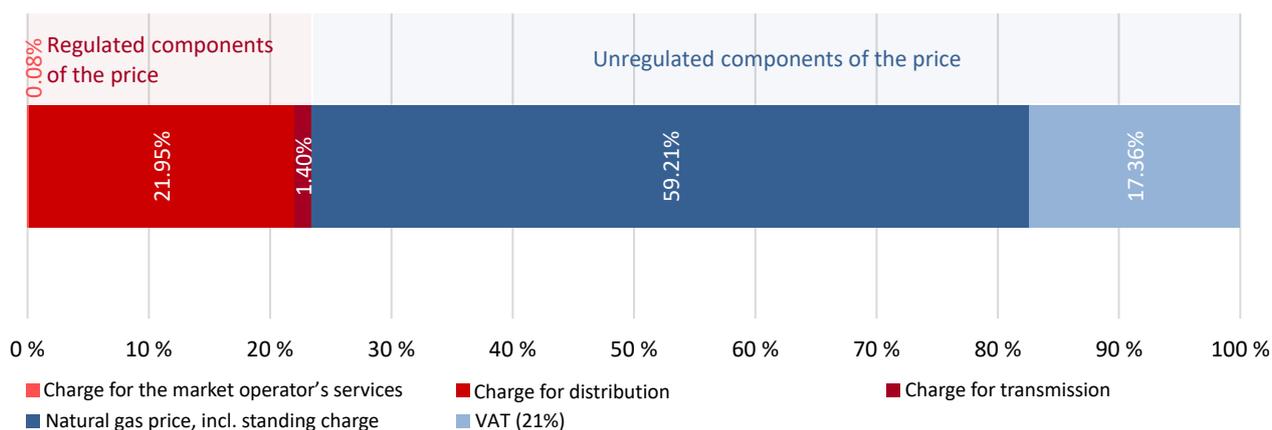
The average charge for the distribution system service, which also includes the service of gas transmission to the domestic point, rose by 0.4% in 2020 from 2019. The main reason for this increase is a higher gas transmission charge, which is integrated into the charge for the distribution system service.

Adjusted allowed revenues, based on 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. For 2020, this charge was set at CZK 1.07/MWh.

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 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 2020.

**Chart 10 Structure of the average price for the gas supply service for household customers in 2020**



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.

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. There is no charge for connection itself to the distribution system. Where the length of the transmission system's pipeline that is to be erected for the purpose of connecting the applicant is shorter than 5 km the TSO pays all the costs incurred in connection. Otherwise, the applicant for connection must share the connection costs based on the equation contained in public notice 62/2011 (connection to the gas system).

### **Regulated and unregulated access to storage facilities**

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, including the subsequent results. Thus, the Czech storage capacity market is one of the most transparent in the EU. The Office continuously monitors and evaluates these terms and conditions. No discriminatory treatment of gas market participants occurred in 2020.

In 2020, the storage system operators, RWE Gas Storage CZ, s.r.o., MND Gas Storage a.s., and Moravia Gas Storage a.s., called a total of 28 auctions to sell storage capacities, in which storage capacity was sold for much higher prices than previously. It can be inferred in this respect that the low gas prices in summer and a bet on a large seasonal difference in gas prices (spread) were the main factors used by applicants for storage capacity for the valuation of the various products.

Another important criterion in respect of 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 gas stores in them are too low (which chiefly happens at the end of the heating season and of the storage year), for

technological reasons storage facilities are unable to offer the full withdrawal capacity and fully respond to temperature changes and so supply sufficient gas quantities to the market. On 1 October 2020, 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 2019/2020, when storage facilities were filled to 35-76% after the season. Table 4 compares gas quantities in storage facilities after the 2019/2020 withdrawal season and before the 2020/2021 withdrawal season.

**Table 4 Comparison of gas volumes in storage facilities after and before the withdrawal season**

Company	Level in the facility (in %) on 31 March 2020*	Level in the facility (in %) on 30 September 2020*
RWE Gas Storage CZ, s.r.o.	35.14	99.25
Moravia Gas Storage a.s.	75.13	97.11
MND Gas Storage a.s.	75.77	98.22

Source: [www.rwe-gasstorage.cz](http://www.rwe-gasstorage.cz); [www.moravia-gs.cz](http://www.moravia-gs.cz); [www.gasstorage.cz](http://www.gasstorage.cz)

\* The percentage expresses the ratio of the gas quantity in the facility and its technical capacity

Auction results clearly show that storage facilities continue to serve primarily for gas storing in summer and gas withdrawal in winter when daily consumption is lower or higher than the agreed daily gas import from abroad. Storage facilities therefore continue to play a fundamental role in ensuring the reliable operation of the Czech gas system, and not only when supply is curtailed but also for compensating the summer and winter surpluses/shortfalls between gas sources and gas consumption.

### Balancing

The Office continued in its evaluation of the efficiency of the model for gas balancing in the system, which had been in place from 1 July 2016, and then since 1 January 2019 when the processes in place were first subjected to major changes. The Office primarily focused on analysing the flexibility provided through the line pack in the system.

The set flexibility range, which was based on the system operating data available in 2014 and 2015, combined with the use of only the commercial instruments for the physical balancing of the system (i.e. gas purchase and sale at the virtual trading point), brings a number of problems in the operation of the transmission system:

- extreme physical imbalances between input and offtake keep emerging, and there is no option for an effective physical balancing of the system,
- the recommended direction of the balancing action is often opposite to the direction really needed for achieving the optimum line pack in the system,
- an undertaken balancing action does not guarantee an actual physical input of gas,
- balance responsible parties are not compelled to adjust their input to the expected consumption, for example, during weekends,
- the actual data based on which the general rules for undertaking balancing actions are determined are known only on the subsequent gas day; however, for an economic management of the system the current and the expected condition of the transmission system are crucial,

- at the end of the day, in some cases the transmission system may be operated off the optimum level of the line pack, which results in a larger amount of compression work, and hence higher consumption of electricity and gas for driving compression stations,
- the transmission system experiences conditions on the verge of a safe and reliable operation.

The Office's findings show that the system of physical balancing, in particular the size of aggregated flexibility, could mostly be accepted thanks to the lower use of the transmission system's capacities. In most cases, the transmission system offered the required flexibility, albeit at the cost of a higher consumption of fuel gas for driving the system in some cases.

For this reason, the Office has started to draw up changes to the relevant provisions in public notice 349/2015 (the Gas Market Rules) with a view to the rules for the balancing actions undertaken by the TSO boosting the role of the economic operation of the transmission system in respect of the optimisation of the costs incurred in driving the compression stations and also to improving responses to imbalances caused by the varying off-takes during the gas day, where during the first two thirds of the gas day gas off-take from the system exceeds input and then, at night, this off-take decreases and the daily input and off-take amounts are balanced out, because there is no question that in the context of the expected conversion from coal to gas, system operation management will become more strenuous due to the rise of imbalances during the gas day.

#### **4.1.2 Cross-border issues**

##### **CMP**

The procedures and dates/times that are required for the proper implementation of NC CAM and CMP rules are set out in public notice 349/2015 (Gas Market Rules). The Office continuously reviews the efficiency of regulation to ensure that the set rules match the development in the gas market in the Czech Republic and in the international context.

Under the CMP rules, the TSO informs the Office and the balance responsible party, or the foreign participant, concerned about unused booked transmission capacity following the end of the period under review.

In 2020, several cases occurred where a cross-border point was completely booked up contractually. The Office found that the cases were related to a planned outage that reduced the size of the available technical capacity. For this reason, the size of the capacity offered for the yearly capacity auction was reduced. The remaining free capacity was primarily allocated for shorter capacity products (quarterly, monthly, and daily).

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

Under Directive 2009/73/EC, implemented in the national legislation through Section 58k of the Energy Act, the Czech transmission system operator draws up ten-year network development plans (TYNDP).

A 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. Under Section 58k(6) of the Energy Act, it opens the TYNDP for public consultation; subsequently, following the settlement of the responses received, the Office either decides to approve the submitted version of the plan or imposes the obligation to restate the plan. The Office examines the content of the 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, as well as 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.

The *Ten-Year Czech Transmission System Development Plan for 2021–2030*, in the version intended for public consultation at the level of the TSO, contained several major changes compared with the plan for the preceding period, both in the technical and economic parameters of the various projects and in the list of projects. Further to the responses received during its 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 14 December 2020, following the conclusion of the public consultation at the ERO level and the settlement of the responses received, the Office approved the *Ten-Year Czech Transmission System Development Plan for 2021–2030*.

### **Cross-border cooperation**

Under Article 26 of Commission Regulation (EU) 2017/459, as early as mid-2019 NET4GAS, s.r.o., together with the adjacent TSOs, started a second incremental capacity process. In 2020, preparations of the selected projects for incremental capacity continued, namely between the Czech Republic and Austria with the Austrian operator, Gas Connect Austria GmbH, and between the Czech Republic and Poland with the Polish operator, GAZ-SYSTEM S.A. These TSOs designed the technical execution of the project in question and held a public consultation between 14 January 2020 and 14 February 2020. NET4GAS received one supportive response to the project for incremental capacity on the border between the Czech Republic and Austria.

At the end of October and in early November 2020, NET4GAS applied to the Office for approval of the proposals on both projects. This started the six-month period for the regulatory authorities to coordinate on the issuance of their decisions. The incremental capacity auction for these projects was planned for July 2021 as part of the yearly capacity auction.

#### **4.1.3 Implementation of network codes and guidelines**

##### **NC TAR (Commission Regulation (EU) 2017/460)**

The motivated decision required in Article 27(4) was published in Part 3/2019 of the *Energy Regulatory Gazette*. Further to this decision, the relevant prices for the gas transmission service were set for 2020 and published in the ERO Price Decisions.

Under Article 28, the Office consults, on an annual basis, the discounts, multipliers, and seasonal factors. It then projects the outcome from this consultation into the wording of its price decision.

Under Article 29, the Office published the reserve prices of the 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 4/2020 of 4 June 2020.

On 2 December 2020, the Office published the information required in Article 30. The Office is obliged to publish the information required by Articles 29 and 30 every year.

### **NC CAM and NC INT**

With effect as of 1 March 2019, the establishment of virtual interconnection points (VIP) was completed at the interconnection points of the transmission system, as required by Article 19(9) NC CAM. The interconnection points between the German NCG zone and the Czech Republic were integrated into the Waidhaus NCG VIP at the Waidhaus delivery point as of the same date.

Under Article 4(2) of Commission Regulation 2015/703 (NC INT), in early 2020 NET4GAS held a public consultation on Amendment 1 to the Interconnection Agreement for the Brandov-GASPOOL VIP. The content of the consulted Amendment was the contract provisions on a new physical interconnection point, Brandov-Deutschneudorf EUGAL, and its integration under the Brandov-GASPOOL VIP.

NET4GAS also held a public consultation on the proposal for certain provisions of the Interconnection Agreement for the new Brandov-EUGAL cross-border point and appendices thereto, Amendment 6 to the Interconnection Agreement for the Brandov point, and the Interconnection Agreements for the Waidhaus-NCG VIP and Brandov-GASPOOL VIP and amendments thereto. The content of the consulted selected provisions and agreements included contract provisions on procedures for managing cross-border gas transmission (including nominations and their matching) for the Brandov-EUGAL cross-border point after the establishment of the Brandov-GASPOOL VIP and for the Waidhaus NCG VIP and the Brandov-GASPOOL VIP and, equally importantly, communication procedures in case of exceptional events under Article 10 NC INT.

Having conducted a 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 Czech 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 free of charge.

In 2020, the Office carried on the continuous monitoring within its remit under 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 2020 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 measures 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 are non-binding and constitute information on the prices for which customers can buy the gas supply service, which 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 can 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 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 purpose of REMIT is to ensure a fair and competitive environment for trading in gas and to 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 5 Wholesale gas market indicators**

<b>Gas wholesale market indicators</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Gas production [GWh]	1,473	1,580	1,477	1,410	1,334
Spot market participants [-]	95	97	97	98	104
Total gas demand [GWh]	88,243	90,996	87,306	91,398	92,894
Imports volume [GWh]	362,845	373,374	424,107	385,378	464,284
Exports volume [GWh]	276,070	278,592	338,775	283,857	383,385
Number of traders active in the wholesale market [-]	-	-	-	-	104
Volume traded in spot markets [GWh]	2,088	3,747	6,542	11,198	8,968
Traded volume in the spot gas market [GWh]	-	-	4,210	2,554	3,901
Traded volume in futures market [GWh]	-	-	10,752	13,752	12,869
Weighted average of prices on the within day market [EUR/MWh]	15.09	18.02	23.88	14.12	9.52

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

### **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 further to 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.

#### **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 automatic matching of bids and offers. 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.

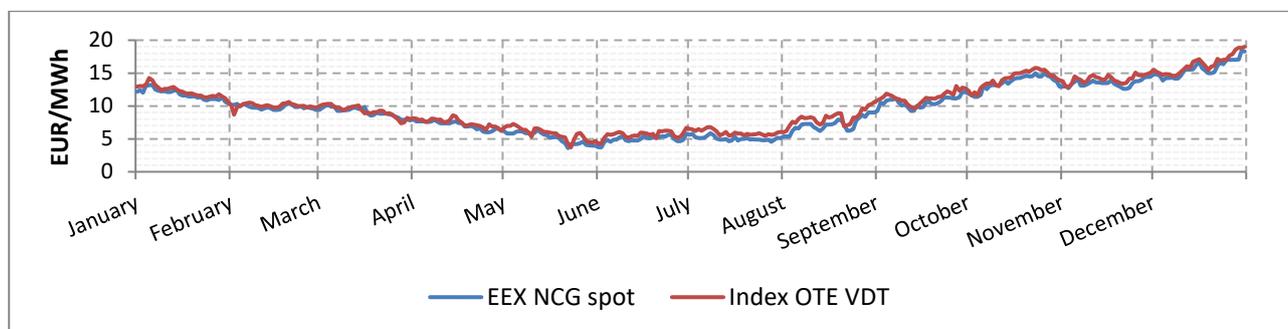
In the within day market organised by the market operator, 4,311 GWh of gas was traded, down by 7.7% on 2019. The weighted average of the prices of the gas traded in the within day market declined by 32.6% to EUR 9.52/MWh in 2020 from 2019. In the spot market, natural gas prices even dropped under EUR 6/MWh in mid-2020. The reasons for such low prices included weaker demand and storage capacities being relatively filled due to the mild 2019/2020 winter; the market uncertainty

related to the expiry of the transit contract between Ukraine and Russia; and the growing quantities LNG being shipped to Europe.

The consequences of the progress of COVID-19 pandemic in the Czech Republic since the spring of 2020 have hit almost all industrial sectors; to some extent, this was also reflected in lower gas off-take by process loads. On the contrary, customers took more gas for space heating, electricity generation, and gas supply to CNG stations. Because of lower ambient temperatures, which were 1.6 °C lower than in the preceding 2019/2020 winter season, the increased gas off-take for space heating also continued, but for some minor exceptions, in the 2020/2021 winter season. Due also to other factors, the weakened economic environment therefore was not felt too much in overall gas consumption in the Czech Republic.

In recent years, the prices in the Czech within day gas market have copied the profile of the prices of the comparable product on the German NCG platform, traded in the spot market of European Energy Exchange AG (EEX, the PEGAS platform), and it was no different in 2020. Chart 11 clearly depicts the significant correlation of the development of prices on these two markets.

**Chart 11 Comparison of the OTE Index and EEX NCG spot prices in 2020**



Source: OTE, a.s., Powernext SAS

Development like the above could also be seen in the prices in adjacent countries' markets (TTF, Gaspool, and CEGH). The Czech within day gas market can therefore be described as a fully functional wholesale venue. 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.

### Power Exchange Central Europe

In terms of the forward market, through PXE in the Czech Gas Futures market 1,901 contracts totalling 3,901 GWh were traded for a total of EUR 53.3 million. In the PXE spot market (Czech Gas Spot), 304,420 contracts totalling 8,968 GWh and EUR 98.5 million were traded in 2020. Compared with 2019, when 7,012 GWh of gas was traded, PXE registered an over 27% increase in the gas quantity traded and the number of executed contracts.

#### 4.2.2 Retail markets

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 2020, the Office held records of a total of 2,829,132 gas customers' SDPs connected to regional distribution systems. Compared with 2019, the number of registered supply points therefore declined by 5,377.

The retail gas market had a total of 133 active gas traders in 2020. Table 6 provides more details about the retail market.

**Table 6 Certain indicators of the retail gas market**

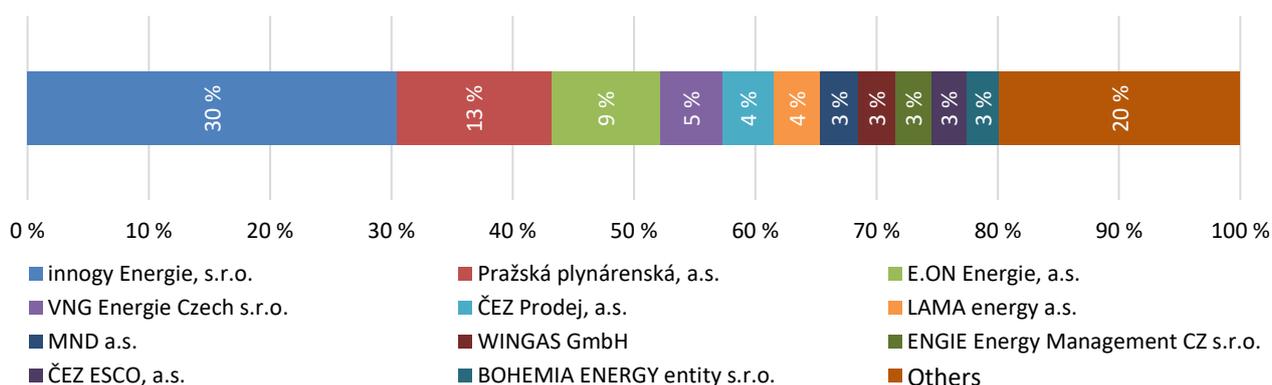
Czech market indicators	2016	2017	2018	2019	2020
Number of active gas suppliers [-]	98	110	119	125	133
Market share of the three largest suppliers by consumption [%]	57.13	52.55	53.69	52.15	52.18
Number of suppliers with market shares (in terms of customer numbers) > 5% [-]	4	4	5	4	4
Herfindahl-Hirschman Index [-]	1,601	1,341	1,377	1,259	1,297

Source: ERO

The Office monitors market concentration in the former monopoly areas. Although in the regional breakdown the gas market is more concentrated than from the nationwide perspective, the values stay deep below the threshold of a heavy market concentration. It can therefore be noted that the retail gas market is not heavily concentrated, and its structure is significantly in favour of effective competition.

Another important indicator of competition in the retail market is the various suppliers' market shares. In line with the good practice of supervision over competition, the Office started to monitor suppliers in groups last year. In terms of the quantity supplied, with its 30% innogy Energie, s.r.o. continues to be the largest gas supplier, followed by Pražská plynárenská, a.s. with 13% and E.ON Energie, a.s. with 9%. Chart 12 provides a more detailed picture of gas traders' shares of supply to customers.

**Chart 12 Gas suppliers' share of gas consumption in 2020**



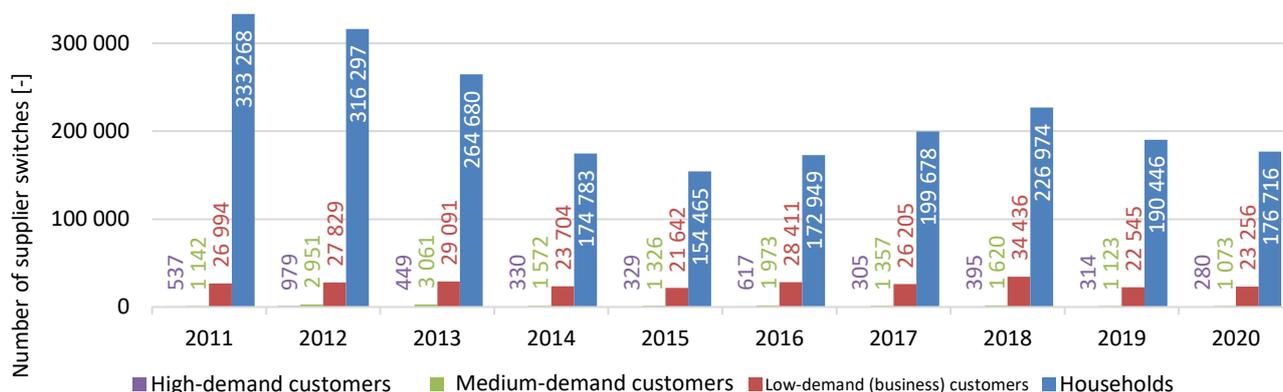
Source: OTE, a.s.

Traders with less than 1% are included in the Others item.

### Supplier switching

More than 200,000 customers changed their gas supplier in 2020; of those, more than 176,000 switches took place in the most populated customer category, i.e. households. Chart 13 shows the structure of gas supplier switching in more detail. Table 7 shows the number of supplier switches to the number of supply points (the switching rate).

**Chart 13 Number of gas supplier switches between 2011 and 2020**



Source: OTE, a.s., ERO editing

**Table 7 Number of gas supplier switches in 2020**

Customer category	Number of supplier switches [-]	Total number of SDP [-]	Switching [%]
High-demand customers	280	1,605	17.45
Medium-demand customers	1,073	6,748	15.90
Low-demand customers	23,256	206,659	11.25
Households	176,716	2,614,120	6.76
<b>Total</b>	<b>201,325</b>	<b>2,829,132</b>	<b>7.12</b>

Source: ERO

Some other indicators of the retail gas market can be found in Tables 8 and 9.

Chiefly 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 to 1,200/MWh.

**Table 8 Selected retail market indicators (households)**

Retail market indicators (households)	2016	2017	2018	2019	2020
Gas consumption [GWh]	25,309	25,902	24,279	23,200	23,984
Number of customers* [-]	2,632,037	2,632,599	2,626,417	2,619,793	2,614,120
Number of registered suppliers [-]	213	227	236	243	247
Number of active suppliers [-]	86	99	95	105	133
External switching rate [%]	6.6	7.6	8.6	7.3	6.76
Legal switching time [business days]	10	10	10	10	10

Source: OTE, a.s., ERO

\* The number of supply points for 2020 is not final; it does not include supply points in local distribution systems.

**Table 9 Selected retail market indicators (non-households)**

Retail market indicators (non-households)	2016	2017	2018	2019	2020
Gas consumption [GWh]	61,906	63,942	61,618	66,582	68,911
Number of customers* [-]	208,436	211,658	214,202	214,716	215,012
Number of registered suppliers [-]	213	227	236	243	247
Number of active suppliers	73	86	97	111	133
Switching rate [%]	14.9	13.2	17.0	11.2	11.45
Legal switching time [business days]	10	10	10	10	10

Source: ERO, OTE, a.s.

\* The number of supply points for 2020 is not final; it does not include supply points in local distribution systems.

#### 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. 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 is 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.

### **Consumer protection and dispute settlement**

In 2020, the Office continued its 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 like those for consumers in the electricity market and are described in detail in the electricity chapter in point above 0.

### **4.3 Gas supply security standard (GSSS)**

As part of its competences, the Office monitors and evaluates adherence to the security standard for gas supply in the Czech Republic (GSSS). In response to the expert circles' interest, the Office has created a Monthly Report on the Evaluation of the GSSS in the Czech Republic, which has been posted on the Office's website since the 2015/2016 winter season on a regular basis. 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 GSSS to the Office before every winter season. The Office found that on 31 December 2020, of all the licensed entities a total of 157 gas traders provided for GSSS for their own operation or for some other gas traders.

In 2020, GSSS 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 GSSS. This means that one trader provides GSSS for several other traders, including through gas storage for 30% of GSSS. Before the winter season, storage facilities in the Czech Republic contained approximately 3.3 bcm of gas, which currently accounts for 39% of yearly gas consumption and for 58% of gas consumption in the heating season in the Czech Republic. However, please note in this context that the stored gas does not have to be intended solely for customers in the Czech Republic, but traders can also store gas there for their customers outside the Czech Republic. The gas covered by GSSS is sufficient for gas supply to customers in the event of emergencies.

According to data from gas traders and gas producers, by 1 December 2020, GSSS had been in place for the following cases in the following quantities:

- in the event of a seven-day temperature peak: 400,637 MWh;
- in the event of at least 30 days of exceptionally high demand for gas: 9,367,807 MWh; and
- in the event of an at least 30-day disruption of the single largest gas infrastructure: 7,088,378 MWh.

As in 2019, the Office asked SSOs to provide it with data on the daily quantities of stored gas in the given period, broken down by gas trader. Relying on this data, the Office carried out, in respect of all companies, a review of the GSSS reports received with a view to checking the actual situation with GSSS on the part of each of the traders. One of the Office's key missions is to ensure safe and reliable gas supply to final customers in the Czech Republic.

## Abbreviations

ACER	Agency for the Cooperation of Energy Regulators
GSSS	Gas supply security standard
EEX	European Energy Exchange AG
PXE	Power Exchange Central Europe
CAIDI	Customer Average Interruption Duration Index in the period under review
CEER	Council of European Energy Regulators
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
CNG	compressed natural gas
CWD	capacity weighted distance reference price methodology
ČEPS	operator of the Czech electricity transmission system, ČEPS, a.s.
CR	Czech Republic
EC, Commission	European Commission
The Energy Act	Act No 458/2000 on the conditions of business and state administration in energy industries and amending certain laws (the Energy Act) as amended
ERRA	Energy Regulators Regional Association
ERO, Office	Energy Regulatory Office
EU	European Union
HHI	Herfindahl-Hirschman Index
LV	low voltage (in Czech <i>NN</i> , <i>nízké napětí</i> , i.e. 'low voltage')
MV	medium voltage (in Czech <i>VN</i> , <i>vyšoké napětí</i> , i.e. 'high voltage')
HV	high voltage (in Czech <i>VVN</i> , <i>velmi vysoké napětí</i> , i.e. 'extra high voltage')
LNG	liquefied natural gas
MIT	Ministry of Industry and Trade
NET4GAS	operator of the Czech gas transmission system, NET4GAS, s.r.o.
market operator	OTE, a.s.
SDP	Supply and delivery point
NC CAM	Commission Regulation (EU) 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013
NC INT	Commission Regulation (EU) 2015/703 of 30 April 2015 establishing a network code on interoperability and data exchange rules

NC TAR	Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas
ERO Board	the Board of the Energy Regulatory Office
4M MC	the countries of the 4M Market Coupling region integrated market, specifically the Czech Republic, Hungary, Romania, and Slovakia
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
SAIFI	System Average Interruption Frequency Index in the period under review
SAIDI	System Average Interruption Duration Index in the period under review
SIDC	Single Intraday Coupling, integration of cross-border markets
VIP	Virtual Interconnection Point
Price Control Principles	<i>Price Control Principles for the 2021-2025 Regulatory Period in the Electricity and Gas Industries and for the Market Operator's Activities in the Electricity and Gas Industries, and for Mandatory Buyers</i>
SES Act	Act No 165/2012 on supported energy sources and amending certain laws, as amended

#### **Note**

Names of Czech companies are written the way they are registered in the Companies Register, including cases when they are registered with mistakes.

## List of legislation

### Czech laws

Act No 458/2000 on the conditions of business and state administration in energy industries and amending certain laws (the Energy Act) as amended

Act No 165/2012 on supported energy sources and amending certain laws, as amended

### Czech statutory instruments (public notices)

Public notice 540/2005 on the quality of electricity supply and related services in the electricity industry

Public notice 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

Public notice 62/2011 on the conditions of connection to the gas system and on changes to Ministry of Industry and Trade public notice 251/2001, which lays down the Operating Rules for the Gas Transmission and Distribution Systems

Public notice 349/2015 on Gas Market Rules

Public notice 408/2015 on Electricity Market Rules

Public notice 16/2016 on the conditions for connection to the electricity grid

Public notice 70/2016 on the billing of supply and related services in the energy industries

Public notice 8/2016 on the details of licensing for business in energy industries

### EU Regulations

Regulation (EC) No 715/2009      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

Regulation (EU) No 994/2010      Regulation (EU) No 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC

Regulation (EU) No 1227/2011      Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency

Regulation (EU) No 347/2013      Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009

Commission Regulation (EU) 2015/703      Commission Regulation (EU) 2015/703 of 30 April 2015 establishing a network code on interoperability and data exchange rules

Commission Regulation (EU) 2015/1222	Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management
Commission Regulation (EU) 2016/631	Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators
Commission Regulation (EU) 2016/1388	Commission Regulation (EU) 2016/1388 of 17 August 2016 establishing a Network Code on Demand Connection
Commission Regulation (EU) 2016/1447	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
Commission Regulation (EU) 2016/1719	Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation
Commission Regulation (EU) 2017/459	Commission Regulation (EU) 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013
Commission Regulation (EU) 2017/460	Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas
Commission Regulation (EU) 2017/1485	Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation
Commission Regulation (EU) 2017/2195	Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing
Commission Regulation (EU) 2017/2196	Commission Regulation (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration
Regulation (EU) 2018/1999	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

Regulation (EU) 2019/941	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
Regulation (EU) 2019/942	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
Regulation (EU) 2019/943	Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity

#### **EU Directives**

Directive 2009/72/ES	Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC
Directive 2009/73/ES	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
Directive (EU) 2018/844	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
Directive (EU) 2018/2001	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
Directive (EU) 2018/2002	Directive (EU) 2018/2002 of the European Parliament and of the Council of 11 December 2018 amending Directive 2012/27/EU on energy efficiency
Directive (EU) 2019/944	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

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