National Report of the Energy Regulatory Office on the Electricity and Gas Industries in the Czech Republic in 2016

July 2017

List of frequent abbreviations and acronyms

Czech	English	
ČR	CR	Czech Republic
ERÚ, úřad	ERO, Office	Energy Regulatory Office
CEER	CEER	Council of European Energy Regulators
ACER	ACER, Agency	Agency for Cooperation of Energy Regulators
ES	EC	European Community
EU	EU	European Union
EK	EC	European Commission
V4	V4	Visegrád Four
innogy GS	innogy Gas Storage, s.r.o.	
MND GS	MND Gas Storage a.s.	
Moravia GS	Moravia Gas Storage a.s.	
EZ	the Energy Act: Act No 458/2000 on Conditions of Business and State Administration in Energy Industries and Amending Certain Laws, as amended	

Content

1 Foreword by the Chairwoman of the Energy Regulatory Office

Dear Readers,

Let me outline the developments in the Czech energy market for you. Last year, we could see the level to which the competitive environment had developed in the Czech Republic. More than 550,000 energy supplier switches took place in the Czech Republic over those 12 months while several preceding years had been marked by the opposite trend.

The 15% year-on-year increase in the number of supplier switches is attributable to a number of factors. The most important of them include enhanced consumer protection and continuous improvements in general information for consumers, for which the Energy Regulatory Office (ERO) strives at all times. The introduction of indicative gas prices, i.e. an indicator of adequate prices for final customers, was a major event in this respect. Through this step the ERO has activated customers and, primarily, suppliers themselves: in the wake of the very first publication of the 'index' suppliers cut their price list prices, and did so in the fairly strong limelight focused on them by the media, which in fact has multiplied the practical impact of the index.

From the EU perspective, the mainstay mission pursued by the ERO as the national regulator is to implement the rules of the internal energy market. For example, the drafting -- an exercise that had taken several years -- of the network codes and guidelines in which the ERO participated under my direction resulted in the adoption of the Network Code on Gas Balancing of Transmission Networks last year. It is also thanks to this that the volumes of trades in the within day market increased by up to 70%.

I also consider the good implementation of the REMIT regulation to be an achievement. We put in place the required technical capacities and also built a team of professionals in a short period of time. Thus, the monitoring is now running on a fully-fledged basis, which is also borne out by the information presented in this Report.

My six-year mandate as the ERO Chairwoman ends this year and I will therefore venture into a brief recapitulation. I have never made a secret of my positively critical attitude to the European Union. Throughout my service as the ERO Chairwoman I have been quite outspoken and, I believe, consistent about energy problems. For example, I regard the market distortion caused by the excessive aid for renewable energy sources, which had not been well thought through, as highly problematic. Indeed, the Czech Republic has been tackling its consequences in the form of loop flows to this day.

By the same token, while criticising the European Union I can also openly praise it for endeavouring to deal with the negative and frequently unintended impacts of its steps and directives. For example, in connection with the loop flows, I consider it to be important that ACER and the European Commission have joined the effort to address this problem, doing so also thanks to ERO staff members' effort. Talks on splitting the German-Austrian bidding zone are currently under way.

I regard the progressive expansion of the Czech-Slovak market coupling scheme to its current form of the 4M MC project, which also includes Hungary and Rumania, and its recognition in

the EU as a great success in respect of market integration. On the other hand, I would express my wish that future measures be preceded by more thorough analyses of any impacts and also an analysis of the preceding steps. The reason is that I regard preventing mistakes from emerging as the very best approach, although mistake remedying is necessary.

I would like to conclude this foreword, which is also my farewell to the position as the ERO Chairwoman, by recalling the successful cooperation within the Visegrád Four (V4). As early as 2013 I was one of those who initiated the establishment of a permanent forum of V4 regulators. This first step has been followed by many more, which is a great success. I and my colleagues participate in a number of joint activities on a regular basis. Over the time of my service alone, seven summits at the level of chairpersons and many other expert meetings have been held. One of the practical deliverables is a joint study on retail market liberalisation and deregulation, which was headed by ERO experts.

In conclusion, please accept my thanks for your cooperation throughout my term in office; I firmly believe that the ERO will continue in this cooperation under its new management.

Alena Vitásková

2 Main developments in the electricity and gas markets

The Energy Regulatory Office operates under Act No 458/2000 on Conditions of Business and State Administration in Energy Industries and Amending Certain Laws, as amended (the Energy Act), into which the Czech Republic has implemented the relevant provisions of the third energy package and Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (REMIT).

2016 was the first year of the fourth regulatory period in the electricity and gas industries. The rules for the fourth regulatory period have been set with a view to energy system operators having sufficient funds and motivation for system upgrade and development while preventing them from channelling the funds collected from customers out of companies; they should use the funds for maintenance and development over the long term.

In February 2016, dTest, a consumer organisation, arranged an auction for electricity and gas supply for more than 66,000 registered persons, thus joining the few companies in the Czech Republic that had been organising e-auctions for energy for some time. The company that offered the least expensive energy supply won the auction. The persons who were interested in using the winning bid were guaranteed transparent commercial terms ensuring, among other things, that at the end of the one-year commitment the contract would not be automatically extended but would turn into a contract for an indefinite period.

In 2016, the retail gas market experienced another milestone in the trend of gas supplier switching: the number of gas supplier switches exceeded 200,000 recorded switches and slightly exceeded the number from 2014. Nevertheless, the gas market is saturated and going forward, more significant changes can only be expected to be caused by changes in the ownership structure of certain suppliers or by the potential folding of certain gas suppliers.

In 2016, the Office introduced, on the basis of its gas market monitoring, indicative gas prices that help customers make a picture of the gas price that they can require from traders.

In terms of impacts on the Czech wholesale gas market, one of the highlights of 2016 was the commissioning of a new underground gas storage facility in a depleted oil field in Dambořice. In the year of commissioning the facility had a storage capacity of 115 mcm. The target capacity of 448 mcm is planned to be achieved in 2021.

Furthermore, under Regulation (EU) No 312/2014 of 26 March 2014 establishing a Network Code on Gas Balancing of Transmission Networks, as of 1 July 2016 the method of clearing the difference caused by an imbalance between the gas energy quantity input into and off-taken from the gas system. The new balancing system is based on financial compensation for the differences, which are cleared on a daily basis. In the wake of the introduction of these new principles the volume of gas trades in the within day gas market organised by the market operator increased by 70.24%.

The combined cycle unit at the Počerady power station started efficiently to perform its role of a readily available electricity generating capacity in 2016, when it generated 1,813 GWh of electrical energy, consuming 3,586.8 GWh of gas, up by 223.5% year-on-year.

The retail electricity market experienced the same development as the gas market: compared with 2015, the number of supplier switches rose by more than 29%. This can be related to the expiry of fixed-term contracts concluded earlier and customers' ability to switch suppliers without penalties. A major change in the wholesale market was the start of the allocation of long-term and daily transmission capacities through the Joint Allocation Office.

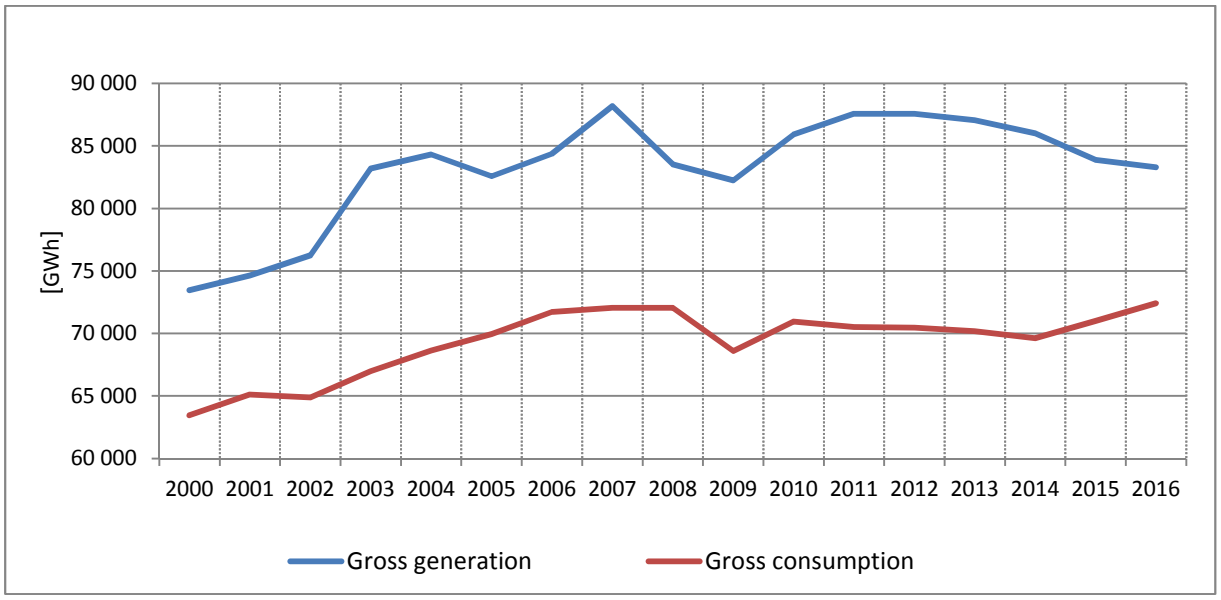
In 2016, the ERO concluded the legislative process for amending public notice no. 70/2016 on the billing of supply and related services in energy industries, which has resulted in a simplified billing of electricity and gas supply services to make it more understandable for customers. However, the very important information about the date for supply contract termination was not included in the public notice; the working commission of the Government's Legislative Council recommended that it be not included in the proposed amendment due to the risk of overstepping the legal framework given by the Energy Act. On the basis of this recommendation, the ERO removed these provisions from the proposed amendment. The ERO was active in the protection of customers' and consumers' interests in the energy sector and handled more than 9,600 submissions, some of them already on an out-of-court basis under the relevant amendment to the law on consumer protection. Most of the submissions concerned illegal energy off-take, the supplier switching procedure, the conduct of peddlers, purchase contracts for LED bulbs, penalties and billing. The Code of Ethics for electricity/gas traders was finalised; it helps to boost consumer protection.

In general, through its operation and putting in place the rules for the functioning of the electricity and gas markets the ERO has long been cultivating the market environment, protecting consumers' justified interests and creating a fair, transparent and non-discriminatory environment for regulated electricity and gas market participants.

3 The electricity market

In 2016, gross electricity generation totalled 83.3 TWh, down by 0.7% year-on-year. On the other hand, gross domestic electricity consumption (72.4 TWh) rose by 2%. The largest year-on-year change in gross electricity generation was registered for combined cycle plants; it rose by 47%, and these plants offset the year-on-year drop in NPPs' generation of more than 10%. Generation in large, over 10MW hydroelectric power stations rose by almost 20% year-on-year, while generation in small hydroelectric power stations increased by 5%. Electricity generation in hydroelectric power stations increased overall by 11.5% year-on-year. Pumped-storage hydroelectric power stations generated almost 6% less electricity and wind power plants generated 13% less.

Chart 1: Annual electricity generation and demand (2000–2016)



Source: ERO

3.1 Network regulation

3.1.1 Unbundling

The Office also monitors adherence to the rules of unbundling on the basis of the implemented Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity (Directive 2009/72/EC). The implementation of directives has resulted in major 'unbundling-centred' amendments to Czech legislation and it was very important not only from the perspective of the provisions on the electricity transmission system operator's unbundling but also because it has vested the Office with much broader competences in oversight and inspections, and penalisation for breaches of the unbundling rules.

In respect of distribution system operators' unbundling, Article 26 of Directive 2009/72/EC had been implemented through an amendment to the Energy Act earlier, specifically through Sections 25a and 11(1)(m) of the Energy Act. The Czech energy market is stable and no major changes are taking place as regards DSOs in terms of unbundling.

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 and submit to the ERO by 30 April, annual reports on measures adopted for compliance programme execution for the past year.

3.1.2 Technical functioning

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

Under Section 17(7)(g) of the Energy Act, the Office approves or lays down the grid code/operating rules for the transmission/distribution systems. In 2016, it approved several modifications to the existing rules and some new rules for distribution system operation. The key objective of the approval process was to ensure that grid codes/operating rules were the basis for the transparent and predictable performance of the licensed activity and did not cause any disequilibrium between the various electricity market participants. Another requirement is that the codes/rules contain provisions arising from legislation and also findings gathered in the activities of distribution system operators. In terms of the Office's influence on technical procedures, the drafting of an amendment to public notice no. 408/2015 on electricity market rules should also be mentioned. The amendment changes the rules influencing the functioning of the electricity market.

In respect of electricity supply quality, the Office has put in place incentive-based electricity quality control in the fourth regulatory period (2016-2018). In this context it has determined the required values of the continuity indicators and related parameters for each of the regional distribution companies. The required values have been determined on the basis of a detailed analysis examining the relationship between quality and the costs incurred by each of the DSOs. The purpose of incentive-based quality control is to reduce the number and duration of both planned and unplanned electricity distribution interruptions.

In respect of electricity supply quality, the Office primarily monitored the level of electricity supply quality achieved and compliance with the standards required by public notice no. 540/2005 on the quality of electricity supply and related services in the electricity industry. The level of quality in distribution systems is measured by electricity supply continuity indicators under Section 21 of public notice no. 540/2005. The basic continuity indicators are defined in the public notice as follows: System Average Interruption Frequency Index in the period under review (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 2016 are shown in Table 1.

Table 1: Electricity distribution continuity indicators in 2016

Indicator *	ČEZ Distribuce	E.ON Distribuce	PREdistribuce	Czech Republic
SAIFI [interruptions/year]	2.87	1.60	0.33	**2.21**
SAIDI [minutes/year]	309.64	252.14	32.52	**258.29**
CAIDI [minutes]	107.86	157.56	99.34	**116.96**

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

3.1.3 Network tariffs for connection and access

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

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

The charge for using transmission system networks is influenced by losses in the transmission system and the price of energy for covering these losses. Expected losses remained at the same level as the year before. The charge for network use was favourably influenced by a drop of 8% in the price of electrical energy for covering losses. The other input that significantly and negatively influenced the charge for network use was the negative correction factor, which dropped by an order of magnitude year-on-year. The result of all these factors was that the charge for using transmission system networks surged by 43.3%. The charge for capacity booking in the transmission system increased by 8% year-on-year, mainly due to the TSO's increased investment activity.

The charge for using distribution system networks for 2016 was also favourably influenced by the drop in the price of electrical energy, while the demand planned for customers remained at approximately the same level year-on-year. The growth in the charge for using the transmission system networks had a negative impact on the charge for using distribution system networks. This development of the parameters caused a year-on-year increase in the charge for network use at the extra high voltage level ('EHV' [≈ high voltage]) by 9.6%, while at the high voltage level ('HV' [≈ medium voltage]) this charge dropped by 9.6% compared with 2015. The charges for booked capacity at the various voltage levels are mainly influenced by the agreed technical parameters of booked capacity, the amount of investment at the respective voltage level, and the charge for capacity booking in the higher-level transmission system. The unit price for booked capacity at the EHV and HV levels increased by 4.7% and 4.6% respectively in the year under review.

Since 2016, the component of the price for support of electricity from SES has been primarily related to the value of the customer's booked input power, but the maximum payment of the component of the price for support of electricity from SES was set as the product of the electricity quantity taken and CZK 495/MWh. Thus, in 2016 no customer paid more towards the component of the price for support of electricity from SES, in terms of the MWh of electricity taken, than they had had to pay in 2015. The costs of operating aid for electricity, which are not covered by income from the payments of the component of the price for support of electricity, are covered by a subsidy from the national budget, which the Government had set at CZK 21.965 billion for the year under review. For 2016, the planned costs of aid for electricity from supported sources totalled CZK 42.411 billion, including the correction factor.

The charge for the provision of system services is intended to cover the costs of balancing electricity generation and demand. The transmission system operator primarily arranges for the balancing by purchasing ancillary services. The charge for system services dropped by 5.2% year-on-year, thanks to bargain purchases of ancillary services and a negative correction factor.

Connection conditions changed somewhat in 2016. The conditions for connecting new electricity customers and generators to the distribution and transmission systems, including the method of calculating the applicant's share of the costs incurred in the connection and in supplying the required power, are now set out in public notice no. 16/2016 on the conditions of connection to the electrical grid, which has superseded public notice no. 51/2006. The technical conditions for connection are stipulated in the rules of transmission/distribution system operation.

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

3.1.1 Cross-border issues

Access to cross-border infrastructure

The Czech electrical grid is synchronised with the rest of continental Europe. Cross-border interconnections exist with all neighbouring countries, i.e. Germany, Poland, Slovakia and Austria, and with five transmission systems: 50Hertz and TenneT (Germany), PSE (Poland), SEPS (Slovakia), and APG (Austria). At the respective cross-border point transmission capacities continue to be allocated on the basis of coordinated calculation within the Central and Eastern European region (known as Central Eastern Europe, CEE),[1)] which also includes Slovenia and Hungary in addition to the neighbouring countries. A project intended to merge

[1]) The regions for coordinated congestion management are defined in point 3.2 of Annex I to Regulation (EC) No 714/2009

the CEE region and the CWE region into a single CORE region was started in 2016. The project entails the development of a methodology for *transmission capacity allocation* for the day-ahead market, using the flow-based method. Subsequently, the development of methodologies for *transmission capacity allocation* for the intraday and long-term markets should take place.

Coordinated capacity allocation for the whole of the subsequent year and month (annual and monthly capacities) and for the individual trading hours on the subsequent day (day-ahead capacities) was organised by Joint Allocation Office (JAO)[2]. JAO provides services to 20 TSOs in 17 countries, for which it organises yearly, monthly and daily auctions of transmission rights on 27 border interconnections in Europe and acts as a fall-back in case of failures of Market Coupling (MC), i.e. coupled day-ahead electricity markets. Capacity allocation takes place under the Rules for Coordinated Auction of Transmission Capacity, which set out the conditions for access to cross-border infrastructure within the meaning of Article 37(6)(c) of Directive 2009/72/EC. The transmission system operating rules (grid code), which are subject to approval by the Office under Section 17(7)(g) of the Energy Act, refer to these auction rules. Informal coordinated assessments of the auction rules take place through the CEE regional coordination committee. The above-described capacity allocation method is used for cross-border interconnections with the 50Hertz, TenneT, PSE and APG transmission systems. For interconnection with Slovakia, a different cross-border capacity allocation method is used, see below. The auction rules fully comply with Article 16 of Regulation (EC) No 714/2009 of the European Parliament and of the Council on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003 (Regulation (EC) No 714/2009). The auction rules allow, in particular, netting, i.e. the full satisfaction of requirements for transmission in opposite directions. In line with the trend of using long-term transmission capacity rights mainly as protection against volatile prices (hedging), long-term transmission rights are allocated with the no-use option and subsequent resale in a daily auction. This approach is in line with the target model for the electricity industry.

Capacities on the national border with Slovakia (the interconnector with SEPS) are allocated differently. Long-term nominations take place there without the need to book separately cross-border transmission capacity, for which market participants can apply until two days before the cross-border transmission is to take place. The transmission capacity so used is free of charge. Should they be exceeded, the matched values of nominations in the respective trading hours are curtailed. The curtailment is proportional for all matched values of nominations in the respective direction. Curtailment is carried out with rounding down to positive integers.

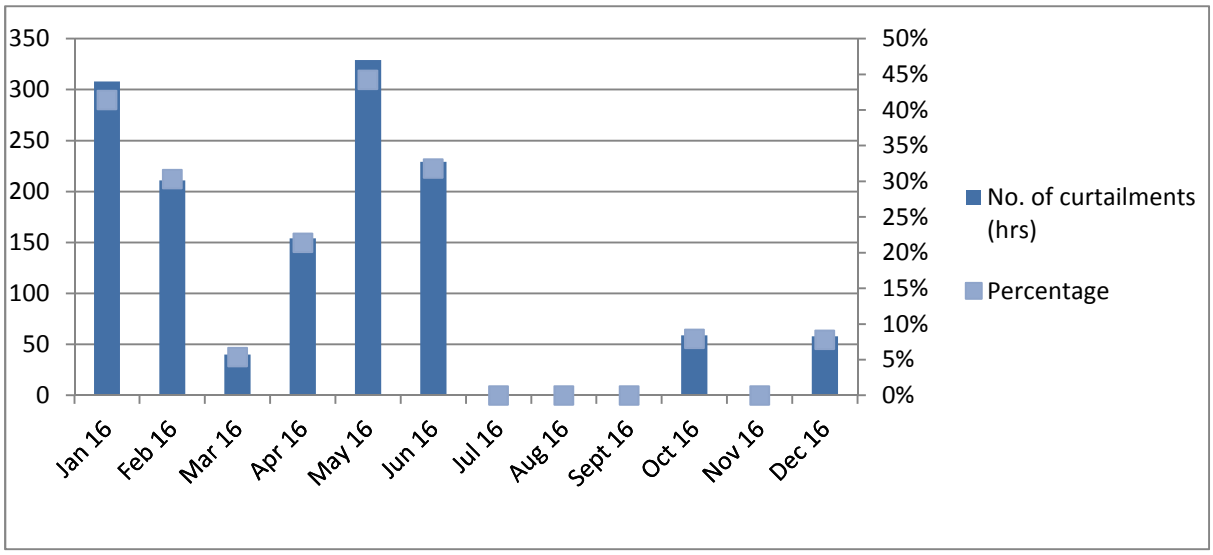
Thanks to the historical interconnection between the Czech and Slovak transmission systems, high transmission capacity is available in the cross-border interconnector with SEPS. In

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

previous years, contractual congestions occurred only infrequently, but this trend has begun changing in recent years. The ČEPS-SEPS interconnection has not, for historical reasons, been described as structurally congested within the meaning of point 1.4 of Annex I to Regulation (EC) No 714/2009.

The Office continuously monitors the situation and currently has data on curtailments for 2016 (see Chart 2). Compared with 2015, the number of curtailments declined by 4% to the resulting 16% of cases; however, in relation to the long-term average, which covers the period from 2012 to 2016, this value is still above the average. Commission Regulation (EU) 2016/1719 establishing a guideline on forward capacity allocation entered into force on 17 October 2016; the Regulation envisages that where long-term transmission rights do not exist on a bidding zone border at the entry into force of this Regulation, the allocation of long-term transmission rights on such borders will be introduced. The national regulatory authorities of the bidding zone in question must assess whether sufficient long-term hedging products exist on the border in question. In November 2016, the ERO launched a project with a view to introducing long-term transmission rights on the border between the Czech bidding zone and the Slovak bidding zone.

Chart 2: Exhaustion of free nominations on the ČEPS-SEPS interconnection



Source: ČEPS, a.s.

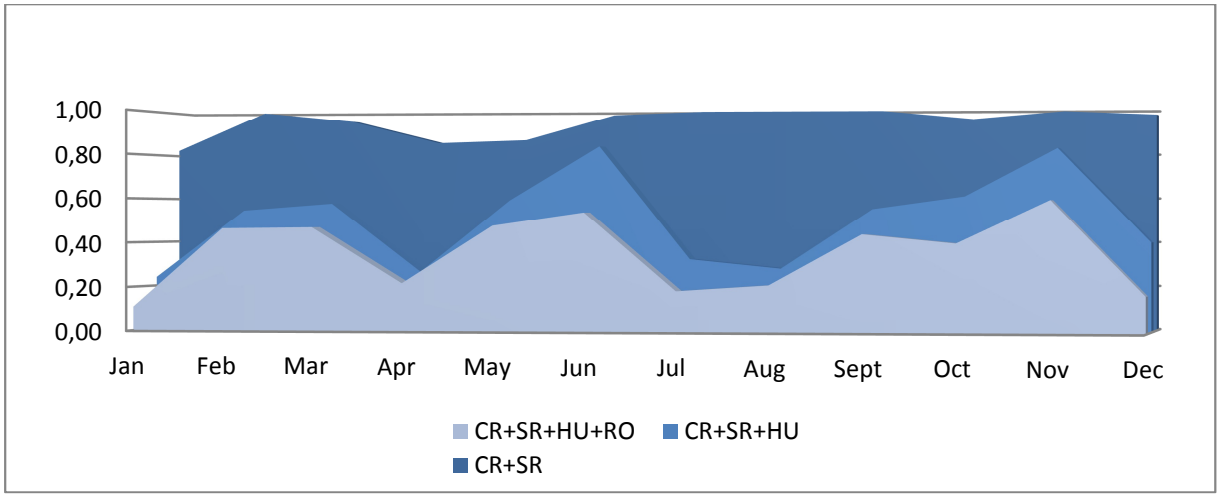
On all cross-border interconnectors, within-day (intraday) transmission capacities are allocated on the First Come First Served basis. However, the current system does not make charges possible, and therefore does support the efficient pricing of the limited transmission capacities.

Since 2012, intraday transmission capacity has been allocated for individual trading hours on the interconnector with SEPS. On other interconnectors, transmission capacity is allocated for six four-hour intervals ("sessions"). Since 2010, day-ahead transmission capacities on the national border with Slovakia have been allocated by means of implicit auctions through MC. Transmission capacity allocation through implicit auctions has considerable advantages over explicit allocation, which takes place on the other cross-border interconnection sites (see NR 2013 and NR 2014, http://www.eru.cz/cs/o-uradu/narodni-zpravy). An important indicator of the success of implicit allocation is the occurrence of identical prices at the participating

spot markets, i.e. price convergence. Compared with 2015, price convergence on the CZ-SK interconnector increased by almost 5%, in the CZ-SK-HU area by 18% and in the CZ-SK-HU-RO (4M MC) area by 16%. This means that on the CZ-SK interconnector price convergence occurred in 95.25% of cases, in the CZ-SK-HU area in 50.15% of cases and in case of all four markets coupled, CZ-SK-HU-RO, in 35.34% of cases.

Chart 3: Convergence in 4M MC in 2016

The decimal comma rather than the decimal point is used for technical reasons.



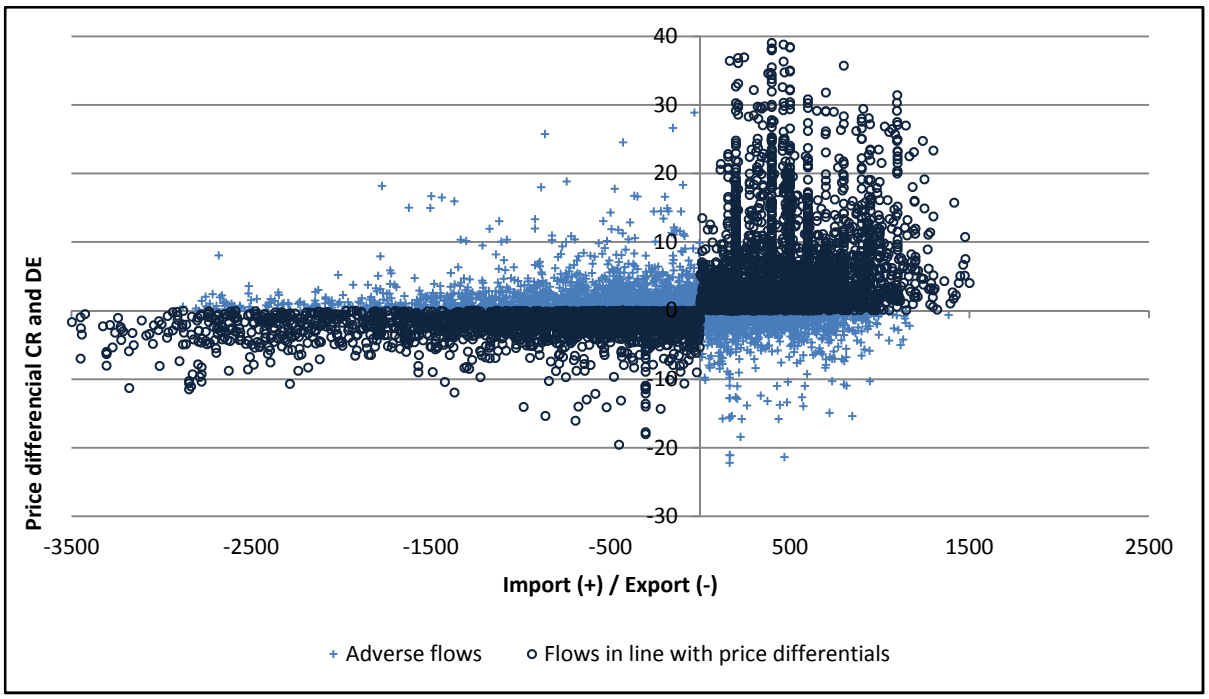
Source: OTE, a.s., the ERO's own calculation

As mentioned above, capacity in cross-border interconnectors, with the exception of the ČEPS-SEPS interconnectors, is allocated in explicit auctions. Since capacity is allocated separately from energy trading, situations may occur when electricity is exported from a higher price market to a lower price market, i.e. it flows against the price differential (which is also known as adverse flows). This situation is undesirable from the economic perspective as it reduces social welfare and the potential for using cross-border interconnections.

Chart 4 below shows the extent of this phenomenon on the Czech Republic's border with the German-Austrian bidding zone (i.e. the aggregate of interconnectors with the 50Hertz, TenneT and APG transmission system operators)[3]. Quadrants 2 and 4 (light blue points) depict the situation where trading exchanges take place against the price differential; in 2016, this situation occurred in 34.1% of the hours.

[3]) A trading exchange at each of the interconnectors equals the net balance of total nominations in both directions; the price differential is determined as the difference between the hourly prices on OTE's day-ahead market and on Epexspot's day-ahead market for the German-Austrian bidding zone.

Chart 4 Adverse flows in 2016



Source: OTE, a.s., EEX AG, ČEPS, a.s., the ERO's own calculations

The Office monitors the use of congestion charges (i.e. revenues from cross-border capacity auctions). Under Section 24(10)(n) of the Energy Act, every year ČEPS, a.s. provides data for the Office's decisions on charges for electricity transmission and on charges for system services. Revenues from cross-border capacity auctions go to the System Development Fund and serve for the development of cross-border lines.

Cooperation with other regulatory authorities and ACER

In 2016, the Office's involvement in ACER and CEER working groups focused on continuing work on the relevant electricity issues related to the development and amendment of European energy legislation and its implementation at the national levels, and also on preparing the future implementation of the Commission's legislative proposals discussed as part of the Clean Energy for All Europeans package.

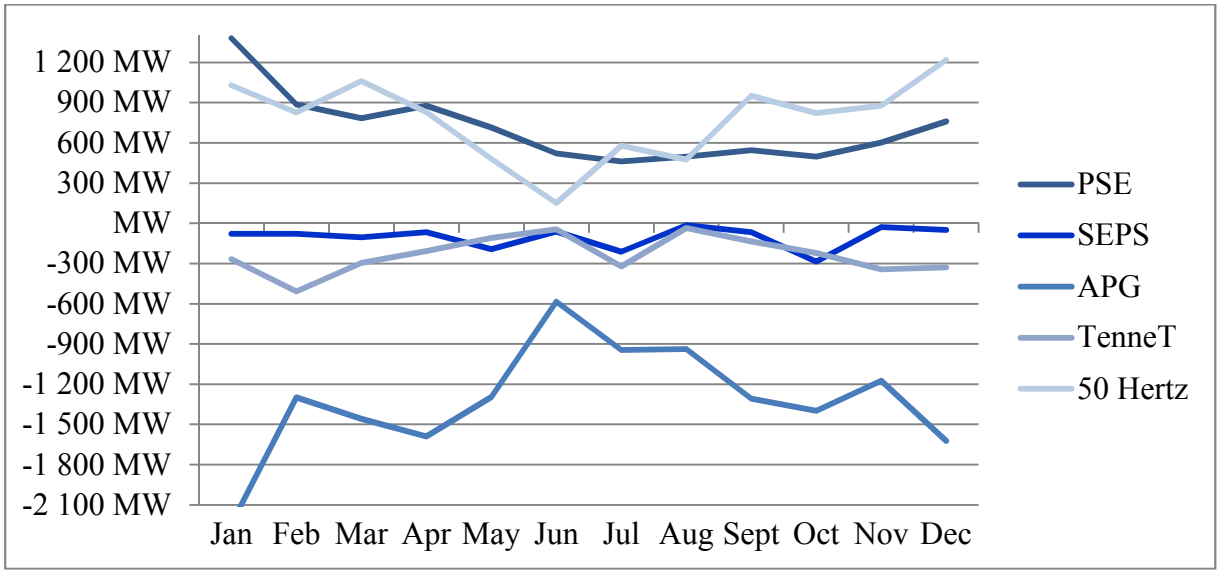
For ERO staff members involved in the activities of the ACER/CEER electricity working groups, 2016 was primarily marked by intensive work on the implementation of network codes for transmission networks. In their respective working groups, the ERO's technical units actively participated in meetings on preparations for the approval of the network code for grid connection of generators, network code for demand connection, network code on high voltage direct current connections and DC connected power park modules and the framework guideline for capacity allocation on the long-term market.

In parallel with these processes, work continued on the implementation of the earlier approved network code on capacity allocation and congestion management (the drafting of the conditions and the approval of the methodologies required by this Regulation). In respect of these activities, the ERO staff members coordinate, on a long-term basis, with other entities in the Czech Republic with a view to achieving the maximum possible in promoting Czech interests and minimising the potential negative impacts. The ERO staff members actively

participated in and contributed to these groups through continuously providing the relevant information, the requested documents, and their own feedback, including *inter alia* the monitoring of the XBID Cross-border Intraday Market Project and the related organisation of an international meeting of the project implementation group in Prague in September.

As regards the long-term developments concerning the dangerous level of unplanned electricity flows via the Czech transmission system and the related source of this problem, the German-Austrian bidding zone, the ERO staff members actively promoted Czech interests, in particular as part of the related talks with ACER, to which national regulators delivered their decision on the matter in May 2016. Chart 5 indicates that unplanned electricity flows (the difference between nominations and physical flows) enter the Czech electrical grid from the north via the interconnections with 50Hertz and PSE and exit the Czech Republic in the south to Austria (the interconnection with APG). Unplanned imports totalled 1,486 MW and unplanned exports totalled 1,659 MW (these are not averages on import/export interconnectors). The Office continues to consider that the increased occurrence of loop flows in the CEE Region is related to the size and topology of the German-Austrian bidding zone and also to wind power development in northern Germany. This view has been basically upheld by the findings contained in ACER's decision.

Chart 5 Unplanned flows in 2016



Source: ČEPS, a.s., and the ERO's own calculations

The Office also continued to promote cooperation with the regulatory authorities of the V4 countries.

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

Under Section 24(10)(j) of the Energy Act, ČEPS, a.s., i.e. the TSO, is obliged to prepare a ten-year plan for the development of the electricity transmission system, including an investment plan, every other year. Subject to arrangements with ČEPS, a.s., the decision was made to issue this plan also for the 2017-2026 period for the sake of consistency between the ten-year plan for the development of the electricity transmission system and the European TYNDP (Ten Year Network Development Plan), to which a selection of projects of common

interest (PCI) further relate. The second list of PCI drawn up by the European Commission was issued in 2015, but as early as 2016 the preparation was started for a new methodology for selecting projects for the third list of PCI, which should be prepared in 2017.

PCI are projects helping to achieve the European objectives in the development of the European transmission system with a view to ensuring the safety of the operation of the entire integrated system. ČEPS, a.s. currently has five PCI included in the TYNDP. The projects largely aim at double-circuiting inland 400 kV lines (please see Table 2).

Table 2 PCI list – PCI 3.11

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

Source: ČEPS, a.s., ERO's own editing

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

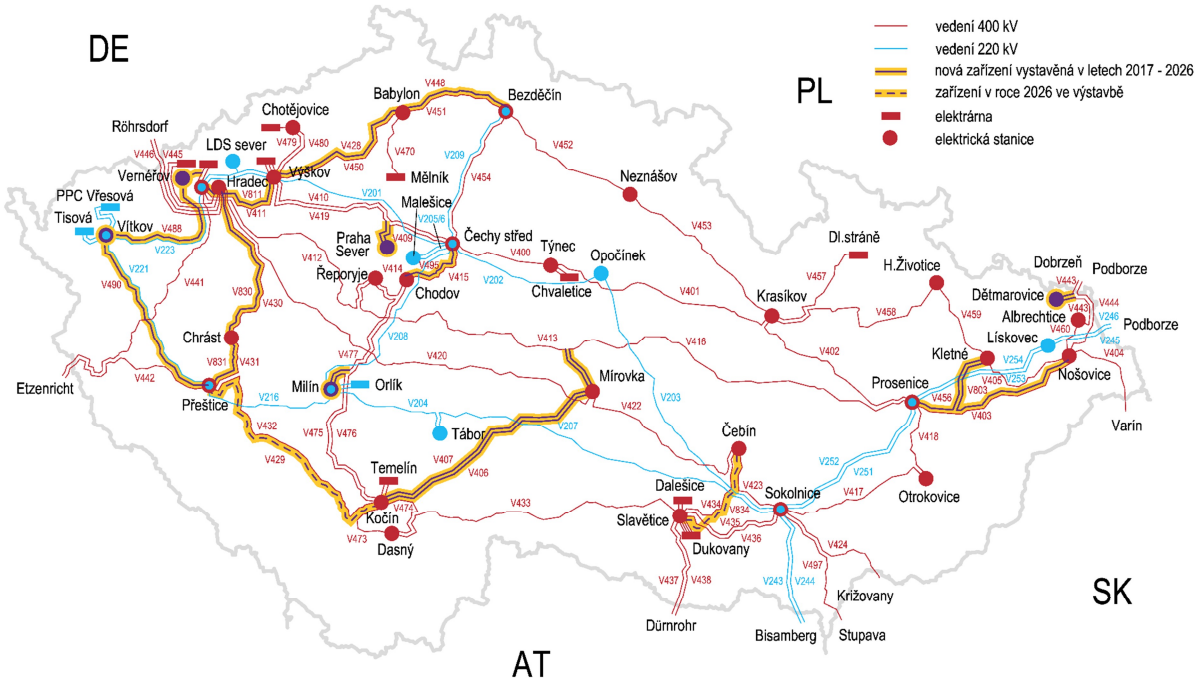
ČEPS's investment plan of 21 November 2016 covers the period from 2017 to 2026 and contains capital expenditure totalling CZK 47.8 billion allocated in line with the timing of the execution of each of the development plans and the renovation of installations in the transmission system. In addition to the need to export output from new capacities, the planned investments are also necessitated by the effort to support both domestic and international cooperation in the market and by the policy adopted for the gradual upgrade of the transmission system. The capital expenditure is planned for the short, medium and long term. The purpose of short-term and medium-term investments is to find less time consuming solutions helping to increase the transmission capability before long-term investments can be carried out, such as converting the existing 220 kV double circuit lines to 400 kV double circuit lines, double circuiting 400 kV lines, and comprehensive retrofits or expansions of substations. The short-term solutions that are acceptable in both operating and financial terms include, in particular, the following: an upgrade of lines to 80 °C, dynamic loading of lines,

the complete modernisation of lines without any major interventions with the pylon structure, automatic power limiting systems and the planned limitations on the output from generating capacities.

The rising power in unplanned flows from other countries, mainly Germany, is posing a risk to the safety of the Czech electrical grid. Over the short term, the safety and reliability of the transmission system's operation is being ensured by modernising crossings and reinforcing the loadability of the phase conductors in selected sections of the most heavily loaded lines. ČEPS is also preparing some other solutions included in the ten-year development plan, such as erecting new lines and double-circuiting certain lines. With a view to preserving safe operation and meeting the N-1 safety criterion in the transmission system, ČEPS has started, following agreement with the German side, the erection of phase shifting transformers (PST) in the Hradec substation. The construction of the new part of the substation continued in 2016; three PST out of the total of four PST were installed in their final positions and the PST control system was accepted. All units are expected to be in operation in 2017.

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

Figure 1: Development of the Czech electricity transmission system until 2026



Source: ČEPS, a.s.

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

3.1.4 Compliance

The Energy Regulatory Office ensures that the TSO and DSOs and, if applicable, the relevant owners of the systems, and also all electricity utilities perform their obligations under the relevant legislation at the European and national levels. The Office exercises its powers on the basis of the relevant provisions of the Energy Act, which lay down the rights and obligations arising from the relevant provisions of the EU legislation, i.e., in particular, Directive 2009/72/EC, Regulation No 714/2009/EC, and Directive 2012/27/EU. The Czech legislation is fully harmonised with this EU legislation.

Under the Energy Act, the Energy Regulatory Office also exercises its supervisory powers so as to ensure the efficient monitoring of all electricity market participants' compliance with EU and Czech law and with the Office's relevant legally binding decisions, and imposes effective, proportionate and dissuasive penalties on the electricity utilities that breach their obligations. The Office oversees compliance of the electricity transmission company's and distribution companies', system owners' and electricity undertakings' activities with the relevant EU legislation, including the cross-border issues. To this end, the Office primarily monitors and oversees compliance with the relevant provisions of the Energy Act on independence of the electricity transmission system operator and with the certification decision. Should it find a breach of the relevant provisions of the Energy Act in this respect the Office has the power to impose the respective penalties laid down in the legal system under Article 37(4)(d) of Directive 2009/72/EC, and also the power to revoke the independence certificate under statutory conditions.

An amendment (Act No 131/2015) to the Energy Act came into effect on 1 January 2016, with the exception of a few provisions. The Energy Act has been amended mainly due to the need to harmonise it with the new Civil Code and the new Review Rules, and to enhance consumer protection. Another reason was the need to remove the discrepancies that had emerged from energy market participants' experience and also EU legislation that had to be implemented in the national legal system, such as, in particular, Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, repealing Directives 2004/8/EC and 2006/32/EC, and Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency. This amendment to the Energy Act was accompanied by amendment to Act No 165/2012 on Supported Energy Sources and Amending Certain Laws (the SES Act), as amended. The main reasons for amending the SES Act included, in particular, the need to implement certain provisions of Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency (providing that some provisions of this directive have been implemented through the above amendment to the Energy Act). Equally importantly, some provisions were amended in connection with the requirements emerging from the application practice, to supplement the provisions on the optimisation of spending on supporting and improving the review process.

The amendments to the Energy Act and to the SES Act then necessitated amendments to a large number of public notices, i.e. the implementing acts for these laws. The Energy Regulatory Office promulgated some of the public notices in 2015 with effect from 1 January 2016, i.e. with the same effective date as the amendment to the Energy Act. All the changes to legislation which the Office effected had been consulted with the entities

concerned. When developing or amending legislation the Office always places emphasis on the maximum transparency and non-discriminatory approach and on eliminating negative impacts on the Czech electricity market. In 2015, the Office promulgated the following implementing acts – public notices in the electricity industry with effect from 1 January 2016:

- no. 194/2015 on the method of price regulation and procedures for price controls in the electricity and heat supply industries. This statutory instrument lays down the foundations for price controls in the electricity industry for the new three-year regulatory period from 1 January 2016 to 31 December 2018. The rules of regulation are primarily treated in the principles of price controls, which are, to a considerable extent, based on the principles applied in the preceding regulatory period. The statutory instrument reflects the changes precipitated by the market situation but basically maintains continuity in price controls in the electricity and heat supply industries. Together with this public notice, the ERO also promulgated no. 196/2015 on methods of price regulation and procedures for regulating the prices for the market operator's activities in the electricity and gas industries. Thus, the regulation of the charges for the market operator's services has been separated and provided for in a separate implementing act;

- no. 262/2015 on regulatory reporting directly responded to the amendment to the Energy Act, which necessitated changes in some regulatory reports and the related provisions of the public notice. Nevertheless, continuity in data reporting for regulatory purposes has been preserved to a considerable extent, because the new instrument is largely based on the earlier one and does not constitute a fundamental change for regulated entities;

- no. 408/2015 on Electricity Market Rules. To a large extent, its content is based on the previous Electricity Market Rules (no. 541/2005), which it superseded as of 1 January 2016. However, this legislation had to be changed and supplemented in many respects, in particular in the wake of the amendments to the Energy Act and the SES Act. Legislation also had to respond to electricity market participants' practical experience;

- no. 296/2015 on the technical and economic parameters for determining feed-in tariffs for electricity generation and green premiums on heat and on determining the service life of electricity generating plants and heat generating plants using renewable energy sources ('the technical & economic parameters public notice'), which is an implementing act related to the SES Act and sets out the basic parameters for determining aid for electricity.

In 2016, the Energy Regulatory Office also promulgated some other public notices that responded to the amendment to the Energy Act and the SES Act in many respects. These public notices were also consulted with the entities concerned to achieve the maximum transparency and a non-discriminatory approach and to eliminate negative impacts for the Czech electricity market. In 2016, the Office promulgated the following public notices:

- no. 8/2016 on the details of licensing for business in energy industries; in addition to the amendment to the Energy Act, it also reflects the changes related to the re-codification of Czech civil law and to experience from the application practice; it primarily remedies the insufficient clarity of legislation and removes redundant or useless provisions of the preceding public notice (such as having to prove business assets or provide a list of contracts proving the ownership or usufruct right to the energy installation);

- no. 9/2016 on procedures for registering aid with the market operator and implementing certain other provisions of the SES Act (the 'registration public notice'); it responds to the new legislation on operating aid for useful heat as contained in the amendment to the SES Act;

- no. 16/2016 on the conditions for connection to the electrical grid; it lays down uniform general conditions for connecting electricity market participants' installations to the transmission system or a distribution system, providing that any specificities of connecting different market participants are set out as special provisions in relation to general provisions, including those on the conditions of connecting up to 10 kW generating plants. The public notice also lays down the method for determining the share of the justified costs to be paid by the applicant for the connection of an installation to the transmission/distribution system;

- no. 70/2016 on the billing of supply and related services in the energy industries; it responds to the change of the terminology in the Energy Act and also clarifies and supplements the basic, or minimum, standards for billing energy supply to customers. It also responds to energy consumers' requirements concerning billing transparency. The Office also expects the public notice to enhance the objectivity of the decisions taken by consumers for the purpose of savings, be it efficient energy use or the right selection of the supplier;

- no. 404/2016, on the particulars and structure of the returns required for preparing reports on the operation of systems in the energy industries, including the dates, scope and rules for preparing the returns (the 'statistics public notice'), contains completely new provisions on the collection of the statistical data that is further used for preparing yearly and quarterly reports on the operation of systems in the energy industries. These reports are the basic source of data for both state and non-state institutions, experts, and the general public. The reports also serve as inputs for additional work and analyses carried out by institutions such as the Ministry of Industry and Trade, the Czech Statistical Office, the Ministry of Foreign Affairs and the market operator.

As regards the Agency's and the European Commission's decisions, in 2016 the Commission decided on the compatibility of the following cases of state aid with the EU's internal market:

- State Aid SA.43182 (2015/N) – Czech Republic: Promotion of electricity production from small hydro power plants;
- State Aid SA.43451 (2015/N) – Czech Republic: Operating support for small scale biogas installations with a capacity of up to 500 kW; and
- State Aid SA.40171 (2015/NN) – Czech Republic: Promotion of electricity production from renewable energy sources.

The ERO then reflected the Commission's above decisions in its Price Decisions laying down the amount of aid related to electricity from supported energy sources.

3.2 Promoting competition

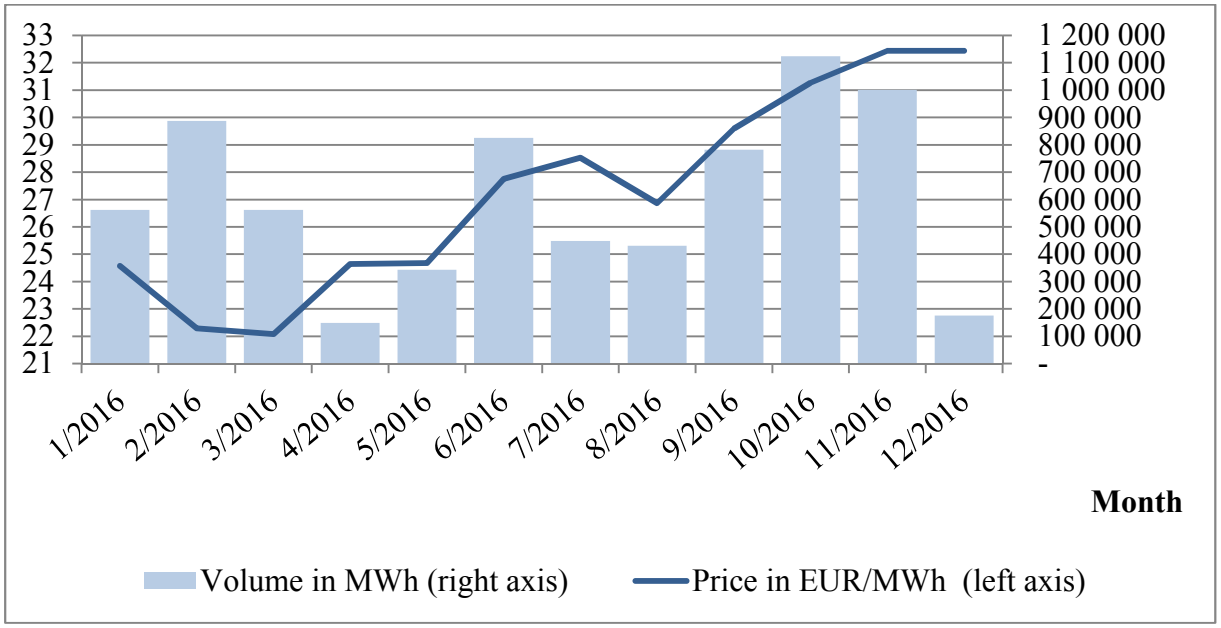
3.2.1 Wholesale markets

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

In the Czech Republic, electricity is traded at POWER EXCHANGE CENTRAL EUROPE, a.s. (PXE), under bilateral [OTC] contracts, and at spot markets organised by OTE, a.s. While the standard products traded at PXE and the products at the spot market of OTE, a.s. have fixed expiry dates, these rules do not apply to bilateral contracts. The terms of bilateral contracts vary; an electricity producer and an electricity trader, or a trader and a customer, usually enter into one-year agreements. At PXE, only financial products (i.e. without the option of physical supply) are currently traded. In 2015, 1,390 contracts with settlement in 2016 and a volume of 8.2 TWh were traded (830 contracts with a volume of 7.3 TWh concerned the annual product) while in 2016 (for 2017) it was 1,505 contracts totalling 11.3 TWh (1,222 contracts totalling 10.7 TWh concerned the annual product). The traded quantity therefore increased by 8.3%.

Electricity traders can use any combination of bilateral contracts and energy exchange products, including OTE's platforms and foreign exchanges, for buying and selling. It is therefore not feasible clearly to determine the structure of electricity procurement for specific final customers after the supplier has bought or resold electricity in various market places in Europe. Chart 6 indicates the prices at PXE in 2016.

Chart 6 Prices of futures BL CAL 2017 (annual base load) at PXE



Source: PXE, a.s.

A part of the electricity quantity is traded under OTC (bilateral) contracts (not registered at the energy exchange) and also at the spot market (day-ahead and intraday markets) organised exclusively by OTE, a.s. In 2016, 20,141 GWh of electricity was traded at the day-ahead market; under bilateral contracts registered in the OTE system, 100,621 GWh was traded, and 62 GWh was traded in the block market; and 370 GWh of electricity was traded on the

intraday market. All cleared entities, i.e. not only traders and producers but also the customers who are responsible for imbalances [≈ balance responsible parties], can go to the spot market to procure electricity.

A total of 109 participants were active on the intraday electricity market as at 31 December 2016.

3.2.2 Retail market

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

The ERO website offers customers information about the energy market's functioning and information related to consumer protection. On the website, the Office advises citizens of the opportunities and procedures for electricity supplier switching. The online electricity ready reckoner, also available on the website, helps to compare the various electricity traders' price quotations and to check electricity billing.

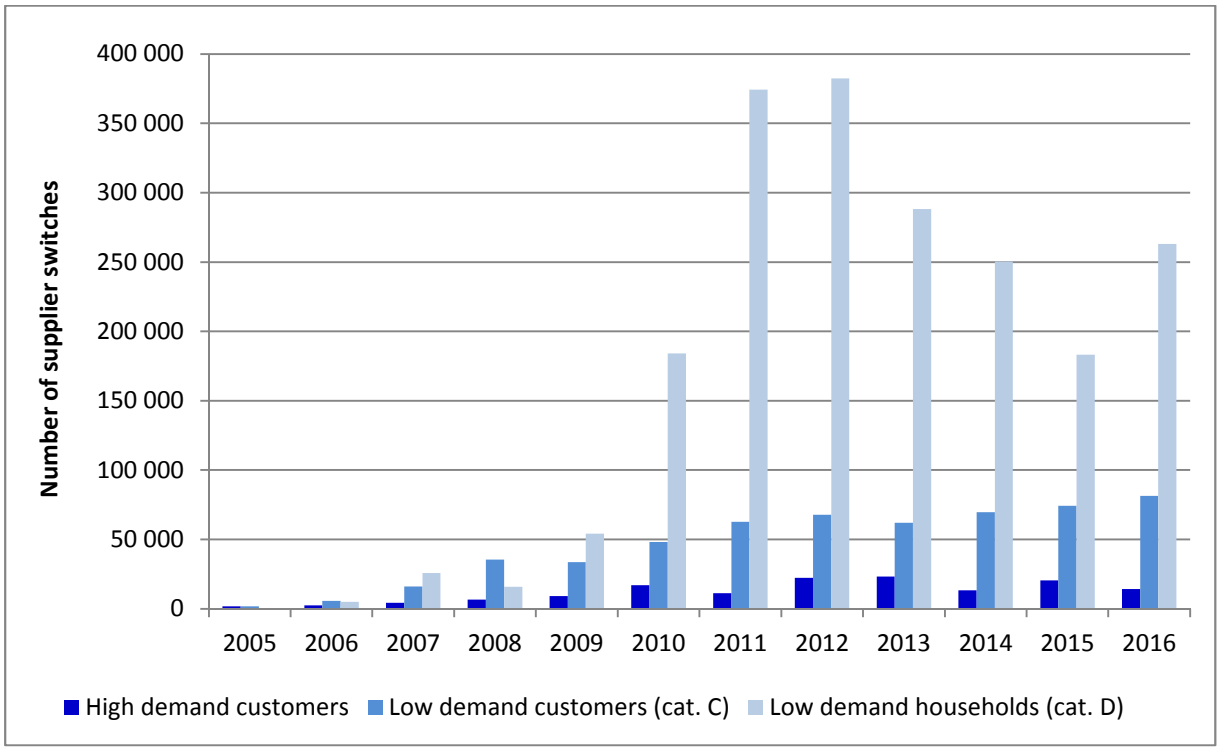
Since 2006, all customers have been able to change their electricity supplier. Since then, approximately 2.7 million electricity supplier switches have been executed. Electricity suppliers use a number of tools for approaching customers such as door-to-door sales, participation in mass-scale e-auctions, and the acquisition of weaker competitors. In 2016, almost 359,000 customers changed their electricity supplier, which implies a relative increase in electricity supplier switching of 29.3% year-on-year. The overall increase in electricity supplier switching is mainly attributable to the year-on-year growth of 43.7% in the household segment. In the low-demand business segment the number of supply point transfers to a different supplier increased by 9.9% year-on-year, whereas in the high-demand customer segment electricity supplier switching dropped by 29.8%. This is illustrated by Chart 7, which shows the numbers of electricity supplier switches between 2005 and 2016.

Table 3: Electricity supplier switching

	2015	2016		2016	2016
Type of demand	**Number of supplier switches**	**Number of supplier switches**	**Year-on-year change [%]**	**Total number of supply points**	**Switching [%]**
High demand customers	20,349	14,278	-29.83	24,440	58.4
Low demand customers – businesses	74,109	81,415	9.86	742,598	11.0
Low demand customers – households	183,114	263,073	43.67	5,159,231	5.1
Total	**277,572**	**358,766**	**29.25**	**5,926,133**	**6.1**

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

Chart 7: Annual electricity supplier switching in the main customer categories between 2005 and 2016



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

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

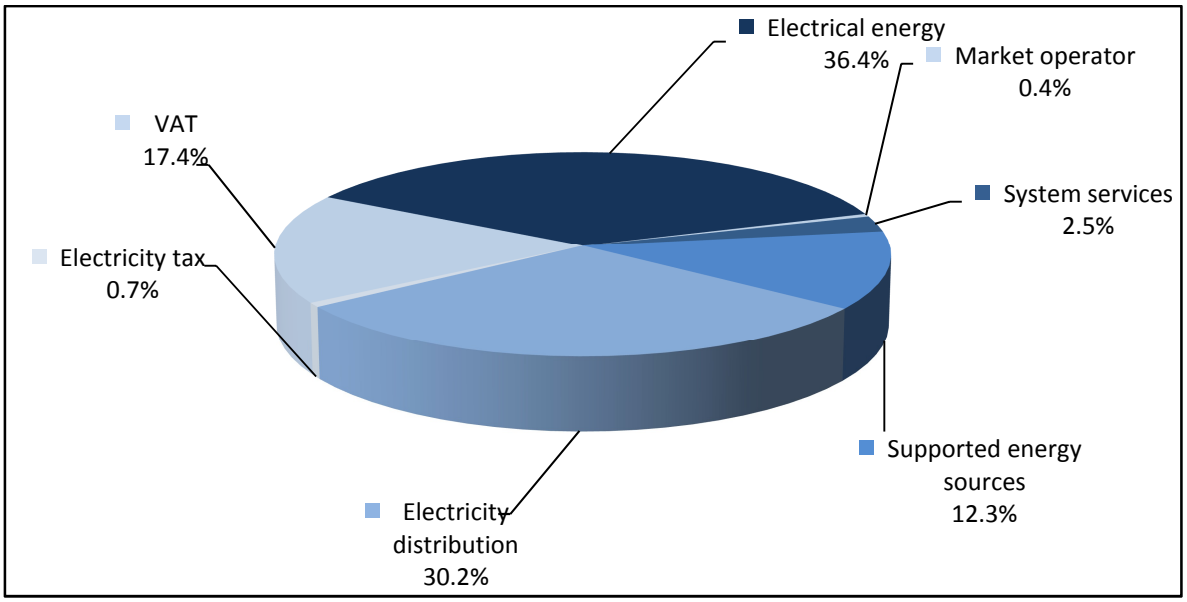
The overall price of electricity supply for customers at the LV level is made up of the charge for the distribution system service and the unregulated price of electrical energy, which is determined by the supplier selected by the customer. The Office sets out the charge for the distribution system service in its binding price decisions, where the charge for system services, the component of the price for support of electricity from supported energy sources, and the charge for the market operator's services are the same for all final customers in the Czech Republic regardless of the connection point or selected supplier. The charge for electricity distribution depends on the place of connection, i.e. on the distribution system to the network of which the supply point is connected. Thus, customers cannot select their distribution system operator. However, customers at the LV level can change their distribution tariff subject to meeting the conditions for obtaining the tariff or, by changing the main switch upstream of their electricity meter, they can influence the fixed component of the regulated charge for electricity distribution.

Customers have the right to select, at their own discretion, any supplier of electrical energy and the most suitable product on offer with regard to the nature and size of their demand. The number of supplier switches is published, on a monthly basis, in the statistics section of the

website of the electricity and gas market operator, OTE, a.s., broken down by voltage level and customer category. Table 3 above shows electricity supplier switching in 2016.

Chart 8 shows the percentage shares (including the VAT and electricity tax) of the various components in the resulting price of electricity supply for households in 2016.

Chart 8: Percentage shares taken by each of the components of electricity supply price for households in 2016



Source: ERO

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

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

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

In 2016, the Office continuously monitored, within its remit and in line with Section 17 of the Energy Act, the use of restricting or unfair conditions in contracts on the electricity market, restricting or excluding customers' rights, and also monitored competition on the wholesale and retail electricity markets. In this monitoring, the Office did not find any practices or instruments restricting customers' rights or distorting competition in the electricity market,

and in 2016 it therefore did not impose any measure to eliminate the causes of non-existent effective competition on the electricity market.

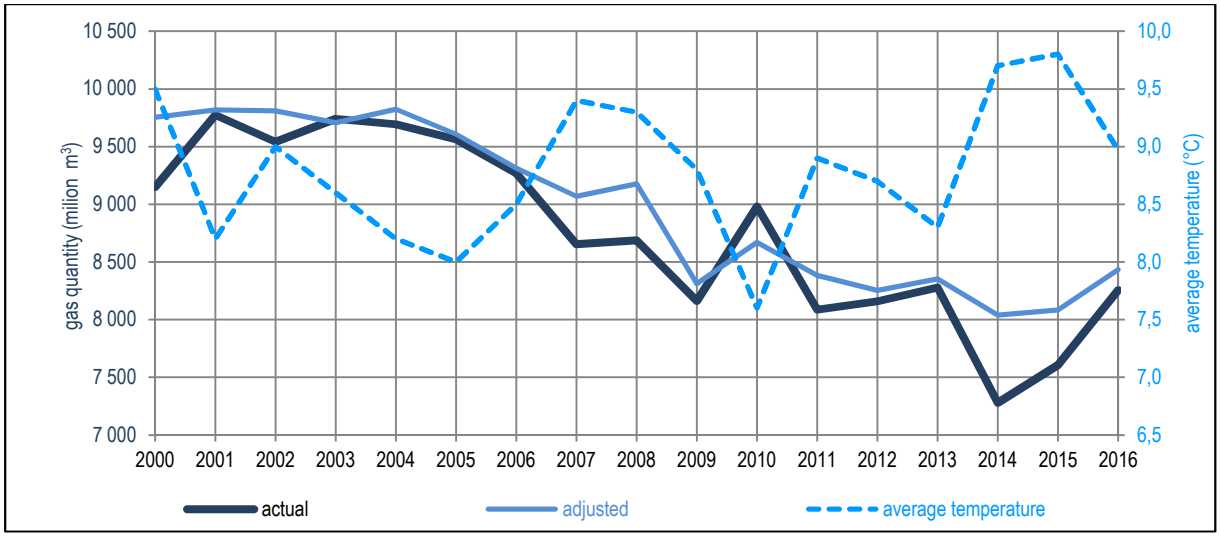
The Office has certain reservations to fixed-term contracts with automatic extension. Although traders and customers enter into such contracts on a voluntary basis this type of contract is, in particular when combined with other obligations (lease of bulbs, discounts paid out in advance etc.), usually unclear for customers, mainly in terms of identifying the dates and conditions on which contracts can be terminated.

4 The gas market

In 2016, annual gas consumption in the Czech Republic totalled 8,255.1 mcm, i.e. 88,243.2 GWh (the average GCV in the country amounted to 10.69 kWh/m^3, i.e. 38.48 MJ/m^3). Compared with 2015, actual consumption rose by 8.5%, with the largest growth during the year registered in the fourth quarter. The increase in consumption was due to cold November and December and, in particular, the operation of the combined cycle unit at the Počerady power station, the demand of which increased significantly compared with the preceding years. Monthly consumption peaked in January at 12,664.4 GWh (1,187.3 mcm).

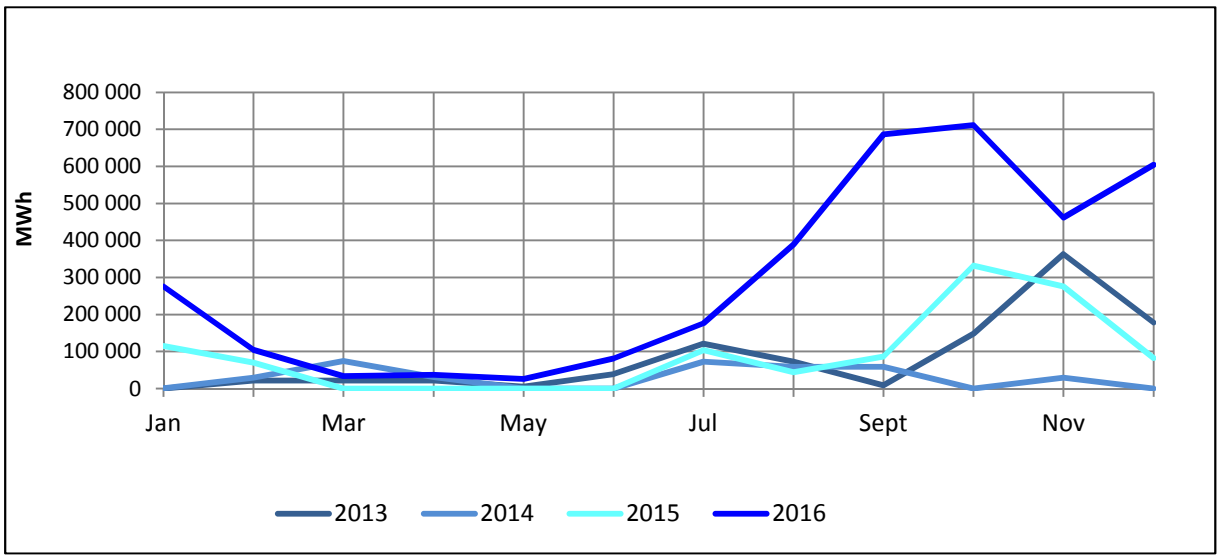
The average annual temperature was 9 °C, with a difference of +1.1 °C from the long-term normal temperature and a difference of -0.8 °C compared with 2015. Gas consumption in the heating season accounted for approximately 72% of total annual demand. Adjusted to long-term normal temperatures using the temperature gradients of consumption, consumption in 2016 amounted to 8,432.7 mcm, i.e. 90,140.4 GWh, with a year-on-year increase of 4.3%. Chart 9 shows an overall evaluation of gas consumption in the Czech Republic between 2000 and 2016, indicating consumption adjusted to normal temperature.

Chart 9: Annual gas consumption (2000-2016)



Source: ERO

Chart 10 The Počerady combined cycle unit's gas consumption



Source: ERO

4.1 Network regulation

The public notice on Gas Market Rules is the key document for the gas market's functioning. This statutory instrument provides for the processes and timeframes that are required for putting in place the rules for the various gas market participants' operation, which help to ensure the gas market's transparent and non-discriminatory functioning. The design of these processes reflects the requirements of higher-level legislation, i.e., in particular, the Energy Act and the relevant EU regulations. The application of the principles of Commission regulations to the corresponding design of the gas market model must not pose any risks to the various gas market participants' operations.

Regulated prices related to gas supply are set every year under the applicable legislation. In 2015, regulated prices for 2016 were set out in ERO Price Decision 6/2015 on the basis of the Energy Act, public notice no. 195/2015 on methods of price regulation and procedures for price controls in the gas industry, public notice no. 196/2015 on methods of price regulation and procedures for regulating the prices for the market operator's activities in the electricity and gas industries, and 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. The above Price Decision lays down regulated prices for gas transmission and distribution and for the market operator's services for the calendar year 2017.

4.1.1 Unbundling

The Czech transmission system operator, NET4GAS, s.r.o., was granted an independence certificate in 2013. In 2016, the ownership structure of NET4GAS, s.r.o. did not change and no circumstances inconsistent with the ERO's decision or the European Commission's opinion of 2013 occurred, and so no reasons were found for TSO re-certification.

Article 26 of Directive 2009/73/EC of the European Parliament and of the Council lays down the requirements for distribution system operators' unbundling and the criteria on the basis of which those requirements are to be satisfied. This article of the directive has been implemented in Czech legislation through Section 59a of the Energy Act.

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

Unbundling has also necessitated provisions 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 execution of the programme. Compliance officers prepare annual reports on measures adopted for compliance programme execution for the past year and submit them to the Office by 30 April.

In 2016, the Office received annual reports on measures adopted for compliance programme execution for 2015 from all the distribution system operators to which this obligation applies.

4.1.2 Technical functioning

The gas transmission system is comprised of approximately 3,800 km of high-pressure gas pipelines serving for both transit and inland gas transport through DN 50 to DN 1400 pipelines under nominal pressures ranging from 4 to 8.4 MPa. The pressure required for moving the gas through the system is provided by compressor stations; in the northern branch, compressor stations at Kralice and Kouřim and in the southern branch compressor stations at Břeclav and Veselí nad Lužnicí. In 2016, the installed capacity of compressor stations totalled 243 MW.

In 2016, operators of the distribution systems that are directly connected to the transmission system operated a total of 73,893 km pipelines. Table 4 shows the breakdown.

Table 4 Lengths of operated gas pipelines by pressure level

	HP [km]	IP [km]	LP [km]
GasNet	11,302	40,702	12,913
E.ON	1,222	2,326	985*
PPD	373	2,842	1,228

* including 705 km of IP and LP service pipes

Underground gas storage (UGS) facilities play a major role in ensuring the reliable operation of the Czech gas system, and not only in the periods of curtailed supply but also for compensating the summer and winter surpluses/shortfalls between gas sources and gas consumption. In normal situations, gas storage facilities serve for storing gas in summer/withdrawing gas in winter when the daily consumption is lower/higher than the daily contract quantity of imported gas.

Compared with 2015, the overall technical storage capacity of storage facilities in the Czech Republic increased to a total of 3.076 bcm, which in theory accounts for 37% of the country's annual gas consumption in 2016. The storage capacities have been expanded thanks to the reinforcement of the storage capacities in the Uhřice UGS facility (MND Gas Storage a.s.) from 245 to 255 mcm and the commissioning of a new UGS facility in Dambořice (Moravia

Gas Storage a.s.) on 1 July 2016. The facility currently has a capacity of 115 mcm and its maximum storage parameters, i.e. 448 mcm, are expected to be achieved in 2021.

A UGS facility connected only to the Slovak gas network and owned by SPP Storage, s.r.o., with a capacity of 576 mcm, is also located in southern Moravia. This UGS facility is not yet connected to the Czech gas system and its capacity is therefore not included in the country's overall storage capacity. 2016 saw talks on connecting this UGS facility directly to the Czech transmission system and on the conditions for operating it in the cross-border mode.

The technical parameters of UGS facilities in the Czech Republic (storage capacity, maximum daily withdrawal capacity and maximum daily injection capacity) are shown in Table 5.

Table 5: Gas storage facilities in the CR and their technical parameters

SSO	UGS facility	Storage capacity [million m^3]	Maximum daily withdrawal capacity [million m^3/d]	Maximum daily injection capacity [million m^3/d]
innogy GS	Háje	64	6.0	6.0
	Dolní Dunajovice	900	17.0	12.0
	Tvrdonice	535	8.0	8.0
	Lobodice	177	5.0	2.5
	Štramberk	500	7.0	7.0
	Třanovice	530	8.0	6.0
	Total	**2,706**	**51.0**	**41.5**
MND GS	Uhřice	255	6.0	2.6
Moravia GS	Dambořice	115	4.0	3.0
Total Czech Republic		**3,076**	**61.0**	**47.1**
SPP Storage, s.r.o. (connected only to the Slovak transmission system)	Dolní Bojanovice	576	9.0	7.0

Balancing services

The obligation to apply Commission Regulation (EU) No 312/2014 of 26 March 2014 establishing a Network Code on Gas Balancing of Transmission Networks (which has a priority force) in the national gas market model precipitated a major overhaul of ERO Price Decision 6/2015 of 25 November 2015, as amended in Price Decision 1/2016 of 29 February 2016, with effect from 1 July 2016. The main purpose of the changes was to remove the parts of the Price Decision, which set the charge for balancing gas and were related to the old model of balancing. There was no need to set new charges because the charge for imbalances is derived from the daily market price of gas in the Czech Republic plus a small adjustment, taking into account the charge for the TSO's balancing action, if carried out, reflecting the size of the system imbalance.

Supply security and reliability standards, quality of service and supply

As part of its competences, the Energy Regulatory Office monitors and evaluates compliance with the security standard for gas supply in the Czech Republic. The obligation to provide for this standard is laid down in 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. This regulation has been implemented in Czech law through the Energy Act and Ministry of Industry and Trade Public Notice 344/2012 on states of emergency in the gas system and on

methods for ensuring the security standard of gas supply. In response to interest shown by market participants and expert circles, the Office has introduced Monthly Reports on the Evaluation of the Security Standard for Gas Supply in the Czech Republic, which the Office posts on its website on a regular basis during the heating season. The Office has repeatedly stated that one of the key pillars of its activity is adopting measures that will ensure safe and reliable gas supply to customers in the Czech Republic (including review mechanisms), and the Office therefore devotes great attention to monitoring gas traders' compliance with the obligation to keep the supply security standard.

Monitoring time taken to connect and repair

Under the applicable legislation, the TSO, DSOs and SSOs are obliged to specify plans of shutdowns of their gas facilities and to post these plans on their websites. Shutdowns must be notified at least 30 days before the day on which the shutdown is to start. The most frequent reasons for shutdowns include repair and maintenance of equipment, underground well repair, and stabilising reservoir pressures in each plant. Shutdowns of the virtual UGS facility are also declared for reasons attributable to the transmission system operator.

In 2016, the above time limit was kept at all times. Furthermore, the repair work did not impair the required quality of the supply and services provided by the respective gas infrastructure operator. However, some cases appeared where the repairs had been planned for the period when gas is consumed for heating.

Monitoring access to storage, line pack and other ancillary services

SSOs have adopted a compliance programme the purpose of which is to ensure a non-discriminatory position for all gas market players who use or want to use storage services. They are obliged to notify the Office of compliance with this programme once per year. In the period under review no breach of such programmes was identified.

Access to gas storage facilities is based on the principle of negotiated third-party access (TPA). In the relevant regulations, the Office sets out the particulars of which applicants for storage capacity must be aware before storage capacity is sold and allocated using an auction mechanism. The terms and conditions of every auction are posted on the SSO's website. The Office continuously monitors and evaluates these terms and conditions. In 2016, no discriminatory treatment of gas market participants occurred.

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

Access to gas storage facilities is based on the principle of negotiated third-party access (TPA). The terms and conditions of every auction are posted on the SSO's website. The Office continuously monitors and evaluates these terms and conditions, as also all the services offered by SSOs. Through auctions, the entire storage capacity for the 2016/2017 storage year was sold in 2016.

In 2016, no discriminatory treatment of gas market participants or breach of the obligation to publish auction terms before the auction was registered.

Monitoring safeguard measures

No crisis in the gas market or threat to the physical safety of people, apparatus or installations or system integrity occurred in 2016 and so no necessary safeguard measures had to be taken in 2016.

4.1.3 Network and LNG tariffs for connection and access

Tariffs

Under Act No 265/1991 on the Competences of the Czech Republic's Authorities in the Area of Prices, as amended, the Energy Regulatory Office is a state administration authority competent to set regulated charges for gas transmission and distribution, charges for the market operator's services, and the gas prices of the supplier of last resort under Section 17(11) of the Energy Act. The prices of the supplier of last resort are controlled on the cost-plus basis.

The tariffs applicable in 2016 had been set in accordance with the Energy Act, public notices no. 195/2015 on methods of price regulation and procedures for price controls in the gas industry and no. 196/2015 on methods of price regulation and procedures for regulating the prices for the market operator's activities in the electricity and gas industries, and the published Price Control Principles for 2016-2018 in the Electricity and Gas Industries and for the Market Operator's Activities in the Electricity and Gas Industries.

A regulatory method based on the revenue cap principle was used for 2016, which was the first year of the fourth regulatory period, to determine the allowed revenues of DSOs. In the case of revenues for the TSO, the method is based on a combination of the revenue cap and price cap principles. Set parameters together with other eligible variables are inputs into 'adjusted allowed revenues', from which the relevant regulated prices are derived. The regulatory method remains unchanged throughout the regulatory period to ensure a stable and predictable environment for all gas market participants.

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

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

The same method of gas distribution pricing is used for all DSOs. Adjusted allowed revenues are determined for each operator of a distribution system that is directly connected to the transmission system on the basis of the data reported by the operator. Depending on booked distribution capacity and the gas quantity planned to be distributed, the adjusted allowed revenues so determined are then allocated to the prices for each customer category. 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.

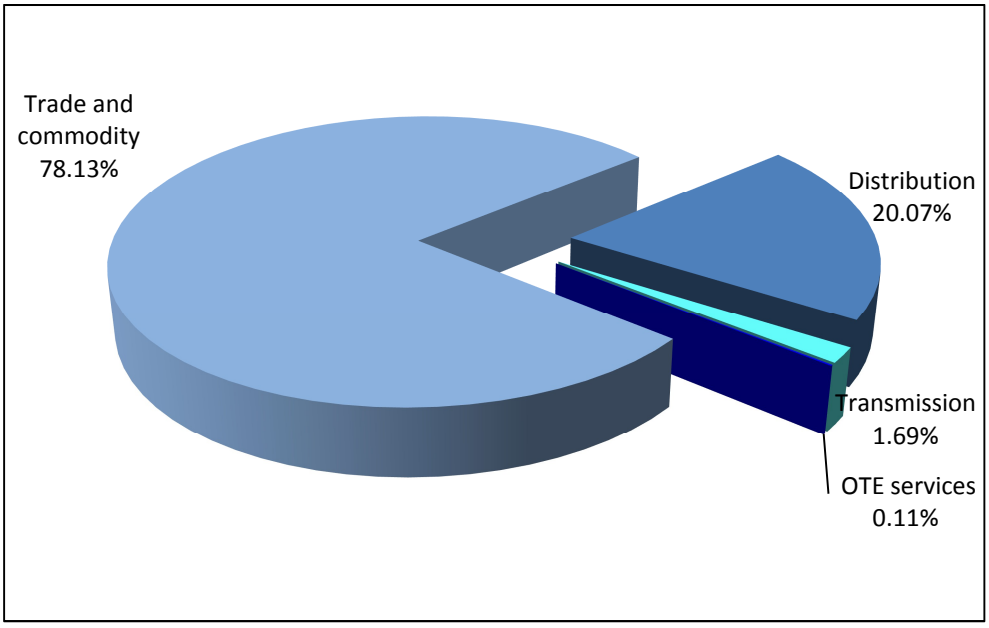
The Office determines regulated gas distribution prices for each customer category, which are as follows: categories of high-demand customers, medium-sized demand customers, low-demand customers, and households. These prices are also usually double-component prices with a fixed and a variable component,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

Finally, the Office also regulates the charges for the market operator's services in the gas industry. Every year, the Office also sets adjusted allowed revenues for the market operator's services in the gas industry, on the basis of which the fixed charge for clearing carried out by the market operator is calculated. The payment for the fixed charge for clearing depends on the gas quantity taken.

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

The Office did not apply any special tariffs for LNG in the Czech Republic in 2016.

Chart 11 Structure of the average price of the gas supply service for household customers in 2016 (without tax items)



Source: ERO

Prevention of cross-subsidies

Cross-subsidies are prevented, in particular, by the suitable structure of regulatory reporting that, following the accounting and legal unbundling, strictly requires the reporting of costs directly allocable to each of the regulated activities.

Regulated and negotiated access to storage

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

In 2016, SSOs called a total of 20 auctions for storage capacities. For the first time ever, the reserve price of storage capacity in auctions was determined using a formula reflecting the difference between summer and winter gas prices rather than a firm value. SSOs therefore accentuated the intrinsic value of gas storing in storage facilities.

Table 6

Date of the auction	Company	Final price*		Volume offered [GWh]	Contract type
28 Jan 2016	innogy GS	53	CZK/MWh	43.00	Yearly capacity
1 Feb 2016	innogy GS	55	CZK/MWh	20.00	Yearly capacity
19 Feb 2016	innogy GS	53	CZK/MWh	3.00	Yearly capacity
22 Feb 2016	innogy GS	56	CZK/MWh	300.00	Yearly capacity
7 Mar 2016	innogy GS	53	CZK/MWh	200.00	Yearly capacity
15 Mar 2016	MND GS	0.60	CZK/m^3/yr	10.50	Yearly capacity
21 Mar 2016	innogy GS	49	CZK/MWh	56.00	Yearly capacity
22 Mar 2016	innogy GS	29	CZK/MWh	3.79	Operating volume
23 Mar 2016	innogy GS	49	CZK/MWh	300.30	Yearly capacity
18 Apr 2016	innogy GS	52.4	CZK/MWh	55.00	Monthly capacity
19 Apr 2016	innogy GS	30.5	CZK/MWh	375.00	Operating volume
23 May 2016	innogy GS	70.8	CZK/MWh	158.20	Monthly capacity
24 May 2016	innogy GS	34.8	CZK/MWh	180.00	Operating volume
22 Jun 2016	Moravia GS	2.79	€/1000 cu m/yr	121.00	Monthly capacity
25 Oct 2016	innogy GS	55	CZK/MWh	300.00	Yearly capacity
25 Oct 2016	innogy GS	33	CZK/MWh	100.00	Operating volume
31 Oct 2016	innogy GS	CZK 7/day	CZK/MWh	0.50	Injection and withdrawal volume
10 Nov 2016	MND GS	$P = \Delta_{S/W} + K$, where K= +CZK 18.5	CZK/cu m/yr	180.00	Yearly capacity
30 Nov 2016	MND GS	$P = \Delta_{S/W} + K$, Where K= +CZK 9	CZK/cu m/yr	1,010.00	Yearly capacity
21 Dec 2016	innogy GS	55		500.00	Yearly capacity

Note: The innogy GS prices have been converted to yearly storage capacity, unless stated otherwise

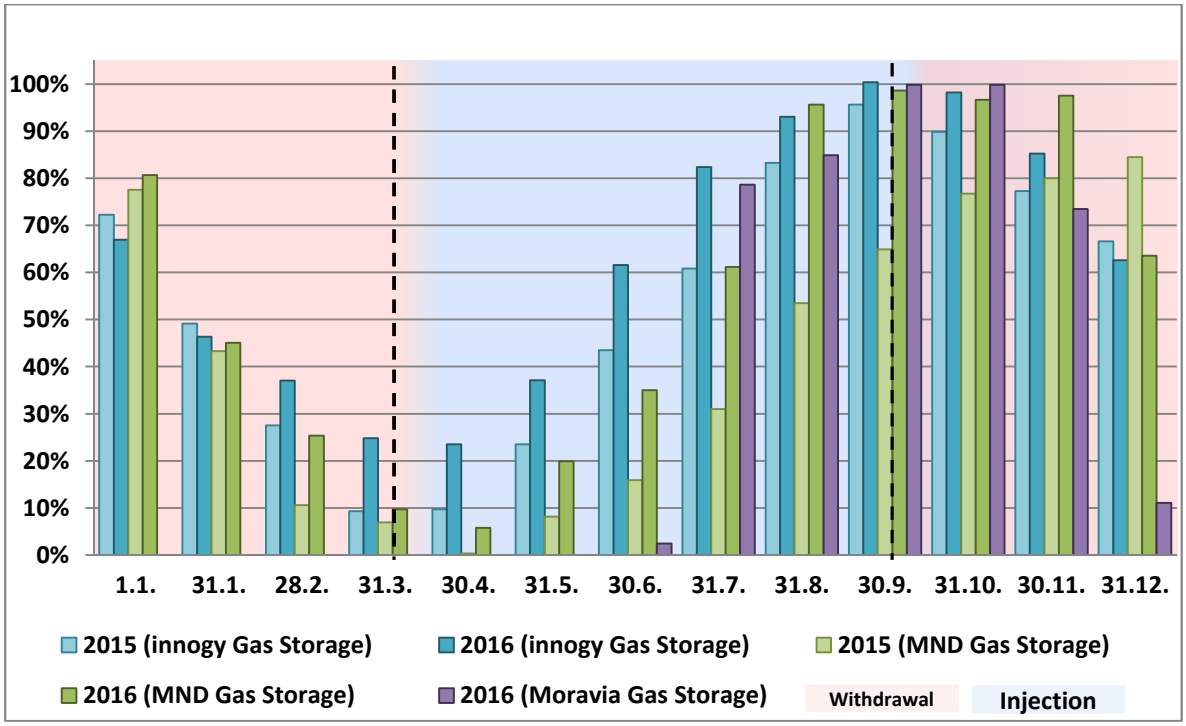
Source: ERO

The reserve prices in storage capacity auctions were lower than in 2015, which can be attributed to the influence of declining gas prices on spot markets and the minimum difference between the summer and winter prices. This trend, in principle negative for SSOs, directly helps to improve the operating efficiency of gas storage facilities in a fully market and competitive environment. On the other hand, there is a positive effect of lower extra costs for

gas traders, which are also passed through to the final prices for customers through business models.

Another criterion for reviewing the rules for access to storage facilities is the level to which they are filled. This indicator is crucial before the beginning of the heating season and at the end of the storage year when, in case of temperature fluctuations, storage facilities are unable to offer the full withdrawal capacity for technological reasons when they hold a low level of gas stores. As at 1 October 2016, all gas storage facilities were filled to capacity.

Chart 12 Comparison of gas stores in storage facilities in the Czech Republic between January 2015 and December 2016



*Note: The black dashed line in the chart separates the end and the beginning of withdrawal seasons

Table 7 Year-on-year comparison of gas volumes in storage facilities at the end of the withdrawal season**

	Level of depletion at the end of the withdrawal season on 30 April 2015	Level of depletion at the end of the withdrawal season on 30 April 2016
innogy Gas Storage	25.00%	9.00%
MND Gas Storage	0.33%	5.75%

** A rate expressing the ratio of gas quantity in the facility and its technical capacity

4.1.4 Cross-border issues

Procedures for capacity allocation and congestion management

In compliance with Regulation (EU) No 715/2009, the gas transmission system operator has implemented, at border transfer stations, measures for capacity allocation in the case of congestion. Although the Czech Republic has sufficient transmission capacities at the entry and exit border points of the transmission system, ACER has, on the basis of an analysis of the data available on ENTSOG's Transparency Platform, identified some border points at

which the use of a firm day-ahead use-it-or-lose-it mechanism should result in a higher and more efficient use of the transmission system's technical capacity. Relying on this analysis, the Office has updated the settings of the congestion management mechanisms, with procedures for congestion management in the case of contractual congestion. This change came into effect on 1 January 2017.

Cooperation with other regulatory authorities and ACER

Gas working groups primarily focused on monitoring the implementation of network codes in the various countries. As part of their active participation in these working groups, the ERO staff members prepared questionnaires and subsequently provided the relevant information about the Czech gas market. In 2016, the network code for harmonised natural gas transmission tariff structures was being prepared for approval. The consultations on this document have resulted in respecting the specific nature of the use of the Czech gas transmission system and in minimising the negative impacts on the Czech Republic. Intensive bilateral talks on preparing market integration between the Czech Republic and Austria were under way. A strategic task with an impact on the gas market in the national as well as the European context was commenting on the materials related to the European Commission's intention to amend the regulation on the security of supply.

In the SSE GRI, projects with regional impacts were re-prioritised. Projects focused on the timely implementation of network codes were removed from the work plan. Instead of those, projects addressing the specific issue of cooperation were prepared and executed. The Czech and Austrian sides continued to discuss and work on the integration of their gas markets; the Slovak TSO, whose existing transmission infrastructure might be used by way of a virtual gas pipeline, was also invited to attend the discussions. The Office also participated in a project focused on analysing licence awarding in the member states, in a questionnaire assessing the implementation of the third package and in the assessment of gas quality parameters.

In 2016, ERO representatives participated in meetings organised as part of the V4 Gas Forum, which had been set up upon the initiative of the V4 countries' competent ministries. The key topics included the various tasks focused on issues concerning regional projects pursuing the objective of creating a trading zone covering several countries.

In 2016, the Office continued – within an international task force that also included representatives of the Austrian regulator (Energie-Control Austria) and the Austrian and Czech TSOs (Gas Connect Austria and NET4GAS) – in the work on the project for integrating the Czech and Austrian gas markets as a pilot project of gas market integration in Europe. The task force analysed several alternative options for continuing with the integration. The Office placed utmost emphasis on finding a solution that would be, in terms of operation, simple, flexible, requiring only the minimum legislative changes, and cost effective. The Office repeatedly stressed the requirement to minimise the costs necessitated by the project and to quantify the benefits of this market integration for Czech consumers.

The task force drew up a document the purpose of which was to clarify the key aspects of the functioning of the selected integration concept, known as the TRU option. The document was also intended to serve as the basis for the forthcoming public consultation process. The qualitative and quantitative level of the consulted document was the subject of extensive discussions whereby regulatory authorities demanded that the key aspects of TRU in the

presented document be elaborated on in more detail. National regulators played the supervisory role in the consultation process. They guarantee the transparency of the consultation process but not the quality of the document, for the preparation of which the TSOs are responsible.

The comments raised in the public consultation process were accepted from 30 March to 19 April 2016. Overall, 15 entities operating in the Czech and Austrian gas markets have participated in the consultation. During the consultation, the players in both markets generally expressed their interest in more detailed information about the functioning of the integration model and the manner in which the integration would be carried out without the existence of direct interconnection. They pointed out certain open questions with regard to compliance with the legislative framework in the two countries and also stressed the need for a more specific determination of the costs and benefits.

The review of the comments had not been completed by the end of 2016. The project and the task force will therefore continue in 2017.

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

Under Section 58k of the Energy Act, the Office assesses the ten-year plan for the development of the gas transmission system (TYNDP) and approves it by its decision; the TSO prepares the plan and submits it to the Office every year. The obligations to prepare the TYNDP and submit it to the Energy Regulatory Office for approval arise from the implementation of 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 into the Czech legislation (the Energy Act).

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

Under Section 58k(7) of the Energy Act, the current and prospective gas transmission system users whose justified interests may be directly affected by the TYNDP can lodge their reasoned comments on the TYNDP with the Energy Regulatory Office.

Under Section 58k(6) of the Energy Act, the Office consulted on the TYNDP and for this purpose it published the TYNDP without undue delay from receipt thereof in a manner enabling remote access for at least ten working days.

With regard to the requirements for transparency and in compliance with Section 58k of the Energy Act the Office places, when deciding on the presented plan, emphasis on the consultation process conducted by the TSO and the consultation process conducted by the Office. In this respect it relies on Section 58k(9) of the Energy Act, under which the TYNDP should include justifiable requirements for investment in the gas transmission system. Together with this, the Office assesses its compliance with the Union-wide Ten Year Network Development Plan prepared by ENTSOG.

The ERO hereby notes that the comments provided by the current and prospective gas transmission system users whose justified interests may be directly affected by the TYNDP

did not contain any requirement for investment in the development of interconnection between the Czech Republic and Austria, i.e. for the implementation of the TRA-N-133 and TRA-N-135 projects (known as the BACI and Oberkappel projects).

On the contrary, in their comments the current and prospective gas transmission system users, including large professional interest groups (Teplárenské sdružení České republiky [Association for District Heating of the Czech Republic], Hospodářská komora České republiky [Chamber of Commerce of the Czech Republic], Svaz průmyslu a dopravy České republiky [Confederation of Industry of the Czech Republic]), encouraged the TSO to revise its TYNDP, because in their opinion the implementation of the above projects would result in an increase in the price for the gas transmission service.

On the basis of all the information available to it, the Office has also reasons to believe that the TRA-N-133 and TRA-N-135 projects cannot be expected to create a situation where the positive externalities and benefits outweigh the negative externalities, in particular, without limitation, the costs incurred in the implementation of the projects, which the users of the system in the Czech Republic would have to pay.

For this reason the Office, referring to Section 58k(9) of the Energy Act, requested the TSO, as early as the consultation process conducted at the level of the TSO, to provide the information that would rebut the above statement. The Office also requested the TSO to revise and re-evaluate the need for the above projects.

In its submitted observations on the comments the TSO ignored the comments raised by the current and prospective gas transmission system users whose justified interests may be directly affected by the TYNDP and also the Office's comments and the Office's request to provide facts the nature of which would rebut the Office's opinion on the above projects.

In compliance with Section 58k(9) of the Energy Act, under which the TYNDP should include justifiable requirements for investment in the gas transmission system, on 22 December 2016 the Office therefore issued a decision ordering the TSO to change its TYNDP 2017-2026.

4.1.5 Compliance

The Energy Regulatory Office ensures that the TSO and DSOs and, if applicable, the relevant owners of the systems, as well as all gas undertakings perform their obligations under the relevant legislation at the European and national levels. The Office exercises its powers on the basis of the relevant provisions of the Energy Act, which lay down its rights and obligations arising from the relevant provisions of the EU legislation, i.e., in particular, Directive 2009/73/EC, Regulation No 715/2009/EC, Regulation No 994/2010/EC or 1227/2011 and Directive 2012/27/EU. The Czech legislation is fully harmonised with this EU legislation.

The Office also exercises its supervisory powers under the Energy Act so as to ensure the efficient monitoring of all gas market participants' compliance with EU and Czech law and with the ERO's relevant legally binding decisions, and imposes effective, proportionate and dissuasive penalties on the gas undertakings that breach their obligations. The Office oversees compliance of the gas transmission company's, distribution companies', system owners' and other gas undertakings' activities with the relevant EU legislation, including the cross-border issues. To this end, the Office primarily monitors and oversees compliance with the relevant

provisions of the Energy Act on the independence of the gas transmission system operator and with the certification decision. Should it find a breach of the relevant provisions of the Energy Act in this respect, the Office has the power to impose the respective penalties laid down in the legal system under Article 41(4)(d) of Directive 2009/73/EC, and also the power to revoke the independence certificate under statutory conditions.

An amendment (Act No 131/2015) to the Energy Act came into effect on 1 January 2016, with the exception of a few provisions. The Energy Act has been amended mainly due to the need to harmonise it with the new Civil Code and the new Review Rules, and to enhance consumer protection. Other reasons included the need to remove the discrepancies that had emerged from energy market participants' experience and the EU legislation that had to be implemented in the national legal system such as, in particular, Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, repealing Directives 2004/8/EC and 2006/32/EC, and Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency.

The amendments to the Energy Act then necessitated amendments to a large number of public notices, i.e. the implementing acts for these laws. The Office promulgated some of the public notices in 2015 with effect from 1 January 2016, i.e. with the same effective date as the amendment to the Energy Act. All changes to legislation which the Office effected had been consulted with the entities concerned. When developing or amending legislation the Office always places emphasis on the maximum transparency, a non-discriminatory approach, and on eliminating negative impacts on the Czech gas market.

In 2016, the Energy Regulatory Office also promulgated some other public notices that responded in many respects to the amendment to the Energy Act. These public notices were also consulted with the entities concerned to achieve the maximum transparency and a non-discriminatory approach and to eliminate negative impacts for the Czech gas market. In 2016, the Office promulgated the following public notices for the gas industry:

- no. 8/2016 on the details of licensing for business in energy industries; in addition to the amendment to the Energy Act, it also reflects the changes related to the re-codification of Czech civil law and to experience from the application practice; it primarily remedies the insufficient clarity of legislation and removes redundant or useless provisions of the preceding public notice (such as providing proof of business assets or a list of contracts proving the ownership or usufruct right to the energy installation);

- no. 70/2016 on the billing of supply and related services in the energy industries; it responds to the change of the terminology in the Energy Act and also clarifies and supplements the basic, or minimum, standards for billing energy supply to customers. It also responds to energy consumers' requirements concerning billing transparency. The Office also expects the public notice to enhance the objectivity of the decisions taken by consumers for the purpose of savings, be it efficient energy use or the right selection of the supplier;

- no. 404/2016, on the particulars and structure of the returns required for preparing reports on the operation of systems in the energy industries, including the dates, scope and rules for preparing the returns (the 'statistics public notice'), contains completely new provisions on the collection of the statistical data that is further used for preparing yearly and quarterly

reports on the operation of systems in the energy industries. These reports are the basic source of data for both state and non-state institutions, experts and the general public. The reports also serve as inputs for additional work and analyses carried out by institutions such as the Ministry of Industry and Trade, the Czech Statistical Office, the Ministry of Foreign Affairs and the market operator.

As regards complying with the Agency's and the European Commission's binding decisions by the Office, no such decisions were made in respect of the Office in 2016.

4.2 Promoting competition

4.2.1 Wholesale markets

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

Entities trading at the wholesale gas market can buy gas under long-term contracts, at commodity exchanges, or from other traders. Long-term contracts with Russian and Norwegian gas producers probably still have the most significant influence on the formation of wholesale prices. Long-term contracts are usually entered into for very long terms of up to 30 years. Earlier, certain changes to the gas price formulae were made in these contracts, but long-term contracts themselves have not been abandoned.

The Office does not set or influence the prices of gas traded at wholesale markets. The Czech gas market has been fully liberalised since 2007. Wholesale prices depend solely on agreement between the entities and on the current market situation.

2016 was a breakthrough year for all gas market participants in the Czech Republic, as with effect from 1 July 2016, the method of balancing the difference between the gas quantity input into the gas system and the gas quantity off-taken from the gas system was fundamentally changed. Until that date, the imbalance so created could be balanced in kind; since 1 July 2016, only financial compensation for such differences has been possible. The changes also included modifications of the markets organised by the market operator.

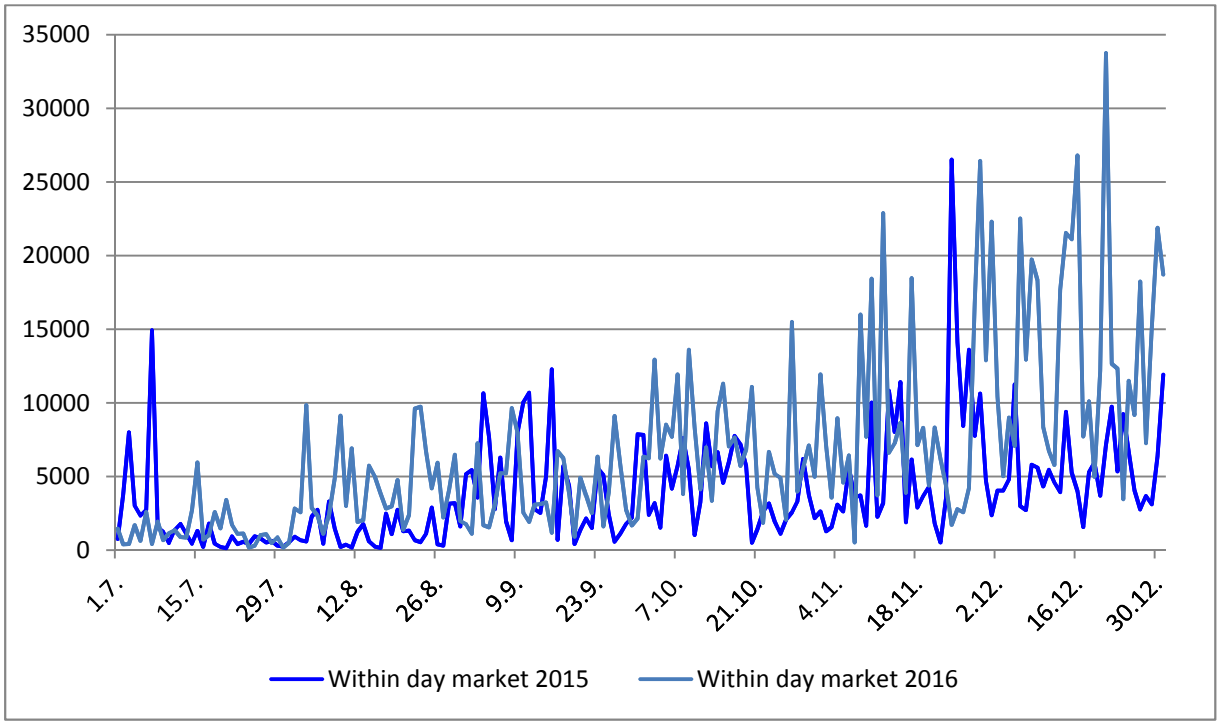
Within day gas market

The holder of the exclusive licence for the activities of the market operator in the Czech Republic, OTE, a.s., has been organising a spot gas market since 2010. An amendment to the Gas Market Rules has abolished the day-ahead gas market organised by the market operator; the reason was the negligible interest in it on the part of gas market participants. On the other hand, the within day gas market experienced dynamic development. In connection with the need to ensure a steadily stable and, from the regulatory aspect, predictable platform for trading in the gas necessary for balancing, this market has been established as a platform on which the TSO carries out balancing actions. This market maintained its high attraction for gas market participants in 2016 again.

In terms of the traded gas quantities, compared with 2015 last year saw a drop of 6.71% (2,228 GWh of gas was traded in 2015 while 2,088 GWh was traded in 2016). In 2016, the average price of the gas traded at the within day market amounted to EUR 15.09/MWh.

In terms of the modifications effected it is appropriate to evaluate – from the perspective of this market's liquidity – the period from 1 July 2016 to 31 December 2016 (Chart 13). In that period, the traded gas quantity increased, on a year-on-year basis, from 712 GWh in 2015 to 1,212 GWh in 2016. The year-on-year increase is therefore 70.24%.

Chart 13 Traded gas quantities in 2015 and 2016 (from 1 July to 31 December)

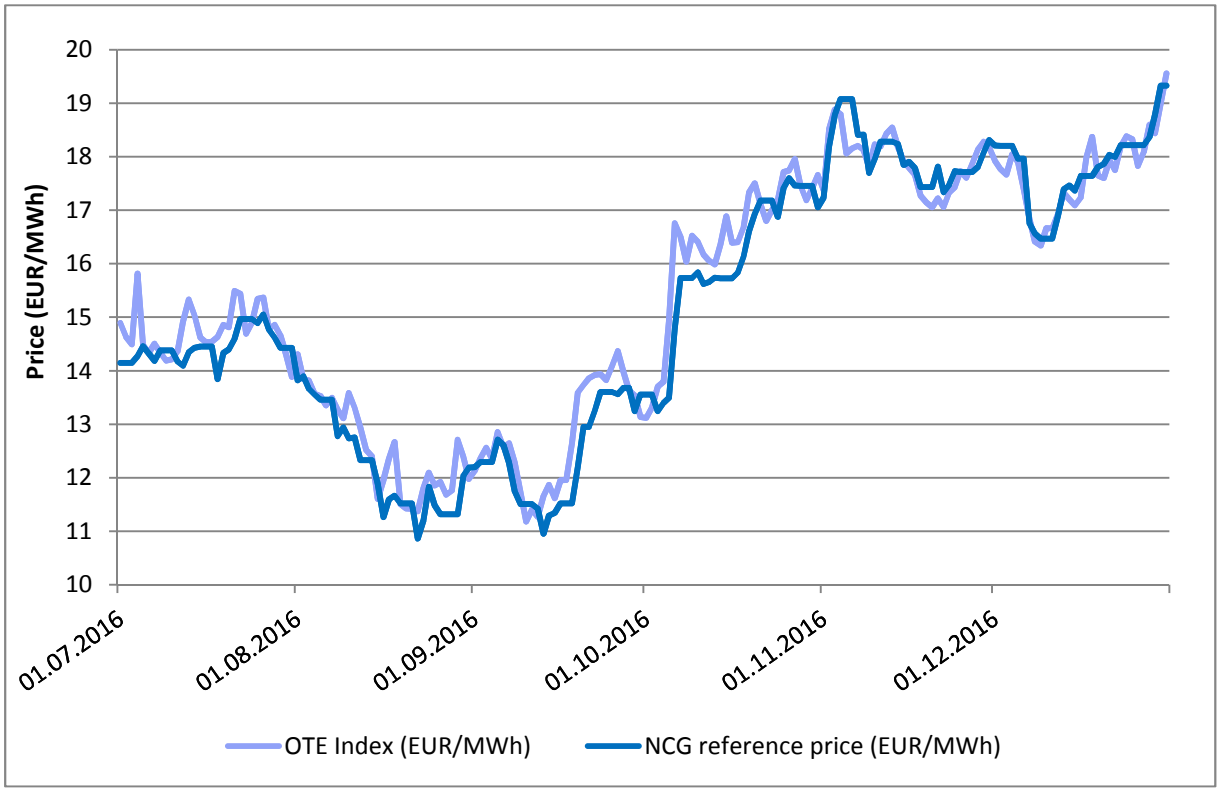


Source: OTE, a.s.

The weighted average of the prices at the within day (intraday) gas market organised by the market operator in 2016 copied the profile of the weighted average of the prices of the comparable product on the NCG platform, traded at the spot market of European Energy Exchange AG (EEX).

A comparison of the weighted averages of the prices in transactions executed in 2016 at the within day market and at NCG indicates that the prices of the gas traded at the within day gas market correspond to the prices on the NCG platform, which is the most liquid trading hub in the region. A more detailed comparison of the prices at some within day markets is shown in Chart 14.

Chart 14 Comparison of the OTE Index price with NCG



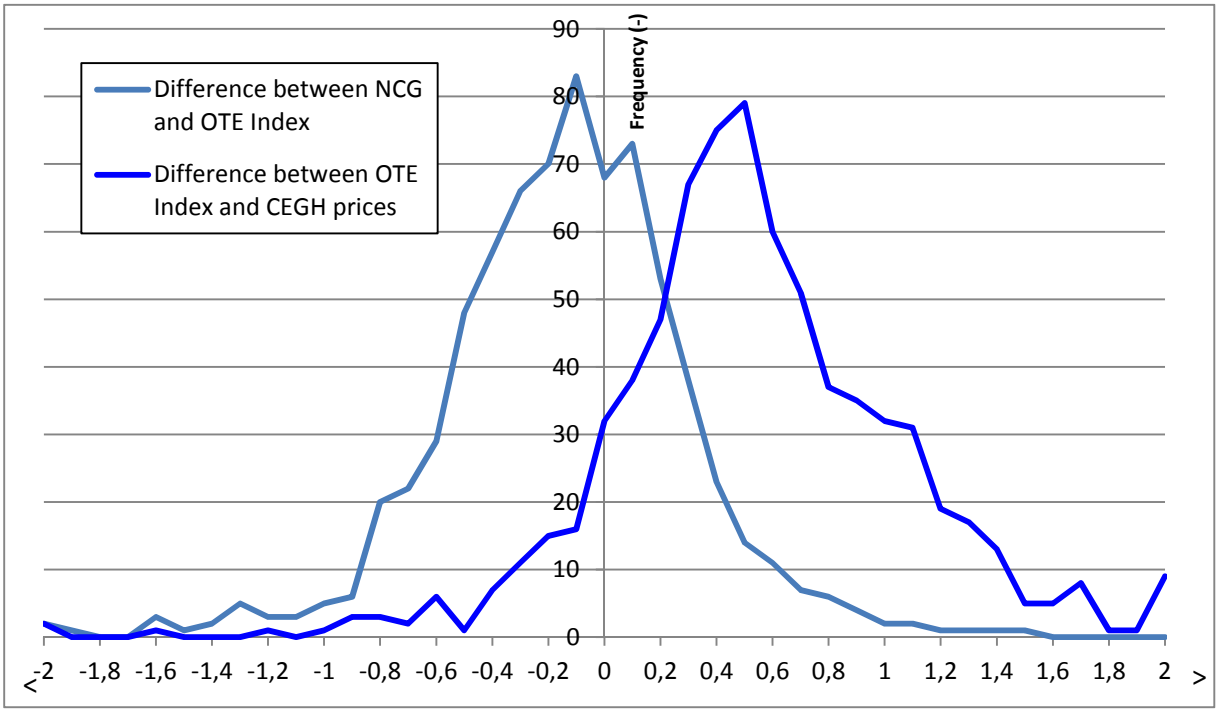
Source: OTE, a.s.

The upward trend in gas market participants' interest in using the within day market continued in 2016, and that market can therefore be described as a viable trading platform that has confirmed its potential for further growth in the context of the development of the Czech gas market. Thanks to the market participants' rising interest, it can be regarded as a fully-fledged platform on which commercial plans can be carried out.

A crucial aspect for gas market participants is that the within day gas market has the capacity to execute occasional large volumes of daily trades in which the price does not significantly differ from the key reference market for the Czech Republic, i.e. the NCG hub. The price also remains lower than that at the Austrian CEGH hub. Chart 15 shows the number of the differences between the OTE Index prices and those at NCG and CEGH.

Chart 15 Comparison of the number of differences between the OTE price and the NCG and CEGH prices

The decimal comma rather than the decimal point is used for technical reasons.



Source: OTE, a.s.

Thanks to the significant increase in liquidity the organised gas spot market in the Czech Republic, in the form of a within day market, constitutes a reliable guarantee for market participants that they can very flexibly respond to the current situation in the market or in the gas system. The within day gas market also works as a price-setting element, because the price achieved in the transactions at this market is being increasingly used as guidance for pricing other contracts. The execution of transactions at the within day gas market, which runs on a 24 x 7 basis, is based on the principle of automatic bid and offer matching. Trading takes place in the euro and one gas day is the trading period. Executed trades can be cleared in the euro or Czech crowns. The delivery point for gas under executed trades is the Czech virtual trading point (VTP) organised by the market operator.

A total of 95 counterparties were active at the within day gas market as at 31 December 2016.

4.2.2 Retail market

An environment where gas traders provide gas supply services to their customers under a contract is designated as the retail gas market. As at 31 December 2016, the Office registered a total of 242 holders of valid licences for gas trade or authorisations for gas trade. In 2016, 98 active traders supplying gas to customers operated in the Czech retail market.

In the Czech Republic, 2,840,473 supply points of customers connected to regional distribution systems were registered as at 31 December 2016. Compared with 2015 the number of supply points declined by 3,861. Gas supplier switches in each customer category in the period from 2011 to 2016 are shown in Table 8.

Table 8: Gas supplier switches in 2011-2016

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

A total of 203,950 gas supplier switches were registered in 2016; of those, 172,949 took place in the most populated customer category, i.e. households. Table 9 shows the switching rate for 2016.

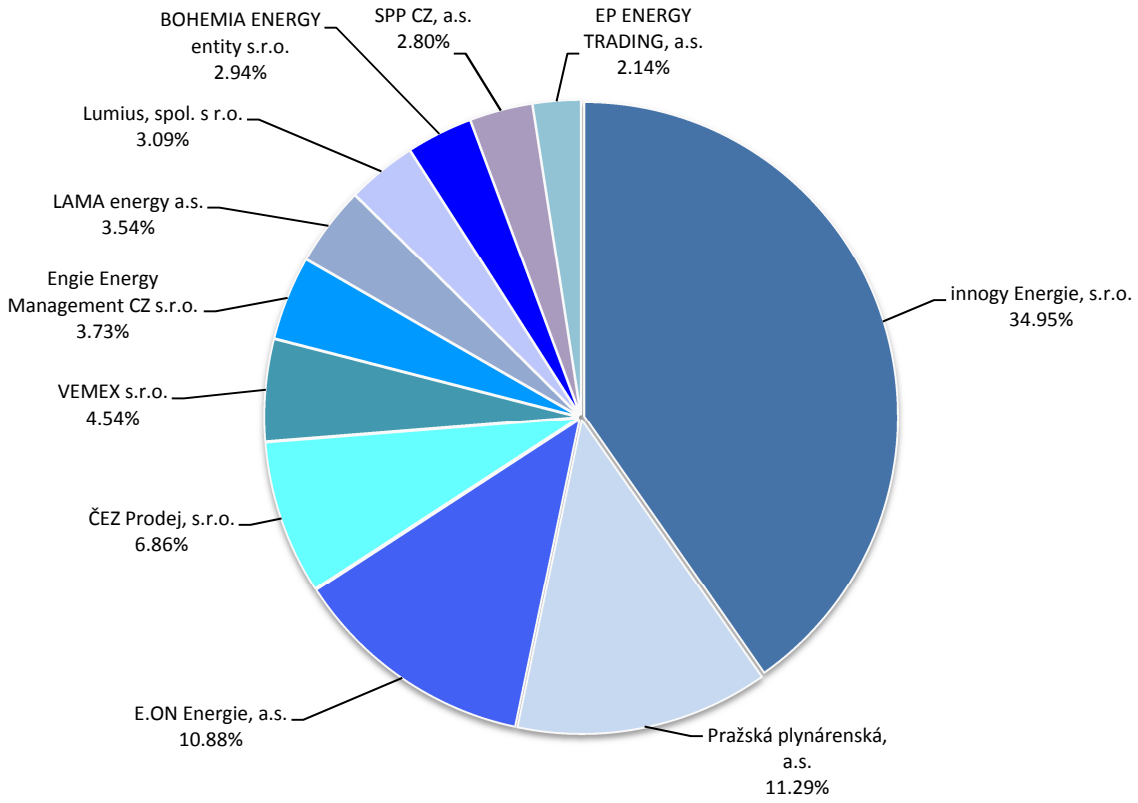
Table 9 Number of gas supplier switches in 2016

Customer category	Number of supplier switches	Total number of supply points	Switching* [%]
High demand	617	1,618	38.13
Medium-sized demand	1,973	6,823	28.92
Low demand	28,411	199,995	14.21
Households	172,949	2,632,037	6.57
Total	**203,950**	**2,840,473**	**7.18**

* Note: Switching – ratio of the number of gas supplier switches per year and the total number of supply points in that year.

Source: ERO

Chart 16 Traders' shares of gas supply in 2016



In 2016, innogy Energie, s.r.o. (formerly RWE Energie, s.r.o.) held the largest market share in terms of the gas quantity supplied to customers; it supplied customers with 34.95% of the gas consumed by customers in the Czech Republic.

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

Under the Energy Act, the Office continuously monitors the gas market in order to see whether effective competition exists on this market. The monitoring also includes assessing the conditions for the functioning of the liberalised Czech gas market. On the basis of its analyses in 2016 the Office notes that the conditions for the functioning of the liberalised gas market have been put in place correctly. These conditions ensure that the Czech gas market can be described as one of the best developed in the European Union. In spite of that, only a relatively small part of customers use their opportunities to change their supplier and thereby opt for better terms and conditions of the supply service. As the result, the competitive pressure on gas traders is not so strong and many traders can therefore offer their services for higher prices, because their customers accept such prices.

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

Satisfying the requirements of Directive 73/2009/EC, implemented in the Czech legislation, the Office puts in place rules that provide for the gas market's secure functioning and promote a competitive environment. The gas market has been fully liberalised since 2007 and the Office only controls the prices that cannot, for technical or organisational reasons, be formed by market mechanisms in a competitive environment. In the Czech gas market several dozen gas traders offering their services to customers have been operating on a long-term basis; in 2016, the Office recorded 98 active gas traders in the retail market. The Czech gas market works on the basis of a non-discriminatory approach, where every trader can approach any customer, and, vice versa, every customer can enter into a contract with any trader. The prices of the gas supply service and other terms and conditions of gas supply depend only on their agreement with each other. The well-developed competitive environment in the gas market has spawned a broad range of traders' quotations in terms of both the price and the related commercial terms and conditions. The market's dynamics therefore depends more on customers' ability and willingness to change their supplier and so gain better conditions. The Energy Act and the implementing acts based thereon guarantee the right to switch their gas supplier to all customers. This change is free of charge. Subject to the existing commercial terms and conditions, every customer therefore has the right to select their gas supplier.

In 2016, the Office continuously monitored, within its remit and in line with Section 17 of the Energy Act, the use of restricting or unfair conditions, restricting or excluding customers' rights, in contracts on the gas market and also monitored competition in the wholesale and retail gas markets. In this monitoring, the Office did not find any practices or instruments restricting customers' rights or distorting competition in the gas market, and in 2016 it therefore did not impose any measure to eliminate the causes preventing effective competition on the gas market.

In line with its duty to protect consumers, in the latter half of 2016 the Office started to post on its website indicative prices for gas supply services with a view to enhancing consumers'

awareness. This price serves as an indicative value for consumers. Indicative prices constitute non-binding information for customers on whether the prices for which they are buying the gas supply services reflect the actual situation on the retail gas market.

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

Indicative prices of supply services constitute an average value that already includes the price for gas taken and also the standing monthly charge for gas supply. However, they do not contain the regulated prices for distribution and for the market operator's services, which are laid down in ERO Price Decisions.

In the context of the above monitoring of the gas market, the Office has certain reservations to fixed-term contracts with automatic extensions. Although traders and customers enter into such contracts on a voluntary basis this type of contract is, in particular when combined with other obligations (lease of bulbs, discounts paid out in advance, etc.), usually unclear for customers, mainly in terms of identifying the dates and conditions on which contracts can be terminated. Long-term fixed-term contracts also dampen the gas market's dynamics as their contract terms and conditions usually do not allow the customer to terminate the contract without a penalty.

4.3 Security of supply

In this respect, the Ministry of Industry and Trade is the competent authority. As part of its competences, the Energy Regulatory Office only monitors and evaluates the meeting of the security standard for gas supply in the Czech Republic.

5 Consumer protection and dispute settlement in electricity and gas

5.1 Consumer protection

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

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

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

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

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

In connection with Consumer Protection, in 2016 the ERO prepared, and on 4 August 2016 distributed for the commenting and consultation procedure, a new Code of Ethics for Electricity/Gas Traders, which would supersede the current Code of Ethics for Traders in the Energy Industries of 26 June 2012. The new code was issued on 15 December 2016 and traders were invited to accede to the code.

5.2 Dispute resolution

Under Article 37(11), Article 37(4)(e) and Article 37(5)(c) of Directive 2009/72/EC, in 2016 the Energy Regulatory Office conducted 107 sets of adversarial proceedings where persons in the position as consumers were the persons who moved for the adversarial proceedings to be commenced. Of this number, 37 sets of adversarial proceedings were concluded by a final decision in 2016.

Under Article 41(11) and Article 41(4)(e) of Directive 2009/73/EC, in 2016 the Energy Regulatory Office conducted 20 sets of adversarial proceedings where persons in the position as consumers were the persons who moved for the adversarial proceedings to be commenced. Of this number, 4 sets of adversarial proceedings were concluded by a final decision in 2016.