National Commission for Energy Control and Prices

Annual Report on Electricity and Natural Gas Markets of the Republic of Lithuania to the European Commission

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Table of content

List of tables

List of figures

1. PREAMBLE

At the end of 2015 and in 2016 new interconnections NordBalt (Lithuania–Sweden) and LitPol Link (Lithuania–Poland) have become operational. The new interconnections have contributed to the reduction of electricity prices, recorded both in the Lithuanian and Latvian bidding areas. In these areas, energy prices in the Nord Pool day-ahead market in 2016 as compared to 2015 have decreased by 12.8 and 13.8 percents respectively.

Completion of said interconnections, for which 90% of all the 2015 investments in the transmission grid were allocated, resulted in lower investments of transmission system operator Litgrid, AB in the transmission grid in 2016, which have fallen from EUR 207.99 m in 2015 to EUR 36.74 m in 2016. New connections only partially eliminated the status of the Baltic states as "energy islands", therefore the synchronisation of the Baltic states is the next important step in integrating them into the European power market. Due to the interconnections, the value of the transmission grid's strategic projects during 2016–2025 should amount to EUR 341 m, and the total investment of the transmission system operator (hereinafter – TSO) would reach EUR 635.39 m.

In 2016, the distribution grid investments amounted to EUR 118.92 m – 2.5 percent more than in 2015. According to the investment programme 2016–2020 presented to the National Commission for Energy Control and Prices (hereinafter – the NCC), planned investments in the distribution grid during 2017–2019 will amount to EUR 434 m. In comparison, planned investments in the distribution grid in the previous investment plan for the period of 2016–2018 amounted to EUR 413 m.

According to the Regulation (EU) No. 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (hereinafter – the Regulation (EU) No. 1227/2011), the NCC supervised the announcement of urgent market messages (UMM). During 2016, the NCC found 15 potential UMM violations, 13 of which were related to the procedure for the announcement of inside information, and 2 – to market manipulation. Having evaluated all identified potential UMM violations, the NCC did not find any violations of Regulation (EU) No. 1227/2011. It should be noted that on 1 January 2016 the NCC (as other national regulatory authorities in the Nord Pool AS trade area) took over the control of UMM assigned to each country's jurisdiction.

In 2016, 2 new permits were issued to independent power suppliers, 1 permit was terminated after liquidation of an independent supplier due to its bankruptcy. During 2016, the NCC also changed 2 permits after changes of independent supplier names, and renewed 1 permit to carry out activities according to submitted request. At the end of the year there were 19 active independent suppliers out of 36 licensed independent suppliers.

In 2016, physical import flows (11.106 TWh) increased as compared to 2015 (7.938 TWh) but the physical export amount also increased: 2.831 TWh in 2016 compared to 0.730 TWh in 2015. These changes were influenced not only by the newly operational interconnections, but also by a change in production in local power plants: 3.973 TWh in 2016 compared to 4.598 TWh in 2015. The lower amount of electricity produced in local power plants was a result of a significant fall in production from non-renewable energy sources (1.953 TWh in 2016 compared to 2.988 TWh in 2015) while the production from renewable energy sources (hereinafter – RES) during the same period has increased by a smaller amount (2.024 TWh in 2016 compared to 1.611 TWh in 2015). The decrease in production from non-renewable energy sources in 2016 was determined by two main reasons. First of all, due to the freezing of the third unit of the Vilniaus energija UAB power plant the total production of Vilniaus energija UAB, categorised under non-renewable energy sources (some of the production of the second unit of the power plant is categorised under production from renewable energy sources), fell by 99.6 percent. Also in 2016 the capacities of

Kaunas Combined Heat and Power Plant were conserved, therefore in 2016 it produced 65 percent less electricity than in 2015.

Total household consumption of electricity in 2016 amounted to 2.640 TWh and was 4.8% higher than in 2015 (2.518 TWh). Total non-household consumption of electricity in 2016 amounted to 6.337 TWh (5.5% or 0.328 TWh higher than in 2015).

In 2016, maximum hourly power demand in Lithuania (net) was 1979 MW – 231 MW or 13.2% higher than in 2015 (1748 MW, in 2014 – 1835 MW). In 2016, maximum hourly power demand in the distribution grid amounted to 1695 MW and was 140 MW or 9.0% higher than in 2015 (1555 MW, in 2014 – 1639 MW).

It is forecasted that by 2025 the installed power of new power generating sources will have increased to 4196 MW. Around 27.5 percent of this amount would be produced by power plants using RES.

In 2016, the NCC revised the methodology for setting the power transmission, distribution and public supply services' and public price cap, where a revision of the return on investment due to transfer reliability indicators was implemented necessary and justified investment in the means for increasing the energy consumption efficiency (including the development of smart power networks) is regulated, and a ratio for assigning the costs of the distribution services to household users is established. As the distribution grid operator differentiates the distribution service prices, the value of this ratio for users will be consistently increased until 2020, but it cannot exceed 1.3 – in 2017 this value for calculating the public energy prices amounted to 1.2.

According to Article 9 of the Commission Regulation (EU) 2015/1222 of 24 July 2015 on establishing a guideline on capacity allocation and congestion management (hereinafter – CACM), the TSO and nominated electricity market operators (hereinafter – NEMO) have continued to prepare methodologies to be presented for the approval of the regulatory authorities of the European Union (EU.)

According to Commission Regulation (EU) 2016/1719 of 26 September 2016 on establishing a guideline on forward capacity allocation (FCA), national regulatory authorities carried out evaluations based on which in 2017 they adopted coordinated resolutions regarding the feasibility of application of additional financial means in the region for insurance against market price fluctuations.

In 2016 the volume of imported natural gas was 24591 GWh , i.e. around 10.9 percent lower than in 2015 (27593 GWh), less gas was also transported via the natural gas transmission system – in 2016, 46847 GWh of natural gas was transported (2.32 percent less than in 2015) and of that amount 23336 GWh (49,81 percent) was transported to Lithuanian consumers, 23511 GWh (50,19 percent) was transported by transit to Russia. In 2016, 7476 GWh of natural gas was distributed, 14344 GWh was supplied.

In 2016, 20095 GWh of natural gas was sold and/or consumed in the wholesale natural gas market, i.e. 25.2 percent less than in 2015 when 26864 GWh of natural gas was sold and/or consumed.

In 2016, 7065 GWh of natural gas was sold in the retail natural gas market, i.e. 0.89 percent less than in 2015 when 7129 GWh of natural gas was sold.

In 2016, 22.8 TWh of natural gas was consumed, i.e. 9.5 percent less than in 2015, and this was the lowest amount of natural gas consumed since 2008.

Total value of Amber Grid AB investment plan for 2016–2025 (including investments of non finished projects started in 2016) equals to EUR 197.6 m. In 2016 in total there was invested EUR 31,9 m in natural gas transmission and distribution activities, i. e. 51 percent less than in 2015 (EUR 65,1 m). The investments in natural gas transmission sector equalled to EUR 12.7 m and in natural gas distribution sector equalled to EUR 19.2 m.

In 2016, the NCC changed the methodology for setting state-regulated prices in the natural gas sector two times. These changes allowed it to unify the regulation in the natural gas and

electricity sectors, increase impartiality of quality-level evaluation and ensure clarity for regulated economic entities on the issues of calculating natural gas tariffs for household users.

At the end of 2016, licences issued by the NCC were held by the following entities of the natural gas sector: Amber Grid AB – natural gas TSO, Energijos skirstymo operatorius AB, Achema AB, Intergas UAB, Fortum Heat Lietuva UAB, Agrofirma Josvainiai AB – natural gas distribution system operators (hereinafter – DSO), Klaipėdos nafta AB – company conducting liquefaction (regasification) activities, GET Baltic UAB – natural gas market operator. 33 companies had natural gas supply licences, 12 of them were conducting operations. In 2016, the NCC issued 1 natural gas supply licence, terminated 1 natural gas distribution licence and 2 natural gas supply licences, also suspended 3 natural gas supply licences and revised 1 distribution and 2 supply licences.

Carrying out the supervision and control of the unbundling of acitivities, on 22 December 2016 the NCC stated that the unbundling of natural gas TSO Amber Grid AB's operations had been carried out appropriately – the Ministry of Energy of the Republic of Lithuania took necessary action regarding the transfer of shares of Litgas UAB held by Klaipėdos nafta AB to an economic entity which is not directly or indirectly controlled by the Ministry of Energy, as per the European Commission's indications.

The NCC actively participates in the Baltic regional gas market coordination group (RGMCG) for creating the regional natural gas market and coordinates the determination of a regional entry and exit point model for calculating the natural gas transmission services' pricing. In the near term it is planned to conduct a comparison of the results of different pricing models for the entry and exit points and to select an optimal solution for the regional Baltic-Finnish natural gas market, that would be implemented as of 2020. I.e. as of 2020 uniform natural gas transmission tariffs would apply for the entry points in the entire Baltic-Finnish region, that would be calculated using the most optimal methodology chosen out of several alternatives ("Postage Stamp", Capacity-Weighted Distance or Matrix approach).

As a short-term measure, a pricing model for entry and exit points is planned for 2018, which is to be applied for the Baltic market that includes Estonia, Latvia and Lithuania. Main principles: the ratio of the entry and exit points is 20/80; the same entry tariff applies for each entry point; an inter TSO compensation mechanism is applied in the region, the creation of which would be the TSO's responsibility. In the summer of 2017 public consultations are being held to discuss these entry and exit point pricing principles.

On 1 July 2017 the natural gas TSOs of the Baltic states began using the implicit capacity allocation model so that it would be easier to allocate short-term natural gas transmission capacities at the interconnection points between the Baltic states. The allocation of capacities is linked to the gas trading in the GET Baltic UAB natural gas market. At the same time, trading platforms of the GET Baltic UAB natural gas market also became operational in Latvia and Estonia, and the market became regional.

Chair Inga Žilienė

2. MAIN EVENTS IN THE ELECTRICITY AND NATURAL GAS MARKETS

2.1. Electricity sector

2.1.1. Unbundling of vertically integrated companies

In 2016 there were no changes in relation to the implementation of the provisions of the Law on Electricity (LoE), related to the unbundling of activities and control of power companies Litgrid AB and Energijos skirstymo operatorius AB.

2.1.2. Security of supply

When at the end of 2015 and in 2016 the power interconnections with Sweden and Poland became operational, the security of the Lithuanian electricity system (hereinafter – LES) increased and this improved the conditions for competition in the Baltic regional market, which is reaffirmed by the decrease in electricity prices both in the Lithuanian and Latvian bidding areas, as indicated in item 3.2.1.

In 2016 the LES imported 88.35% of total electricity used in the country and it seems that this trend will remain as long as there is no competitive local electricity production. It should be noted that as the new interconnections were launched and local production has decreased, the share of imported electricity has significantly grown (in 2015 the LES imported 68.69 percent of total electricity used, in 2014 – 72.60 percent).

During 2016, the total installed power in the power plants has decreased to 3591 MW, i.e. by 575 MW as compared to 2015. Total level of investment in power networks has decreased – this is mostly a result of 5.7 times lower investment in transmission grid, that has fallen from EUR 207.99 m in 2015 to EUR 36.74 m in 2016. It should be noted that the level of investment in the transmission grid of the previous period was influenced by expenses for the new interconnections LitPol Link and NordBalt, which amounted to 90% of the transmission grid investments in 2015. In 2016, the distribution grid investments amounted to EUR 118.92 m – 2.5 percent more than in 2015. The largest increase in investment in 2016 as compared to 2015 was in the reconstruction of the 0.4-10 kV power grid (growth of 29.1 percent).

In 2016, 29.36 thousand new users were connected – 3 percent more than in 2015 when 28.50 thousand new users were connected. The permissible usage power of the newly connected users in 2016 amounted to 349.28 thousand kW and was 9.7 percent lower than in 2015 when it was 386.86 thousand kW.

In 2016, maximum hourly power demand in Lithuania (net) was 1979 MW – 13.2% higher than in 2015 (1748 MW, in 2014 – 1835 MW). In 2016, maximum hourly power demand in the distribution grid amounted to 1695 MW and was 9.0 percent higher than in 2015 (1555 MW, in 2014 – 1639 MW).

Following the provisions of Article 19 of the LoE, the NCC prepared a LES reliability evaluation report for 2015 where it is stated that currently the reliability of the LES is guaranteed. These reports are openly published on the NCC's website: http://www.regula.lt/SiteAssets/LEES%20ataskaita%20u%C5%BE%202015_3.pdf

2.1.3. Competition in the power supply market and market supervision

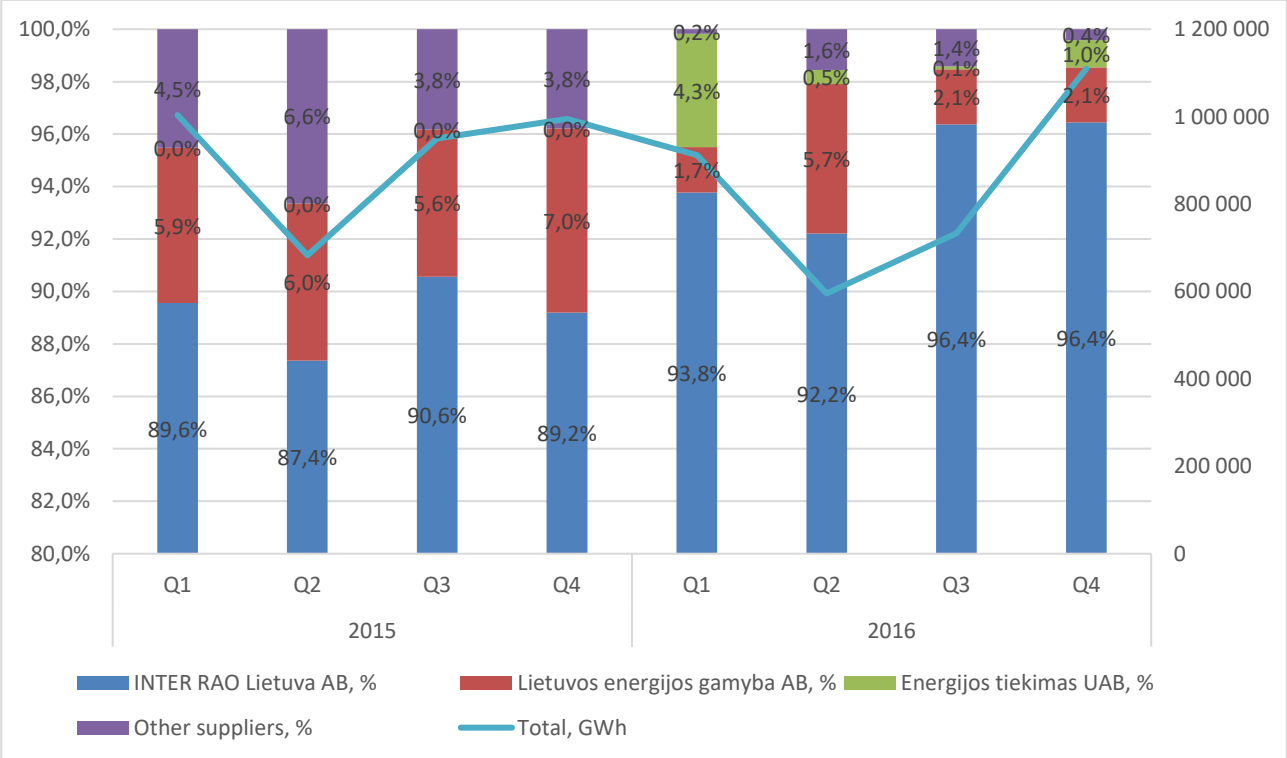
As of 15 December 2015, the NEMO's functions in Lithuania have been carried out by Nord Pool Spot AS (as of 20 January 2016 – Nord Pool AS). The NEMO must ensure a transparent platform for trading in electricity in pursuit of a uniform and integrated electricity market in Europe.

The NCC monitors the wholesale trade of energy products on the national level, also the NCC has been assigned the task of supervising the electricity market. Taking into account the increase in

electricity prices in the day-ahead market of the Nord Pool Baltic bidding area in January 2016, the NCC coordination group conducted a research to analyse the reasons for high electricity prices in the market in January 2016. The results of the electricity price research are provided in more detail in item 3.2.1.1 and below.

According to the Regulations on Issuing Operation Permits in the Electricity Sector, in 2016 2 new permits were issued to independent suppliers, 1 permit was terminated after liquidation of an independent supplier due to its bankruptcy. During 2016, the NCC also changed 2 permits after changes of independent supplier names, and renewed 1 permit to carry out activities according to submitted request. At the end of the year there were 19 active independent suppliers out of 36 licensed independent suppliers. In 2015, there were 2 main suppliers in the wholesale electricity market: INTER RAO Lietuva AB and Lietuvos energijos gamyba AB. As of 2016, they were joined by Energijos tiekimas UAB that began representing Lietuvos energijos gamyba AB in the Nord Pool AS power market according to mutual agreement between the companies. In 2016, more than 90 percent of all the sales in the power market were the power sold by INTER RAO Lietuva AB. The power sold by INTER RAO Lietuva, Lietuvos energijos gamyba AB and Energijos tiekimas UAB combined exceeded 97 percent of all the sales in the power market in 2016.

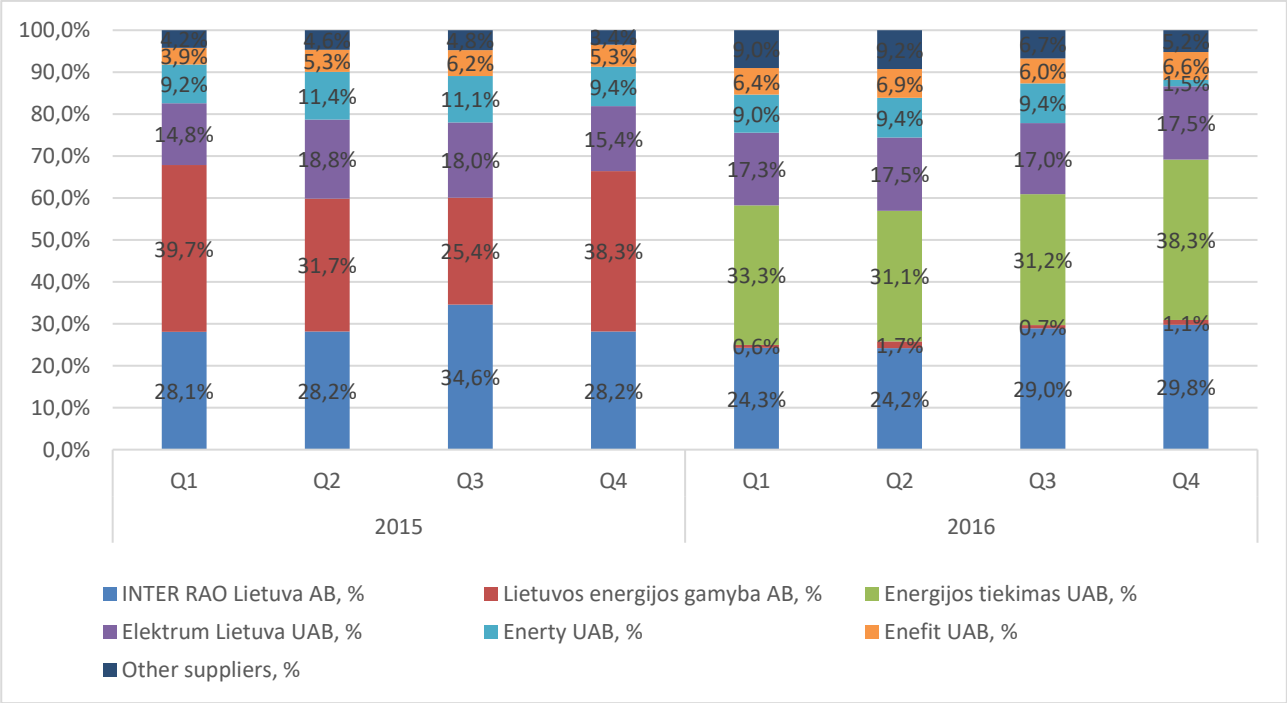
Figure 1. Structure of the sales in the power market by companies, percent, 2015–2016



Source – NCC.

In 2016, just like in 2015, around two thirds of all the purchases in the power market were the purchases made by two companies. However, if in 2015 the highest share belonged to INTER RAO Lietuva AB and Lietuvos energijos gamyba AB, then as of 2016 the latter was replaced by Energijos tiekimas UAB that surpassed INTER RAO Lietuva AB in terms of amount of power bought in the market.

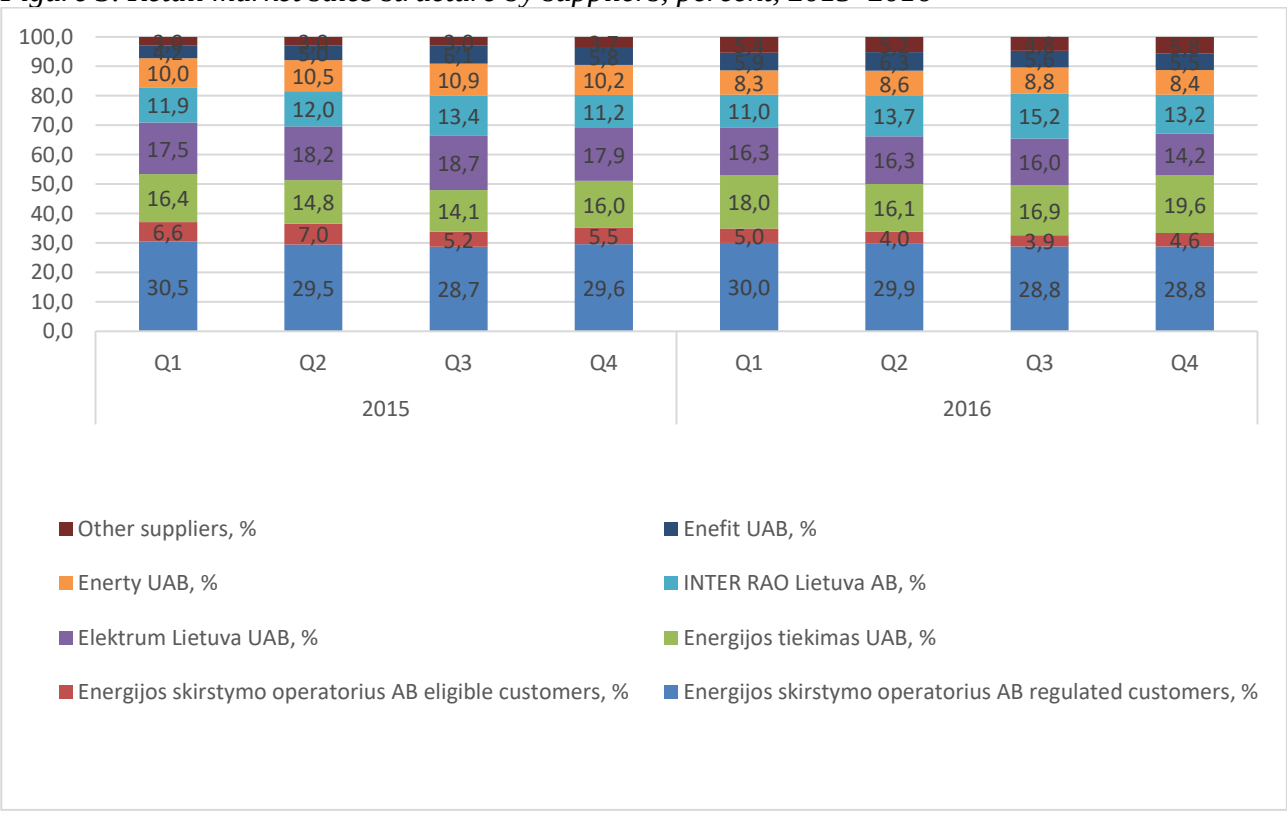
Figure 2. Structure of power purchases in the power market by suppliers, percent, 2015–2016



Source – NCC.

In the retail supply market structure, the market share of Energijos skirstymo operatorius AB in 2016, compared to the previous year, continued to make up around one third of all the power sales in the market. Other market participants maintained similar market shares as in 2015.

Figure 3. Retail market sales structure by suppliers, percent, 2015–2016



Source – NCC.

In order to increase the awareness of the market participants and to ensure that the market participants have reliable information, the NCC makes quarterly and annual power market monitoring reports and publishes them on the NCC's website http://www.regula.lt/elektra/Puslapiai/elektros-rinkos-apzvalga/rinkos-stebesena.aspx.

Regulation (EU) No. 1227/2011 and European Commission Implementing Regulation No. 1348/2014 of 7 January 2015 on data reporting implementing Article 8(2) and Article 8(6) of Regulation (EU) No. 1227/2011 on wholesale energy market integrity and transparency, established appropriate requirements for market participants, the Agency for the Cooperation of Energy Regulators (ACER) and national regulators, i.e. as of 7 October 2015 the market participants provide information to the ACER on wholesale transactions made in the organised markets along with the main data from the central transparency platforms of the European Network of Transmission System Operators (ENTSOs). As of 7 April 2016, the market participants must notify the ACER on all other wholesale transactions (off-exchange transactions, non-standard supply agreements and transportation agreements) and main data from the transmission, liquefaction and storage system operators. The ACER is assigned to collect and analyse said information from the market participants and, after conducting the initial analysis, notify the national regulators on suspicious cases for further examination.

By implementing Regulation (EU) No. 1227/2011 and said European Commission Implementing Regulation, the NCC ensures access to the Centralised European Registry of Energy Market Participants (CEREMP) for the Lithuanian wholesale energy market participants. In 2016, the NCC registered 75 Lithuanian wholesale energy market participants on the CEREMP platform and granted them individual codes.

According to the provisions of Regulation (EU) No. 1227/2011, in 2016 the NCC together with the power market operator Nord Pool AS conducted a review of the UMM announcements. In 2016, the NCC found 15 potential UMM violations, 13 of which were related to the violation of Regulation (EU) No. 1227/2011, i.e. obligation to announce inside information, and 2 – to market manipulation. Having evaluated all identified potential UMM violations, the NCC did not find any violations of Regulation (EU) No. 1227/2011. It should be noted that on 1 January 2016 the NCC (as other national regulators in the Nord Pool AS trade area) took over the control of UMM assigned to each country's jurisdiction.

Monitoring the wholesale of energy products on the national level and taking into account the increase in electricity prices in the day-ahead market of the Nord Pool Baltic bidding area in January 2016, the NCC conducted a research to analyse the reasons for high electricity prices in the market in January 2016.

The evaluation of all the factors that affected the formation of high prices in the Nord Pool power market Baltic bidding area has not shown that a market participant or participants have violated the provisions of Regulation (EU) No. 1227/2011 or other legislation but the NCC has made proposals and addressed the Ministry of Energy of the Republic of Lithuania regarding the improvement of the legal regulation of the obligations that apply to the economic entities that provide the reserve, system services and public service obligations (hereinafter – PSOs), i.e. proposed legislation amendments that would establish the legal limiting conditions for applying activated peak-power reserve, also legislation amendments that would clearly define the content of the reserve service and the rights and obligations of an entity providing such a service.

It should be noted that at least 2 times a year meetings of the National Committee for the Development of the Common Baltic Power Market are held, attended by representatives of state authorities, market participants and related associations. During these meetings, relevant information is exchanged and solutions for issues are sought, finding out their reasons, seeking effective operation and development of the power market.

2.1.4. Preparation of legislation implementing the Law on Electricity

In 2016, the NCC prepared, improved and approved the following main legislation of the electrical sector:

1. **Description of the Procedure for Evaluating the Technological, Financial and Management Capacity of Energy Companies** *(approved on 25 February 2016, resolution No. O3-61)*;
2. **Requirements for the Reliability of Power Transmission and Service Quality** *(amended on 25 March 2016, resolution No. O3-82)*;
3. **Methodology for Setting the Power Transmission, Distribution and Public Supply Services and Public Price Cap** *(amended on 25 March 2016, resolution No. O3-81; 31 May 2016, resolution No. O3-122; 8 December 2016, resolution No. O3-416)*;
4. **Methodology for Setting the Market Price of Electricity** *(amended on 13 May 2016, resolution No. O3-126)*;
5. **Description of the Procedure of Requirements for Using the Power Grid** (*amended on 8 December 2016, resolution No. O3-421)*;
6. **Description of the Procedure for Differentiating the Power Transmission, Distribution, Public Supply Services and Public Power Prices** *(amended on 8 December 2016, resolution No. O3-420).*
7. **Regulations for the Supervision of Power and Natural Gas Trading** *(approved on 22 December 2016, resolution No. O3-450).*

More detailed description of other adopted or amended legislation can be found on the NCC website's news column or in the meeting calendar, also in the annual NCC report for 2016 that is also publicly available on www.regula.lt.

2.1.5. Pricing of regulated activities, setting of transportation prices and connection rates

By implementing a Long-Run Average Incremental Cost (LRAIC) model according to the approved Methodology for Setting the Power Transmission, Distribution and Public Supply Services and Public Price Cap, the transmission and distribution service price caps were calculated for 2017 (see table).

Table 1. Power transmission and distribution service price caps for 2012–2017 (ct/kWh)

Name of regulated service	Supplier of regulated service	Regulated service price cap (ct/kWh)					Regulated service price cap for 2017 (ct/kWh)	Change compared to 2016, percent
		2012	2013	2014	2015	2016		
Power transmission	**Litgrid AB**	**0.672**	**0.699**	**0.639**	**0.538**	**0.691**	**0.672**	**-2.75**
Power distribution for medium voltage networks	**Energijos skirstymo operatorius AB**	**1.413**	**1.375**	**1.297**	**1.178**	**1.000**	**0.830**	**-16.96**
Power distribution for low voltage networks	**Energijos skirstymo operatorius AB**	**1.856**	**1.801**	**1.785**	**1.550**	**1.766**	**1.655**	**-6.31**

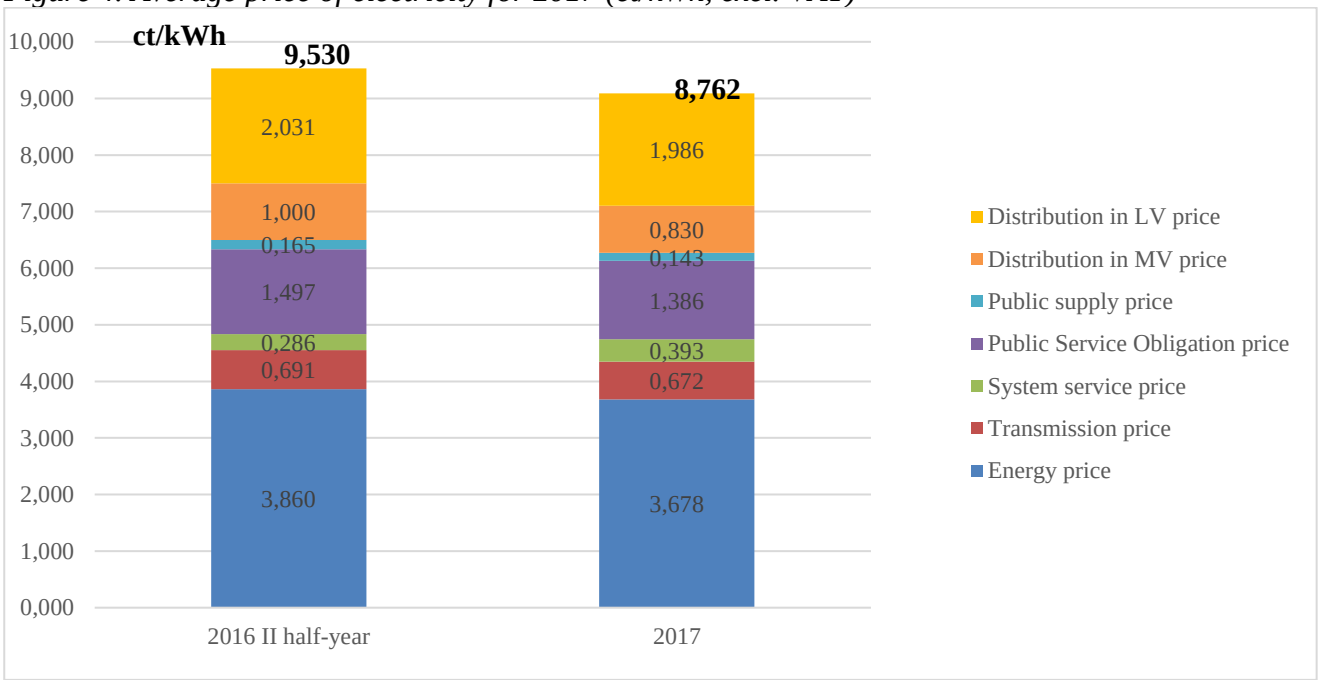
Source – NCC.

Public supplier Energijos skirstymo operatorius AB sells power both to regulated users under public tariffs and as a guarantor supplier according to the guarantor supply price calculation principle

established in the Law on Electricity. Therefore the NCC, when calculating the public power supply price cap, assessed the total amount of energy sold both to users paying public tariffs, and to users paying guarantor supply tariffs. Taking this into account, the NCC set the public power supply service price ceiling for 2017 to 0.143 ct/kWh, which is 14.4% lower when compared to that provided by the public supplier. Compared to the price cap set for 2016 (0.165 ct/kWh), the public power supply service price cap set for 2017 is 13.3% lower. This was due to a reduction of revenue exceeding the return on investment, that accumulated during the 2014–2015 period.

In 2017, the public power price for household users buying electricity from medium voltage networks equals 7.102 ct/kWh (excl. VAT) or 0.397 ct/kWh (5.3%) lower than in the IInd half of 2016. The public power price for household users buying electricity from low voltage networks equals 9.088 ct/kWh (excl. VAT) or 0.442 ct/kWh (4.6%) lower than in the IInd half of 2016.

Figure 4. Average price of electricity for 2017 (ct/kWh, excl. VAT)



Source – NCC.

It should be noted that as of 1 July 2016 for some of the users the power prices according to a pilot project of smart power meter installation (3000 such meters are installed) have been applicable ("Smart" tariff plan with tariffs of four time zones). The "Smart" tariff plan encourages the users to monitor their power consumption and use less energy during peak time, which in turn would lower the power system costs and ensure a more stable electricity consumption throughout the day. Said pilot project is carried out in the whole territory of Lithuania by individual regions, cities and suburbs, apartment blocks and detached houses. According to the results of the pilot project, a decision will be made on further installation of smart power meters. Until the IIIrd quarter of 2017, it is planned to prepare a cost-benefit analysis of the smart power meters, whose conclusions will affect the decision on further development of the smart power meters.

In light of the preparation for market developments resulting from the new interconnections with Sweden and Poland launched at the end of 2015 and in 2016, an issue of power exchange between the systems became relevant. By resolution No. O3-349 of 31 October 2016, the NCC approved the price for using the connecting lines (hereinafter – UCL), to be applied as of 1 January 2017, amounting to 5.23 EUR/MWh which is 0.8 percent lower than that applied as of 1 March 2016. Without historical data, the 2016–2017 UCL price was calculated based on planned scope of using the transmission system and on a share of fixed costs assigned to this service. In later years, the UCL

price will be calculated using actual amounts and costs of electricity during the previous period. Relevant information on the UCL tariff is published on the NCC's website www.regula.lt (in English), column “Regarding price of the service of access to interconnection lines”.

The NCC calculates, approves and publishes on its website the tariffs for the connection of user equipment not later than 30 April of current calendar year. The NCC sets new connection tariffs, if new tariffs differ from the existing ones by 3 percent or more. According to the costs actually incurred by power network operators during the previous year, the NCC recalculated new tariffs for user connection to the power networks and approved by resolution No. O3-131 of 27 April 2017 (amended by resolution No. O3E-164 of 31 May 2017), that came into effect on 1 June 2017.

The tariffs for the connection of power equipment to the power networks (100 percent), calculated and approved by the NCC and applied as of 1 June 2017, are provided in tables 2–4 for the following groups of users:

- Group I – users whose power equipment's permissible capacity or increased capacity is lower than 50 kW and when for the connection of this equipment it is not required to install, change or reconstruct the operator's power objects, prepare a design of the connection of the user's power equipment to the power networks, or when such a project is required but it is prepared and coordinated by the users;
- Group II – users whose equipment's permissible capacity or increased capacity is lower than 100 kW (except for the users of group I);
- Group III – users whose equipment's permissible capacity or increased capacity is between 100 and 500 kW (inclusive).

Table 2. Tariffs for the connection of the equipment of power users to power networks, EUR excl. VAT

Group of users	Tariff for the installation or increase of 1 kW of permissible capacity of power equipment	Tariff for 1 m of laid power network
Group I	19.23	-
Group II	102.79	21.28
Group III	48.86	20.88

Source – NCC

Table 3. Tariffs for the connection of the equipment of power users to power networks for household and socially vulnerable users, EUR excl. VAT*

Group of users	Tariff for the installation or increase of 1 kW of permissible capacity of power equipment	Tariff for 1 m of laid power network
Group I	3.85	-
Group II	20.56	4.26
Group III	9.77	4.18

** as indicated in a list approved by the Government or its authorised institution*
Source – NCC.

*Table 4. Tariffs for the connection of the equipment of power users to power networks for other users**, EUR excl. VAT*

Group of users	Tariff for the installation or increase of 1 kW of permissible capacity of power equipment	Tariff for 1 m of laid power network
Group I	7.69	-

Group II	41.12	8.51
Group III	19.54	8.35

*** except for household and socially vulnerable users indicated in a list approved by the Government or its authorised institution.*

According to the LoE provisions, just like previous year, the tariff for the connection of power equipment of household and socially vulnerable users will be 20 percent of the tariffs indicated above (Table 2), and in all other cases – 40 percent of said tariffs.

2.1.6. International cooperation

In July 2015, the CACM was published in the energy sector. In 2016, six network codes were published in the electricity sector or approved in the European Commission's meetings, while in 2017 a positive decision was adopted in the European Commission's meetings regarding the final eighth code, i.e. balancing network code. For the implementation of the CACM on the European level, a mechanism linking the day-ahead and intraday markets must be implemented and existing methods for calculating and allocating of capacities and managing of congestion must be unified in several phases. A decision regarding the approval of capacity calculation regions was given to the ACER and was adopted on 17 November 2016. In 2016, the Energy Regulators Forum (hereinafter – ERF) approved and agreed in 2017 to continue the discussions and approval of necessary documents regarding the CACM implementation, drafted by the TSO and NEMO. In January 2017, Litgrid AB submitted and the NCC approved a Generation and Load Data Provision Methodology (GLDPM).

For the implementation of the CACM, in 2017 the ERF discussed the following:

- the plan on joint performance of MCO functions;
- the common grid model methodology (CGM);
- the congestion income distribution methodology (CIDM);
- intraday cross zonal gate times (IDCZGTs);
- day-ahead firmness deadline (DAFD).

The CGM was approved by NCC resolution No. O3E-156 of 26 May 2017, DAFD – by resolution No. O3E-254 of 15 June 2017, MCO plan – by resolution No. O3E-282 of 30 June 2017. By a decision of June 2017, the regulators transferred the CIDM to be discussed and approved by the ACER. Following the CGM, TSOs (in Lithuania – Litgrid AB) model the capacity of the existing network infrastructure – such data is used to maintain network reliability and to reduce the costs (including an effect on users) as much as possible. Until now, every TSO used its own network model but, as regional power networks become increasingly interrelated, it became necessary to create a joint network model. This will facilitate collaboration between TSOs and make it possible to develop the European power grid more safely and efficiently. According to the DAFD, the day-ahead firmness deadline is 60 minutes before the end of the next day trading session. The MCO plan establishes how the NEMO should jointly implement and carry out the functions of a market-linking operator, including projects of necessary arrangements with third parties. The functions established by the MCO will have to be implemented by Nord Pool AS which is currently the only NEMO operating in Lithuania.

The ERF will continue to discuss the methods required for the CACM implementation, which the NCC will also have to approve on the national level.

In 2016 and 2017, during the FCA implementation, assessments were made and in May 2017 national resolutions in coordination with the regulatory authorities of the Baltic states were adopted regarding the granting of long-term transmission rights.

The TSO prepares the methods for the implementation of the generators' and users' connection codes, to be submitted for the NCC's approval at the end of 2017.

Lithuania together with Latvia and Estonia and other five Baltic sea countries (Kingdoms of Denmark and Norway, Federal Republic of Germany and Republics of Poland and Finland) and the European Commission is implementing the Baltic Energy Market Interconnection Plan (BEMIP) updated in June 2015 which should connect the isolated energy (electricity and gas) systems of the Baltic states with the Scandinavian and Western European energy (electricity and gas) systems and solve the issue of sharing the investment costs between the countries. In April 2013, an EU regulation was adopted on the guidelines of trans-European energy infrastructure, which establishes the principles for evaluating and implementing European-scale infrastructure projects. Based on said EU regulation, in autumn 2017 the European Commission should approve a third list of Projects of Common Interest (PCI), whose integral part is the projects necessary for the implementation of BEMIP. Upon the approval of the third PCI list, in the coming years the NCC along with other regulatory authorities will have to adopt resolutions regarding cost sharing among the project developers that are necessary for the implementation of the PCI projects.

New interconnections (NordBalt, LitPol Link) only partially eliminated the status of the Baltic states as "energy islands", therefore the synchronisation of the Baltic states is the next important step in integrating them into the European power market. NCC representatives continue their activities in the joint electricity coordination group (BEMIP) of national regulatory authorities and transmission system operators of the Baltic sea region – Lithuania, Latvia, Estonia, Poland, Sweden, Finland. The near-term goals are to discuss the principles for calculating the power import and export tariff that are common for the region, market coupling issues, establishment of a model for calculating the price of the Baltic region balancing energy.

2.2. Gas sector

2.2.1. Unbundling of vertically integrated companies

The NCC constantly monitors and controls how the activities of the assigned TSO, Amber Grid AB, ensure the requirements of independence and unbundling of activities as indicated in the Law on Natural Gas (hereinafter – LoNG).

On 10 April 2016 the NCC stated that the unbundling of Amber Grid AB's activities complies with the LoNG provisions and the company may be assigned as a TSO provided that within 12 months from the date when this resolution comes into effect the Ministry of Energy carries out necessary actions regarding the transfer of shares of Litgas UAB held by Klaipėdos nafta AB to an economic entity which is not directly or indirectly controlled by the Ministry of Energy, as indicated in Opinion C(2015) 2135 (final) of the European Commission on the unbundling of Amber Grid AB (hereinafter – the Opinion). On 22 December 2016 the NCC stated that the unbundling of natural gas TSO Amber Grid AB's activities had been carried out appropriately – the Ministry of Energy took necessary action regarding the transfer of shares of Litgas UAB held by Klaipėdos nafta AB to an economic entity which is not directly or indirectly controlled by the Ministry of Energy, as indicated in the Opinion of the European Commission.

2.2.2. Key changes in price regulation of the natural gas sector

In 2016, the NCC changed the methodology for setting state-regulated prices in the natural gas sector 2 times. The methodology was approved by the NCC by resolution No. O3-367 of 13 September 2013 (hereinafter – Price Methodology). Said changes:

- establish that the security component may be revised once a quarter, upon evaluating a change in forecast natural gas market price approved by the NCC or upon the existence of other factors;
- facilitate the calculation of the liquefied natural gas (LNG) supply price margin;

- include the fee for LNG liquefaction (regasification) and the costs of booking the capacities required at the natural gas transmission system's interconnection point with the LNG terminal in Klaipėda into the assigned supplier's natural gas supply operation costs;
- separately evaluate a deterioration of each level of quality;
- clarify the definition of natural gas product price applied in calculations of natural gas tariffs;
- revise the evaluation of discrepancies between the forecast and actual gas purchase price of respective period for household users, taking into account the thermal value, transportation cost, security component;
- establish that natural gas tariffs for household users are calculated using 1 m^3=10.4 kWh thermal value (calorific value).

These changes make it possible to unify the regulation in the natural gas and electricity sectors, increase impartiality of quality-level evaluation and ensure clarity for regulated economic entities on the issues of calculating natural gas tariffs for household users. It should also be noted that, upon the approval of the Price Methodology, the gas supply security component to the transmission price was also adjusted accordingly.

2.2.3. Formation of competition in the natural gas supply market, main changes of the gas market monitoring in 2016

In the natural gas sector, the NCC regulates 41 economic entity. In the natural gas sector, a licence is needed for transmission, distribution, storage, liquefaction (regasification), supply and market operator activities. At the end of 2016, licences issued by the NCC were held by the following entities: Amber Grid AB – natural gas TSO, Energijos skirstymo operatorius AB, Achema AB, Intergas UAB, Fortum Heat Lietuva UAB, Agrofirma Josvainiai AB – DSO, Klaipėdos nafta AB – company conducting liquefaction (regasification) activities, GET Baltic UAB – natural gas market operator. 33 companies had natural gas supply licences, 12 of them were conducting operations. In 2016, the NCC issued 1 natural gas supply licence, terminated 1 natural gas distribution licence and 2 natural gas supply licences, also suspended 3 natural gas supply licences and revised 1 distribution and 2 supply licences.

In 2016 the volume of imported natural gas was 24591 GWh, i.e. around 10.9 percent lower than in 2015 (27593 GWh), less gas was also transported via the natural gas transmission system – in 2016, 46847 GWh of natural gas was transported (2.32 percent less than in 2015). In 2016, 7476 GWh of natural gas was distributed, 14344 GWh was supplied.

In 2016, the revenue of the natural gas sector (transmission, distribution, liquefaction, supply) amounted to EUR 509 m, i.e. was almost 18.4 percent lower than in 2015 (EUR 624 m).

In 2016, 20095 GWh of natural gas was sold and/or used in the wholesale natural gas market, i.e. 25.2 percent less than in 2015 when 26864 GWh of natural gas was sold and/or used.

In 2016, 7065 GWh of natural gas was sold in the retail natural gas market, i.e. 0.89 percent less than in 2015 when 7129 GWh of natural gas was sold.

In 2016, 22.8 TWh of natural gas was used, i.e. 9.5 percent less than in 2015, and this was the lowest amount of natural gas used since 2008.

The number of household and non-household users in the natural gas sector has been consistently increasing since 2010: in 2016 there were 573 thousand natural gas users in Lithuania, 566 thousand of whom were household and 6.8 thousand non-household users, while in 2015 there were 569.3 thousand natural gas users.

It should be noted that the NCC actively cooperates in the international Baltic region coordination group RGMCG established in accordance with BEMIP, and in the creation of the regional natural gas market. The main goal is until 2020 to create rules for the operation of a unified regional gas market, including joint pricing principles that would ensure transparent competition and clear procedure for the users of gas systems who seek to use the Baltic and Finnish transmission systems, as well as competitively priced gas for the users of gas. During 2016 the NCC together with other members of the RGMCG prepared an action plan for the formation of a common regional

natural has market. The NCC coordinates the creation of the entry and exit point model for calculating the natural gas transmission services' pricing. As the NCC coordinates the creation of a regional entry and exit point model for calculating the natural gas transmission services' pricing, in the near term it is planned to conduct a comparison of the results of different pricing models of the entry and exit points and to select an optimal solution for the regional Baltic-Finnish natural gas market, that would be implemented as of 2020. As a short-term measure, a pricing model of entry and exit points is planned for 2018, which is to be applied for the Baltic market that includes Estonia, Latvia and Lithuania. Main principles: the ratio of the entry and exit points is 20/80; the same entry tariff applies for each entry point; an inter TSO compensation mechanism is applied in the region, the creation of which is the TSO's responsibility. In the summer of 2017 public consultations are being held to discuss these entry and exit point pricing principles.

On 1 July 2017 the natural gas TSOs of the Baltic states began using the implicit capacity allocation model so that it would be easier to allocate short-term natural gas transmission capacities at the interconnection points between the Baltic states. The allocation of capacities is linked to the gas trading in the GET Baltic UAB natural gas market. At the same time, trading platforms of the GET Baltic UAB natural gas market also became operational in Latvia and Estonia, and the market became regional.

2.2.4. Natural gas market supervision

In order to ensure an effective competition in the natural gas supply markets and prevent potential abuse, in 2016 the NCC conducted a research of the natural gas supply market and made a decision to:

• acknowledge Haupas UAB as an entity that has a high influence in the wholesale and retail natural gas supply markets of Druskininkai, which had applied excessively high prices of natural gas in 2014;

• oblige Haupas UAB to submit data to the NCC, that is necessary to establish a natural gas supply price cap in the territory of Druskininkai municipality and to separate the costs of operations.

Lietuvos dujų tiekimas UAB (until 30 October 2014 the natural gas supply operations were conducted by Lietuvos dujos AB) remains an entity with a high influence in the natural gas supply market, able to apply excessively high prices or price pressure to consumers or other market participants, but no cases of abuse were found.

In 2016 the NCC carried out a scheduled inspection of Klaipėdos nafta AB's capitalised costs included in the investment value of the LNG terminal and related non-capitalised costs and concluded that the following value of regulated assets is needed for the calculation of the security component: 27 November 2014 – EUR 58,707,890; 31 December 2014 – EUR 67,095,135; 2015 – EUR 66,686,240. Taking into account the regulated asset values found during the inspection, the price cap for natural gas liquefaction (regasification) for 2017 was adjusted. Please remember that the inspection of Klaipėdos nafta AB was carried out to collect and evaluate information on all the Klaipėdos nafta AB's capitalised costs included in the investment value of the LNG terminal and related non-capitalised costs, as well as to assess their necessity and compliance with legislation requirements.

3. ELECTRICITY MARKET

3.1. Network regulation

3.1.1. Unbundling

Articles 10 and 11 of Directive 2009/72/EC and article 3 of Regulation (EC) No. 714/2009

Information on the final decision adopted by NCC with regard to the designation of Litgrid, AB as a TSO meeting the requirements of article 10 of the Directive 2009/72/EC was published in

the Official Journal of the EU C 312 of 26 October, 2013. The above action formally completed the entire TSO certification procedure enshrined in EU legislation and LoE.

In 2016, there were no changes in the implementation of provisions of the LoE related to the unbundling of Litgrid, AB operations and control. According to provisions of Article 26 of the LoE, the NCC performs continuous monitoring and controlling activities of the TSO during the performance of its activities and ensures compliance with the established requirements of independence and unbundling of the LoE.

Article 26 of Directive 2009/72/EC

According to the LoE, which took effect on 7 February, 2012, that transposed respective provisions of the Directive 2009/72/EC, following the electricity distribution network company's presentation of the necessary documents, the NCC determined, during their meeting of 26 July 2012, that the unbundling of distribution activities of Lesto, AB (as of 1 January. 2016 – Energijos skirstymo operatorius, AB) are in compliance with the provisions of items 1 and 3 of Article 54 of the LoE.

Upon the change of circumstances, which would deny assurance of compliance with the implementation of requirements of unbundling of types of activities and accounting established in items 1 and 3 of Article 54 of the LoE, Energijos skirstymo operatorius, AB undertakes to inform the NCC no later than within 5 working days from the change of said circumstances. There were no changes of the above circumstances observed in 2016.

3.1.2. Technical functioning

Balancing services (Articles 37(6) (b) and 37(8))

Mutual relations of the electricity market participants in wholesale trade of electricity within the territory of the Republic of Lithuania are governed by the Rules on Trade of Electricity approved by Order of the Minister of Energy. Balancing energy prices are calculated in accordance with the Description of Procedure of Regulation of the Balancing Energy Price drawn up in accordance with the requirements of national and EU legislation.

In 2016, Lithuanian, Latvian and Estonian TSOs presented the first Dossier on Balancing of Baltic Energy Market by way of public consultations. Said consultations covered the two following components for balancing the Baltic Energy Market: harmonized imbalance settlement and pricing model, which shall harmonize the imbalance settlement and pricing principles of the market participants within the three Baltic countries, as well as the reference product designed for balancing energy exchange. The implementation of the reference product for balancing energy within Baltic countries took place on 1 November, 2016. In accordance with the model discussed at the public consultation, the Ministry of Energy are obliged to approve the amendments of Rules on Trade of Electricity. Following the said approval, the NCC shall approve the new Description of Procedure of Regulation of the Balancing Energy Price within the year 2017.

Baltic Balancing Energy Market compliant with the EU Guidelines on Energy Balancing should start operation on 1 January, 2018.

Security and reliability standards, service quality and supply (Article 37(1) (h))

The LoE establishes that the NCC sets the requirements for electricity transmission reliability and service quality and controls the compliance therewith. Requirements for Electricity Transmission Reliability and Service Quality (hereinafter – the Requirements), based on which electricity transmission reliability and service quality requirements for a new regulatory period, i.e. for 2016–2020, are set before April 15 of the calendar year of the new regulatory period considering the average of actual transmission reliability indicators of five years, i.e. 2011–2015, were amended in March of 2016.

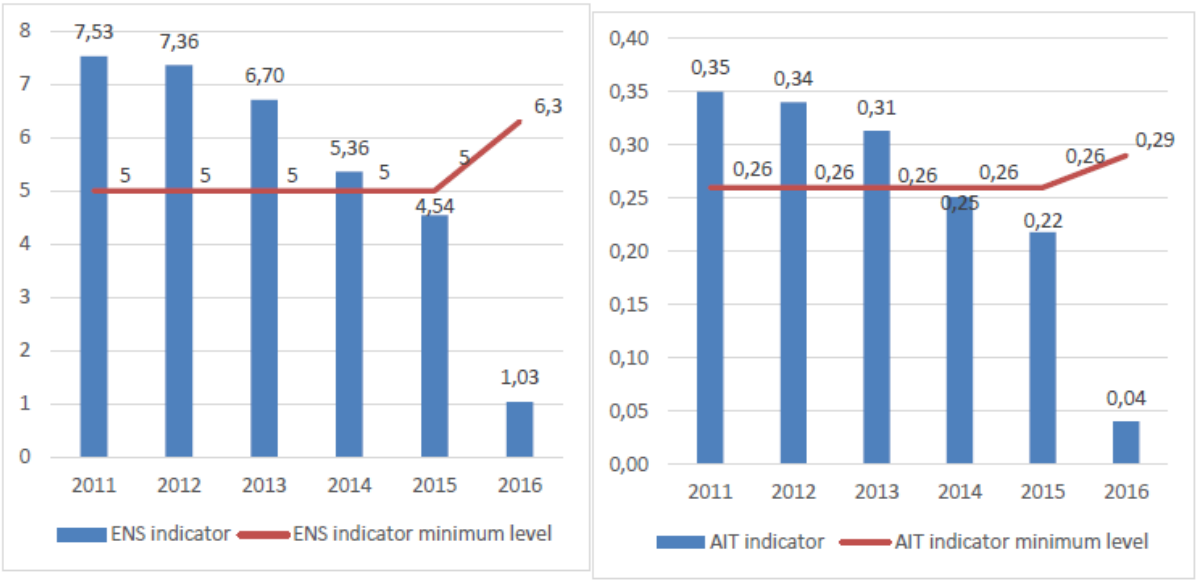
Electricity transmission reliability and service quality indicators and their minimum levels are calculated separately both for the electricity transmission system and the distribution network (see

Figures below). The lower the indicator value, the better the reliability level of electricity transmission. Only cases where interruptions in electricity transmission occurred for reasons attributable to responsibility of the system operator or for unidentified reasons are taken into account for the calculations. Interruptions that occurred as a result of *force majeure* or external impact have no effect on reliability indicators. The reliability of electricity transmission via transmission networks is assessed by the two following indicators:

- Energy not supplied via the transmission network (hereinafter – ENS);
- Average interruption time (hereinafter – AIT).

Figure 5. ENS and minimum indicator level, MWh

Figure 6. AIT and minimum indicator level, min



Source – NCC.

Reliability indicators set by the NCC for the year 2016 oblige the TSO to ensure that the technical service quality will be better or equal to the following minimum requirements: average electricity interruption time for consumers should not be greater than 0.29 min., and the amount of not transmitted electricity should be no greater than 6.3 MWh. The NCC assessed the actual transmission reliability level for the year 2016 and determined that compared to the set minimum level, the reliability of transmission according to the ENS indicator was 83.7 percent lower (did not exceed the maximum value) and according to the AIT indicator was 86.2 percent lower (did not exceed the maximum value).

The reliability of electricity transmission via distribution networks is assessed by the two following indicators:

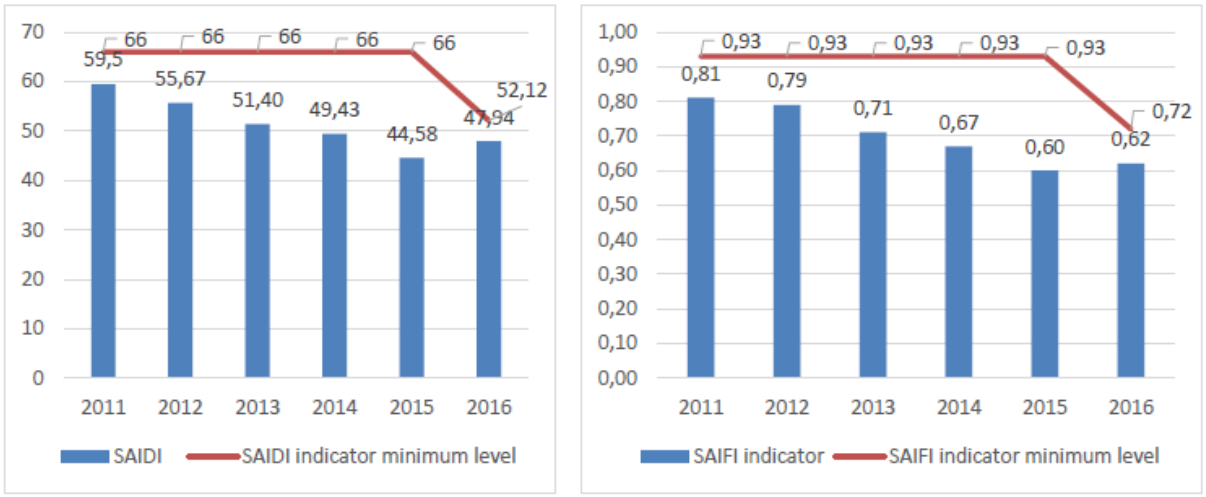
- system average interruption duration index (hereinafter – SAIDI);
- system average interruption frequency index (hereinafter – SAIFI).

Reliability indicators set by the NCC for the year 2016 oblige the distribution system operators (hereinafter – DSO) to ensure that the technical service quality will be better or equal to the following minimum requirements: the system average interruption duration index (SAIDI) for consumers should be no longer than 52.12 min. per year, while the system average interruption frequency index (SAIFI) at the fault of DSO per single consumer should be no greater than 0.72 times.

The NCC assessed the actual quality reliability level for the year 2016 and determined that compared to the set minimum level, the reliability of transmission according to the SAIDI indicator was 8.0 percent lower (did not exceed the maximum value) and according to the SAIFI indicator was 13.8 percent lower (did not exceed the maximum value).

Figure 7. SAIDI and minimum indicator level, min per consumer

Figure 8. SAIFI and minimum indicator level, times per consumer



Source – NCC.

The indicators of the Energijos skirstymo operatorius, AB does not exceed the minimum transmission reliability levels during the entire reference period. The indicators decreased steadily year after year and only saw a slight increase in the year 2016. This means that the quality of transmission services saw a slight decrease in 2016, while the interruption time per consumer per year and the number of interruptions per 1 consumer saw a slight increase as compared to 2015. However, the indicators for the year 2016 were better as compared to the average SAIDI and SAIFI values for the years 2011–2015.

Electricity transmission and distribution services quality indicators established within the requirements. DSOs are subject to the following indicators:

– Percentage share of new customers connected on time (within 20 days from the day of payment of their connection fee);

– Percentage share of restored electricity transmission for consumers that settled their outstanding fees (within 5 days for household consumers and within 2 days for other consumers);

– Percentage share of consumers informed about the planned interruption in a timely manner (10 calendar days in advance);

– Percentage share of failures eliminated for consumers in a timely manner (within 5 working days);

– Percentage share of consumers for whom electricity transmission was restored after unplanned interruption (subject to reliability category);

– Percentage share of claims of consumers and network users examined in a timely manner (within 30 calendar days).

TSO is subject to sole quality indicator – percentage share of claims examined in a timely manner (within 30 calendar days).

Table 5. Performance of Energijos skirstymo operatorius, AB transmission reliability quality indicators in the year 2016

Reliability category for electricity supply	Unit of measure	Set indicator for service provision to consumer	Average indicator for service provision to consumer	Indicator for timely service provision to consumer (percent)
I	hour	0	0.00	100
II	hour	2.5	1.38	100

III	hour	24	3.93	100

Source – NCC.

According to Article 19 of the LoE, the LES reliability assessment report for the year 2015 was drawn up in 2016. The report states that LES assures the required reliability. The above report is also published on the NCC website at www.regula.lt.

Monitoring of safeguard measures (Article 37(1) (t))

According to Item 11 of Article 31(1) of the LoE, TSO Litgrid, AB responsible for the assurance of the state electricity balance. The necessary secondary and tertiary reserve volumes are planned for the assurance of reliability of supply, which are ensured by contracts with power plants functioning within the Lithuanian electricity system and contracts with neighbouring operators of BRELL on jointly maintained secondary reserve. Contracts on continued management of electricity current connection with TSO from Poland and Sweden also include a clause for emergency supply of electricity from neighbouring countries in case of failure or an emergency.

TSO orders a tertiary power reserve to ensure electricity supply to consumers, which may be activated during the maximum electricity consumption period in presence of a lack of supply in the electricity market. Consumer disconnection and restriction plans have been composed and approved in case of lack power or fuel.

Congestions at the interconnection Lithuania–Belarus have been recorded for the previous year. The said congestion lasted for 7 hours. During the above hours, capacity reached up to 1100–1300 MW and the actual current exceeded the set capacity level by 103–118 percent. Energijos skirstymo operatorius, AB had not terminated or limited supply to any customers due to shortages of network capacity in the year 2016.

RES regulatory structure: report on RES connection, use and dispatch control, especially with regard to priority problems. Report on responsibility for RES balancing (Article 11 of Regulation (EC) No. 713/2009)

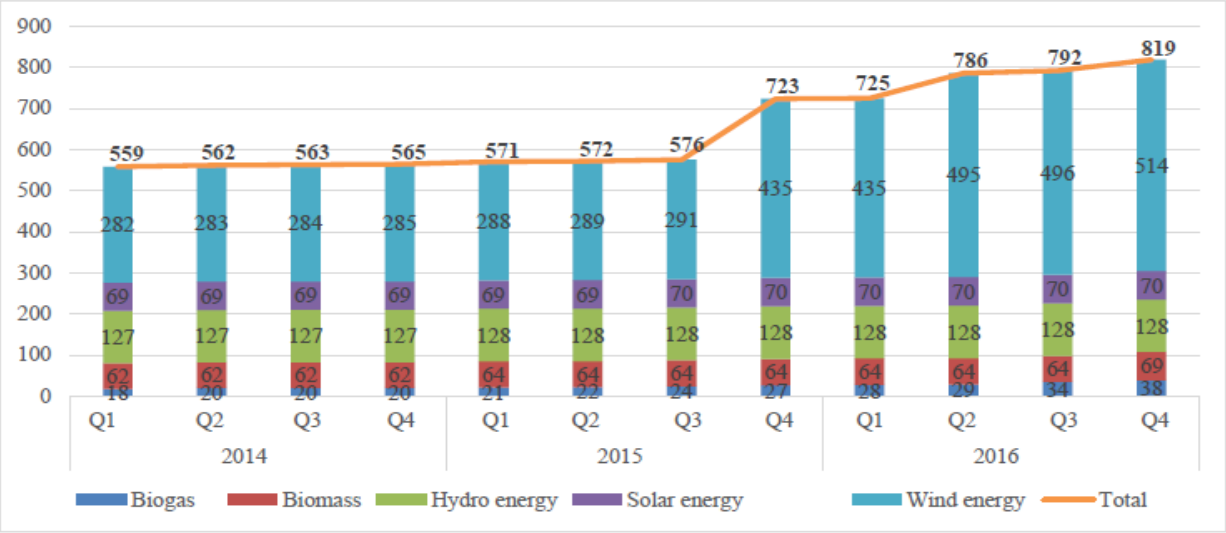
Considering the current market situation and the fact that not all of the consumers producing electricity are connected to the DSO operated distribution networks and that this situation, when calculating the price of services of the use of electricity networks by consumers, restricts the possibility to determine the planned amounts for recovered electricity by the consumers producing electricity and costs for the network operators, the NCC amended the Methodology for Calculating the Price of Services of the Use of Electricity Networks by Consumers Producing Electricity *(approved by Order no. O3–191 of 21 June, 2016).*

Major amendments: In cases when there are no consumers producing electricity connected to the operated distribution network and no actual data required for calculating the price for use of electricity networks, the price for use of electricity network shall be treated as the set price for use of the electricity network of the operator in question.

Responsibilities for balancing RES remained unchanged compared to the previous year, just like any other allowances provided for in the Law on Renewable Resources.

In 2016, wind power plants accounted for the largest share in the overall market structure of installed capacity of renewable sources with 62.7 percent, hydro power plants accounted for 15.6 percent, solar plants – 8.5 percent, biomass – 8.4 percent and biogas – 4.7 percent. In 2015, wind power plants totalled 60.2 percent in the total installed capacity market structure, hydro power plants – 17.7 percent, biomass – 8.9 percent, biogas – 3.7 percent and solar – 9.6.

Figure 9. RES structure by installed capacity in 2014–2016, MW



Source – NCC.

In 2015, the share of installed capacity of RES power plants in the overall installed capacity balance accounted for 16.7 percent and in the year 2016 – for 22.4 percent.

3.1.3. Network tariffs for connection and access

Article 37(1) (a), Article 37(6) (a), Article 37(8), Article 37(10), Article 37(12), Articles 37(3) (c) and (d)

Article 37(1) (a)

The related information is presented in Chapter 2.1.5 of this report.

37(6)(a) straipsnis

According to provisions of the Law on Energy, energy companies engaged in activities of which the prices are subject to regulation must coordinate the planned investment projects related to the construction of new energy objects, restoration, modernization or reconstruction of the existing energy objects or the development of the operating energy objects in energy production, transmission, distribution and supply activities with the NCC. In cases where the investments have not been coordinated with the NCC, the said investments cannot be declared as reasonable and are not included in price caps.

In 2016, the total sum of investments in the transmission and distribution network amounted to EUR 167.44 m, which was significantly less as compared to 2015. The change in question was essentially due to 5.7 times decrease in investments in to transmission networks, from EUR 207.99 m in the year 2015, to EUR 36.74 m in the year 2016. Investments in distribution networks in the year 2016 amounted to EUR 118.92 m, which is 2.5 percent more as compared to 2015.

Return on investments is determined in application of the weighted average cost of capital (WACC) method, which was 5.05 % for a production company, 4.93 % – for TSO and 4.94 % – for DSO in the year 2017. The above and more detailed information is published for the public and can be found on NCC's website at the following address www.regula.lt.

Article 37(8)

The Methodology for Setting Price Caps of Electricity Transmission, Distribution and Public Supply Services as well as Public Price Cap implementing the Long-Run Average Incremental Cost Model (LAIRC) aimed at increasing efficiency of operation of electricity networks which meet demand was approved in late 2015. Electricity transmission and distribution service price caps for a

five-year 2016–2020 regulatory period were set according to the new model. The methodology was subject to clarification throughout the year 2016 by determining the correction on investment return due to the indicators on transmission reliability, as well as regulating both the necessary and reasonable investment measures for increasing the efficiency of energy consumption, including development of smart electricity networks, and the coefficient for allocating the established distribution services costs to household consumers was set. By differentiating the distribution service prices, the DSO consistently increases the value of the above coefficient for consumers up to the year 2020, however the said value may not exceed 1.3, meanwhile the applied value in the year 2017 is 1.2. Rights and obligations of the NCC related to prices and tariffs of transmission and distribution service providers, as established by Article 37(8) of Directive 2009/72/EC, remained unchanged throughout the year 2016.

Article 37(10)

Rights and obligations of the NCC related to prices and tariffs of transmission and distribution service providers, as established by Article 37 (10) of Directive 2009/72/EC, remained unchanged throughout the year 2016.

Article 37(12)

Resolutions of the NCC may be appealed in the procedure prescribed by the Law on Administrative Proceedings of the Republic of Lithuania.

Articles 37(3) (c) and (d)

According to Article 33 of the LoE, rights and obligations related to the preparation, evaluation and monitoring of a 10-year transmission network development plan established for TSO and NCC remained unchanged throughout the year 2016. A 2016–2025 plan for the development of the Lithuanian electricity system 400–110kV networks for the upcoming decade was received on 30 June, 2016. The NCC announced a public consultation for the said plan and, having evaluated the received comments, approved by the Order no. O3–395 of 29 November, 2016 that investments provided for in the investment plan for 2016–2025 drawn up by Litgrid, AB will ensure reasonable development of the electricity sector, which would meet the needs of market participants, as well as reliable and efficient functioning of the transmission system ensuring quality services for consumers.

In the year 2015–2016, following the operation of interconnections NordBalt and LitPol Link projects, the need for investments for the investment programme 2016–2025 for the development and renovation of the transmission network shall reach about EUR 671.18 m, i.e., 22.89 percent less as compared to the planned investments of Litgrid, AB for the years 2015–2024. The project of connection and synchronization of the LES with networks of continental Europe makes the largest share of the investments into transmission network projects for the years 2016–2025.

According to the approved Description of the Procedure of the Assessment and Approval of Investments of Energy Companies with the National Commission for Energy Control and Prices approved by the NCC, a DSO prepares a long-term investment programme of regulated activities for a regulatory period and presents it to the NCC. According to the investment programme for 2016–2020 submitted to the NCC, investments for 2017–2019 total EUR 434 m.

Prevention of cross-subsidies (Article 37(1) (f))

The functions set forth to the NCC according to item 13 of Article 8(9) of the Law on Energy and item 5 of Article 9(4) of the LoE to control the efficient unbundling of activities in the energy sector in order to ensure the independence of transmission and distribution activities from the commercial interests in the energy activities and to avoid cross-subsidies, as compared with the last year, remained unchanged (for more information, see the Annual Report on Electricity and Natural Gas Markets of the Republic of Lithuania to the European Commission for the year 2015).

3.1.4. Problems of cross-border trade

Access to cross-border infrastructure, including capacity allocation and congestion management procedures (Article 37(6) (c), Article 37(8), Article 37(9), use of revenues for interconnection links (Article 37(3) (f))

From 2016 new regulation that consists of terms, regulations and methodologies for calculating, setting and allocating cross-border capacities in the Baltic states and with third countries has been applicable that was approved by NCC on 10 December 2015.

The situation on access to the interconnection infrastructure changed in the year 2016, at the start of the operation of the interconnection lines with Sweden and Poland. Nordbalt connection significantly lowered the electricity price within the market.

It should also be noted, that due to the lack of capacity, trading was restricted for the following interconnection links:

- Lithuania–Latvia interconnection link for 364 hours (for 4 hours from Lithuania to Latvia, for 360 hours from Latvia to Lithuania);
- Lithuania–Belarus interconnection link for 12 hours (from Belarus to Lithuania);
- Lithuania–Sweden interconnection link for 2882 hours (for 2848 hours from Sweden to Lithuania, for 34 hours from Lithuania to Sweden);
- Lithuania–Poland interconnection link for 4690 hours (for 2370 hours from Poland to Lithuania, for 2320 hours from Lithuania to Poland).

The changed infrastructural situation, when Lithuania turned up at the crossroads of electricity flows between Sweden, Latvia, Belarus, Poland and Russia (Kaliningrad), has demanded new decisions associated with new countries and markets, as well as their specifics. Regional cooperation has become of particular importance in pursuit for efficient solutions and implementation of connection of electricity markets: cost sharing between countries and market participants, implementation of financial tools, efficient use of capacities, implementation of intra-day trading in new interconnection links, etc. The above decisions are related to network codes that are adopted or planned to be adopted, while the implementation of tasks provided for therein at the European level has become increasingly relevant for the adoption of decisions at the regional and national level.

It should be emphasized that while having built new interconnections to the West, Lithuania, just like other states, still remains as an isolated energy island in the EU. Thus integration into European electricity systems in terms of management and operative work is the top priority, i.e. synchronous operation of the Lithuanian electricity system with networks of the continental Europe would be the ultimate goal.

In 2016, Lithuanian electricity TSO generated EUR 3 438 451 in congestion income (EUR 915 936 in 2015). The plan is to use all these funds for the implementation of strategic projects. It should be noted that in 2016 a congestion in the interconnection link Lithuania–Belarus has been recorded. The said congestion lasted for 7 hours. During the above hours, capacity reached up to 1100–1300 MW and the actual current exceeded the set capacity level by 103–118 percent.

In 2016, annual hourly electricity demand peak (net) was 1 979 MW (1 748 MW in 2015, 1 835 MW in 2014). The total installed capacity of LES power plants totalled 3 591 MW.

All of the relevant information related to access to and the use of the transmission network is published on the website of Litgrid, AB at the following address www.litgrid.eu and the Nord Pool AS website at the following address www.nordpoolspot.com.

Monitoring the technical cooperation between the Community and third-country transmission system operators (Article 37(1) (s))

As mentioned in Chapter 2.1.5, when preparing for the development of regional market, which was determined by the newly launched interconnection links with Sweden and Poland, considering

amendments to the LoE which took effect in March of 2014 and having respectfully received a reasoned notice of the Ministry of Energy, the NCC set the price of EUR 5.27/MWh for UCL by its Resolution no. O3-694 of 30 December 2015. The said price has been applied since 1 March 2016. NCC approved the new price of EUR 5.23/MWh by the Order no. O3-349 of 31 October, 2016 for the year 2017, which is a 0.8 percent decrease compared to the price set in the year 2016.

In the refocus of electricity systems of the Baltic states for work with Continental European networks and in preparation for work in disconnection from other electricity systems in an "island mode", respective decision will be needed. Mutual coordination increases the overall system management efficiency and reduces the likelihood of total failures. Moreover, domestic electricity transmission network must also be enhanced for synchronization, which will serve as renovation of depreciating infrastructure and as a method to efficiently exploit LitPol Link and NordBalt interconnection links. Implementation works for synchronous work with the Continental European networks are planned to be completed up to the year 2025.

Monitoring of the transmission system operator's investment plans according to the TYNDP (Article 37(1) (g))

Monitoring of investment plans of Litgrid, AB is performed in line with the conditions indicated in Chapter 3.1.3 and enshrined in the LoE, i.e. a 10-year plan for the development of transmission networks presented by the 1st of July of each year for evaluation by the NCC.

In 2016, the length of high-voltage electricity transmission lines amounted to 7 080 kilometres and there were 236 high-voltage transformer substations. The total electricity demand was 12.25 TWh. Electricity consumption increased by 3.7 percent. Currently, LES is directly connected with electricity systems of with five neighbouring states (Sweden, Poland, Belarus, Latvia, and Russia). The planned investment amount into the transmission network in 2016–2025 is about EUR 671.18 m.

The NCC also participates in PCI implementation process together with TSO and cooperates with energy regulators of other countries in pursuit for successful completion of construction of strategic interconnection links according to a 10-year transmission network development plan.

Cooperation (Article 37(1) (c))

The LoE obliges the NCC to cooperate with the national regulatory authorities of the energy sector of foreign countries.

The NCC may enter into agreements on cooperation in the electricity sector with the national energy sector regulatory authorities of other countries, and, within its competence, participate in activities of international or regional organizations, associations, committees, commissions or working groups.

It has also been established that under its competence, the NCC represents the Republic of Lithuania in the ACER, acting in accordance with Regulation (EC) No. 713/2009 of the European Parliament and of the Council of 13 July 2009 on establishing an Agency for the Cooperation of Energy Regulators. In cooperation with the ACER and foreign national energy sector regulatory authorities, the NCC is exchanging information which is necessary to perform the NCC functions set forth by this Law and other legal acts. The NCC ensures confidentiality of the received information.

The NCC is also a member of the CEER and ERRA. NCC representatives take part in various meetings of working groups, perform joint benchmarking analyses of energy undertakings, answer various questionnaires, provide the required information and monitor the course of the drafting of documents.

3.1.5. Compliance with legal acts

The Regulator's compliance with the binding decisions of the ACER, the European Commission (Article 37(1) (d)) and with the Guidelines (Article 39)

The NCC has been continuously receiving information about the ACER and the European

Commission's legal acts that are being drafted or have already been adopted. Moreover, by means of joint information system, the NCC conciliates its positions with other state authorities. Provisions of relevant legal acts of the European Union have been transposed to provisions of the national legal framework or are applied directly, and are complied with under the competence in the NCC's adoption of resolutions on the setting of components of transmission service price, setting and allocation of capacity of connection lines, rules on the management of congestion and others.

Ensuring compliance of transmission and distribution undertakings, system owners and electricity undertakings with the relevant Community legislation, including cross-border issues (Articles 37(1) (b), 37(1) (q), 37(3) (a), (b), (e) and 37(5) + imposing penalties (Article 37(4) (d))

Unless otherwise provided for in other legislation, the NCC prepares and sets forth in its legal acts detailed requirements on compliance with the European Union legal framework and liability in case of non-compliance with their provisions. Compliance with provisions of legal acts on cross-border trade has been described in Chapters 2.1.3 and 3.1.4 of this Report.

According to Article 9(7) of the LoE, the NCC imposes efficient, commensurate and dissuasive sanctions on electricity undertakings for non-compliances in performing state-regulated energy activities in the electricity sector in accordance with the procedure and conditions prescribed by laws. Penalties imposed by the NCC for non-compliance in performing the state-regulated energy activities and the procedure for imposing them are set forth in the Law on Energy.

Article 36 of the Law on Energy establishes that in order to ensure compliance with conditions of regulated activities set forth in laws, the NCC imposes penalties on energy undertakings for violations in the performance of regulated activities, which have not been removed within a reasonable period of time set by the NCC.

In cases where the Competition Council investigates actions of unfair competition or infringement of the principle of non-discrimination of customers in the energy sector under its competence, such actions are investigated, binding instructions to energy undertakings are issued and liability for the infringements, including sanctions imposed on energy undertakings, is defined according to the procedure and conditions prescribed by the Law on Competition. To this end, the NCC and the Competition Council collaborate between themselves in order to efficiently identify the scope of actions of unfair competition or infringement of the principle of non-discrimination of customers in the energy sector, and their scope and impact on energy consumers and/or other energy undertakings. Energy undertakings are held liable for the same infringement either pursuant to the Law on Energy or the Law on Competition, depending on the competence assigned either to the NCC or to the Competition Council.

3.2. Promoting competition

3.2.1. Wholesale market

The new interconnection links NordBalt and LitPol opened up new possibilities for the development of the Lithuanian electricity market and significantly reduced the wholesale price of electricity within the Lithuanian energy market. The reduction of price of electricity was recorded in the price zones of Lithuania and Latvia in which the price for electricity on the power exchange in the year 2016 were reduced by 12.8 and 13.8 percent respectively as compared to 2015.

NCC actively participates in the creation of new regional electricity market, including drawing up and implementation of various general legal acts.

Since 7 April, 2016, wholesale energy market participants, i.e., legal entities, concluding transactions within the wholesale energy market for the acquisition of electricity (and natural gas) are subject to the requirement of Regulation (EU) no. 1227/2011 to provide ACER all of the information related to the transactions concluded within the wholesale energy market, including trading orders and other information.

In December, 2016, NCC drafted and approved Rules for Supervision of Trading in Electricity

and Natural gas, which entered into force on 1 March, 2017. The said rules introduced the term "Market Participant", defining which electricity and natural gas market participants are subject to wholesale market supervision, monitoring and assessment of violation provisions, as well as clearly defining the instances for investigation on the said violations of wrong-doings within the wholesale energy market.

In May, 2017, according to FCA on determining the forward capacity allocation guidelines, NCC performed the analysis on the possibility on restricting the risk of energy price fluctuations. The capacity calculation region of Baltic states is comprised of the following countries: Lithuania, Latvia, Estonia, Finland, Sweden and Poland. This was the first analysis on restricting the risk of energy price fluctuations that has been performed in Lithuania: NCC analysed the operation of forward transactions of electricity market, whether products or their combinations offered at the forward transaction market would help avoid the fluctuations of next day price within certain trading markets and whether the said products or their combinations are effective. In response to the circumstances determined during the investigation and pursuant to promote more efficient operation of the wholesale electricity markets, NCC together with the national regulation authorities of Sweden, Poland and Latvia obliged the TSO of said states to ensure the possibility for the participants of the wholesale electricity market to acquire long-term inter-zone risk mitigating products, without entitling long-term transmission rights, within 6 months.

According to the requirements of EU on creation of common regional electricity market, in May 2017, NCC approved the jointly drafted and approved CGM of the EU transmission system operators. Pursuant to CGM, TSO models the capacity of current network infrastructure, the said data shall be used for ensuring the reliability of the network and reduce the costs for network operation, including the consumers as well. Previously, each and every TSO used their own network model, however the increasing relation between the electricity networks within the region demands for the necessity to create a common network model. The above shall ensure more streamlined cooperation between the TSO and shall allow for safer and more efficient development of the European electricity network.

During the creation of the single electricity network within the region, each and every EU TSO have submitted a proposal on single day ahead firmness deadline DAFD, which shall be 60 minutes until the end of trade of the day ahead. NCC approved the above deadline during meeting in June, 2017.

In 2016, the set electricity price in the Lithuanian market was EUR 37/MWh. 88.35 percent of electricity was imported. 2 new licenses to independent suppliers were issued in 2016, however 1 license was suspended. At the end of the year, there were 19 active independent suppliers out of 36 licensed independent suppliers. There were 3 main electricity suppliers in the wholesale market last year (see fig. 1). There were 18 participants in the day-ahead trade and 10 on the intraday trade of electricity exchange. For more information, see www.nordpoolspot.com.

3.2.1.1. Monitoring the level of prices, transparency, efficiency of market opening and competition, Articles 37(1)(i), (j), (k), (l), (u) and 40 (3)

The electricity price monitoring is conducted according to the approved Description of Procedure of Electricity Market Monitoring, and the results are published in NCC's annual reports and Review of the Development of Energy Sector, which are published on the NCC's website www.regula.lt (also see section 2.1.3).

It should be mentioned that meetings of the National Committee for the Development of a Single Baltic Electricity Market are held at least once per half a year and they are attended by representatives of state authorities, market participants and related associations. Here relevant information is exchanged and issues of concern are solved, clearing up their reasons, and plans for steps to be taken in pursuit for an efficient operation and development of electricity market are drawn up.

In order to ensure transparency, the NCC monitors if information according to Regulation (EC) No. 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003 and provisions of Commission Regulation (EU) No. 838/2010 of 23 September 2010 on laying down guidelines relating to the inter-transmission system operator compensation mechanism and a common regulatory approach to transmission charging is published properly. The NCC also publishes on its website the entire information related to its activities: news, various explanations, statistics, held meetings, material of public meetings, etc.

In response to the increasing prices of the day ahead prices of electricity exchange Nord Pool within the price zone of Baltic states in January, 2016, NCC performed the investigation for determining the reasons for the high prices of electricity exchange in the month of January, 2016. Based on the factors determined during the investigation, NCC applied to the Ministry of Energy for the development of the regulations for reserve, system services and obligations applied to legal entities providing PSOs.

3.2.2. Retail market

Since 2013, all commercial consumers have been paying for electricity at market prices, and, in case of necessity, a six-month guaranteed electricity supply is secured to these customers. Household consumers also have the right to choose an independent electricity supplier and purchase electricity in the market or according to bilateral agreements.

Last year, the average annual electricity consumption by household consumers increased from 1 634 kWh to 1 696 kWh. In 2016, the retail market share held by the public supplier Energijos skirstymo operatorius, AB stayed the same – about one third of the total consumption, including guarantee supply. 45 448 consumers used the services of guarantee supplier. The three biggest independent electricity suppliers in the retail market were the following: Energijos tiekimas, UAB, Elektrum Lietuva, UAB and INTER RAO Lietuva, AB. Their share in the retail market accounted for 70.3 percent in terms of the volume of electricity. Compared to the year 2015, the market share occupied by Energijos tiekimas, UAB increased the most out of the largest independent electricity suppliers in 2016.

The number of consumers in the country increased from 1 673 801 to 1 691 038 consumers, of which 134 279 were non-household consumers. During 2016, consumption by non-household consumers purchasing electricity at public prices decreased from 0.112 TWh to 0.104 TWh. Consumption by household consumers purchasing electricity at public prices in the year 2016 totalled 2.64 TWh. This is a slight increase compared to the year 2015 (2.51 TWh). The number of household consumers having purchased electricity in the market under negotiated prices increased from 11 to 29. In the year 2016, due to the outstanding debt, Energijos skirstymo operatorius, AB terminated electricity supply for 3 452 customers.

3.2.2.1. Monitoring the level of prices, transparency, efficiency of market opening and competition, Articles 37(1)(i), (j), (k), (l), (u) and 40 (3)

In 2016, the average electricity price in the Lithuanian market was EUR 37/MWh. The average annual retail price to a typical household consumer of the public supplier was EUR 43/MWh (acquisition of electricity and margin of public supply), while the price of the use of electricity networks and transmission service was EUR 32/MWh.

Year 2017 is the second year of the 2016–2020 year regulatory period. Allowed revenues calculated in each other year will be adjusted according to the requirements of the Methodology for Setting Electricity Transmission, Distribution and Public Supply Service Price Caps and the Public Price Cap approved by Resolution no. O3-3 of 15 January 2015 of the NCC on the Approval of the

Methodology for Setting Electricity Transmission, Distribution and Public Supply Service Price Caps and the Public Price Cap.

In 2017, the price cap of the transmission service of Litgrid, AB is equal to 0.672 ct/kWh, which is 0.019 ct/kWh or 2.75 percent less as compared to the transmission price cap set for the company for 2016. The presented information of the TSO towards NCC, showed that the TSO plans to order 400 MW/h for the secondary reserve and 484 MW/h for the tertiary power reserve. The changes in price for the secondary and tertiary power reserves resulted due to non applicability of corrections in 2017 for the reduced level of costs for the provisions of said services following the assessment of the audit findings in the year 2016. In light of price caps of reserve capacity assurance services and TSO forecasted amount of services and budget for acquisition of said services in 2017, the system service price of 0.393 ct/kWh was set for 2017 (the said price includes costs for acquisition of services for assuring active power for the primary, secondary and tertiary reserves, as well as costs for reactive power and voltage management and emergency, shortage prevention and liquidation services).

The distribution price cap of Energijos skirstymo operatorius, AB at medium voltage is equal to 0.830 ct/kWh in 2017 (0.170 ct/kWh or 16.96 percent less as compared to 2016) and at low voltage – 1.655 ct/kWh (0.111 ct/kWh or 6.31 percent less as compared to 2016). The changes in price resulted mainly due to increase in the amount of the foreseen electricity volume to be distributed and decreased return rate on investment (from 5.24 percent in 2016 to 4.94 percent in 2017) and reduced operating revenues of Energijos skirstymo operatorius, AB due to increased profit that exceeded the return rate on investment for the period 2014–2015.

Considering the Resolution No. 1178 of the Government of 23 November, 2016 On the Identification of entities providing PSOs and setting of the scope of provision of PSOs for 2017 which establishes that the scope of subsidized electricity production in cogeneration mode in combined electricity and heat generation cycle power plants should not be set for 2017, the NCC did not determine the need for PSOs funds for this service. However, producers ensuring the security of electricity power supply shall be obliged to provide the service of assurance of electricity system reserves. To this extent, the NCC determined the need of EUR 34.3 m PSOs funds for 2017.

The PSOs budget set for 2017 increased from EUR 138.9 m (corrected in 2016) to EUR 145.8 m, or by about 4.9 percent. However, due to the increase in the forecasted amount of electricity consumption, the PSOs cost was reduced from 1.497 to 1.386 ct/kWh.

In 2017, the public electricity price for household consumers purchasing electricity from medium voltage networks was 7.102 ct/kWh (exclusive of VAT), or 0.397 ct/kWh (5.3 percent) less as compared to the II half of 2016. The price for household consumers purchasing electricity from low voltage networks was 9.088 ct/kWh (exclusive of VAT, or 0.442 ct/kWh (4.6 percent) less as compared to the II half of 2016.

Electricity prices, their application, comparison with prices applicable in other countries and other related information is published on the website of the NCC at www.regula.lt or website of Energijos skirstymo operatorius, AB at www.eso.lt. Consumers are informed about new prices and tariff plans individually on the self-service portal www.manogile.lt, while those having presented their contact data – by SMS messages or e-mails. The Company also informs customers about the applicable tariff plans and their application conditions by customer service line 1802.

Market opening and efficiency questions are discussed in Chapters 3.2.1 and 3.2.2, and more data are available in the CEER database.

3.2.2.2. Recommendations on supply prices, market research and application of measures for promoting efficient competition

Article 37(1) (o)

Item 15 of Article 8(9) of the Law on Energy establishes that the NCC monitors whether the concerted practices that would restrict competition have not occurred, including conditions of

exclusive rights, whereby big non-household customers may be prevented from or their possibilities may be limited to simultaneously conclude agreements with more than one supplier.

Procedures of the submission of information about market distortions or restrictions to the Competition council, including the submission of appropriate information and the presentation of investigation of respective occurrences in the market, are carried out in accordance with the requirements established by laws. According to Item 16 of Article 8(9) of the Law on Energy and Item 7 of Article 9(4) of the LoE, the NCC issues recommendations on the compliance of the prices of the services rendered in the electricity sector with the transparency, non-discrimination and other requirements set forth in the laws at least once per year and submits them to the Competition Council.

Information about the researches carried out and measures taken by the NCC, is described in detail in Chapter 2.1.3.

Article 37(4) (b)

According to submitted quarterly reports, the NCC assesses costs of repair, maintenance and operation, personnel, administration, etc. of the electricity transmission and main DSO (Litgrid, AB and Energijos skirstymo operatorius, AB), small distribution system operators (Achema, AB, Akmenės Cementas, AB, Lifosa, AB, Dirbtinis Pluoštas, UAB and E Tinklas, UAB) and public suppliers (Energijos skirstymo operatorius, AB and Dirbtinis Pluoštas, UAB) and electricity power supplier having a large influence towards the electricity reserve capacity within the market Lietuvos energijos gamyba, AB.

This allows the NCC to be continuously informed about the costs incurred by regulated electricity transmission and distribution operators and to provide consultations on issues related to attribution of the costs incurred to regulated activities within the shortest possible time. Having assessed the presented data of quarterly income and cost statements of electricity companies, the NCC provides inquiries to economic undertakings on issues emerged during cost analysis. More active analysis by the NCC of quarterly operating costs of the said electricity sector companies is aimed at evading situations having occurred in the past, when having conducted routine inspections of costs of electricity sector energy transmission and distribution operators and of the public supplier, significant violations of cost accounting of companies conducting regulated activities were recorded, while consumer overpayments are set out in future periods over the course of a few years due to their scope.

By determining the price caps for 2017, the NCC assessed the surplus profit for the period 2014–2015 of the TSO and DSO (Ligrid, AB and Energijos skirstymo operatorius, AB) and public supplier (Energijos skirstymo operatorius, AB) in 2016. The calculated sums are laid out and shall be returned towards the consumers in the near future.

3.3. Security of supply (to the extent in which the Regulator is a competent authority)

Implementation of safeguard measures (Article 42)

The process of update of the Lithuanian Energy Strategy, which should set the energy goals for Lithuania till 2050, was started in 2015 and continued in 2017 with the aim to assess the changed situation after the launch of new interconnection links with Poland and Sweden.

National energy independence strategy set a clear vision, implementation principles, strategic directions and tasks. The implementation of the above strategy is detailed in the action plan for year 2020, 2030 and 2050. The above strategy shall be implemented by way of the 4 following directions:

- Competition;
- Reliability;
- Reduction on influence towards environment (energy saving and green energy);
- Participation of country businesses towards achieving advancements in energy.

Ministry of Energy published the updated project for National Energy Strategy for public

consultation in June, 2017.

3.3.1. Monitoring the supply and demand balance

Article 4

The relevant information is provided in Chapters 2.1.2 and 3.1.2 herein.

3.3.2. Monitoring investments in generation capacities related to security of supply

Article 37(1) (r)

According to the provisions of the LoE, the NCC monitors the implementation of the network development plan and performs its evaluation. Each year Litgrid, AB prepares ten-year network development investment plans that evaluate development scenarios of the planned new generation sources.

In the plan submitted in 2016 forecasts are made that the installed capacity of new electricity generation sources will increase to 4 196 MW by 2025. Power plants using RES would account for 27.5 percent of the above share.

It should be noted that LES has strong enough interconnection links with neighbouring countries, while the launched new interconnection links LitPol and NordBalt with Poland and Sweden contribute to the increase of security of supply. Under these conditions, in any case, technical possibilities to cover electricity generation capacity deficiency (if any) by imported electricity are available.

Security of the operating network Article 7 of Directive 2005/89/EC

Major part of the needed electricity supply was imported due to uncompetitive production capacities in 2016. In 2016, 34.75 percent of the total consumption of electricity was produced by power plants operating in Lithuania, which was 7.59 percent less as compared to 2015 (42.34 percent). The imported volume of electricity accounted for 88.35 percent of the total consumption of electricity (68.69 percent in 2015, 72.60 percent in 2014).

The volume of electricity possible for import depends on repairs carried out in the transmission network. In 2016, 2.376 GWh electricity power on average was available for import to Lithuania hourly.

Investments in cross-border capacities 5 and more years ahead Article 7 of Directive 2005/89/EC

In the juncture for the period 2015-2016, TSO together with partners completed the following construction plans for two interconnection links: Nordbalt link integrated the energy systems of Baltic states into the energy system and electricity market of Northern countries and enhanced the energy security and energy supply reliability within the region. LitPol Link link integrated the Baltic states into the single European energy system and European electricity market. The implementation of the above project also marked the end of the construction of the Energy ring of Baltic state. The said ring connects the energy systems of Lithuania, Latvia, Estonia, Finland, Sweden, Norway, Denmark, Poland and Germany.

A second 400 kV cross-border interconnection link between Lithuania and Poland and a number of projects related to enhancement of the domestic market are planned for synchronisation with Continental European Network. In transition to synchronous operation of energy system of the Baltic states with the European energy system, the Baltic IPS/UPS systems will be connected using asynchronous links, i.e. by installing DC converters.

According to the Description of the Procedure of Evaluation of Energy Company investments and their Approval with the NCC, TSO shall coordinate separate investments, the scope whereof is

equal or greater than EUR 3.5 m. The value of transmission network strategic projects for interconnection links for the period 2016–2025 should total EUR 341 m, while the total investments of TSO should total EUR 635.39 m.

The expected future demand and planned capacities for 5 and 5–15 years ahead

Article 7 of Directive 2005/89/EC

In 2016, the maximum hourly electricity demand (net) in Lithuania was 1 979 MW, i.e. 13.2 percent more as compared to 2015 (1 748 MW, 2014 – 1 835 MW). In 2016, the maximum hourly electricity demand in distribution network was 1 695 MW, or 9.0 percent more as compared to 2015 (1 555 MW, 2014 – 1 639 MW).

Electricity demand is mostly affected by changes in the country's economic level, which are best defined by gross domestic product (hereinafter – GDP). However, there are other factors present, which also have a significant affect towards the future electricity demand, thus the following was assessed in this forecast:

• GDP growth;
• Electricity efficiency;
• Number of electric cars and their electricity consumption;
• Number of heat pumps and their electricity consumption.

The forecast is that in case of the base scenario, Lithuania's electricity demand will increase to 12.59 TWh by 2025 (an annual growth of an average of 1.5 percent), in case of lower economy growth – 11.89 TWh (an annual growth of an average of 0.9 percent), while in case of an optimistic scenario – to 13.0.5 TWh (an annual growth of an average of 1.9 percent). In case of base scenario, Lithuania's electricity demand would be 11.56 TWh by 2020. The forecasted highest electricity demand in case of base scenario would be 2 079 MW in 2020, 2 184 MW in 2025.

During 2016, Energijos skirstymo operatorius, AB transmitted to its customers 9.605 m kWh (9.15 m kWh in 2015) of electricity (including technological losses and own needs). The volume of electricity planned to be transmitted in 2017–2019 is forecasted pursuant to provisions of the Methodology for Setting Price Caps of Electricity Transmission, Distribution and Public Supply Services and the Public Price Cap approved by the NCC, i.e. the plan is to have electricity consumption increase by an amount equal to ½ of GDP change. According to March 2017 forecasts of economic indicators of Lithuania drawn up by the Ministry of Finance of the Republic of Lithuania, the forecasted growth of Lithuania's GDP in 2017–2019 is 2.7 percent, 2.6 percent and 2.5 percent, respectively (½ of GDP accounts for 1.35 percent, 1.30 percent and 1.25 percent, respectively).

In 2016, electricity supply of Energijos skirstymo operatorius, AB totalled 3.15 m kWh (3.12 m kWh in 2015), of which 2.74 m kWh was public electricity supply and 0.41 m kWh – guarantee supply. In 2015, public electricity supply and guarantee supply totalled 2.63 m kWh and 0.49 m kWh respectively. The Company forecasts that the volume of electricity planned to be supplied to public consumers in 2017–2019 will increase by 1 percent each year.

3.3.3. Measures to cover peak demand or shortage of suppliers

Article 4

According to the legal acts, the electricity TSO Litgrid, AB is responsible for ensuring the national electricity balance.

According to the Description of Conditions of Temporary Interruption of Electricity Transportation to Assure Public Interests and Procedure of Calculation and Compensation of Related Losses approved by Order No .1-121 of the Minister of Energy of 19 April 2010 and provisions of other legal acts, the Procedure for Drawing up the Schedules and Performing Termination of Electricity Transportation to Customers and Capacity Limitations was approved by Order No. 176 of the General Director of Energijos skirstymo operatorius, AB (formerly known as Lesto, AB) of 11 May 2011.

Each year Energijos skirstymo operatorius, AB draws up schedules of limitation of capacity and electricity, as well as of emergency disconnection, which are presented to TSO every year. Limitation schedules (drawn up for a one-year period) are drawn up having summarised and analysed system demand, network parameters and the available information of network users, therefore the scopes of limitations may change each year. Network users included in the limitation schedule are informed about the planned limitation tasks and arising duties in writing in advance. The distribution network is capable of satisfying peak electricity demand because the installed capacity significantly surpasses the existing peak demands.
Energijos skirstymo operatorius, AB had not terminated or limited supply to any customers due to shortages of network capacity in the year 2016.

4. GAS MARKET

4.1. Network regulation

4.1.1. Unbundling of the vertically integrated undertakings

Designation of the natural gas transmission system operator and issuance of a licence for natural gas transmission activity

The NCC decided by its Resolution No. O3-5 on the Unbundling of Natural Gas Transmission Activities and a Preliminary Decision on Designation of the Transmission System Operator of 15 January 2015: to state that the unbundling of Amber Grid, AB transmission activity complies with the provisions of Articles 40–42 of the LoNG and Amber Grid, AB can be designated as the TSO.

On 26 March 2015, the NCC received the European Commission's Opinion regarding the unbundling of Amber Grid, AB, whereby the European Commission stated that it is not satisfied with the fact that an in-depth assessment of indirect rights of the Ministry of Energy in Litgas, UAB was not performed in accordance with Article 9(2) of Directive 2009/73/EC and encourage the NCC to certify Amber Grid on the condition that all of the shares of Litgas, UAB owned by Klaipėdos nafta, AB would be transferred as well.

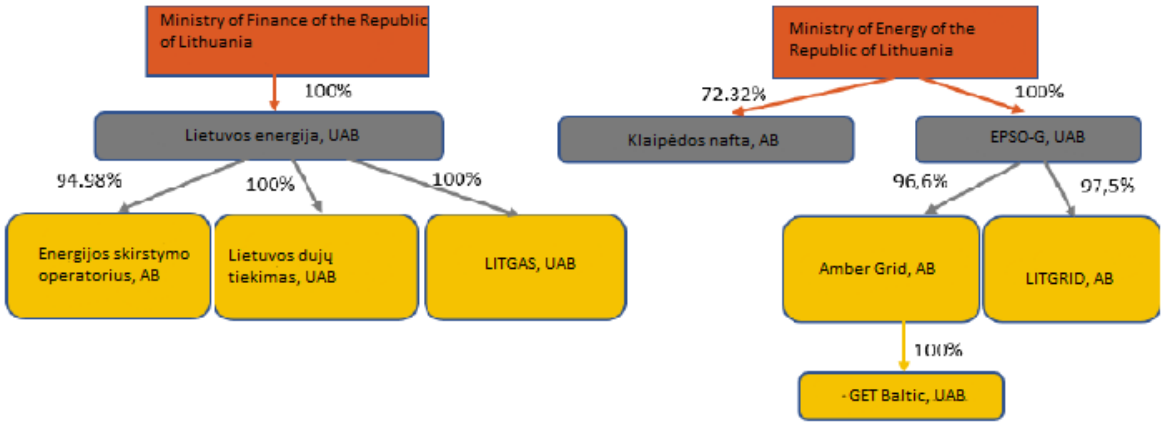
Having evaluated the Opinion provided by the European Commission and letters provided by the Ministry of Finance and Ministry of Energy, by its Resolution No. O3-242 of 10 April 2015 (hereinafter – Resolution on issue of licence), the NCC resolved as follows: 1. To state that the unbundling of Amber Grid, AB transmission activity complies with provisions of Articles 40–42 of the LoNG and that Amber Grid, AB can be designated a TSO, on condition that that the Ministry of Energy of the Republic of Lithuania will conduct actions for the transfer of shares of Litgas, UAB owned by Klaipėdos Nafta, AB to an entity, which is neither directly nor indirectly controlled by the Ministry of Energy, as indicated in the Opinion by the European Commission no later than within 12 months from the effective date of the NCC Resolution regarding the designation of Amber Grid, AB. By the same resolution, the NCC revoked the fixed-term licence issued to Amber Grid, AB and issued Amber Grid, AB an open-end TSO licence.

In the performance of the functions attributed thereto, by Resolution No. O3-107 of 22 April 2016 (hereinafter – Resolution on violation) the NCC stated that Amber Grid, AB failed to perform the obligation set in subparagraph 4.1 of Resolution on issue of licence and stated that Amber Grid, AB does not meet requirements for independence of TSO activities and the unbundling of activities enshrined in Chapter eight of the LoNG. In light of this fact, the NCC obliged Amber Grid, AB to rectify the infringement of conditions of regulated activities within 2 months from the effective date of the resolution and to present to the NCC information and an action plan coordinated with the Ministry of Energy related to the transfer of shares of Litgas, UAB owned by Klaipėdos Nafta, AB within 10 working days. In case of a failure of Amber Grid, AB to rectify the infringement of conditions of the regulated activity specified by the NCC, according to the Law on Energy the company may be imposed a fine of up to 10 percent of its annual income generated in the previous

financial year from the regulated natural gas transmission activities.

By its Resolution No. O3-453 of 22 December 2016, the NCC assessed whether Amber Grid, AB performed the corrective measures and rectified the infringement specified within the Resolution on issue of licence and the Resolution on violation and stated that on 3 October, 2016 Klaipėdos nafta, AB and Lietuvos energija, UAB entered into an agreement for the acquisition and sale of Litgas, UAB owned shares controlled by Klaipėdos nafta, AB by which all of the shares were transferred towards Lietuvos energija, UAB, which is not directly or indirectly controlled by the Ministry of Energy, as well as that the unbundling of Amber Grid, AB transmission activities complies with the provisions of Articles 40–42 of the LoNG.

Figure 10. State-owned natural gas enterprises, April, 2017



Source – NCC.

4.1.2. Technical functioning

Rules on the use of the system

The approved Rules on the Use of Natural Gas Systems define the procedure and conditions for the use of the systems, rights and obligations of system operators, system users, cooperation guidelines, mechanisms for allocation of system capacities and congestion management, procedure and principles for arranging repair works, announcing about them and conducting them, etc.

According to article 49(3) (4) of LoNG, NCC coordinated the amended Rules on the Use of Natural Gas Systems for transmission and distribution drafted by the system operators in the years 2016 and 2017:

1. **Rules for the Use of Amber Grid, AB Natural Gas System** *(approved on 31 may 2017, No. O3-699).* The following provisions related with the booking of capacities were amended: in the connection point between Lithuanian and Latvian transmission system it is foreseen to set aside 10 percent of technical capacity for short term day ahead and intra day capacity bookings, the possibility for implicit capacity allocation foreseen, the rules on the allocation of volume of gas within the connection point of Lithuanian and Latvian transmission system were clarified by determining that the volume of gas transmitted via the connection point should be equal to the approved application for gas volume, rules on termination of the contract for natural gas transmission services were clarified as well.
2. **Rules for the Use of Liquefied Natural Gas Terminal** *(approved on 3 June 2016, No. O3-169).* A longer period of time for temporary LNG storage in the terminal was provided for LNG terminal users, actual technological losses generated in the LNG terminal will be allocated for system users in proportion to the volume of gas stored for them in the terminal. The designated supplier was provided with a possibility not to regasify the mandatory terminal

volume, having agreed thereon with the terminal operator.

3. **Rules on the Use of the Natural Gas Distribution System of Energijos skirstymo operatorius, AB** *(approved on 23 November 2016, No. O3-399).* The rules provide a more flexible procedure for concluding agreements: a clause for entering into an agreement project was revoked (distribution service agreement shall be concluded with a single signing), a clause for more flexible submission of the signed agreement (system user shall be able to submit the signed agreement towards the operator via the specified e-mail address), in case where the distribution service agreements shall be concluded by the system user – supply undertaking, the system user shall be allowed to submit only the group of distribution prices without specifying the volume of gas, provided there are vulnerable users in question. The conditions for the automatic extension of the agreement have been expanded, cases where the distribution services are provided to objects not owned by the right of property of the system user have been regulated, causes for amending agreement have been expanded.

Balancing of natural gas systems

In 2016, natural gas companies did not coordinate transmission and distribution systems' balancing rules with the NCC. The NCC approved the Rules on Balancing Natural Gas Transmission System of of TSO Amber Grid, AB and the Rules on Balancing Natural Gas Distribution System of Intergas, UAB drafted in 2015.

The primary responsibility for balancing of gas volume shall remain with market participants, participating in the activities for the balancing of the transmission system, which are obliged to balance the same volume of gas as removed from the distribution system back to the same distribution system within the balancing period. In case the market participant responsible for balancing the transmission system fails to balance the required volume of gas, the said market participant shall buy the required amount of gas to be balanced from the TSO, provided that the market participant shall be responsible for the shortage of gas within the transmission system, or the TSO shall buy the gas from the market participant if the market participant caused an overload of gas within the transmission system and shall calculate the disbalance fee by applying the balancing fees set by NCC and shall take any measures necessary to maintain the balance of the system. Disbalance fees shall be applicable to market participant, participating in the activities for the balancing of the transmission system which are liable for the disbalance of the day that the said disbalance exceeds the imbalance tolerance limit. Market participant, participating in the activities for the balancing of the transmission system shall be allowed to take any measures necessary to recover the balance of injected and removed volume of gas to the system within the balancing period as well as to take any measures necessary to recover the balance in cases where they take less gas than they injected to the said system.

The NCC monitors the balancing service activity, evaluates costs and revenues of the balancing service. The pricing of the balancing service in the transmission activity is based on the principle that revenues from the balancing service must correspond to costs of the balancing activity. The formed difference between revenues and costs of the balancing activity is evaluated each year by adjusting the transmission price cap.

Indicators of service quality and reliability

The LoNG provides that the NCC shall set quality indicators, including those of reliability, of services supplied by natural gas undertakings, as well as the procedure for their evaluation. According to the Description of Quality and Reliability Indicators of Services Supplied by Natural Gas Undertakings and Procedure of their Evaluation approved by Resolution O3-90 of the NCC of 11 April 2012, the minimum quality levels for each gas undertaking are set individually for a specific period of price regulation.

The key indicators of the quality of uninterrupted natural gas supply are the System Average Interruption Duration Index (SAIDI) and the System Average Interruption Frequency Index (SAIFI) during the reporting period. The SAIDI and SAIFI are differentiated by reasons of interruption of

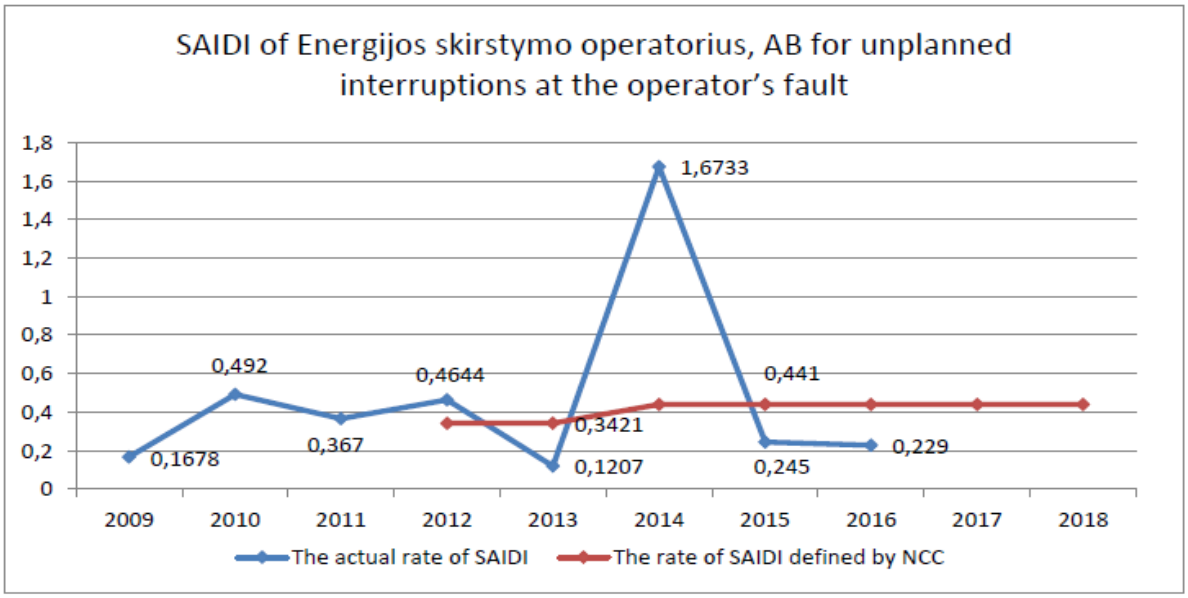
supply.

The NCC has set the minimum quality levels for regulatory period for each gas company individually. Gas undertakings, which will provide services of lower parameters than the minimum quality indicator levels set for them, will be imposed with economic sanctions.

By its Resolution No. O3-69 of 10 March 2017, the NCC determined that the services provided by Amber Grid, AB, Energijos skirstymo operatorius, AB, Achema, AB Intergas, UAB, Fortum Heat Lietuva, UAB and Agrofirma Josvainiai, AB meet the minimum quality levels set for a respective gas undertaking.

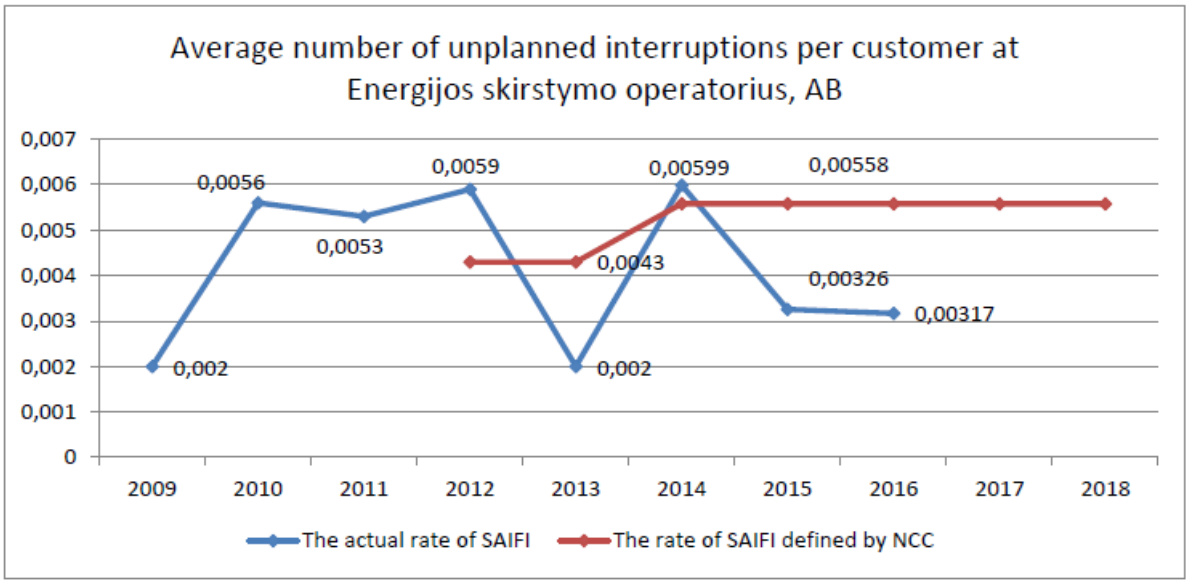
The SAIDI and SAIFI of the natural gas distribution system operator Energijos skirstymo operatorius, AB for 2009–2016 are illustrated in Figures below.

Figure 11. SAIDI of Energijos skirstymo operatorius, AB for unplanned interruptions at the operator's fault, min, per customer



Source – NCC.

Figure 12. Average number of unplanned interruptions per customer at Energijos skirstymo operatorius, AB, times per consumer



Source – NCC.

As seen from the Figures, in 2016, as compared to 2015, the indicators of Energijos skirstymo operatorius, AB improved. The average duration of unplanned interruptions decreased from 0.245 to 0.229 min. per customer, and the number of interruptions decreased from 0.00599 to 0.00326 times per customer. There were no interruptions in other natural gas distribution undertakings.

Monitoring the duration of customers' connection to the network and performance of repair works

Transmission and distribution system operators render the service of connection of new customers' systems to the operating transmission and distribution systems, which is subject to 2 service quality requirements:

- Examination of new customers' applications to connect their systems to the operating transmission system;
- Connection of a new customer's system to the operating transmission or distribution system in accordance with a connection contract.

There were no customers, which had not been connected to the transmission system due to the fault of the TSO Amber Grid, AB. Percentage share of responses to a new customer sent on time, within 30 calendar days, accounted for 100 percent in Amber Grid, AB in 2016. In 2014, this indicator also was 100 percent.

The indicator of timely examination of customer applications in DSO Energijos skirstymo operatorius, AB was 97.84 percent in 2015 and 96.97 percent in 2016. The indicator of the timely examination of consumer applications set by the NCC till 31 December 2018 is 95.43 percent. Other companies examined applications of both household and non-household customers on time. Arrival of emergency services to the premises of household customers in response to the received reports on gas leaks was 100 percent on time in all undertakings.

The TSO must publish on its website the schedule of repair works, listing the construction, reconstruction and repair works of the gas transmission system scheduled in the current year, which can affect rights of system users. The schedule of repair works must indicate the sites and the names of works to be carried out therein, the commencement and completion dates of the planned repair works and disconnection works in the sites of certain zones and their impact on gas supply. The TSO has to publicly inform system users about the planned gas system repairs or the beginning of the connection works of other user systems, when gas transmission is interrupted or restricted, at least 42 calendar days before the start of the said works. The TSO has to notify system users of the time of interruption or restriction of the gas transmission and of the duration thereof by mail, e-mail, via a courier or by fax at least 5 days before the start of the gas system repairs or the connection works of other user systems.

The DSO has to notify system users about the start and the duration of interruption or restriction of gas distribution at least 5 days before the commencement of repair works of the gas system or connection works of other gas systems by one of the following: by mail, e-mail, via a courier or by fax.

Access to storage facilities

Article 50 of the LoNG establishes two possible methods for the services of using underground natural gas storage facilities of natural gas undertakings and for storing natural gas in pipelines:

1. When the right to use storage facilities, the services of natural gas storage in pipelines and other additional services is implemented by negotiations, consumers and system users negotiate agreements with a respective operator of the storage system or with natural gas undertakings.

2. The NCC takes the necessary measures to ensure the right of natural gas undertakings and consumers to use storage facilities, services of natural gas storage in pipelines and other additional services at pre-announced tariffs and/or under other conditions and obligations in using storage

facilities and services of natural gas storage in pipelines.

Currently there is no gas storage facility in Lithuania. Lietuvos dujų tiekimas, UAB uses the Inčukalns natural gas storage facility in the Republic of Latvia. Based on the submitted applications, Latvian TSO and the gas storage operator Conexus Baltic Grid, JSC allocates the capacities of the gas storage facility in the Republic of Latvia.

Lietuvos dujų tiekimas, UAB stores in the Inčukalns storage facility the quantity of natural gas that is needed to supply with gas residents and those non-household consumers, which have signed agreements on uninterrupted supply of natural gas, for the time period set by the state according to the agreement signed with Conexus Baltic Grid, JSC.

Monitoring safeguard measures (Article 41(1) (t))

The Description of Measures to Safeguard Reliability of Natural Gas Supply approved by Resolution No. 163 of 26 February 2008. The said description provides for priority order of gas supply in case of termination of gas supply, a major interruption in the supply of gas or a partial disruption of gas supply in light of the volume of gas kept in pipelines, gas storages and technical gas system capacities. Supply companies are liable for uninterrupted natural gas supply to vulnerable consumers, for whom they must accumulate and store gas reserves. Supply companies must accumulate and store such quantity of gas reserves for vulnerable consumers to whom they supply gas, which would be sufficient to meet gas demand of vulnerable consumers in cases laid down in Article 8(1) of the Regulation (EU) No. 994/2010. In light of this fact, supply undertakings must do the following no later than by 1 September of each year:

– To determine and accumulate the quantity of natural gas necessary for vulnerable consumers in accordance with conditions laid down in Article 8(1) of the Regulation (EU) No. 994/2010 and to maintain it till gas reserves for vulnerable consumers are determined and accumulated for the following year;

– To present to the NCC in writing data on volumes of gas accumulated for vulnerable consumers.

Lietuvos dujų tiekimas, UAB stores 342.5 GWh of natural gas within the storage in Latvia, in order to ensure the security of natural gas supply in 2017. Costs for natural gas storage are included in the price rates of natural gas for household customers. In 2017, the price component included in the price for the security of natural gas supply is equal to EUR 0.28 MWh.

4.1.3. Natural gas transmission, distribution and liquefaction prices' regulation

Unbundling the accounts and ensuring the avoidance of cross subsidies

Natural gas undertakings performing regulated activities must distribute their revenues, costs and assets in accordance with business units and services pursuant to the Description of the Unbundling of Accounting of Natural Gas Undertakings, Cost Allocation and Accounting Unbundling-Related Requirements approved by Resolution No. O3-316 of NCC of 18 July 2013. In implementing the unbundling of accounts, each natural gas undertaking must act in accordance with the principles of causation, storage, objective and consistency.

In the natural gas sector the NCC approves the methodologies for setting state-regulated prices and sets (adjusts) price caps, the requirements for unbundling the accounts and allocating the costs of regulated activities in order to avoid cross subsidies.

Price caps are set for a 5-year period, and are revised for 7 economic undertakings once per year. The NCC also inspects whether the specific prices of regulated services set by gas undertakings do not discriminate individual consumer groups, and approves natural gas tariffs for household customers every half year. The NCC sets, revises and checks about 100 prices in the natural gas sector each year.

Adjustment of the price cap of the transmission system operator Amber Grid, AB in the implementation of the pricing model of entry-exit points

Paragraph 19 of the Preamble of Regulation (EC) No. 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks establishes that in order to enhance competition through the creation of liquid wholesale gas markets, it is vital that gas could be traded independently of its location in the system.

Based on the Methodology for Setting State-Regulated Prices in the Natural Gas Sector approved by Resolution No. O3-367 of the NCC of 13 September 2013, as of 2015 the price cap in the transmission activities has been set and adjusted per capacity unit and the application of the pricing model of entry-exit points was started, which establishes that the NCC shall set price caps and adjust them at entry and exit points of the transmission system, which are set:

1. At entry points in the natural gas transmission system of Lithuania:

1.1. The interconnection point between the transmission system of Lithuania and the link of the LNG Terminal in Klaipėda (hereinafter – the LNGT entry point);

1.2. The interconnection point between the transmission system of Lithuania and the natural gas transmission system of Latvia, natural gas transmitted whereby to the natural gas transmission system of Lithuania is accounted for at Kiemėnai gas metering station (hereinafter – Kiemėnai entry point);

1.3. The interconnection point between the transmission systems of Lithuania and Belarus, natural gas transmitted whereby to the natural gas transmission system of Lithuania is accounted for at Kotlovka gas metering station (hereinafter – Kotlovka entry point).

2. At exit points of the natural gas transmission system of Lithuania:

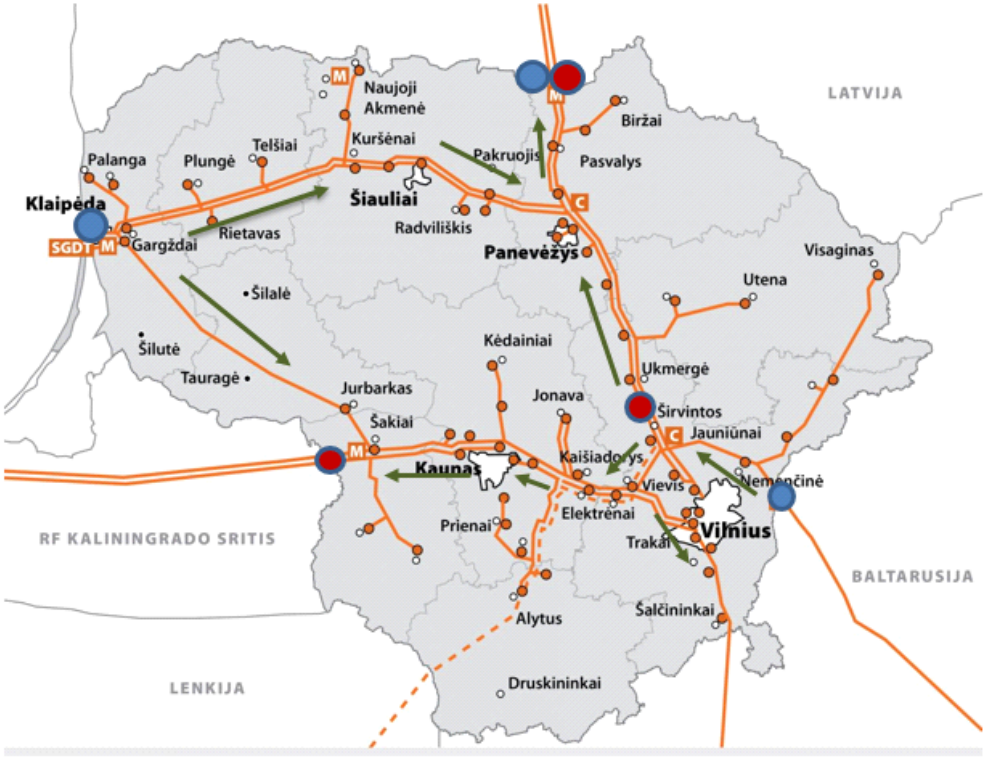
2.1. Cross-border exit points:

2.1.1. The interconnection point between transmission system of Lithuania and natural gas transmission system of Latvia, natural gas transmitted whereby from the natural gas transmission system of Lithuania is accounted for at Kiemėnai gas metering station (hereinafter – Kiemėnai exit point);

2.1.2. Interconnection point between the transmission systems of Lithuania and the Kaliningrad Region of the Russian Federation, natural gas transmitted whereby from the natural gas transmission system of Lithuania is accounted for at Šakiai gas metering station (hereinafter – Šakiai exit point);

2.2. At domestic exit point – at interconnection points of the natural gas transmission system of Lithuania with Lithuanian natural gas distribution systems and consumer systems, which are directly connected to Lithuanian natural gas transmission system corresponding to one exit point for all transmission system users of the country.

Figue 13. Topological map of the Lithuanian natural gas transmission system according to the Entry-Exit Point Pricing Model



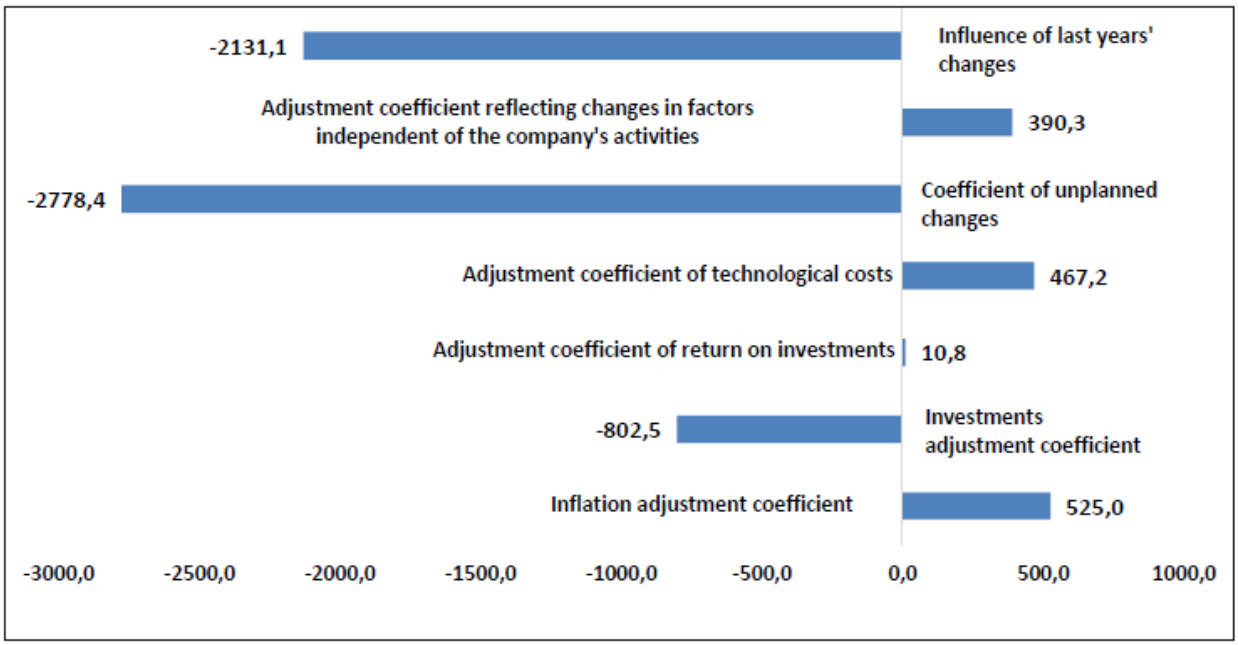
* Note. Blue points were defined as entry points of natural gas; Red points were defined as exit points.

Source – NCC.

In the implementation of the pricing model of entry and exit points and the Opinion of the ACER No. 03/2015 of 15 June 20215 On the Compliance of the Decision of the National Commission for Energy Control and Prices with Guidelines of Directive 2009/73/EC, Regulation (EC) No. 715/2009 and other Related Provisions of this Directive and Regulation (hereinafter – ACER Opinion), the NCC set adjusted price caps at entry and exit points for 2017 *(Resolution No. O3-324 of 21 October 2016).*

The NCC adjusted price caps at entry and exit points by setting the overall revenues level necessary for the TSO Amber Grid, AB. According to the data presented by the TSO, the NCC calculated adjustment coefficients, which were used to adjust the TSO revenues level necessary for the performance of transmission services to domestic users of the system, i.e. excluding income received for transportation service from a third country to a third country. The income level which the NCC set after the adjustment was EUR 40 870.65 thousand for 2017.

Figure 14. Factors affecting changes in income for AB Amber Grid transmission service, thousand, EUR



Source – NCC.

In light of the fact that according to the pricing model of entry and exit points, a separate price has been set for each gas entry point to the transmission system and gas exit point from the transmission system, while the activity of natural gas transmission to a third country also is an integrated part of the pricing model of entry and exit points reflecting costs incurred by TSO in the performance of this activity. Paragraph 19 of the Preamble of the Regulation (EC) No. 715/2009 and its Article 13(1) define the general principles for tariff setting for the use of the networks at the same time creating an obligation for all member states to ensure that the transmission system in their territory operated according to the requirements set in Regulation (EC) No. 715/2009. Having evaluated the costs of EUR 8 605 thousand indicated by the TSO for natural gas transmission from a third country to a third country via the territory of the Republic of Lithuania, the NCC set the overall income level of EUR 49 475.65 thousand for 2017.

According to the Opinion of the ACER, Pricing methodology and data provided by TSO, the NCC separated costs of the main network and the regional network. The main network is such a network which may be used by both natural gas consumers of the Republic of Lithuania and persons ordering the transportation service from a third country to a third country, while the regional network is intended solely for natural gas consumers of the Republic of Lithuania.

The NCC made calculations according to the principles of the pricing model of entry and exit points and set price caps of transmission prices at entry and exit points, evaluating costs attributed to the main gas pipeline network. The final transmission price caps are calculated having assessed costs attributed to the regional gas network, which are attributed to the domestic point.

In order to create preconditions for the development of the natural gas market, efficient use of alternative natural gas supply sources, emergence of new suppliers and formation of competitive conditions, the NCC applies a transitional period for the price calculated at the LNG terminal entry point for 2016 and sets a price growth in equal shares within a period of three years till the expiry of the 2014–2018 regulatory period of Amber Grid, AB:

2016 – 1/3 of the amount of capacity price cap at the LNG terminal entry point;

2017 – 2/3 of the amount of capacity price cap at the LNG terminal entry point;

2018 – the price equal to the amount of capacity price cap at the LNG terminal entry point.

Table 6. Comparison of Amber Grid, AB transmission service price caps in 2015–2017, EUR/MWh/day/year

At entry points in the natural gas transmission system of Lithuania:				
	2015	2016	2017	Difference, in percent
LNG entry point	0	10.05	20.03	-
Kiemėnai entry point	49.58	32.32	31.74	-1.8
Kotlovka entry point	49.58	32.32	31.74	-1.8
At exit points of the natural gas transmission system of Lithuania:				
Cross-border exit points:				
Kiemėnai exit point	49.58	38.05	36.02	-5.3
Šakiai exit point	54.02	58.82	56.73	-3.6
Domestic exit point	300.68	428.82	421.81	-1.6

Source – NCC.

According to the Methodology requirements, the NCC checked whether the set natural gas transmission service price caps at entry and exit points meet the condition for non-discrimination of system users laid down in the ACER conclusions, i.e. the ratio between the average gas unit price of capacities created for cross-border transportation with the average unit price of capacities created for domestic system users must be equal to 0.9 – 1.1.

Condition of non-discrimination of system users is checked evaluating costs of capacities created for the main gas pipeline network, which are used for both cross-border and domestic transportation, i.e. revenues from domestic users of the system are calculated exclusive of costs of the Regional network. The calculation of the ratio of unit prices of respective capacities is presented in Table 7.

Table 7. Calculation of a price ratio of unit of capacities at cross-border and domestic point

Exit points	Maximum daily flows, MWh/day	Revenues, Eur	Capacity unit price, EUR/MWh	Ratio between price of cross-border and domestic* point
capacities	216 197	17 962 707	83.08	0.99
Cross-border**	118 560	9 997 940	84.33	

Source – NCC.

** Assessment of maximum daily flows of domestic exit point and Kiemėnai entry point and revenues of Kotlovkos GMS, Klaipeda GMS, Kiemėnai GMS entry points and domestic exit point.*
*** Assessment of capacities and revenues of Šakiai GMS and Kiemėnai exit point and revenues of Kotlovkos GMS.*

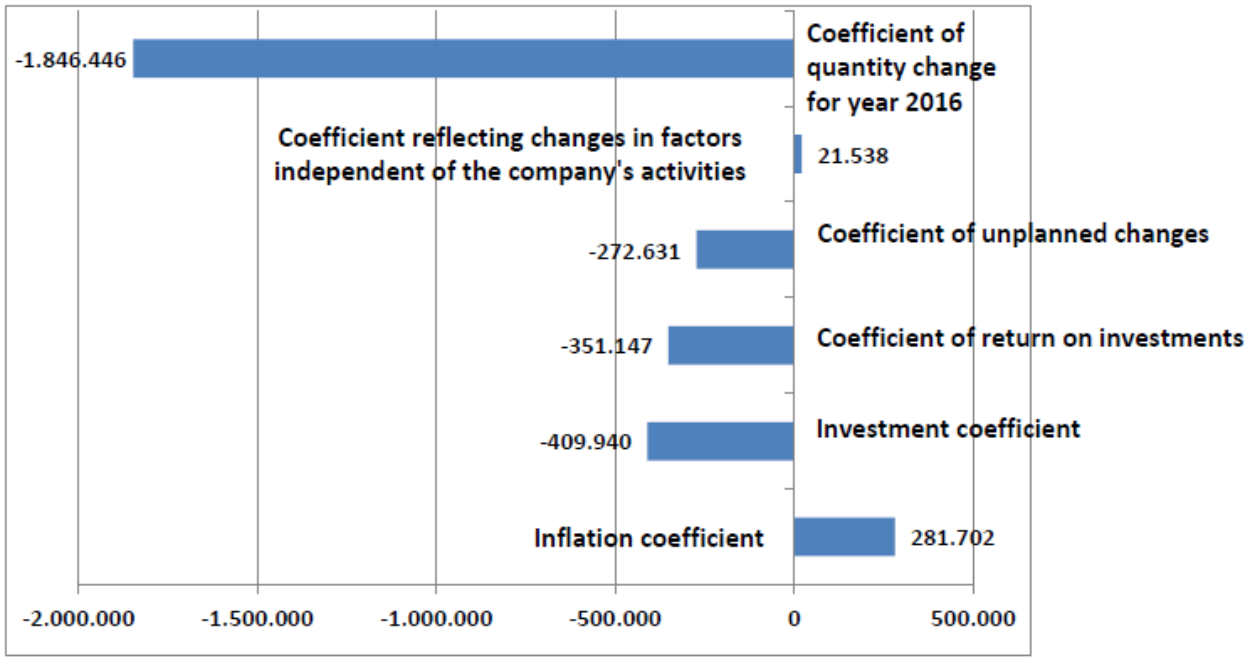
The average price per capacity unit for Lithuanian transmission system domestic point users was reduced by 1.2 percent in 2017. The main reason for the decrease of this price in 2017 was the 9.6 percent reduction of the level of costs as compared to 2016, as well as assessment of capacities of the entry point of Kiemėnai gas metering station (GMS) for the evaluation of the price. However, the ordered capacities at the domestic point have also decreased by 8.9 percent, therefore the decrease of the average capacity price remains insignificant.

Adjustment of the liquefaction price cap

The NCC adjusted the fixed component of revenues of the liquefaction of the LNG terminal

for 2017 according to the correction coefficients set in the Methodology that impact towards the income level mandatory for operating the LNG is presented in fig. 15. Just like in 2016, the variable component remained equal to zero.

Figure 15. Factors affecting the changes of fixed component of the liquefaction price cap of Klaipėdos nafta, AB, EUR/MWh



Source – NCC.

The adjusted revenues level for liquefaction in 2017 has been reduced by EUR 2 576 924, i.e., by 3.5 percent as compared to 2016. The set liquefaction price cap, calculated in accordance with the consumption capacity unit, is EUR 361.84 (MWh/day/year) in 2017, i.e., a 39.3 percent more as compared to 2016. The variable part remains the same, i.e., $T_{l,\ price\ cap,\ c} = 0$.

The main reasons for the increase of the fixed component and price cap of liquefaction are the following:

– In 2016, the Order no. 1251 of the Government of the Republic of Lithuania of 12 November 2014 on the amendment of the Order no. 199 of the Government of the Republic of 15 February 2012 on the amendment of the Law on the the Liquefied Gas Terminal has been implemented, pursuant to which the operational costs of the LNG have been reduced in the year 2015 and 2016 using the funds collected in 2013. Collected funds each year amount to EUR 14 472 744.2.
– The consumption capacity decreased by 12.7 percent (EUR 214 535 (MWh/day/year)) as compared to 2016.

The setting of a security component to the natural gas transmission price

The Law Amending Articles 2, 5 and 11 of the Law on Liquefied Natural Gas Terminal of the Republic of Lithuania No. XI-2053 of 17 November 2015 establishes that costs of the LNG terminal, its infrastructure and installation of the link, which cannot be funded from other sources accessible to the company implementing the LNG terminal project, also all fixed costs of operation of the LNG terminal, its infrastructure and the link and reasonable costs of the supply of mandatory LNG terminal amount are included in the Security component in the procedure prescribed by the NCC.

The NCC evaluated all fixed costs of operation of the LNG terminal in the calculation of the fixed component of the liquefaction price cap, thus according to the Price Methodology, the NCC

calculated the Security component as the sum of the fixed component of the liquefaction price cap, operating expenses of the designated supplier's supply activity, costs of the difference between the prices of acquisition and sale of the minimum annual amount of gasified natural gas necessary for ensuring mandatory activities of the LNG terminal per one unit of consumption capacity.

According to the Methodology for Setting the Forecasted Natural Gas Market Price, the NCC sets the natural gas prices at which the designated supplier will have to sell LNG to consumers. Having evaluated the mandatory LNG quantity planned to be supplied, checked the indicated supply costs of the designated supplier and assessed consumption capacities planned for 2017, the NCC sets the designated supplier's supply price and Security component to the transmission price.

In light of the above, the NCC set the designated supplier's Security component to the transmission price of EUR 510.16 (MWh/day/year) in 2016 (Resolution No. O3-683 of 23 December 2015). Having assessed the changes in consumption capacities and forecasted natural gas market price, the NCC recalculated the Security component 2 times in 2016. *(Approved by Resolution No. O3-83 of 25 March 2016 and Resolution No. 03-121 of 13 May 2016).*

The NCC approved and set the security component of EUR 473.60 (MWh/day/year) in 2017 (Resolution No. 03–369 of 17 November 2016). However, in 2017, the NCC amended the Methodology for setting the forecasted natural gas market price *(approved by the Resolution no. O3-111 of 11 April 2017)* establishing the possibility to recalculate the forecasted natural gas market price for each quarter (formerly set for 6 month period) in order to ensure the possibility for regulated energy manufacturers to acquire natural gas from LNG at the actual price. Following the assessment of both the price and amount of imported natural gas and transaction on the natural gas exchange, the market price of EUR 18.74 (MWh/day/year) was set *(approved by Resolution O3E-137 of 11 May 2017).* In light of the changes in market price and the 176.946.55 MWh/day/year consumption capacity presented by the TSO, the calculated price of the security component was adjusted to EUR 452.08 (MWh/day/year). The said price shall take effect on 1 July, 2017 *(approved by Resolution No. O3E-145 of 15 May 2017).* Information related with the security component is presented in table 8.\

Table 8. Additional security component to the natural gas transmission price, paid in accordance with consumption capacity at the domestic exit point.

Security component for the natural gas supply, EUR (MWh/day/year)	Up to 01.05.2016	Up to 01.07.2016	Up to 31.12.2016	Up to 30.06.2017	From 01.07.2017.
	510.16	**315.97**	**354.61**	**473.60**	**452.08**
Fixed part of the liquidation price for ensuring and compensating the fixed costs of operation of the LNG terminal.	259.84	259.84	259.84	361.84	361.84
Gas supply price of the designated supplier	166.66	72.24	107.2	166.15	153.15
Income difference component for realisation of the unused mandatory amount of gas in the natural gas market	82.99	-2.28	1.85	-51.97	-60.36
Liquefaction price component	-	-6.53	-6.83	-2.87	-3.03
Compensation for overestimating the consumption capacities	-	-7.98	-8.16	-0.16	-0.17
Administrative costs component for LNG funds	0.67	0.68	0.71	0.61	0.65

Source – NCC.

The setting of a specific liquefaction (regasification) price

The Methodology establishes that the NCC sets a specific liquefaction (regasification) price at the interconnection point of the Lithuanian transmission system with the LNG terminal link in Klaipėda considering the course of development of the regional natural gas market, possibilities to ensure diversified natural gas supply to natural gas consumers of the Republic of Lithuania under conditions of efficient competition in the market. Assessing a possibility of natural gas transportation to other Baltic states, the NCC evaluated gas transportation price differences when transporting gas via the Kotlovka and LNG terminal natural gas transmission system entry points. In order to create uniform competition conditions for all system users transporting gas via Kotlovka and LNG terminal entry points, the NCC set the liquefaction price of EUR 0.10 /MWh *(Resolution No. O3-700 of 30 December 2015).*

Adjustment of the distribution price cap

In 2016, Druskininkų dujos, UAB ceased their distribution activities. On the request of the undertaking, The NCC revoked their gas distribution and supply licences. In 2016, the NCC adjusted distribution price caps of 4 DSO, i.e., 1 less as compared to 2015. The NCC set the natural gas distribution price cap of EUR 7.52/MWh (exclusive of VAT) for the largest DSO Energijos skirstymo operatorius, AB (until 1 January, 2016 known as Lietuvos dujos, AB) for 2017. Compared to 2016, the distribution price cap decreased by 8.46 percent, or EUR 0.67/MWh. The main reason for such decrease is lower costs of technological processes and increased amounts of forecasted amounts of natural gas to be distributed.

The change of distribution price caps of all DSO in 2010–2017 is presented in Table 9.

Table 9. Change of distribution price caps in 2010–2017, EUR/MWh

Company name and type of activities	2010	2011	2012	2013	2014	2015	2016	2017	Change in 2017 as compared to 2016, percent
Energijos skirstymo operatorius, AB *									
Distribution	4.69	4.42	4.64	5.00	6.40	7.47	7.92	7.25	-8.46
Fortum Heat Lietuva, UAB									
Distribution	3.74	3.81	4.19	4.19	4.43	6.14	6.47	6.25	-3.40
Intergas, UAB									
Distribution	2.58	2.34	2.39	2.30	2.29	2.64	7.61	8.17	7.36
Agrofirma Josvainiai, AB									
Distribution	1.46	1.52	1.65	1.81	1.96	2.05	1.68	1.79	6.55

* Energijos skirstymo operatorius, AB started their operations in 2016, following the merger of Lietuvos dujos, AB and Lesto, AB.

Source – NCC.

Connection of new customers

According to Article 9(2) and Article 37(5) of the LoNG, the NCC sets the rates for connecting natural gas systems of new household customers. According to the Methodology for Setting the Rates of Connection of New Natural Gas Customers, New Natural Gas Systems and Biogas Power Plants (hereinafter – the Connection Methodology) approved by the NCC Resolution No. O3-187 of 17 November 2008, the NCC sets the rates of connection services of systems of new household customers, and the natural gas undertakings calculate the rates of connection of new non-household customers. The rates of connecting household customers may be adjusted no more than once per year. The connection rate consists of the following two components: the fixed component, which does not

depend on distance, and the variable component, i.e. the price of connection per each meter of the installed gas pipeline.

Only one natural gas undertaking, namely, Energijos skirstymo operatorius, AB addressed the NCC regarding new connection rates in 2016. The undertaking submitted the data only for the recalculation of the connection rates of Group II customers, because during the last four quarters (QIV of 2015 – QIII of 2016) the data whereof were used for setting the new connection rate, there were no newly connected Group I customers. During the last four quarters, Energijos skirstymo operatorius, AB connected 3 354 household Group II customers. To connect the customers, 49.031 km of distribution pipelines were constructed, and the investments assigned therefore totalled EUR 4 128.1 thousand. (of which EUR 1 262.5 thousand were customer funds). The average connection rate is calculated by evaluating the pay-back of investments in 20 years and the impact on the distribution price cap, i.e. the planned investments cannot increase the distribution price cap. The average rate according to coefficients set by the undertaking is differentiated into the fixed and variable components.

According to the Connection Methodology, the NCC set natural gas connection rates for Group II natural gas household customers for 2017. Connection rates for the 2009–2017 period are illustrated in the following table.

Table 10. Changes in connection rates for the 2009–2017 period.

Indicator	Connection fee, not dependent on distance, EUR	Fee for connection of each meter, EUR/m
Connection fee in 2009	454.60	25.85
Connection fee in 2010–2011	406.21	27.36
Connection fee in 2012	361.75	14.56
Connection fee in 2013	265.16	16.52
Connection fee in 2014	208.34	16.15
Connection fee in 2015	208.31	14.59
Connection fee in 2016	200.79	11.72
Connection fee in 2017	**228.12**	**13.67**
Change, compared to 2016, percent	13.61	16.64

Source – NCC.

Connection fee has increased in 2017, as compared to 2016 due to the following:

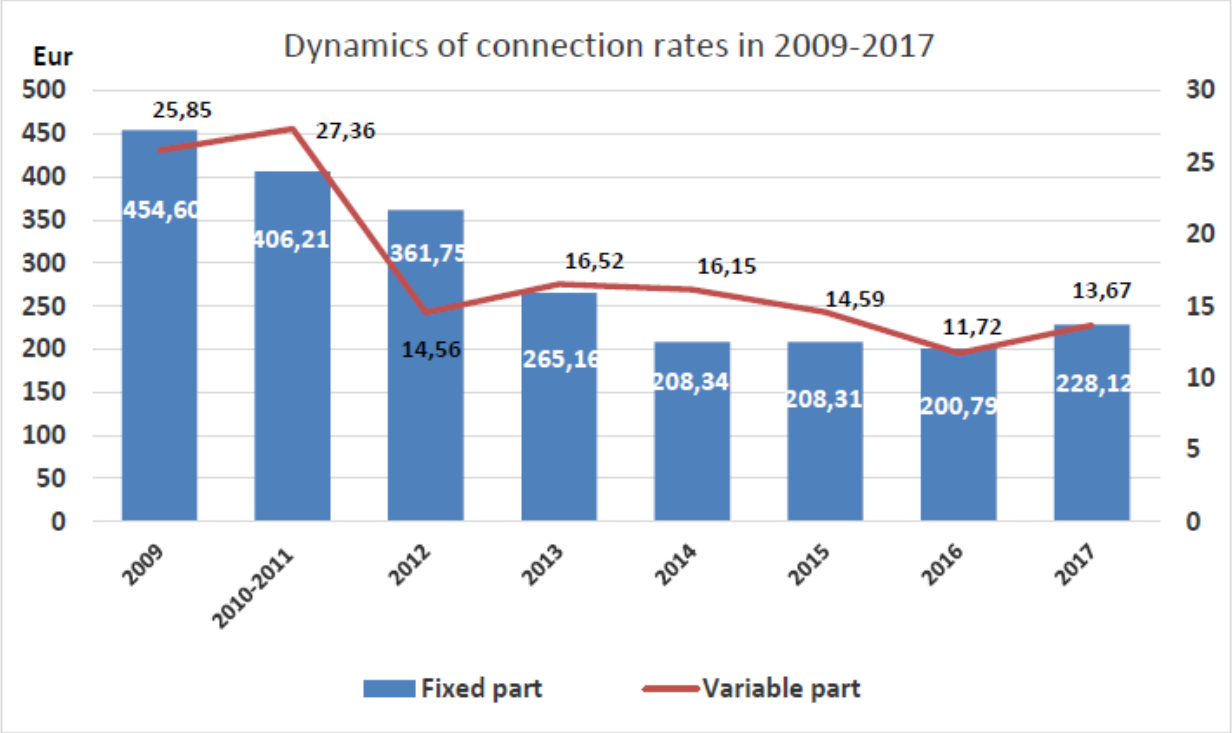
– Connection fee includes first run service fee (EUR 146.97 thousand), i.e. the newly connected customers shall not have to pay additional costs for the said service;

– More distant customers were connected to the distribution pipeline in the previous year, therefore higher pipeline construction costs were incurred;

– Lower distribution price cap for 2017 was set, therefore the connection fee was increased in order for the calculated distribution price for newly connected customers not to exceed the distribution price cap.

Dynamics of the fixed and variable parts in connection rates of Group II household customers in 2009–2017:

Figure 16. Dynamics of connection rates of Group II household customers in 2009–2017, EUR



Source – NCC.

The average connection rate calculated on a 30 m-long connection gas pipeline is illustrated in the following table.

Table 11. Comparison of an average connection rate for Group II household customers

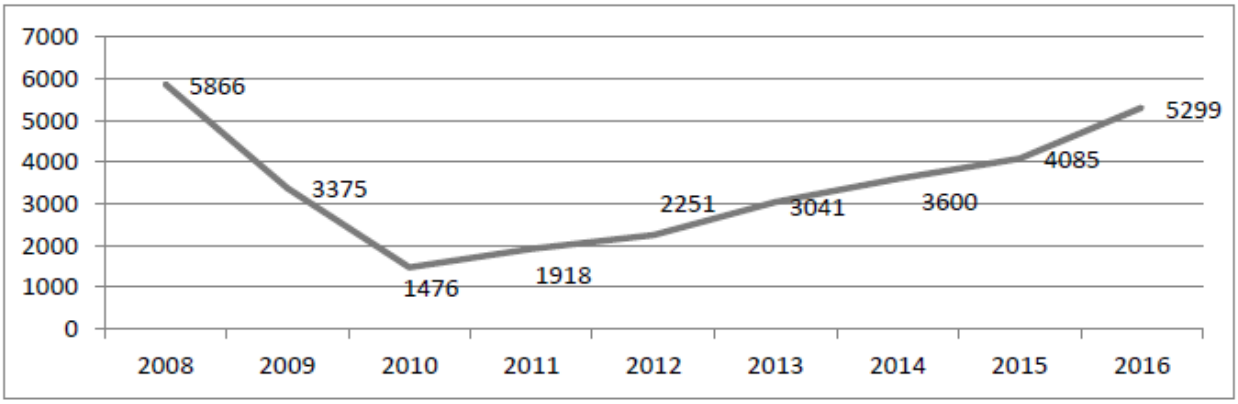
	2016	2017	Change, percent
Average rate (30 m), EUR	552.26	638.22	15.5

Source – NCC.

Connection rate for Group I household customers has remain unchanged, i.e. with fixed component being EUR 962.46 and variable component – EUR 41.17/m.

In 2016, DSO Energijos skirstymo operatorius, AB connected 5 299 new customers. During the 2008–2016 period, an average of 3 435 new customers were connected per year.

Figure 17. Number of new customers connected to the distribution system of Energijos skirstymo operatorius, AB in 2008–2016



Source – NCC.

Other natural gas undertakings did not adjust their connection rates in 2016.

4.1.4. Cross-border issues

Access to cross-border infrastructure facilities, mechanisms of capacity allocation and procedure of congestion management at cross-border points

At present, the transmission system of Amber Grid, AB is interconnected with the natural gas transmission systems of the Republic of Latvia, the Republic of Belarus and the Kaliningrad Region of the Russian Federation, Klaipėda LNG terminal and the distribution systems of Lithuanian DSOs. Natural gas from the Russian Federation is imported to Lithuania through Kotlovka GMS; moreover, this cross-border point is used for transit via the Republic of Lithuania to the Kaliningrad Region. Šakiai GMS is 100 percent used for natural gas transit to the Kaliningrad Region, and the Lithuania–Latvia gas interconnection (Kiemėnai GMS) is currently used not only for the purposes of the security of supply in order to use the Inčukalns natural gas storage facility located in Latvia, where gas for vulnerable customers of Lithuania is stored thus aiming to ensure the security of supply in case of emergencies, but as well as transferring of commercial gas to Latvia and Estonia. At present the capacities of Kotlovka GMS are allocated for domestic consumption based on the first come, first served principle, because the capacities at this cross-border point are not fully used, and neither contractual nor physical congestions are forming there. The technical capacity of Kotlovka GMS Qmax is 325.4 GWh/day. When evaluating access to Kotlovka GMS, it should be noted that in 2016 a part of capacities at this cross-border point was reserved for transit operations to Kaliningrad (Šakiai GMS capacities – 109.2 GWh/day), and the remaining part of the capacities is freely accessible to domestic consumers, however, it should be emphasized that the LoNG provides that in the case of gas supply interruption, the quantity of gas transported by transit shall be limited pro rata to the gas quantities limited for domestic consumers.

In 2016, following the completion of the Amber Grid, AB gas distribution station in Tauragė, the technical capacity at the domestic exit point increased by 772 MWh/day. Technical capacities of other Amber Grid, AB managed entry and exit points of the transmission system remained the same in 2016.

Technical capacities and their use at significant transmission system points is presented in table 12.

Table 12. Technical capacities and their use at cross-border points

Gas metering station	Technical capacities, MWh/day	Maximum use of capacities booked in 2016, MWh/day	Maximum use of capacities, percent
Kotlovka	325 433.47	223 819	68.8
Kiemėnai			
to Latvia	67 590.03	22 657	33.5
to Lithuania	65 086.69	19 945	30.6
Šakiai (to Kaliningrad)	109 200	99 820	90.9
Klaipėda (to Lithuania)	122 350.00	90 143	73.7

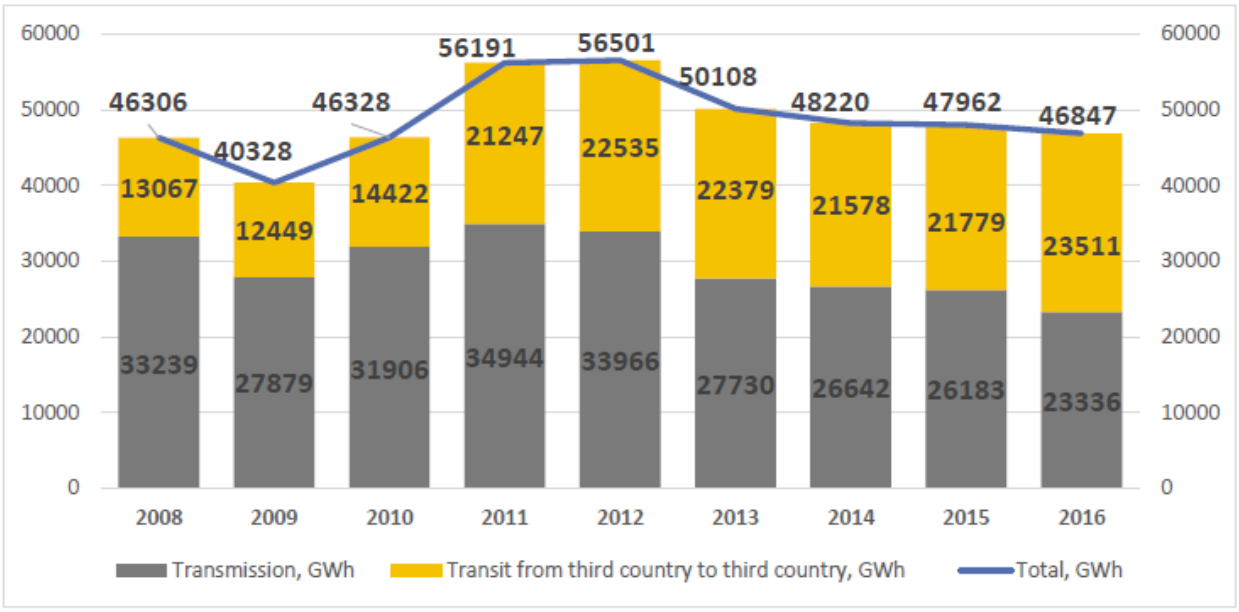
Source – Amber Grid, AB

In 2016, the TSO transported 46 847 GWh of natural gas, of which 23 336 GWh (49.81 percent) was delivered to Lithuanian consumers and 23 511 GWh (50.19 percent) was transported to Russia. Compared to 2015, 2.32 percent less of natural gas was transported in total in 2016. Transmission of natural gas to Lithuanian consumers in 2016 was 10.87 percent less as compared to 2015, meanwhile 7.95 percent more natural gas was transported by transit to Kaliningrad as compared to 2015.

On 1 July, 2017, TSOs of Baltic states started using the implicit capacity allocation model,

which is related with sale of natural gas on the natural gas exchange GET Baltic, UAB.

Figure 18. Transmission market structure in terms of quantity of transported natural gas in 2008–2016, GWh



Source – NCC.

Approval of investments

According to the Law on Energy, the NCC evaluates the reasonability of investments to be made by natural gas undertakings. If investments have not been agreed with the NCC, they cannot be recognized as reasonable and are not included into the price caps.

According to the Description of the Procedure of the Evaluation and Approval of Investments at the National Commission for Energy Control and Prices approved by the Resolution No. O3-100 of NCC of 10 July 2009, the NCC approves the investment projects of gas undertakings which value whereof is above EUR 2 m. Natural gas undertakings shall approve investment projects the value whereof is below EUR 2 m by a common list.

Evaluation criteria of investment projects depend on the investment purpose.

In evaluating the investments aimed at the development of systems and connection of new customers, the NCC calculates pay-back of the investment during the pre-defined period and evaluates the impact of the investment on the regulated prices. According to the provisions of the LonG, investments in the connection of new customers cannot increase the price for the existing customers.

In evaluating investments assigned to ensure the security of systems and the reliability of supply, restoration and reconstruction of the existing system, the NCC evaluates the social, system security and supply reliability benefits and calculates and, in approving an investment project, indicates the impact of investments on the regulated prices.

Ten-year transmission network development plan 2016–2025.

On 29 September, 2016, the NCC stated that the Amber Grid, AB submitted Ten Year (2016–2025) Network Development Plan of TSO of Natural Gas complies with the requirements of the LoNG.

Implementation of transmission system investment projects are aimed for the period 2016–2025, which shall diversify gas supply sources within Lithuania and other Baltic states, increase the reliability of gas supply and the efficiency of transmission system, as well as gasify new territories.

The 2016–2025 plan includes implementation of EU PCI, the list was published by the

European Commission on 18 November, 2015. The said list includes construction of gas pipelines for transmission of natural gas between Poland and Lithuania, as well as connection of gas pipeline between Latvia and Lithuania in order to increase the current capacities. The above projects are aimed at the integration of the transmission system of Lithuania and entire Baltic region into the entire EU gas system.

The total value of the Amber Grid, AB network development plan for 2016–2015 (including the continuous investment project started in 2016) – EUR 197.6 m. EUR 77.3 m is planned to be invested with support from the EU Structural Funds. The planned development works in 2016–2025 should total EUR 194.9 m.

Investments approved by a common list

Liquefaction operations

In 2016, the NCC approved the 2016 list of Klaipėdos nafta, AB planned investment and 2015 list of implemented investments, but not coordinated, that the total value amounted to EUR 1 010 602. EUR 819.9 thousand were allocated towards acquisition of new assets. EUR 190.7 thousand were allocated towards renovation and reconstruction of owned assets. One of the largest approved investments: LNG sampling system, mandatory for determining the amount and quality of imported LNG, on which the final transaction would be concluded between the buyer and the supplier, as well as financial obligations performed.

Klaipėdos nafta, AB shall finance all of the investments from the revenue aimed at covering the depreciation expense. The increase in liquefaction (regasification) costs in 2017 due to implemented investments of the approved list of 2015 makes EUR 11 478 and due to implemented investments in 2016 – EUR 225 555. Investment approved with the 2015 list affect the increase of the fixed price component of liquefaction (regasification) price cap by 0.0005 EUR/MWh, i.e. 0.0163 percent, and investments in 2016 by 0.0105 EUR/MWh, i.e. 0.3206 percent.

Transmission operations

In 2016, the NCC approved the list of commonly approved investments of the TSO Amber Grid, AB for EUR 7 800.8 thousand, EUR 7 232.5 thousand of which shall be financed from costs of depreciation expenses, and EUR 568.2 thousand shall be financed from EU Structural Funds. EUR 3 929.8 thousand were allocated towards acquisition of new assets. EUR 3 871 thousand were allocated towards renovation and reconstruction of owed assets. One of the largest investments are aimed at the implementation of asset management information system. The above system shall ensure efficient receipt of information, analysis and assessment of the state of the assets and completed works, as well as provide information towards Amber Grid, AB on their operational costs. Moreover, important investments aimed at the modernization of the gas pipelines: changing of deteriorated tap nodes shall ensure safe working conditions and safety and reliability of the transmission system, as well as the possibility for more flexible management of gas flows.

Due to the approved investments of investments approved by common lists for 2016–2019, the costs for transmission services have increased by EUR 1 239.2 thousand in 2017, while the average transmission price cap increased to EUR 12.98 (MWh/day/year), i.e. by 2.85 percent.

Distribution operations

In distribution activity in 2016, the NCC approved investments that are coordinated by common list of Energijos skirstymo operatorius, AB and separately submitted investment project. The value of investments approved by common list of Energijos skirstymo operatorius, AB amounts to EUR 7 059 thousand, of which EUR 2.203 thousand were allocated towards acquisition of new assets, EUR 4 855 thousand were allocated towards renovation and reconstruction of owned assets.

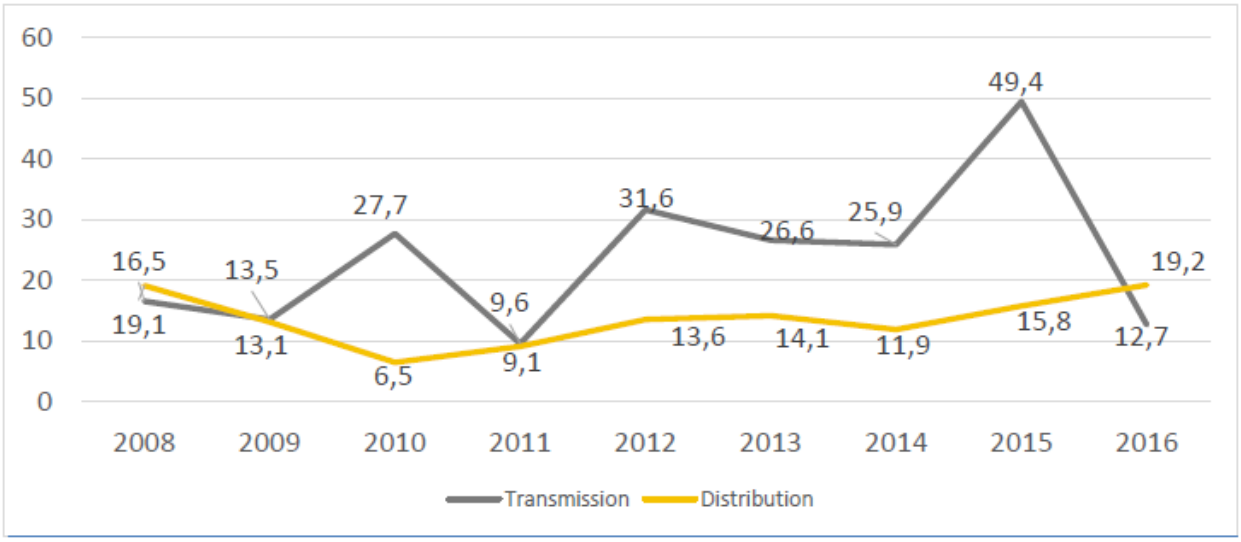
Due to the investments approved by common list for 2016, the costs for distribution services have increased by EUR 809.2 thousand in 2017, while the average distribution price cap increased to

EUR 0.12 (MWh/day/year), i.e. by 1.52 percent.

Other gas distribution undertakings did not submit new investment projects.

Undertakings invested a total amount of EUR 31.9 m into natural gas transmission and distribution activities in 2016, i.e. 51 percent less as compared to 2015 (EUR 65.1 m). Investments into natural gas transmission and distribution sectors amounted to a total of EUR 12.7 m and EUR 19.2 m respectively.

Figure 19. Investments in the transmission and distribution infrastructure for the period 2008–2016, million EUR



Source – NCC.

4.1.5. Compliance with legal acts

Evaluation of information published by economic entities operating in the natural gas sector

According to Article 8(1) of the Law on Energy of the Republic of Lithuania, the NCC regulates the activities of entities operating in the energy sector. Entities performing the activities requiring a licence or a permit and/or which are subject to application of state-regulated prices must make the information about their regulated activities set forth in legal acts publicly available. The requirements for publishing public information for natural gas undertakings are set forth in the Law on Energy, Law on Natural Gas, Description of the Procedure of Publishing Information approved by Resolution No. O3-761 of the NCC of 27 December 2013 On the Approval of Description of the Procedure of Publishing Information, the Rules on Providing Information Related to Energy Activities to the State, Municipal Institutions, Offices and/or other Entities approved by Order No. 1-145 of 19 May 2010 of the Minister of Energy of the Republic of Lithuania On the Approval of the Rules on Providing Information Related to Energy Activities to the State, Municipality Institutions, Offices and/or other Entities.

In order to help entities obliged to publish the mandatory information on their, municipality or NCC owned websites and to comprehend and unilaterally asses the amount, procedures and terms of published information, as established by relevant points of the Description of the Procedure of Publishing Information, the NCC adopted Recommendations for the Compliance of Service Prices in the Energy Sector with Transparency, Non-Discrimination and Other Legislative Requirements.

In order to ensure transparency and publicity of activities of economic undertakings operating in the natural gas sector and regulated by licenses or permits, also, proper information for customers on the provided services, their prices and provision conditions as well as resolution of disputes, the NCC conducted analysis of information subject to mandatory publication in 2016. The NCC determined that one entity did not publish the mandatory information and thus violated the

requirement of the Description of the Procedure of Publishing Information.

Monitoring of the wholesale market

Regulation (EU) No. 1227/2011 provides for a constant European Union-wide monitoring of trading of wholesale market products, which:

- defines market abuse, which may be treated as market manipulation, an attempt to manipulate the market or trade using publicly undisclosed inside information;
- prohibits market abuse;
- requests to publish publicly undisclosed inside information in an efficient and timely manner;
- obligates persons professionally managing wholesale energy products-related transactions and reasonably suspecting that market may be abused in the performance of transactions to immediately report that to the national regulatory authority.

On 16 March 2016, the NCC held a seminar for market participants conducting wholesale energy market trade on binding obligation to provide data and other information to ACER according to Regulation (EU) No. 1227/2011.

In light of the fact that as of 7 April, 2016 market participants were obliged to present ACER with data and information on all the transactions on the exchange, including sales order, NCC provided assistance in order to help the market participant to conduct self-evaluation on whether they are obliged to inform ACER on the conducted transactions, how to register themselves at the CEREMP system, where to find detailed information and what sanctions apply to market participants for failure to perform their obligation on time according to the Regulation (EU) No. 1227/2011.

In order to inform market participants both about the Regulation (EU) No. 1227/2011 and new duties arising out of this legal act NCC has prepared a special heading for the Regulation (EU) No. 1227/2011: Regulation on Energy Market Integrity and Transparency. Based on the submitted information of market participants, the NCC drafted a list of entities whose total gas and electricity consumption is more than 600 GWh, based on the assessment of the possibility of the used devices to operate at maximum capacity all day non-stop throughout the whole year.

On 14 November, 2016, ACER updated the information relevant to the market participants and provided their opinion on the provisions of the Regulation (EU) No. 1227/2011 regulating the obligation to publish information on natural gas transactions. ACER states (subparagraph 3.44 (III) of page 73 of ACER question and answers journal No. 19 published in October, 2016) that transaction concluded at the virtual trading point does not automatically oblige informing ACER, unless the transaction has been concluded within an organized market, i.e. at first, a system where the buyer and seller are introduced to make a transaction must take place. Based on that fact, in Lithuania the information on all of the concluded transactions on the exchange are automatically published, and the bilateral transactions at the virtual spot are not considered as being concluded in the organized market. Market participants are subject to self-evaluation whether the sold or acquired gas is for resale purpose, or whether the consumer procuring said gas has a technical consumption capacity of more than 600 GWh per year. ACER obliges publishing information solely on the said transactions.

By the Resolution No. O3–450 of 22 December 2016, the NCC approved the Rules on Monitoring the Trading of Electricity and Natural Gas regulating the rights and obligations of market participants operating within the wholesale gas market. The above rules establish the participants of electricity and natural gas sectors that are subject to the procedures of wholesale monitoring and supervisions, as well as provisions for the procedures on assessing violations and their obligations (to inform ACER on the concluded transactions, etc.), regulate procedure for the registration of market participants at the CEREMP platform. As well as a list on information that is not subject to public disclosure has been made and procedure for centralized publication and updating of said information has been foreseen. In case the exchange platform, where the said information should be published is inaccessible due to technical difficulties, market operator must ensure that said information would be published at the specialized platform. The above rules clearly state when NCC should start their

investigation on possible violation, investigating possible cases of abuse within the wholesale energy market.

4.2. Promoting competition

4.2.1. Wholsesale market

4.2.1.1. Monitoring the natural gas price level, transparency, open market and competition efficiency in the wholesale market

Wholesale market participants and structure

According to points 4–8 of Article 2 of Regulation (EU) No. 1227/2011, market participants (natural and legal persons) concluding transactions in one or more wholesale energy markets where wholesale energy products are traded, including natural gas supply contracts, and contracts with entities whose consumption whereof is above 600 GWh, are attributed to the wholesale energy market. According to the NCC data, there were 15 legal persons whose actual natural gas consumption exceeded 600 GWh in the natural gas sector when evaluating the possibility of the used devices to operate at maximum capacity all day non-stop throughout the whole year: Klaipėdos energija, AB Vilniaus energija, UAB, Kauno termofikacijos elektrinė, UAB, Lietuvos Energijos Gamyba, AB, Achema, AB, Šiaulių Energija, AB, Panevėžio Energija, AB, Jonavos šilumos tinklai, AB, Kauno energija, AB, Klaipėdos nafta, AB, Lifosa, AB, Nordic Sugar Kėdainiai, AB, Arvi cukrus, UAB, SE Visagino energija and Litesko, UAB. Transactions concluded by these companies in the Lithuanian gas market are attributed to the wholesale natural gas supply market.

In 2016, 20 095 GWh of natural gas were sold/or consumed in the wholesale natural gas market, which is 25.2 percent less as compared to 2015, when 26 864 GWh of natural gas were sold and/or consumed. These changes were determined by the fact that wholesale natural gas supply market participants were consuming less amounts of natural gas.

Table 13. Structure of the wholesale natural gas supply market in 2012–2016, GWh

Structure of the wholesale natural gas supply market	2012	2013	2014	2015	2016
According to bilateral agreements	26 282	21 106	20 646	25 255	19 252
On the exchange	0	599	1 133	652	299
Export	0	0	0	957	544
Total:	**26 282**	**21 705**	**21 779**	**26 864**	**20 095**
Change compared to 2016	-6 187	-1 610	-1 684	-6 769	-
Change compared to 2016, percent	-23.54	-7.42	-7.73	-25.20	-

Source – NCC.

In 2016, there were 19 796 GWh of natural gas sold and/or purchased on the grounds of bilateral agreements (including gas export) in wholesale natural gas supply market, i.e. 24.48 percent less as compared to 2015. During the ongoing investigation period, the largest amount of natural gas was consumed by Achema, AB, which is the largest consumer of natural gas in Lithuania, however, the said consumption rates of the said undertaking in 2016 were less by 6.35 as compared to 2015 percent and amounted to 13 184 GWh. In 2016, Lietuvos dujų tiekimas, UAB and Litgas, UAB were selling natural gas to wholesale consumers of natural gas. The said undertakings sold 1 801 GWh and

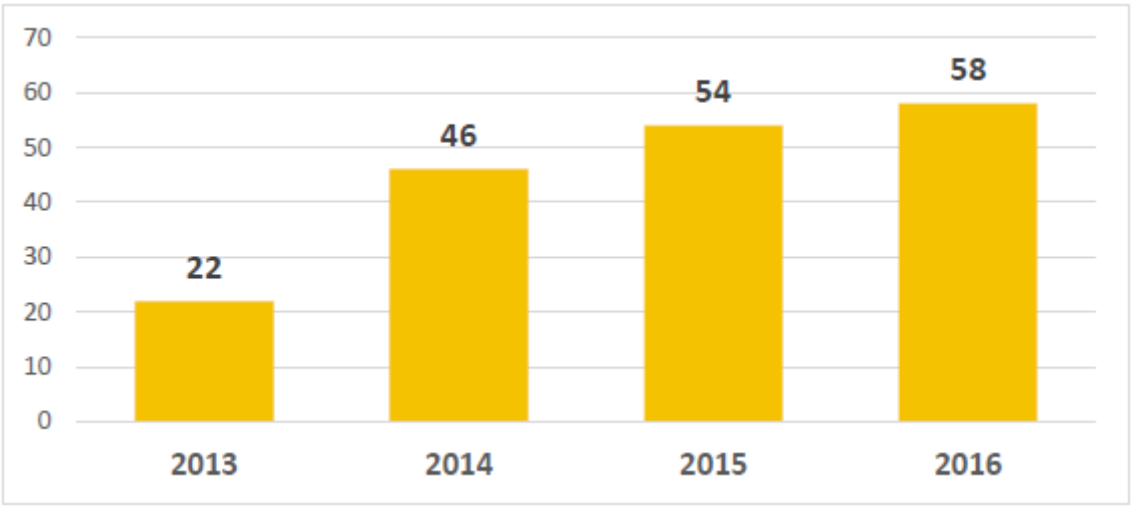
3 341 GWh of natural gas respectively, i.e. 46.2 percent and 50.4 percent less as compared to 2015. By comparing the years 2016 and 2015, it is evident that largest reduction of sold natural gas at the wholesale market were recorded by Dujotekana, UAB. Haupas, UAB increased the amounts of sold natural gas at the wholesale market due to the fact that the undertaking exported natural gas to other countries. Haupas, UAB and Scener, UAB sold natural gas to wholesale natural gas consumers outside of the territory of Lithuania, the total amount of exported natural gas of these two undertakings amounted to 544 GWh in the year 2016.

In 2016, the largest share of market in terms of the amounts of natural gas sold on the grounds of bilateral agreements was held by Achema, AB, which took 66.6 percent of the market share. The market share of the said undertaking increased by 12.89 percentage point as compared to 2015. In 2016, the market shares held by Lietuvos dujų tiekimas, UAB and Litgas, UAB decreased by 3.68 and 8.81 percentage point respectively as compared to 2015.

Trade on natural gas exchanges

In 2016, there were 58 participants registered on the natural gas exchange, and their number was the greatest since 2013. The natural gas market operator license of Baltpool, UAB was revoked by Resolution No. O3-522 of the NCC of 23 September 2015, therefore only information till the moment when the activities of natural gas market operator still were conducted is presented in the report.

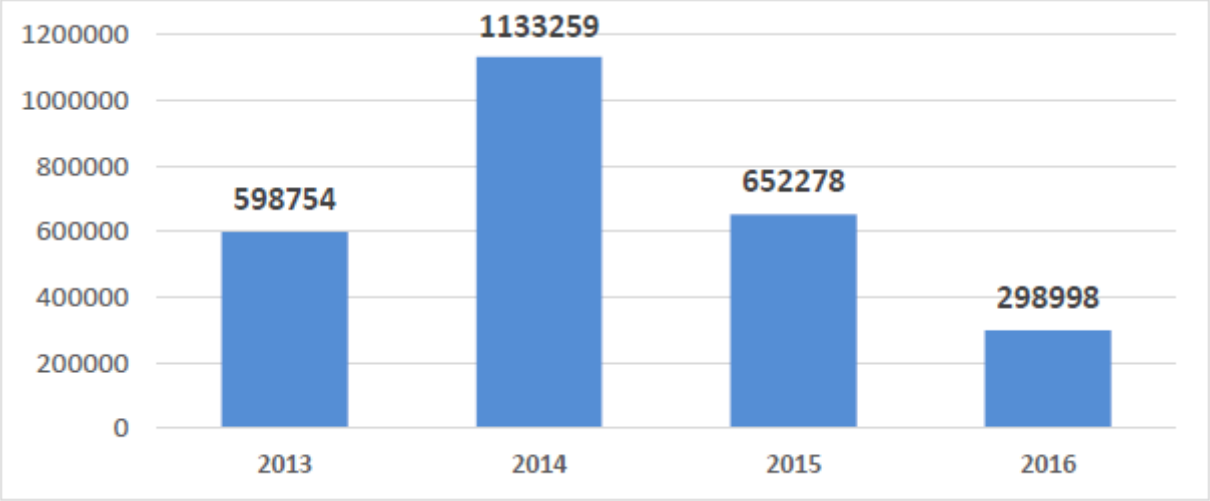
Figure 20. Number of participants on the natural gas exchange in 2013–2016



Source – NCC.

In 2016, 298 998 MWh of natural gas were sold on the GET Baltic natural gas exchange Compared to 2015, the quantity of natural gas sold on GET Baltic, UAB natural gas exchange was 54.16 percent lower.

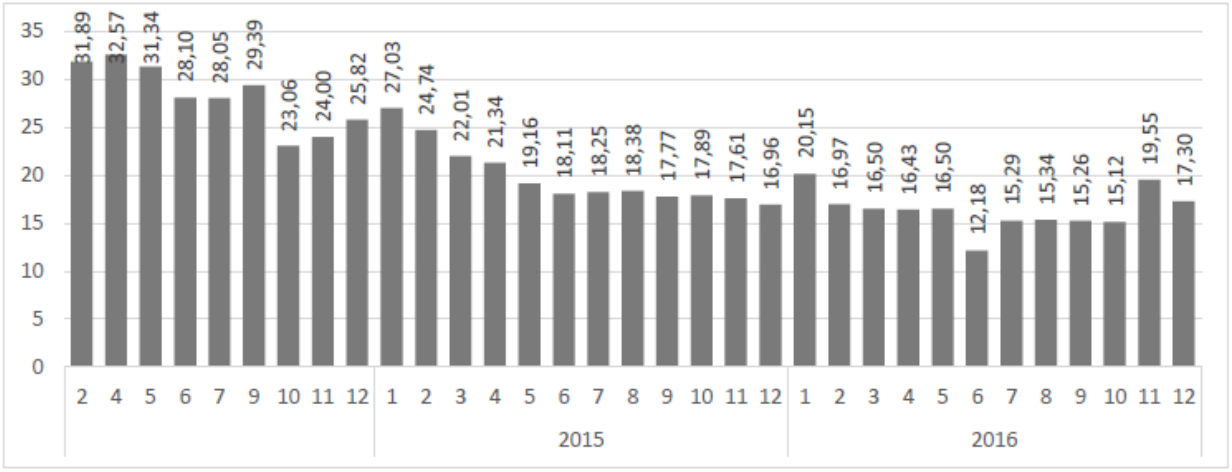
Figure 21. Quantity of natural gas sold on natural gas exchanges in 2013–2016, MWh



Source – NCC.

The average price of natural gas on UAB GET Baltic exchange was EUR 17.47/MWh in 2015, or 27.1 percent less as compared to 2015, when it amounted to EUR 23.98/MWh. In 2016, trade turnover on the exchange was EUR 5.2 m.

Figure 22. Average natural gas price on Get Baltic, UAB natural gas exchange in 2014–2016, EUR/MWh



Source – GET Baltic, UAB.

4.2.2. Retail natural gas supply market

4.2.2.1. Monitoring the natural gas price level, transparency, open market and competition efficiency in the retail market

Natural gas supply companies, market participants (natural or legal persons), which sell natural gas to end users, who consume less than 600 GWh, are attributed to retail natural gas supply market.

The following companies were engaged in natural gas supply in retail market in 2016: Lietuvos dujų tiekimas, UAB, Dujotekana, UAB, Haupas, UAB, Fortum Heat Lietuva, UAB, Energijos skirstymo operatorius, AB, agrofirma Josvainiai, AB, Grata group, UAB, Geros dujos, UAB, Intergas, UAB, Litgas, UAB, Achema, AB.

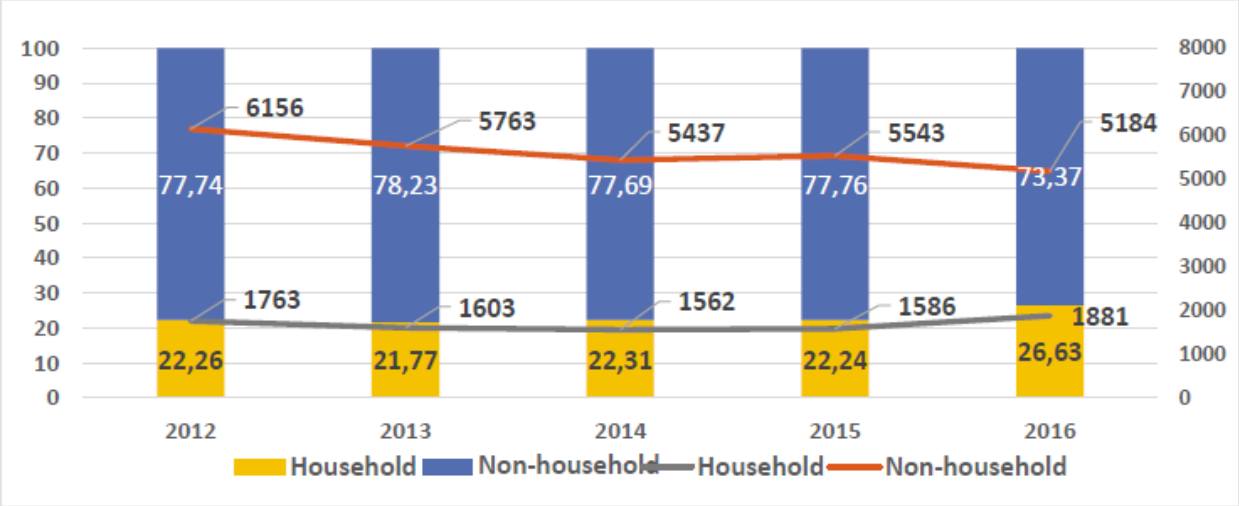
In 2016, 7 065 GWh of natural gas were sold in the retail natural gas supply market, i.e. 0.89

percent more as compared to 2015, when 7 129 GWh of natural gas were sold. This was mainly affected by decreased sales to non-household consumers.

In 2016, Litgas, UAB and Lietuvos dujų tiekimas, UAB held 98.66 percent of the retail natural gas supply market, the remaining part 1.34 percent was shared between other market participants.

In 2016, in terms of the purchased quantities of natural gas, the share of household consumers accounted for 26.63 percent in the retail natural gas supply market and, compared to 2015, it increased by 4.38 percentage point. The share of non-household consumer segment was 73.37 percent in 2016.

Figure 23. Market structure by purchased quantities of natural gas, in 2012–2016, GWh, percent



Source – NCC.

In 2016, there were 573 thousand natural gas consumers, 566.2 thousand were household and 6.8 thousand – non-household consumers. In 2015, there were 562.4 thousand household and almost 6.9 thousand non-household consumers.

Household consumers, who occupy 98.81 percent of the total retail consumer market in terms of the number of consumers, consumed only 26.63 percent of natural gas, which was supplied in the retail natural gas supply market. Non-household consumers purchased 73.37 percent of quantity of natural gas supplied in the retail natural gas supply market, even though compared to the number of household customers, their number as consumers was very low – a mere 1.19 percent.

Household consumer segment

In 2016, there were 5 companies supplying gas in the retail market to household consumers. The supply operator of natural gas in Druskininkai municipality was Energijos skirstymo operatorius, AB[1]. In 2016, household consumers consumed 1 881 GWh of natural gas, i.e. 18.6 percent more as compared to 2015. Household consumers paid EUR 70.3 m, i.e. 10.3 percent more compared to 2015. Lietuvos dujų tiekimas, UAB has remained the main natural gas supplier to household consumers: in 2016, the company accounted for 99.86 percent of sales.

Natural gas tariffs for household consumers

According to Article 9(17) of the NGL, the NCC approves tariffs for household consumers every half a year. In 2016, the NCC approved the tariffs for household consumers of 5 gas companies twice per year, by differentiating these consumers by groups. Druskininkų dujos, UAB supplied

[1] From 1 November 2016

natural gas to household consumers till 1 November, 2016, as of the said date the licence of natural gas distribution operator and supply was revoked on the request of the said company.

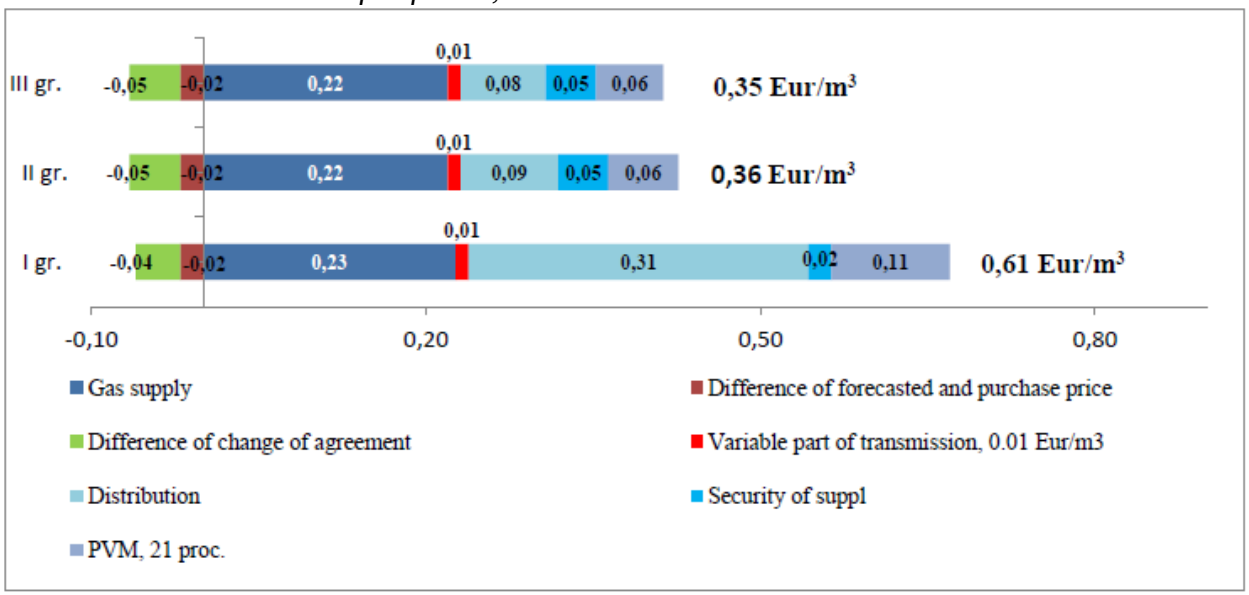
Natural gas tariff for household customers consists of forecasted natural gas (product), specific transmission, distribution, liquefaction and supply prices and the difference between natural gas (product) prices forecasted during the previous validity period of tariffs and actual prices. Gas import price for the upcoming half-year is forecasted according to price calculation formulas and specific prices indicated in natural gas purchase-sale contracts. The difference between income, which forms as a result of a difference between the forecasted and actual import price, is assessed when setting natural gas price for the following half-year. Tariffs for 2014–2016 separately show the share of tax repayable to household customers, which formed as a result of amendments to gas import agreement. Natural gas supply companies set a binomial tariff, which consists of a variable component paid for the quantity of consumed gas, and a fixed component, paid for a fixed tax component per month.

Table 14. Natural gas tariffs for household consumers in Half II of 2016 and in 2017 (inclusive of VAT), EUR

Company	Group	Half II of 2016		2017			
		Fixed tariff component	Variable tariff component	Fixed tariff component	Variable tariff component		comparison of Half I and II
					Half I	Half II	
Lietuvos dujų tiekimas, UAB	I	0.56	0.61	0.56	0.61	0.64	0.03
	II	3.99	0.36	3.99	0.36	0.39	0.03
	III		0.35		0.35	0.38	0.03
Fortum Heat Lietuva, UAB	II	2.64	0.35	3.42	0.45	0.44	-0.01
Agrofirma Josvainiai, AB	I	0.63	0.40	0.63	0.39	0.40	0.01
	II	3.99	0.33	3.99	0.31	0.33	0.02
Intergas, UAB	I	1.45	0.48	1.45	0.40	0.48	0.08
	II		0.41		0.33	0.41	0.07
Druskininkų dujos, UAB	I	0.58	1.13	-	-	-	-
	II	4.05	1.03	-	-	-	-

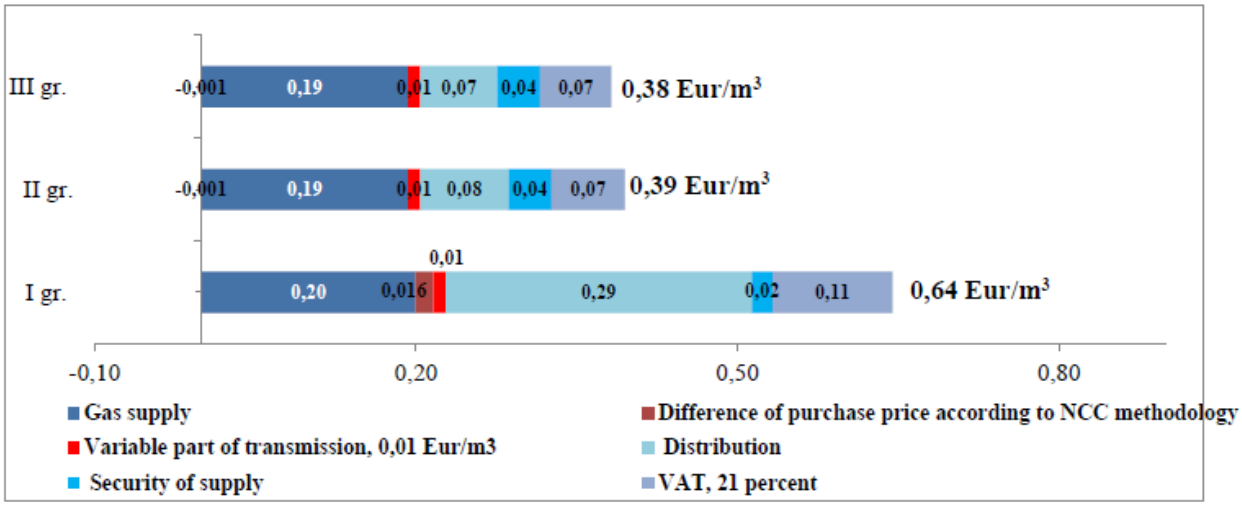
Source – NCC.

Figure 24. Structure of the variable component of the tariff of Lietuvos dujų tiekimas, UAB for household customers in Half I of 2017, EUR



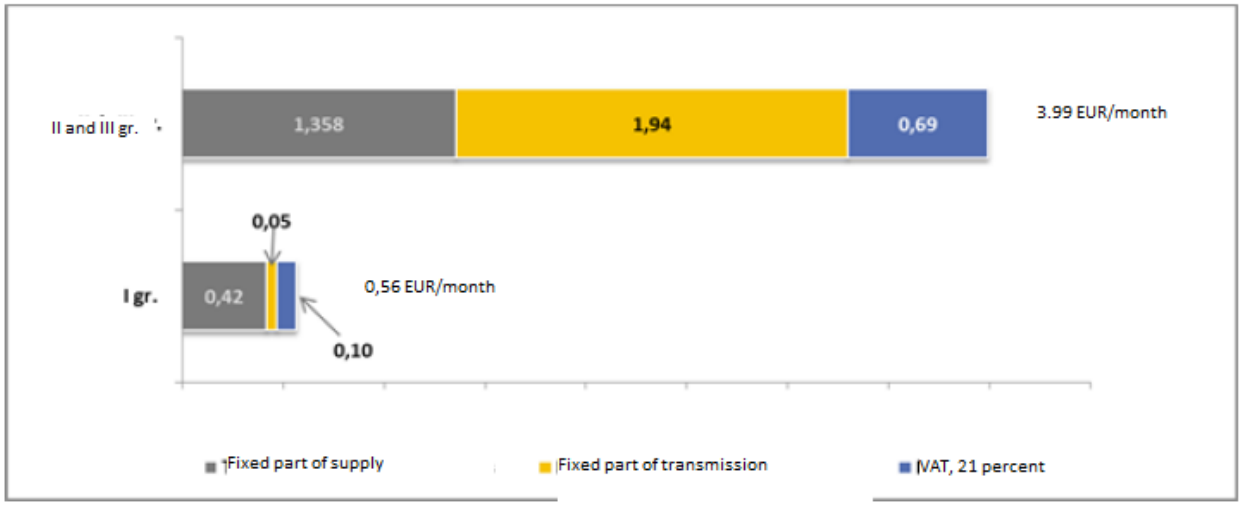
Source – NCC.

Figure 25. Structure of the variable component of Lietuvos dujų tiekimas, UAB tariff for household customers in Half II of 2017, EUR



Source – NCC.

Figure 26. Structure of the fixed component of Lietuvos dujų tiekimas, UAB tariff for household customers in Half I and II of 2017, EUR



Source – NCC.

A fixed rate per month is paid to maintain "functional capacity" of the gas system and to reserve power (ensure capacity) in gas transmission pipelines, because each consumer must have a guarantee of being able to receive a quality service at any time. Also a fixed rate includes accounting and contract conclusion expenses (supply price).

Monitoring of natural gas market

The NCC monitors the scope and efficiency of the opening of natural gas market and competition in wholesale and retail markets. In order to increase awareness of market participants for the market participants to dispose of reliable information, each quarter the NCC prepares and publishes on the website of the NCC at www.regula.lt reports on monitoring of the natural gas market. The reports examine natural gas import, transmission, distribution and supply (wholesale and retail) markets.

In light of the circumstances determined during a market research, the NCC may impose certain accounting and pricing-related obligations on a person having a significant impact in the market. A person having a significant impact in the market may be subject to individual price control measures and obligations to substantiate prices with costs or prices set in comparative markets.

By Resolution No. O3-55 of the NCC of 19 February 2016 a decision was adopted to conclude the investigation (launched in 2014) of the natural gas supply market in order to examine the efficiency of competition in the natural gas supply market, to identify participants having a significant impact in this market, if any, and to assess if participants having a significant impact in the market did not abuse the market.

The market examined during the natural gas supply market research is defined as a wholesale natural gas supply market in the territory of the Republic of Lithuania, except for the territory of Druskininkai municipality, retail natural gas supply market in the territory of the Republic of Lithuania, except for the territory of Druskininkai municipality, wholesale natural gas supply market in the territory of Druskininkai municipality and retail natural gas supply market in the territory of Druskininkai municipality. The research of the natural gas supply market was completed in February of 2016 stating that during the investigation period in 2014:

- Haupas, UAB was recognized as the largest entity in the wholesale and retail natural gas supply market of Druskininkai, applying excessive supply prices due to lack of competition and therefore abusing market participants;

- Lietuvos dujų tiekimas, UAB was recognized as having a large impact in the wholesale natural gas supply market and the retail natural gas supply market, while Haupas, UAB was recognized as having a large impact in the wholesale natural gas supply market of Druskininkai and

retail natural gas supply market of Druskininkai.

The NCC recognized the economic undertaking Lietuvos dujų tiekimas, UAB as a legal person having a significant impact in the wholesale natural gas supply market of Lithuania in 2013–2014 and a legal person having a significant impact in the retail natural gas supply market of Lithuania in 2013–2014.

Haupas, UAB was recognized as having a large impact in the wholesale natural gas supply market of Druskininkai in 2013–2014, which applied excessive supply prices in 2014; Haupas, UAB was also recognized as an entity having a significant impact in the retail natural gas supply market of Druskininkai in 2013–2014, which applied excessive supply prices in 2014.

Haupas, AUB was obligated:

- To supply natural gas in Druskininkai wholesale and retail natural gas supply markets at cost-based prices, including supply margin compliant with reasonability criterion;
- To distinguish costs and to draw up a free form description of the regulatory accounting system in accordance with the requirements laid down in the Description of the Unbundling of Accounting of Natural Gas Undertakings, Cost Allocation and Accounting Unbundling-Related Requirements approved by Resolution No. O3-316 of the NCC of 18 July 2013 On the Approval of the Description of the Unbundling of Accounting of Natural Gas Undertakings, Cost Allocation and Accounting Unbundling-Related Requirements no later than within 2 months from the effective date of this resolution, and to present it to the NCC;
- To present data for setting supply price cap in the territory of Druskininkai municipality no later than within 1 month from the effective date of the resolution, pursuant to the Methodology.

In the implementation of the resolution of the NCC, Haupas, UAB presented to the NCC data for setting natural gas supply price cap in the territory of Druskininkai municipality by its letter No. S-935 of 21 March 2016. Having evaluated the costs presented by Haupas, UAB the NCC set the supply price cap of Haupas, UAB of EUR 5.14/MWh in the territory of Druskininkai municipality. The said price is valid from 1 July, 2016 (Resolution No. O3-142 of 25 May 2016). Haupas, UAB appealed this resolution of the NCC to court, however the court denied the appeal of Haupas, UAB, therefore as of 1 July, 2016 Haupas, UAB applied the set price by the NCC in Druskininkai.

In 2017, the NCC set the adjusted supply price cap of Haupas, UAB of EUR 7.55/MWh, valid as from 1 July, 2017 (Resolution No. O3E-155 of 26 May 2017).

4.2.3. Creation of regional natural gas market

As of 2015, the NCC actively cooperates in the international work group – Regional Gas Market Coordination Group (RGMCG) – on creating a regional natural gas market. The main goal: to create a rule set for single natural gas operation within the region till 2020, including common pricing principles which would ensure a transparent, competitive and clear procedure for users of natural gas systems for using transmission systems of Baltic states and Finland, while offering natural gas for consumers at a competitive price.

In response to the study on single regional market drafted by Frontier consultant for Half I of 2016, the NCC and other RGMCG participants drafted an action plan for the formation of single regional natural gas market during the year 2016. The NCC coordinates the creation of the model for calculating the natural gas supply services prices for the entry and exit points. In the near future, comparison of different models for calculating the pricing for entry and exit points shall take place, and afterwards the resolution for the optimal model for the future regional natural gas market shall be adopted. Acting accordingly to the findings of the Frontier study and following the implementation of the action plan for the implementation of the single regional natural gas market, the following should be created till 2020:

- One single entry-exit zone for Baltic states (including Finland, provided the construction of the Balticconector pipeline has been completed);
- Removal of cross-border transmission system connection points;

- One single operational virtual trading point;
- One balancing zone;
- One single market area manager. The creation of a single regional natural gas market would allow for favourable conditions for more flexible trading ant transporting of natural gas within the market, as well as increased liquidity and integration of the market.

Figure 27. Regional Baltic state natural gas market vision for the year 2020

Source – NCC.

Public consultations on the principles of the model for calculating the pricing for the entry and exit points were hold from 20 June, 2017 to 20 July, 2017. Based on the above principles, the National Regulatory Authorities of Lithuania, Latvia, Estonia and Finland propose the following two solutions:

1. Temporary solution. The model for calculating pricing for entry and exit points should be applied for the Baltic states natural gas market, which comprises of Estonia, Latvia and Lithuania. The implementation of said model should start in 2018. Main principles of the said model: entry and exit point ratio: 20/80; each entry point shall be subject to the same entry tariff; TSO mutual compensation mechanism within the region. The TSOs are obliged to create the said mechanism.
2. Long-term solution. The model for calculating pricing for entry and exit price shall be applied to both Baltic states and Finish markets, which comprises of Finland, Estonia, Latvia and Lithuania. Implementation of said model shall be targeted for 2020 (following the start of operation of the pipeline Balticconector between Estonia and Finland). Having completed the comparison of the results of different models for calculating the pricing for entry and exit points, the resolution for the optimal model for the regional natural gas market would be adopted, i.e. equal tariffs should apply to natural gas transmission at entry and exit points throughout the entire Baltic–Finish region. The said tariff should be calculated while applying the selected optimal alternative out of the possible ones (“Postage Stamp”, Capacity-Weighted Distance or Matrix approach).

On 1 July, 2017, TSOs of Baltic states started using the implicit capacity allocation model, in order to allow for a more efficient distribution of short-term natural gas transmission capacities at the connection points between Baltic states. The allocation of transmission capacities shall be related with sale of natural gas on the natural gas exchange GET Baltic, UAB. At the same time the trading areas of GET Baltic, UAB natural gas exchange started operation in Latvia and Estonia, thus making the exchange regional.

The initiative of the National Regulatory Authorities of Baltic states and Finland participating

in the activities of RGMCG allows for the implementation of more streamlined trading within the region and removal of natural gas supply licenses. In light of the above, the Ministry of Energy of the Republic of Lithuania drafted appropriate amendment projects for Law on Energy and LoNG in 2016 for more streamlined procedures on the issue of permits.

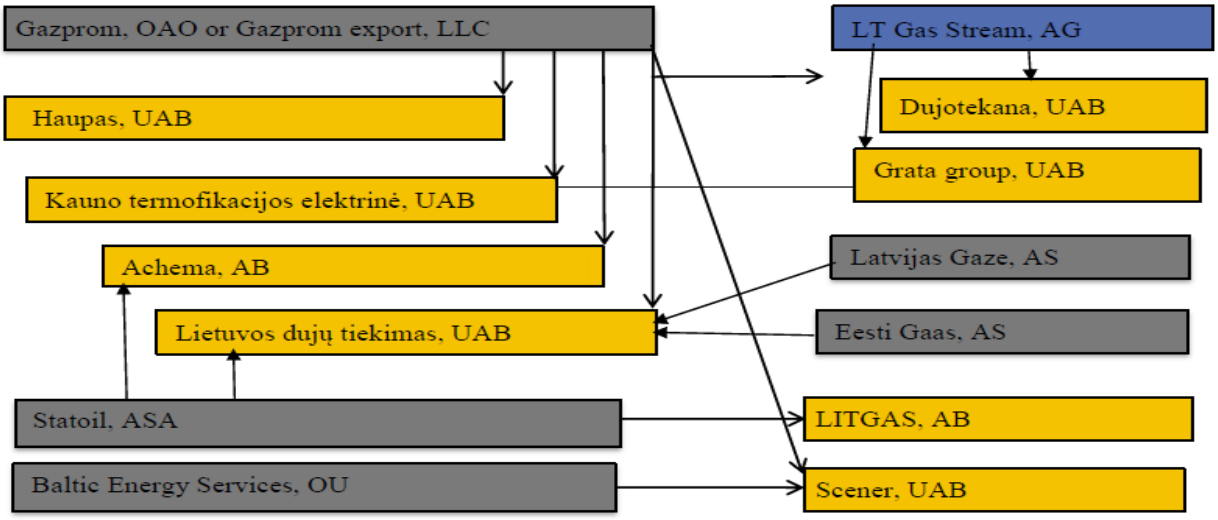
4.3. Security of supply

4.3.1. Natural gas supply and consumption

Having built the LNG terminal in Klaipėda, natural gas supply has become diversified, and the country is no longer dependent on the sole gas supplier. In that way the requirement, laid down in Article 6(1) of the Regulation (EU) 994/2010 establishing that in the event of a disruption of the single largest gas infrastructure, the capacity of the remaining infrastructure, determined according to the N – 1 formula is able to satisfy the total gas demand of the calculated area during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years, was implemented.

In 2016, Lietuvos dujų tiekimas, UAB, Dujotekana, UAB, Haupas, UAB, Achema, AB, Kauno termofikacijos elektrinė, UAB, Litgas, UAB, Grata Group, UAB and Scener, UAB imported natural gas[2]. In 2016, natural gas was imported to Lithuania from Gazprom, OAO, Gazprom export, LLC, Statoil, ASA, LT GAS Stream, AG, Baltic Energy Services, OU, Eesti Gaas, AS and Latvijas Gaze, AS.

Figure 28. Participants of the segment of the natural gas import to Lithuania



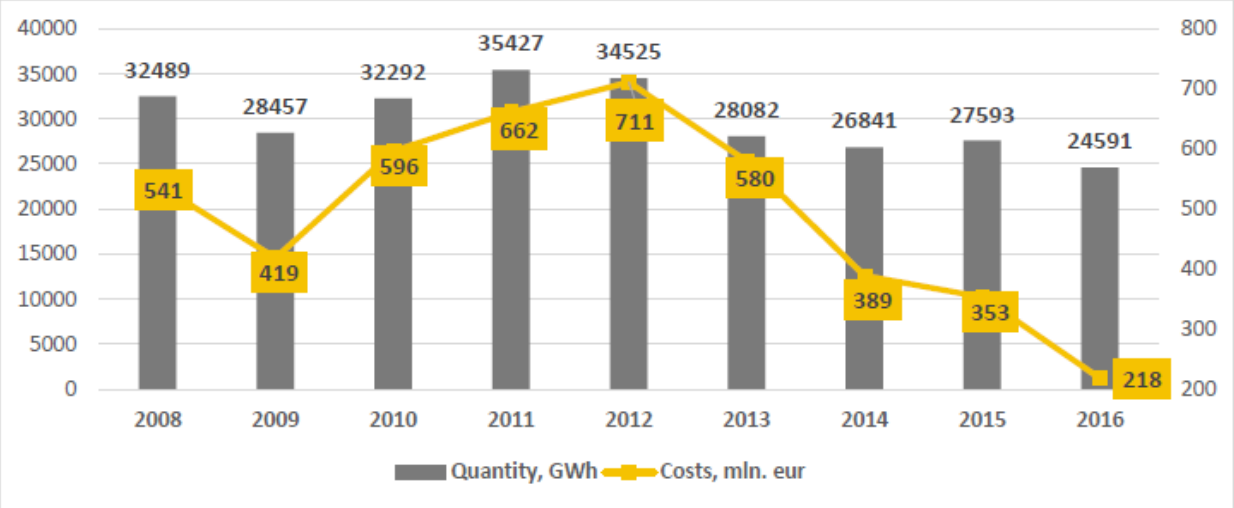
Source – NCC.

In 2016, the costs for importing natural gas incurred by Lietuvos dujų tiekimas, UAB, Litgas, UAB, Dujotekana, UAB, Kauno termofikacijos elektrinė, UAB, Haupas, UAB, Grata group, UAB and Scener, UAB decreased by 38.3 percent as compared to 2015, and 69.4 percent as compared to 2012. In 2016, changes in oil price and reduced prices for alternative fuel (gas and fuel oils) had an impact towards reduced costs on natural gas import.

Quantities of gas imported by natural gas undertakings in 2008–2016 are illustrated in Figure 29.

[2] Scener, UAB previously was Baltic Energy Services, UAB.

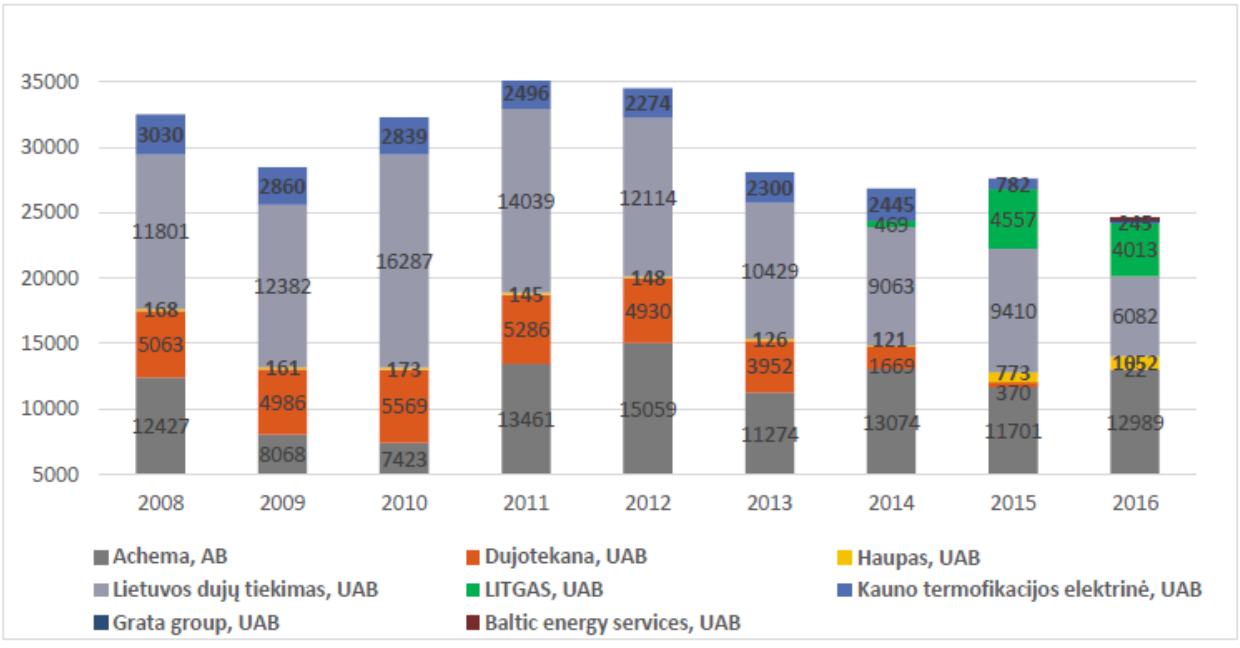
Figure 29. Quantities of imported natural gas (GWh) and import costs in 2008–2016, million EUR



Source – NCC.

In 2016, 24 591 GWh of natural gas was imported to Lithuania, i.e. 10.9 percent less as compared to 2015, when the import volumes amounted to 27 593 GWh of natural gas. In 2016 Grata group, UAB and Scener, UAB started importing natural gas, however the import volumes of said undertakings comprised a little less than 1 percent of the total imported natural gas. Compared to 2015, quantities of natural gas imported by Dujotekana, UAB and Kauno termofikacijos elektrinė, UAB decreased by 94.1 and 68.7 percent, respectively. Quantities of natural gas imported by Haupas, UAB and Achema, AB increased by 36 percent and 11 percent respectively.

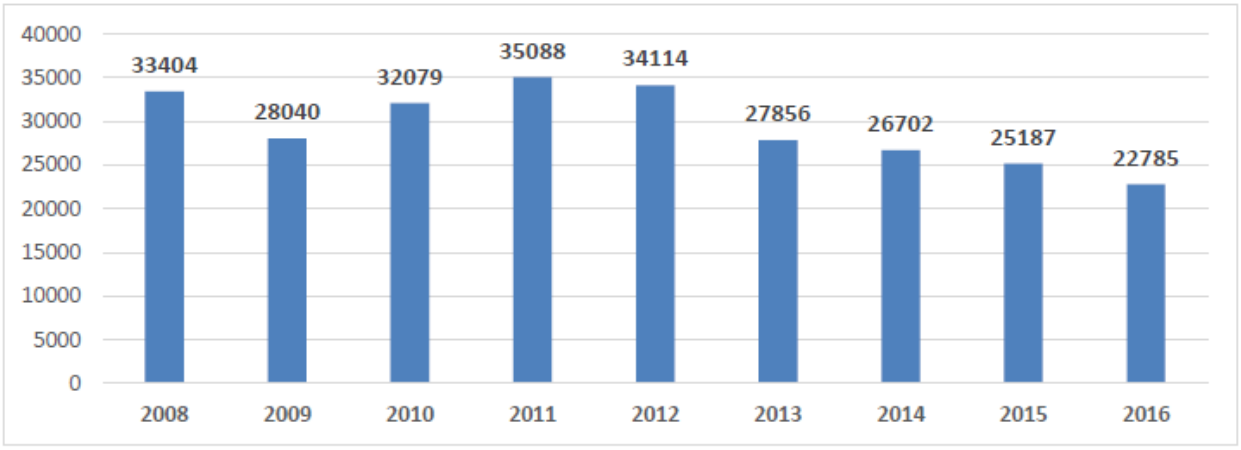
Figure 30. Market structure by quantities of imported natural gas in 2008–2016, GWh



Source – NCC.

The quantity of consumed gas has constantly decreased since 2011. Compared to 2015, the quantity of consumed natural gas decreased by 9.5 percent in 2016. Figure 31 illustrates the changes in consumed gas quantities in 2008–2016.

Figure 31. Quantities of consumed natural gas in 2008–2016, GWh



Source – NCC.

The main reason for lower consumption of natural gas is the construction of biofuel boilers and biofuel consumption in heat supply companies.

4.3.2. Projected future natural gas consumption

According to the data provided by undertakings operating in the natural gas sector, quantities of consumed gas should decrease to 22.6 TWh in 2017. The plan is to transmit about 24–26 TWh of gas to the Kaliningrad Region each year in the future.

4.3.3. Measures to cover peak demand or shortage of suppliers

The natural gas TSO Amber Grid, AB encourages system users to more accurately and steadily plan the necessary capacities by setting the transmission price. The distribution ratio of revenue of all points distributed between the fees for capacities and quantity are 70 percent and 30 percent respectively. The unused (free) capacities are offered on the market with a possibility to conclude agreements for interruptible capacities. Having concluded an agreement for natural gas transmission and distribution services, a system user has a possibility to book (adjust) the capacities each week and/or day. The system user may book the capacities (adjust the order) online or in writing according to the terms and conditions of the agreement. When booking capacities for a respective period of time, the system user must have the already purchased quantity of gas. The supply schedule has to be agreed upon with a supply undertaking according to the terms and conditions of the purchase-sale agreement.

Under normal conditions of transmission system operation and supply to Lithuania, the peak gas demand is fully satisfied. In case of disruptions in gas transportation, the following measures would be used:

– system users who have signed an agreement with a supply company on uninterrupted gas supply shall have gas reserves in Inčukalns underground gas storage facility;

– natural gas supply and transportation priorities and the sequence of gas supply limitation and gradual termination thereof in case of an emergency or disruption in gas supply are set forth in natural gas transmission agreements with system users directly connected to the transmission system;

–DSOs have to carry out the instructions issued by the TSO in case of an emergency or disruption in gas supply, as it is set forth in the National Plan of the Management of Emergency Situation in the Natural Gas Supply.

5. CONSUMER PROTECTION AND DISPUTE RESOLUTION IN ELECTRICITY AND NATURAL GAS SECTORS

5.1. Consumer protection

Compliance with Annex 1 (Article 37(1) (n))

New procedure for investigating complaints lodged towards the operation and non-operation of energy undertakings was approved following the entry into force of the Law on Energy No. IX–884 of 1 January 2016 on replacing the article 34 and supplementing with the article 34^1. The NCC shall analyse the received complaints on the supply, distribution, transmission, storage or non-performance, the right to use the network of the energy undertaking and/or deny of access to the system and other failures to comply with the requirements established in Laws regulating the operation of energy undertakings within its competence. In order to establish the procedures for investigation of complaints by NCC more clearly, NCC approved the Rules on Investigating the Complaints of Consumers (Resolution No. O3–123 of 13 May 2016), according to which the consumer complaint (i.e. person whose devices are connected to the objects operated by the energy undertakings and who purchases energy to be consumed) shall be regarded as a written enquiry towards NCC stating the violation of their rights or legitimate interests, as well as a request to defend them.

Rules for Procedures to Investigate Complaints Out of Court (Resolution No. O3-56, 25 February, 2016) regulates the Rules and Procedures in the NCC for Investigating Complaints Arising from Legal Contractual Relation Out of Court.

According to the Law on energy, resolution of all of the complaints of household consumers and energy undertakings were subject to judicial preliminary investigation in NCC till 1 January, 2016. As of 1 January, 2016, the above requirement was removed from the Law on Energy, therefore the consumer may defend their rights immediately in court.

Consumer protection measures are provided for in Article 57 of the LoNG. Consumers have the right to receive regular and appropriate information on the factual gas consumption and natural gas prices from natural gas undertakings at no extra charge and having concluded clear agreement to grant access to any registered supply undertaking to use their gas meter data free of charge. Natural gas undertakings publish on their websites the prices of natural gas and provided services, indicate possibilities for payment for consumed gas and received services in cash, using online banking services or by concluding a direct debit agreement.

Consumer protection measures are provided for in Article 51 of the LoE. Consumer have the right to receive clear and appropriate information on their rights related with the consumption of electricity and provided services from the NCC and electricity undertakings. The consumers are also entitled the right to receive information on their electricity consumption, including the quantity of consumed electricity, as well as having concluded a clear agreement grant access to any supplier to use their meter data free of charge The consumers are also entitled the right to receive transparent information on the applied prices, tariffs and all terms and conditions related to the electricity services. Suppliers must accommodate for appropriate and sufficient conditions for the consumer access towards the information and data on payments for the supplied electricity towards them. Appropriate and sufficient measures are considered to be: sending of invoices to the consumers or electronic access to the payment information of the consumer or other justified measures.

Consumers have the right to change the supplier free of charge. Undertakings must perform such a change within three weeks from the day of the submission of an application for the change of supplier.

The consumer is entitled the right to receive all of the necessary information on their rights, procedures for complaint investigation and valid Laws regulating the energy sectors from NCC and

State Consumers Right Protection Authority.

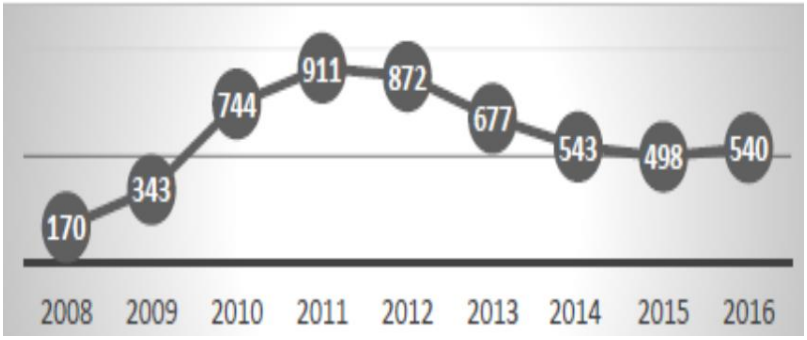
Ensuring access to customer data (Article 37(1) (p))

In 2016, conditions of consumer data access remained essentially the same compared to 2015. It should be mentioned that in 2016, electricity and natural gas distribution and supply companies Lesto, AB and Lietuvos dujos, AB were merged into a single company Energijos skirstymo operatorius, AB. Now electricity and gas consumers receive services and are served in one location and the same self-service portal www.manogile.lt.

In 2016, electricity supply was terminated for a similar number of consumers, i.e. 3 425 (3 218 in 2015, 3 243 in 2014 and 2 179 in 2013) customers due to outstanding debts. Termination of electricity transmission is not implemented in case of the maximum daily air temperature being lower than 15 (fifteen) degrees below zero or higher than 30 (thirty) degrees Celsius above zero, also on Fridays and on holiday eves.

5.2. Examination of enquiries

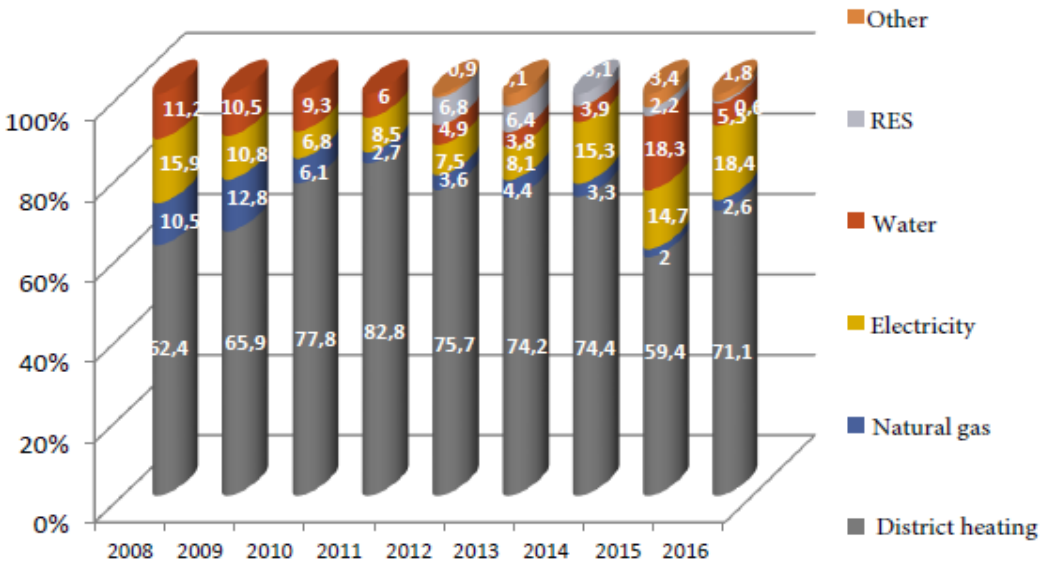
Figure 32. Dynamics of consumer enquiries received by the NCC in 2008–2016, years, (pcs.)



Source – NCC.

In 2016, NCC received 540 written enquiries. Compared to 2015, the change in the number of enquiries was marginal, the number increased by 8 percentage points.

Figure 33. Distribution of consumer enquiries received by the NCC by sector in 2008–2016 (percent)



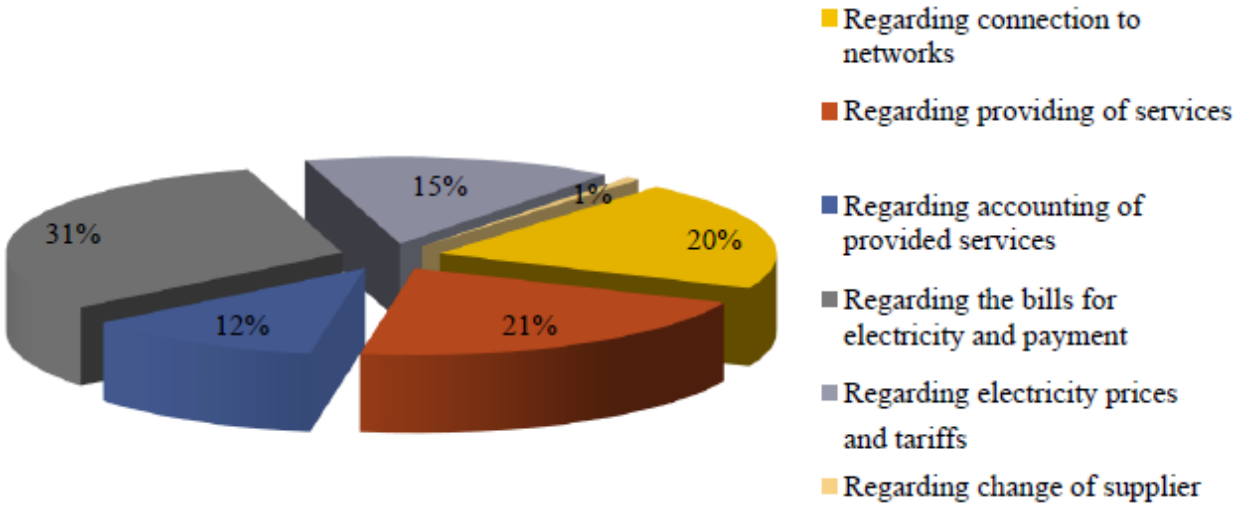
Source – NCC.

The most frequent reason for applying to the NCC was related to the heat sector in 2016. Independently from the common change in the number of enquiries, all of the enquiries related to heat sector comprised 71 of the total number of enquiries in 2016, and remained basically the same as last year.

In 2016, the NCC received 386 enquiries related to the heat sector, 100 to electricity sector, 30 to water sector, 14 to natural gas sector and 3 to renewable energy source sector, other questions comprised a total of 10 enquiries.

In 2016, there were 100 enquiries regarding the electricity sector, of which 57 were complaints and 43 were applications. The distribution of consumer enquiries according to their type are presented in figure 34.

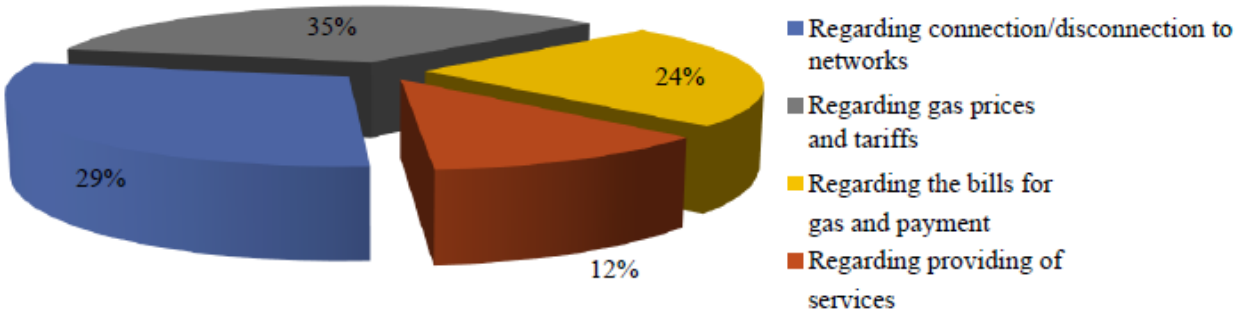
Figure 34. Consumers' written enquiries in the electricity sector by enquiry type (percent)



Source – NCC.

In 2016, there were 14 enquires received regarding the gas sector: 12 of which were regarding natural gas and 2 regarding liquefied natural gas. Most often consumers applied with regard to recalculation of quantities of consumed natural gas and therefore the debts generated, assignment of consumers to the relevant groups and conditions for termination of contract. The largest number of received complaints were of consumers supplied with Lietuvos dujų tiekimas, UAB natural gas.

Figure 35. Consumers' written enquiries in the natural gas sector by enquiry type (percent)



Source – NCC.