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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1. PREAMBLE

The fall in electricity prices was noted in Lithuanian price zone both in 2016 and 2017. This was driven by the fact that new interconnections "NordBalt" (Lithuania–Sweden) and "LitPol Link" (Lithuania–Poland) were put into operation at the end of 2015 – the beginning of 2016.

Electricity prices in Lithuanian price zone in the day-ahead market of the Nord Pool in 2017 compared to 2016 fell by 3.9 % (the fall in prices in 2016, compared with 2015, amounted respectively to 12.8 %).

After the aforementioned interconnections were built, synchronization of the Baltic States is another important step to be taken in the process of integration in European electricity market.

Due to synchronization with the networks of continental Europe, the value of the strategic projects of transmission network should take the largest share of the investment stipulated in 2017-2026 transmission network development plan. The total value of the investment will amount to about 642.49 million euros, i.e. 4.27 % less compared to the investment of 2016-2025 planned by AB "Litgrid". Investments in distribution networks amounted to 170.43 million euros in 2017 – 43.3 % more compared to 2016.

1 new authorization was granted to the independent supplier in 2017, 1 authorization was withdrawn due to inadequate financial capacity of the independent supplier required for operation. In 2017 the National Commission for Energy Control and Prices (hereinafter – NCC) has also changed 1 authorization as result of change in the name of an independent supplier, has suspended 1 authorization and renewed 1 authorization granting the right to operate as per the application submitted. At the end of 2017 there were 24 active independent suppliers out of 37 independent suppliers who were granted authorization.

Physical import flows (11,926 TWh) have increased in 2017, compared to 2016 (11,106 TWh). However, the amount of physical export also increased: 3,249 TWh in 2017, compared to 2.831 TWh in 2016. The assumptions for these changes consisted of interconnections. It should be noted that electricity generation at local power plants decreased insignificantly and amounted to 3.866 TWh in 2017, compared to 3.973 TWh in 2016. The decrease in the amount of electricity generated at the local power plants was largely due to a significant drop in the production from non-renewable energy sources (1.419 TWh in 2017 m., compared to 1.953 TWh in 2016 and 2.988 TWh in 2015 m.) when the production of the same period from renewable energy sources (hereinafter – RES) increased, but to a lesser extent (2.446 TWh in 2017, compared to 2.024 TWh in 2016 and 1.611 TWh in 2015).

The total household electricity consumption in the country in 2017 amounted to 2.713 TWh and was 2.8 % higher than in 2016 (2.640 TWh). The total electricity consumption in the category of non-household consumers in 2017 amounted to 6.498 TWh (2.5 % or 0.161 TWh more than in 2016).

In 2017 the maximum hourly electricity demand in Lithuania (net worth) was 1896 MW, i.e. 4.2 % less than in 2016 (1979 MW, in 2015 – 1748 MW). The maximum hourly electricity demand in the distribution network in 2017 amounted to 1665 MW and was 1.8 % less than in 2016 (1695 MW, in 2015 – 1555 MW).

The Methodology for Setting Electricity Transmission, Distribution and Public Supply Service Price Caps and the Public Price Cap was revised in 2017 by simplifying the calculation of the adjustment of the price caps for regulated services (transmission, distribution, public supply) and a harmonized imbalance accounting model that establishes the uniform principles for the functioning of the balancing markets. A new version of the Description of the Balancing Energy Price Regulation Procedure was approved by the Resolution No O3E-591 of 14 December 2017. These changes provide a level playing field for all balancing market participants in Lithuania, Latvia and Estonia - until then, each state had defined separate principles for balancing energy pricing. A Common Baltic Balancing Market was launched on 1 January 2018.

In the course of the implementation of network codes in the electricity sector, the NCC has approved number of descriptions and methodologies, has also appointed EPEX Spot SE as the nominated electricity market operator in the Lithuanian electricity trading zone.

The NCC, by taking part in the regional Task Force for Gas Transmission Services Pricing and inter-TSO Compensation Mechanism Application, together with the national regulatory authorities of Latvia, Estonia and Finland has prepared the guidelines setting the main pricing principles of the Baltic-Finish natural gas region. On 27 November 2017 the said guidelines have been approved by the national regulatory authorities.

In accordance with the principles enshrined in the Guidelines and in order to create from 2020 onwards a common Baltic-Finnish natural gas transmission entry-exit system and to select the most appropriate methodology for calculating the prices of natural gas transmission services of three currently available alternative methodologies ("Postage stamp", Capacity-weighted distance or Matrix) and to have a model for setting natural gas transmission tariffs for the whole region, in 2017 the national regulatory authorities have implemented a tendering procedure. The tendering procedure has been held under the auspices of the representatives of Finish national regulatory authority, the supplier who has successfully tendered for the procedure was the international consultancy company "Baringa Partners LLP" (hereinafter – "Baringa") that in June 2018 provided the final results of the study prepared to the national regulatory authorities. In order to eliminate the cross-border entry and exit points in the region and to have uniform (similar) tariffs at the points of entry to the region, the consultants have suggested, in line with the Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas, to apply the same "postage stamp" methodology in each country of the region separately, and benchmarking shall apply for the justification of region entry tariffs.

On 1 July 2017 the Baltic Natural Gas Transmission System Operators (hereinafter – the TSO) started using the implicit capacity allocation model in order to allocate more effectively short-term natural gas transmission capacity at the points of interconnection between the Baltic States. Capacity allocation is related to gas trading in the natural gas exchange UAB "GET Baltic". At the same time UAB "GET Baltic" natural gas exchange trading areas started operating in Latvia and Estonia and the exchange became regional. From 2 July 2018 trade in a day ahead product was started in the Baltic Gas Exchange. The trade is conducted together with the cross-border capacities at the interconnection points between the Baltic States that were assigned using the implicit capacity allocation method.

In 2017 the NCC has two times changed the Methodology for Setting State-regulated Prices in the Natural Gas Sector. These changes have enshrined a new incentive mechanism for regulating in the natural gas sector, it has also been specified which factors are not considered to be performance improvement of natural gas companies.

The price caps for natural gas transmission, distribution, liquefied natural gas (LNG) re-gasification have been adjusted (established) and the specific prices have been confirmed in 2017. It should be noted that, in the course of the adjustment of the price caps, the windfall profit of the TSO and of the largest distribution system operator (hereinafter – the DSO) has been evaluated. The NCC has also recalculated the projected natural gas market price of natural gas, the security of supply of the transmission price (hereinafter – the Security element) and has twice confirmed tariffs for household consumers.

The NCC applies regulation in the natural gas sector in respect of 44 entities; compared to 2016, only a number of natural gas supply companies has changed, i.e. it has increased from 33 to 36. Natural gas consumption in Lithuania has stabilized and its growth was visible in 2017, the transit flows of natural gas to Russia are increasing too.

In 2017 the volume of imported natural gas amounted to 27374 GWh, i.e. around 13 % more than in 2016 (24222 GWh). 49954 GWh of natural gas have been transported in 2017 via the transmission system (6.63 % more than in 2016). 7454 GWh of natural gas have been distributed and 13941 GWh have been supplied in 2017. 24.3 TWh of natural gas have been consumed in Lithuania in 2017, i.e. 4.07 % more than in 2016.

Income in the natural gas sector (transmission, distribution, LNG re-gasification, supply) in 2017 amounted to 532 million Eur, i.e. the income was 4.71 % higher compared to 2016 (508 million Eur).

In 2017, 19173 GWh of natural gas have been sold and/or consumed in the wholesale market for natural gas supply, i.e. 2.93 % more than in 2016 when 18628 GWh of natural gas have been sold.

In 2017, 7834 GWh of natural gas have been sold in the retail market for natural gas supply, i.e. 10.76 % more than in 2016 – 7073 GWh of natural gas have been sold in 2016.

49.6 million euros were actually invested in the natural gas sector in 2017, compared to 2016 it has increased by 52.2 % (32.6 million Eur).

Chair Inga Žilienė

2. MAIN EVENTS IN THE ELECTRICITY AND NATURAL GAS MARKETS

2.1. Electricity sector

2.1.1. Major changes in the electricity sector in 2017

In 2017 the electricity amount imported in Lithuanian electricity system (hereinafter – LES) has grown continuously and in 2017 amounted to 95.2 % of the total electricity consumption in the country. The total installed capacity in the power plants has increased in 2017 and reached 3666 MW (in 2016 – 3591 MW). Compared to the last year, cumulative grid investment has increased in 2017, and this change was caused by increased investments of distribution network operators which amounted to 170.43 million euros (compared to 2016 has increased by 43.3 %). The TSO investments of the same period amounted to 26.68 million euros and were 27.4 % lower than in 2016. 29.64 thousand of new consumers have been connected in 2017 (1 % more compared to 2016), their power of the object permissible for use was 414.5 thousand kW (18.7 % higher compared to 2016). In 2017 the maximum hourly electricity demand (net worth) in Lithuania was 1896 MW (4.2 % lower compared to 2016), of them in the distribution network – 1665 MW (1.8 % lower compared to 2016).

Upon receipt of the request of AB "Lietuvos energijos gamyba", which is recognised as a market participant having significant influence in the power reserves market, and taking into account the fact that the market research is carried out at least every five years, in December 2017 the NCC has adopted the decision to initiate the research on active power reserves market which is due to be completed in the fourth quarter of 2018.

In 2017 the NCC has changed the Methodology for Setting Electricity Prices and Pricing of the Services of Ensuring Power Reserves. Major changes:

- return on investment for electricity generators providing the services of power reserves and the public service obligations that exceeds the one permitted by the NCC will be calculated in the same way as for the regulated entities operating in the field of electricity transmission, distribution and supply, i.e. the actual justified costs and income received of the previous periods will be assessed;
- by setting the level of income allowed for these producers, the NCC will be able to adjust it taking into account the results of the inspections performed and cost audits.

These changes have been adopted in order to apply uniform regulatory principles for the electricity power suppliers providing the services of power reserves and the public service obligations as are applied for the operators in the fields of electricity transmission, distribution and supply.

2.1.2. Competition in the electricity supply market and market monitoring

The NCC applies regulation in the electricity sector in respect of 49 entities. The activities of independent power supply, transmission, distribution and public supply are licensed or regulated through authorizations. At the end of 2017 the following entities had the licenses issued by the NCC: AB "Litgrid" electricity TSO, AB "Energijos skirstymo operatorius", AB "Achema", AB "Lifosa", AB "Akmenės cementas", UAB "E Tinklas" and UAB "Dirbtinis pluoštas" – of distribution network operator, AB "Energijos skirstymo operatorius", AB "Achema", AB "Lifosa", AB "Akmenės cementas" and UAB "Dirbtinis pluoštas" – of public electricity supply. In 2017, 37 companies had authorizations of an independent electricity supply, 24 of them operated in the field of an independent electricity supply.

Figure 1. Number of the market participants in electricity sector in 2016

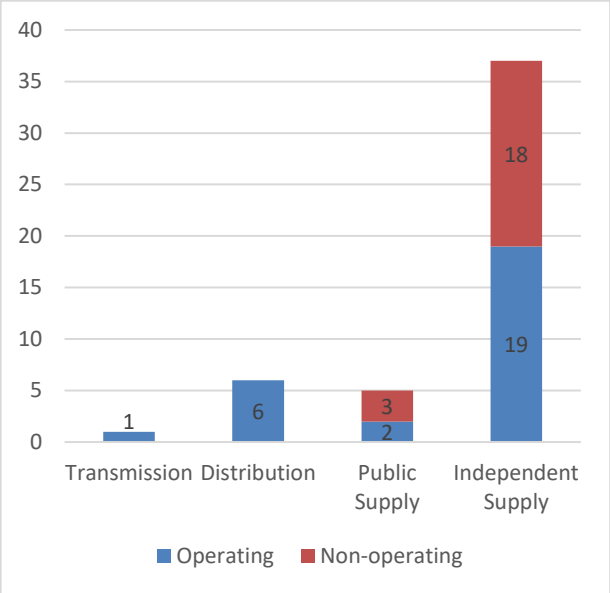
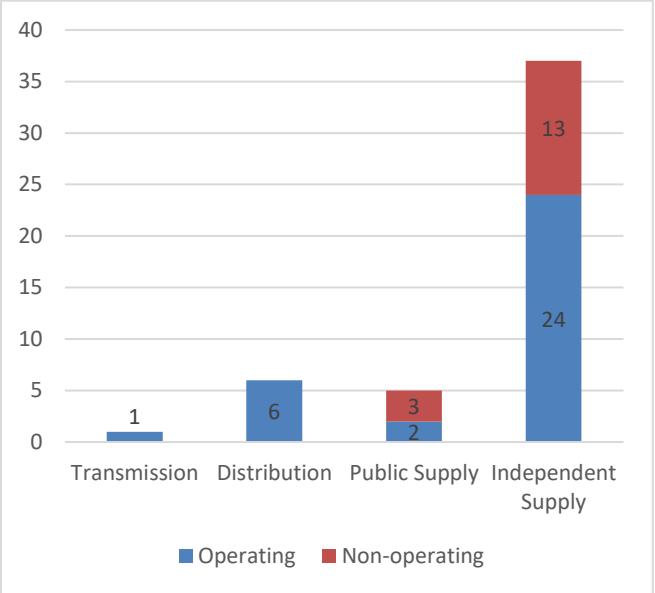


Figure 2. Number of the market participants in electricity sector in 2017



Source – the NCC.

The NCC carries out permanent surveillance of wholesale electricity market, the assessments of 5 potential Regulation (EU) No 1227/2011 on wholesale energy market integrity and transparency (REMIT) violations have been carried out in 2017. Having received information from the market participants the NCC has also conducted the investigation regarding the activities of the TSO AB "Litgrid". The NCC found that in 2014-2016 AB "Litgrid" failed to sufficiently inform the market participants of changes in capacities. However, such the actions of the transmission system operator AB "Litgrid" did not cause direct damage to the market participants. The NCC obliged AB "Litgrid" to inform the Commission of the actions to prevent such violations. AB "Litgrid" has updated "The instructions for providing information to electricity exchange operator "Nord Pool".

2.2. Gas sector

2.2.1. Major changes in prices regulation in the gas sector

In 2017 the NCC has twice changed the Methodology for Setting State-regulated Prices in the Natural Gas Sector approved by the Resolution O3-367 of the NCC of 13 September 2013 (hereinafter referred to as the Methodology of Prices). By the said changes:

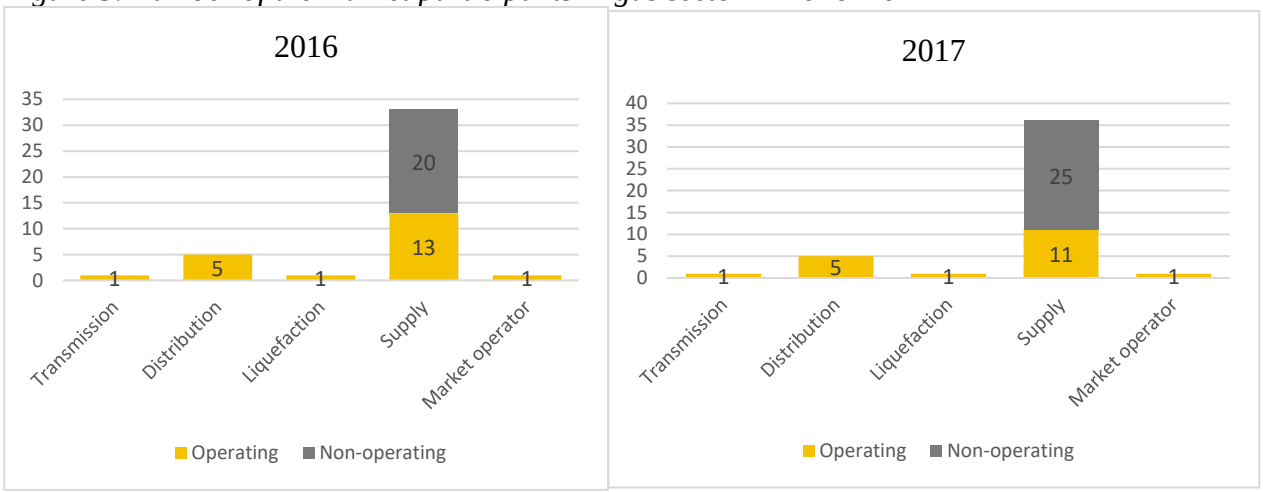
- a new incentive mechanism for regulation in the natural gas sector has been enshrined;
- factors that are not considered to be performance improvement of natural gas companies have been specified;
- has been provided that the asset leased or transferred on the grounds of commodate which is fully used in the regulated activities of the natural gas company even when the company does not carry out non-regulated activities and 50 percent of the share of asset that was financed by other infrastructure companies due to the cost sharing of engineering works shall be included when determining the regulatory asset base (RAB) of the asset attributable to the service (product).

These changes allow for unification of regulation in the natural gas and electricity sectors, increase of the objectivity of the assessment of quality levels and ensuring of clarity for the regulated entities in connection with the issues of calculation of the natural gas tariffs for household consumers.

2.2.2. Formation of competition in the natural gas supply market, the main changes in the gas market monitoring in 2017

The NCC applies regulation in respect of 44 entities in the natural gas sector. The activities of transmission, distribution, storage, LNG re-gasification, supply and market operator are licensed or regulated through authorizations in the gas sector. At the end of 2017 the following entities had the licenses issued by the NCC: AB "Amber Grid" – natural gas TSO, AB "Energijos skirstymo operatorius", AB "Achema", UAB "Intergas", UAB "Fortum Heat Lietuva", AB agricultural company "Josvainiai" – DSO, AB "Klaipėdos nafta" – the company operating in the field of re-gasification of LNG, UAB "GET Baltic" – natural gas market operator. 36 companies had licenses for natural gas supply, 11 of them were operating. In 2017 the NCC has issued 7 licenses for natural gas supply[1], has withdrawn 3 licenses for natural gas supply and has suspended 2 licenses for natural gas supply.

Figure 3. Number of the market participants in gas sector in 2016–2017



Source – the NCC.

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The number of household and non-household consumers in the natural gas sector is consistently increasing since 2010: there were 582 thousand of natural gas consumers in Lithuania, 575.3 thousand of them were household consumers and 7.2 thousand were non-household consumers. In 2016 there were 566.2 thousand of household consumers and 6.8 thousand of non-household consumers.

It should be noted that the NCC actively cooperates in the international Regional Gas Market Coordination Group (RGMCG) established in accordance with the Baltic Energy Market

[1] From 1 January 2018 authorizations are issued for the operation in the field of natural gas supply.

Interconnection Plan (BEMIP) in creating the regional natural gas market. The main objective is to develop in the region by 2020 the Rules for the operation of a single gas market, including the common principles of pricing to ensure the transparent, competitive and clear procedure for users of gas systems seeking to make use of the Baltic and Finish transmission systems, and for the gas users – gas for a competitive price. The NCC, by taking part in the regional Task Force for Gas Transmission Services Pricing and inter-TSO Compensation Mechanism Application, together with the national regulatory authorities of Latvia, Estonia and Finland has prepared the guidelines setting the main pricing principles of the Baltic-Finish natural gas region. On 27 November 2017 the said guidelines have been approved by the national regulatory authorities. In accordance with the principles enshrined in the Guidelines and in order to create from 2020 onwards a common Baltic-Finnish natural gas transmission entry-exit system and to select the most appropriate methodology for calculating the prices of natural gas transmission services of three currently available alternative methodologies ("Postage stamp", Capacity-weighted distance or Matrix) and to have a model for setting natural gas transmission tariffs for the whole region, in 2017 the national regulatory authorities have implemented a tendering procedure. The tendering procedure has been held under the auspices of the representatives of Finish national regulatory authority, the supplier who has successfully tendered for the procedure was the international consultancy company "Baringa" that in June 2018 provided the final results of the study prepared to the national regulatory authorities. In order to eliminate the cross-border entry and exit points in the region and to have uniform (similar) tariffs at the points of entry to the region, the consultants have suggested, in line with the Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas, to apply the same "postage stamp" methodology in each country of the region separately, and benchmarking shall apply for the justification of region entry tariffs.

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3. ELECTRICITY MARKET

3.1. Network regulation

3.1.1. Unbundling

The Articles 10 and 11 of the Directive 2009/72/EC and the Article 3 of the Regulation (EC) No 714/2009

There were no changes in 2017 in connection with the implementation of the provisions of the Law on Electricity (hereinafter referred to as the LoE) related to the unbundling of the activity and control of AB "Litgrid". The National Commission for Energy Control and Prices (hereinafter referred to as the NCC), in accordance with the provisions of the Article 26 of the LoE, continues to monitor and control how the transmission system operator (hereinafter referred to as the TSO), in pursuing its activities, safeguards the independence and activity unbundling requirements set forth in the LoE.

The Article 26 of the Directive 2009/72/EB

In the event of change in the circumstances in connection with which it would be impossible to safeguard the implementation of the requirements of unbundling of activity types and accounting set forth in parts 1 and 3 of the Article 54 of the LoE, AB "Energijos skirstymo operatorius" shall undertake to inform the NCC thereof not later than within 5 working days following the change in the said circumstances. There were no changes in the circumstances in 2017.

3.1.2. Technical functioning

Balancing services (the Article 37(6)(b), the Article 37(8))

The relations between the players on the electricity market active in electricity wholesale in the territory of the Republic of Lithuania are governed by the Rules for trading electricity, the balancing energy prices are calculated as per the Description of the Balancing Energy Price Regulation Procedure.

The NCC, having regard to the Baltic harmonized imbalance accounting model prepared by the Baltic electricity transmission system operators that lays down the uniform principles of functioning of balancing markets, has approved by the Resolution No O3E-591 of 14 December 2017 a new version of the Description of the Balancing Energy Price Regulation Procedure.

These changes provide a level playing field for all balancing market participants in Lithuania, Latvia and Estonia – until then, each state had defined separate principles for balancing energy pricing. A Common Baltic Balancing Market was launched on 1 January 2018.

Security and Reliability Standards, quality of service and supply (the Article 37(1)(h))

The LoE states that the NCC establishes the electricity transmission reliability and service quality requirements and controls compliance with them. The electricity transmission reliability and service quality requirements (hereinafter referred to as the Requirements) have been changed in March 2016. Following these requirements, the electricity transmission reliability and service quality requirements for a new regulatory period, i.e. for the years 2016-2020, are established until the 15th day of April of the calendar year of the new regulatory period, taking into account the average of the actual transmission reliability indicators of five years, i.e. 2011-2015.

The electricity transmission reliability and service quality indicators and their minimum levels are separately calculated for the electricity transmission system and distribution network for electricity (see figures below). The lower the value of the indicator, the better level of electricity transmission reliability. The calculations are limited to those cases where failure of electricity transmission was due to the reasons attributable to the liability of the system operator or occurred for

unidentifiable reasons. Failures caused by *force majeure* or that occurred for external causes do not affect reliability indicators. Reliablity of electricity transmission through electricity transmission networks is assessed using two indicators:

- Energy not supplied (hereinafter referred to as ENS);
- Average interruption time (hereinafter referred to as AIT).

Figure 4. ENS and the minumum level of this indicator, MWh

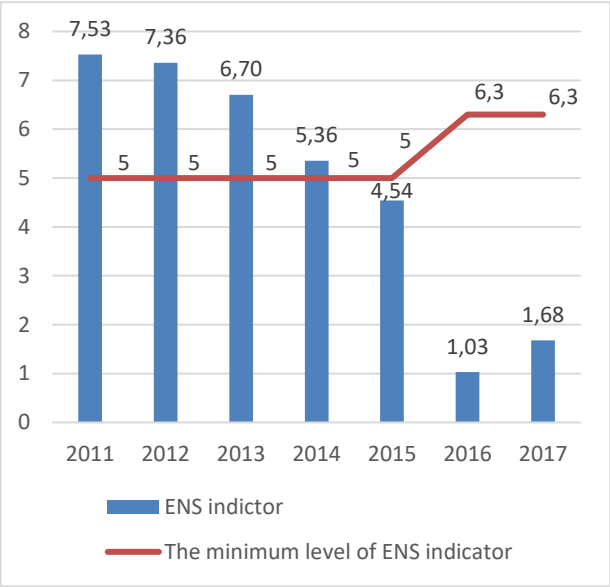
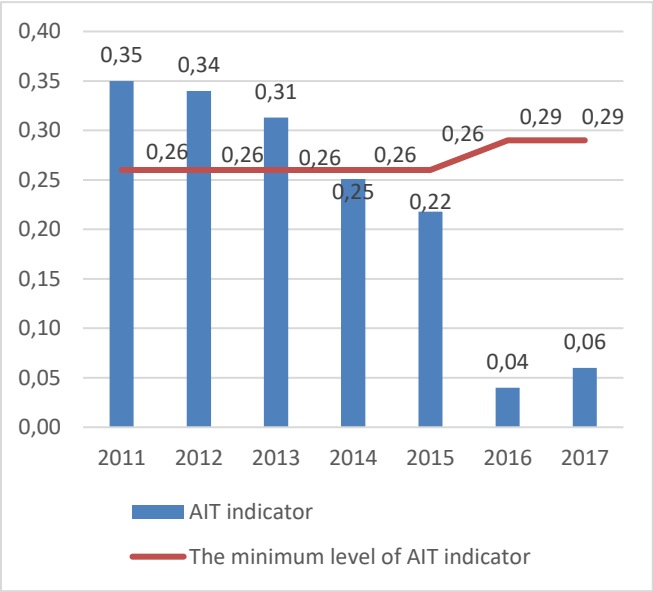


Figure 5. AIT and the minimum level of this indicator, min



Source – The NCC.

The reliability indicators established by NCC for the year 2017 oblige TSOs to safeguard that technical quality of the services will be better or equal to the minimum requirements: the average duration of electricity supply interruption for the consumers should not be longer than 0.29 minute, and the amount of not transmitted electricity should be no greater than 6.3 MWh. In 2017, compared to the minimum level established, the transmission reliability as per ENS indicator was 73.3 percent lower (did not exceed the maximum value set), as per AIT indicator it was 79.3 percent lower (did not exceed the maximum value set).

Reliablity of electricity transmission through electricity distribution networks is assessed using two indicators:

- System average interruption duration index (hereinafter referred to as SAIDI);
- System average interruption frequency index (hereinafter referred to as SAIFI).

The reliability indicators established by NCC for the year 2017 oblige the distribution system operators (hereinafter referred to as the DSOs) to safeguard that technical quality of the services will be better or equal to the minimum requirements: the average duration of electricity supply interruption for the consumers (SAIDI) should not be longer than 52.12 minutes per year, and the average number of interruptions per consumer (SAIFI) when caused by a fault of DSOs should not be greater than 0.72 times.

In 2017, compared to the minimum level established, the transmission reliability as per SAIDI indicator was 5.9 percent lower (did not exceed the maximum value set), as per SAIFI indicator it was 6.9 percent lower (did not exceed the maximum value set).

Fig. 6. SAIDI and the minimum level of this indicator, min. per consumer

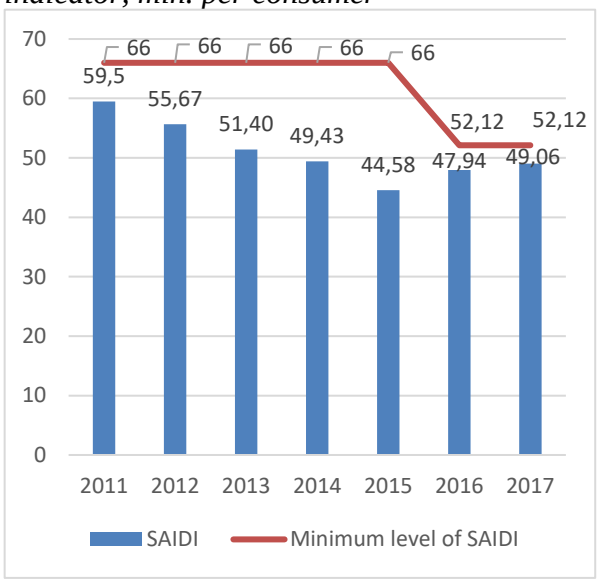
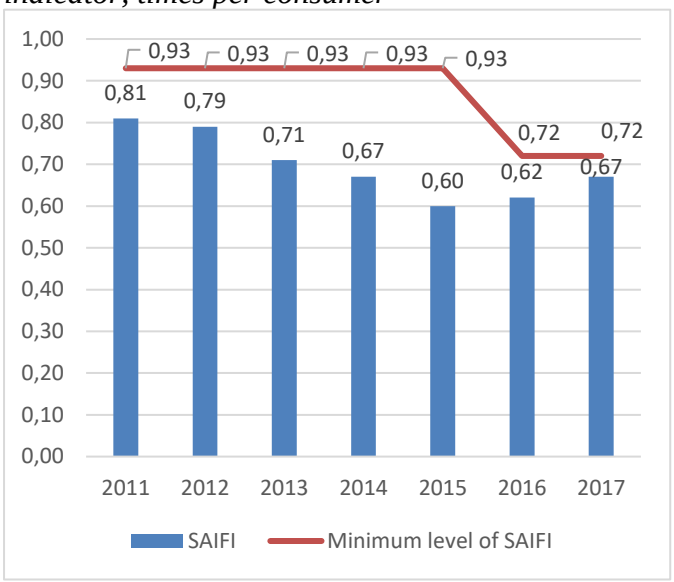


Fig. 7. SAIFI and the minimum level of this indicator, times per consumer



Source – The NCC.

AB "Energijos skirstymo operatorius" does not exceed the minimum transmission reliability levels throughout the comparative period, however SAIDI and SAIFI indicators in 2017 have slightly increased compared to the last year.

The quality indicators of electricity transmission and distribution services are established in the requirements. The following indicators are established for the distribution service providers:

- the percentage share of the timely (within 20 days from the date of payment of connection fee) connected new consumers;
- the percentage share of the timely (within 5 working days to household consumers and within 2 working days to other consumers) restored electricity transmission to the consumers having settled their outstanding fees;
- the percentage share of the consumers who were timely informed on a scheduled interruption (10 calendar days in advance);
- the percentage share of the failures eliminated for consumers in a timely manner (within 5 working days);
- the percentage share of the consumers to whom electricity transmission was restored (depending on the reliability category) after a scheduled interruption for the consumers;
- the percentage share of the timely (within 30 calendar days) investigated complaints of the consumers and network users.

Only one service quality indicator, namely the percentage of the timely (within 30 calendar days) investigated complaints, is established for the TSOs.

Table 1. Execution of the transmission reliability quality indicators of AB "Energijos skirstymo operatorius" in 2017.

Electricity supply reliability category	Unit of measurement	Set indicator of service provision to the consumer	Average indicator of service provision to the consumer	Indicator for timely service provision to the consumer (in percent)
I	hour	0	0,00	100
II	hour	2,5	0,55	100
III	hour	24	1,57	100

Source – The NCC.

In accordance with the Article 19 of the LoE, the Report on the Assessment of the Reliability of the LES for the year 2016 has been prepared in 2017. It has been stated in the said report that the reliability of the LES is being safeguarded. The said report is also publicly available on the NCC website www.regula.lt.

Maintenance of security measures (Article 37(1)(t))

In accordance with the Article 31(1)(11) of the LoE, AB "Litgrid", acting as a TSO, performs a balancing function. The required secondary and tertiary reserve volumes are foreseen to safeguard a supply reliability. These volumes are ensured by the contracts with the power plants in the LES and by the contracts with BRELL Neighbouring Countries operators for the jointly maintained secondary reserve. The DC connections management contracts with Polish and Swedish TSOs also provide for an opportunity of emergency assistance from the neighbouring countries.

The TSOs order the tertiary power reserve to safeguard electricity supply to the consumers that can be activated during the maximum power consumption period, when there is a lack of offers in the electricity market. In the event of a power or fuel shortage, consumer disconnection and restriction plans are drawn up and approved.

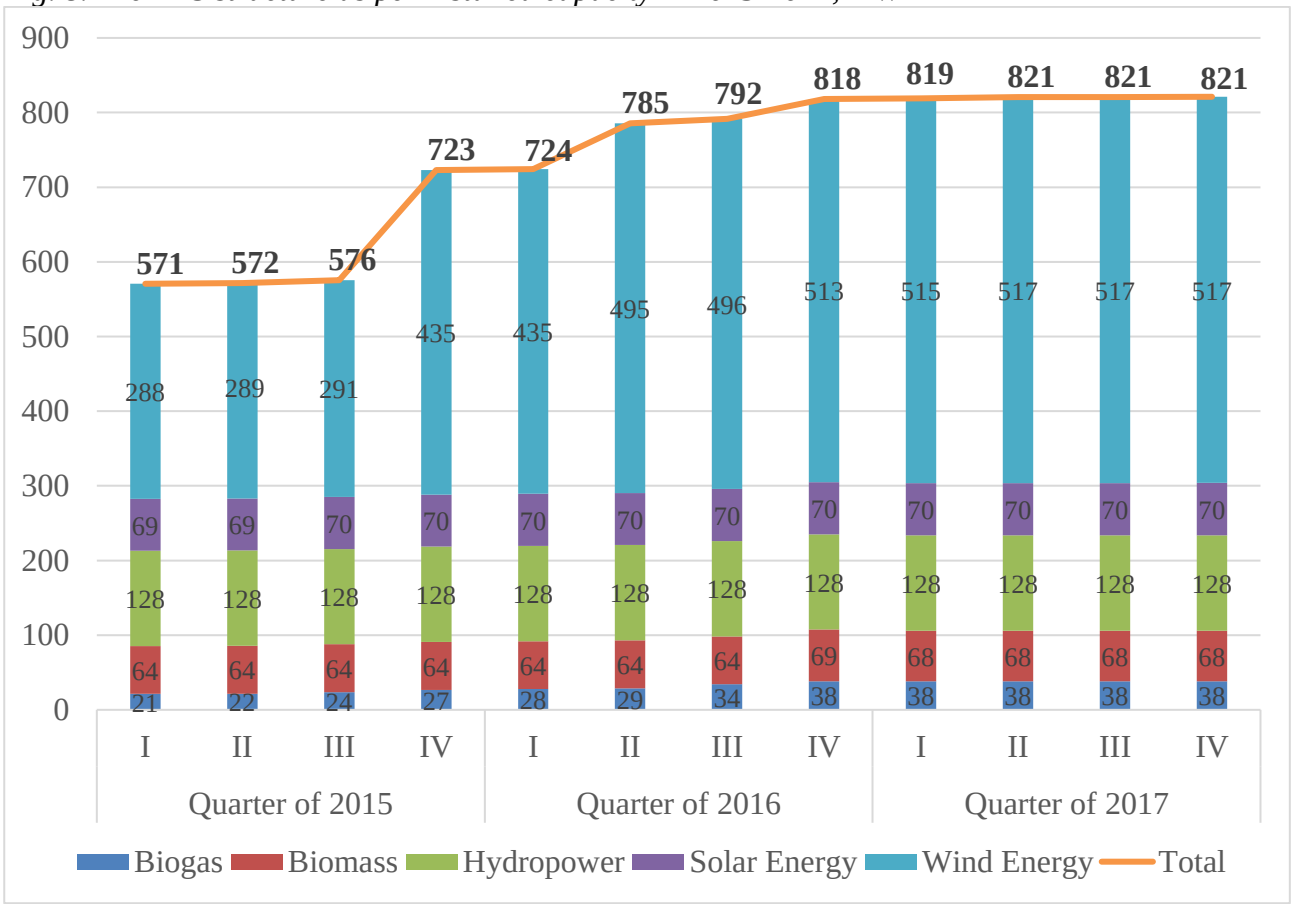
Congestions that lasted for 23 hours have been determined in the last year in Lithuanian-Belarusian interconnection. A capacity during these hours was 1100–1300 MW, whereas a physical flow exceeded the established capacity limit by 101-109 %. Congestions in Russian-Lithuanian interconnection in 2017 lasted for 48 hours. A capacity during these hours was 300-550 MW, whereas a physical flow exceeded the established a capacity limit by 101-113 %. No customers have been disconnected or limited by AB "Energijos skirstymo operatorius" in 2017 due to lack of capacity of the network.

Renewable energy sources (hereinater referred to as RES) regulation structure: The Report on connection, access and dispatching regimes for RES-E, in particular on priority issues. The Report also on the RES balancing responsibility (Regulation (EC) No 713/2009 Article 11)

The balancing responsibilities of RES have not changed, compared to the previous years, like the other incentives provided for in the Law on Energy from Renewable Sources.

The largest market share in the overall structure of renewable resources installed capacity market in 2017 was made up of wind power plants – 63.0 %, hydroelectric power stations – 15.6 %, solar power plants – 8.5 %, biomass – 8.2 %, biogas – 4.7 %. In 2016, the market share of power plants of wind farms in the overall structure of installed capacity market amounted to 62.7 %, of hydroelectric power stations – 15.6 %, of biomass – 8.5 %, of biogass – 4.7 %, of solar power plants – 8.5 %.

Fig. 8. The RES structure as per installed capacity in 2015-2017, MW



Source – The NCC.

In 2017, the share of the installed capacity of RES power stations in the overall balance of installed capacity amounted to 22.4 % and this share remained unchanged compared to 2016.

3.1.3. The network tariffs for connection and access

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

The Article 37(1)(a)

Related information is provided in sections 3.2.2 and 3.2.2.1 of this report.

The Article 37(6)(a)

In accordance with the provisions of the Law on Energy, the energy companies engaged in activities the prices of which are subject to regulation must align with the NCC the planned investment projects related to the construction of new energy objects, restoration, modernization, reconstruction of the existing energy objects or the development of the operating energy objects in energy generation, transmission, distribution and supply activities. If the investments are not coordinated with the NCC, they cannot be recognized as reasonable and are not included in the price caps.

In 2017, the investments of electricity transmission and distribution activities comprised 197.11 million euros (26.6 % more than in 2016). This change was mainly due to 43.3 percent increase in investment in distribution networks that in 2017 comprised 170.43 million euros. The investment in distribution networks – has decreased from 36.74 million euros in 2016 to 26.68 million euros in 2017.

The return on investment is determined by the method of weighted average cost of capital (WACC). In 2018, it amounts to 4.95 % for production company, to 4.90 % for TSO and to 4.88 % for DSO. The aforementioned and a more detailed information is also publicly available on the NCC website www.regula.lt.

The Article 37(8)

The Methodology for Setting Electricity Transmission, Distribution and Public Supply Services‘ and the Public Price Cap has been approved at the end of 2015. The methodology implements the Model of Long-Run Average Incremental Cost (hereinafter referred to as LRAIC) aimed at improving the operation of electricity networks that meet demand. The price caps for electricity transmission and distribution services for the 5 year regulatory period 2016-2020 have been determined under the new model. In 2017, the methodology has been revised in the following aspects:

- the adjustment of the price caps for regulated services (transmission, distribution, public supply) has been simplified;
- the procedure for increasing or decreasing the allowable operating income of the entity during the regulatory period, to adjust the actual return on investment, recalculate the operating costs (OPEX) has been regulated more clearly;
- it has been foreseen how the cost of use of interconnection services should be calculated when the scope of use of interconnection services is equal to zero;
- the repayment of return on investment that exceeds the value set by the NCC when it is arranged over a period of more than one year has been regulated.

The rights and obligations of the NCC concerning the prices and tariffs of transmission and distribution service providers as set forth in the Article 37 (8) of Directive 2009/72 / EC remained unchanged in 2017.

The Article 37(10)

The rights and obligations of the NCC concerning the prices and tariffs of transmission and distribution service providers as set forth in the Article 37 (10) of Directive 2009/72/EC remained unchanged in 2017.

The 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.

The Article 37(3)(c) and (d)

The rights and obligations of the TSO and the NCC established in accordance with the Article 33 of the LoE, related to the preparation, evaluation and monitoring of the 10 year transmission networks development plan remained unchanged in 2017. The plan of development of 400-110 kV networks of Lithuanian electricity system for the next decade and covering the period 2017-2026 has been received on 30 June 2017. A public consultation in connection with the above-mentioned plan has been announced by the NCC, and after having considered the comments received the NCC has confirmed by the resolution No O3E-39 of 15 March 2018 that the investments provided for in the development plan prepared by AB “Litgrid” and covering the period 2017-2026 will ensure a reasonable development of the electricity sector that would meet the needs of market participants, as well as the reliable and efficient operation of transmission system by providing consumers with quality services.

In 2017-2026, the need for investment in the development and renovation of the transmission network will amount to approximately 642.49 million euros, i.e. 4.3 % less compared to the investment planned by AB “Litgrid” in 2016-2025. The largest share of the investments provided for in the 2017-2026 transmission network development plan will me made of investments in the project

of connecting the LES with the continental European networks for the purpose of synchronous operation.

The DSO, in accordance with the Description of the Procedure of evaluation and alignment of investment of energy companies in the National Commission for Energy Control and Prices approved by the NCC, prepares a long-term investment program for regulated activities for the regulation period and submits it to the NCC.

Prevention of cross-subsidization (the Article 37(1)(f))

The function of the NCC established as per the Article 8(9)(13) of the Law on Energy and the Article 9(4)(5) of the LoE to control the efficient unbundling of activities in the energy sector by ensuring the independence of energy transmission and distribution activities from the commercial interests of energy activities and in order to avoid cross-subsidization remained unchanged compared to the previous year (for more details refer to "The Annual Report on Electricity and Natural Gas Markets of the Republic of Lithuania 2016 to the European Commission).

3.1.4. Issues of cross-system trade

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

Trading has been restricted (assuming that the interconnections restricted trading if their capacity for trading was fully used) in the following intersections in 2017 due to the lack of capacity:

- in Lithuania-Latvia interconnector for 389 hours (from Lithuania to Latvia – 9 hours, from Latvia to Lithuania – 380 hours);
- in Lithuania-Belarus interconnector for 132 hours (from Belarus to Lithuania);
- in Lithuania-Sweden interconnector 4911 hours (from Sweden to Lithuania – 3377 hours, from Lithuania to Sweden – 1534 hours);
- in Lithuania-Poland interconnector 6535 hours (from Poland to Lithuania 2805 hours, from Lithuania to Poland – 3730 hours);
- in Lithuania-Russia interconnector 118 hours (from Russia to Lithuania).

New solutions in the context of new countries and markets, and their specifics are required after there occurred changes in relation to the infrastructure situation when Lithuania became a crossroads of electricity flows between Sweden, Latvia, Belarus, Poland and Russia (Kaliningrad). Regional cooperation becomes critically important when seeking for effective solutions and implementing the interconnection of electricity markets: sharing costs between countries and market participants, implementation of financial instruments, effective use of capacity, the implementation of intra-day trading in new interconnections, etc. The said solutions are related to the already adopted codes of electricity networks and the codes that are expected to be adopted, and the implementation of the tasks set out therein at European level is becoming increasingly relevant in terms of the decisions made both at regional and national level.

It should be stressed out that after the new interconnectors to the west have been built Lithuania, like other countries, in the European Union (hereinafter referred to as the EU) is still seen as an isolated island of energy. Thus, integration into European electricity systems from the point of view of management and operational work is a top priority; i.e. the synchronous operation of Lithuanian electricity system with continental European networks would be the ultimate goal.

In 2017, the Joint Research Centre of the European Commission in cooperation with the representatives of the Baltic Sea Region countries in the BEMIP format has performed a Baltic States Synchronization Scenario Analysis Study. The results of the study confirmed the optimal scenario of the Baltic States synchronization with the Western European networks in the context of technical, economical and reliability aspects, i.e. synchronization with continental European networks (hereinafter referred to as CEN) through the Polish electricity system. At the beginning of 2018 the

TSOs of the Baltic States and the European Network of Transmission System Operators for Electricity (hereinafter referred to as ENTSO-E) have launched the Frequency Stability Study of the Baltic States Synchronous Merger with the CEN. Both the study of dynamic stability and the study of frequency stability are required for the final political decision on the scenario of synchronization with the CEN that has been taken in BEMIP format in June 2018 and for approaching ENTSO-E regarding synchronous connection.

In 2017, the Lithuanian electricity TSO earned 1 444 945 EUR (in 2016 – 3 438 451 EUR) of income in relation with congestions. All these funds are planned to be used for the implementation of strategic projects. It should be noted that in 2017 congestions have been determined in Lithuania-Belarus and Russia-Lithuania interconnections that lasted for 23 and 48 hours respectively.

In 2017, the annual hourly peak demand for electricity (net) in 2017 was 1896 MW (in 2016 – 1979 MW, in 2015 – 1748 MW). The gross installed capacity of the power plants of the LES amounted to 3666 MW and was 75 MW higher than in 2016.

All relevant information related to the availability and access to the transmission network is available publicly on the website of AB "Litgrid" www.litgrid.eu and "Nord Pool" AS website www.nordpoolspot.com.

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

A Common Baltic Balancing Market was launched on 1 January 2018. See Chapter 3.1.2 for more details.

Appropriate decisions will be required when reorienting the Baltic electricity systems for operation with the continental European networks and preparing to work disconnected from other electricity systems in "island mode". Mutual coordination increases the overall efficiency of system management and reduces the likelihood of total accidents. Furthermore, for the purpose of synchronization, the internal electricity transmission network that will also serve as renovation of deteriorating infrastructure and as the way to efficiently use "LitPol Link" and "NordBalt connections" also needs to be strengthened. Synchronization with the continental European networks is planned to be implemented by 2025. At the beginning of 2018 the TSOs of the Baltic States and ENTSO-E have launched the Frequency Stability Study of the Baltic States Synchronous Merger with the CEN. Both the study of dynamic stability and the study of frequency stability are required for the final political decision on the scenario of synchronization with the CEN that has been taken in BEMIP format in June 2018 and for approaching ENTSO-E regarding synchronous connection.

Monitor of transmission system operator investment plans as per Ten Year Network Development Plan (TYNDP) (the Article 37(1)(g)

Monitoring of AB "Litgrid" investment plans is carried out as per the conditions referred to in section 3.1.3., that are enshrined in the LE; i.e. the NCC assesses the updated 10 year transmission networks development plan submitted every year until the 1st of July.

In 2017, the length of the high-voltage power transmission lines was 7048 kilometers, and there were 236 high-voltage transformer substations. The total electricity demand – 12.54 TWh. Electricity consumption increased by 2.4%. Currently the LES is directly connected with five neighbouring (Sweden, Poland, Belarus, Latvia, Russia) electricity systems. The amount of investment in transmission network for the period 2017-2026 is around 642.49 million euros.

Cooperation (the Article 37(1)(c))

The NCC is the member of the Council of European Energy Regulators (CEER) and Energy Regulators Regional Association (ERRA), its representatives participate in various meetings of work groups, perform common benchmarking of energy companies, provide answers to various questionnaires, required information and monitor the progress of the documents being prepared.

3.1.5. Compliance with legislation

Compliance by the Regulator with the binding decisions of the Agency for Cooperation of Energy Regulators (ACER), of the European Commission (the Article 37(1)(d)) and with the Guidelines (the Article 39)

The NCC regularly receives information about the legal acts of the ACER and the European Commission that are being prepared and those already adopted, also coordinates positions with other public institutions through the common information system. The provisions of the relevant EU legislation are transposed into the provisions of the national legislation or are applied directly and are observed within the frame of competence when adopting the resolutions of the NCC on the components of the price of transmission service, determination of capacity of connecting lines and the Rules for distribution and congestion management, etc.

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

The NCC, unless otherwise provided by other legislation, draws up and establishes in its own legislation detailed requirements for compliance with the EU legislation and liability for breach of these instructions. The details on compliance with the provisions of the legislation on cross-border trading have been mentioned in parts 2.1.2 and 3.1.4 of this report.

As per Article (9)(7) of the LoE, in accordance with the procedure and conditions established by laws the NCC imposes effective, proportionate and dissuasive sanctions on energy undertakings for violations of the state regulated energy activities in the electricity sector. The fines imposed by the NCC for the violations in carrying out the regulated energy activities and the procedure of their imposition are set forth in the Law on Energy.

The Article 36 of the Law on Energy provides that the NCC, thus ensuring compliance with the conditions of the regulated activity specified by the law, imposes fines on the energy undertakings for the violations in carrying out the regulated energy activities that have not been eliminated within a reasonable time established by the NCC.

In cases where the Competition Council within the frame of its competence investigates unfair competition practices or infringement of the principles of non-discrimination on the part of consumers in the energy sector, the investigation of these practices is carried out, the mandatory instructions are given to the energy undetakings and the liability for the infringements is determined, including the sanctions imposed on the energy undetakings, in accordance with the procedure and conditions established by the Law on Competition. For this purpose the NCC and the Competition Council cooperate with each other in order to determine efficiently the extent of unfair competition practices or infringement of the principles of non-discrimination on the part of consumers in the energy sector and their impact on energy consumers and / or other energy undetakings. The energy undetakings are liable for the same infringements only under the Law on Energy or under the Law on Competition, taking into account the determined competence of the NCC or the Competition Council.

3.2. Promotion of competition

3.2.1. Wholesale market

"NordBalt" and "LitPol Link" electricity interconnections have also opened up new opportunities for the development of the Lithuanian electricity market and have significantly reduced the wholesale electricity market price in Lithuania. The decrease in electricity prices has been recorded both in the price zones of Lithuania and Latvia, where electricity prices in the day-ahead market of the Nord Pool Baltic bidding area in 2017 compared to 2016 fell by 3.9 % (the fall in prices in 2016, compared with 2015, amounted respectively to 12.8 % and 13.8 %).

The NCC is actively involved in the creation of a common regional electricity market, including the development and implementation of various common legislation.

The Rules for the surveillance of trading in electricity and natural gas governing the procedure and conditions for the surveillance and monitoring of trading in electricity and natural gas and assessment of related violations entered into force from 1 March 2017. These rules are designed to safeguard the proper surveillance and monitoring of trading in electricity and natural gas, to create preconditions for fair and effective competition in the electricity and natural gas markets, to safeguard the integrity and transparency of the wholesale electricity and natural gas markets. The rules introduce the concept of a market participant defining which participants of the electricity (and natural gas) sector are subject to the provisions of the procedure for the surveillance and monitoring of wholesale trading in electricity and natural gas and assessment of related violations. The rules also clearly define when an investigation is initiated for a possible violation in the course of investigating possible cases of abuse in the wholesale energy market.

The Baltic States, Finland, Sweden, Poland work closely together in the Baltic Capacity Calculation Region (Baltic CCR) when implementing at the regional level the network codes in electricity sector. The agreement between the national energy regulators of the Baltic CCR region defining the guidelines for cooperation was signed in October 2017.

The NCC, implementing the network codes in the electricity sector defining the Guideline on Capacity Allocation and Congestion Management (CACM), the Guideline on forward capacity allocation (FCA), the requirements of consumer connection, the requirements for generators, the requirements for connecting high voltage DC systems and modules of power plant park connected through a DC line to the network and balancing:

- has appointed EPEX Spot SE as the nominated electricity market operator in the Lithuanian electricity trading zone which can provide intra-day and day-ahead electricity trading services;
- has imposed obligations on AB “Litgrid” together with Swedish and Latvian electricity transmission system operators to submit proposals that could promote the possibilities of hedging the risk of fluctuations in the price of inter-zone electricity;
- agreed that the new eVita module (generator) for the generation of electricity produced by the Dutch company “BDR Thermea Group BV“ would be subject to exclusive (preferential) market entry conditions.

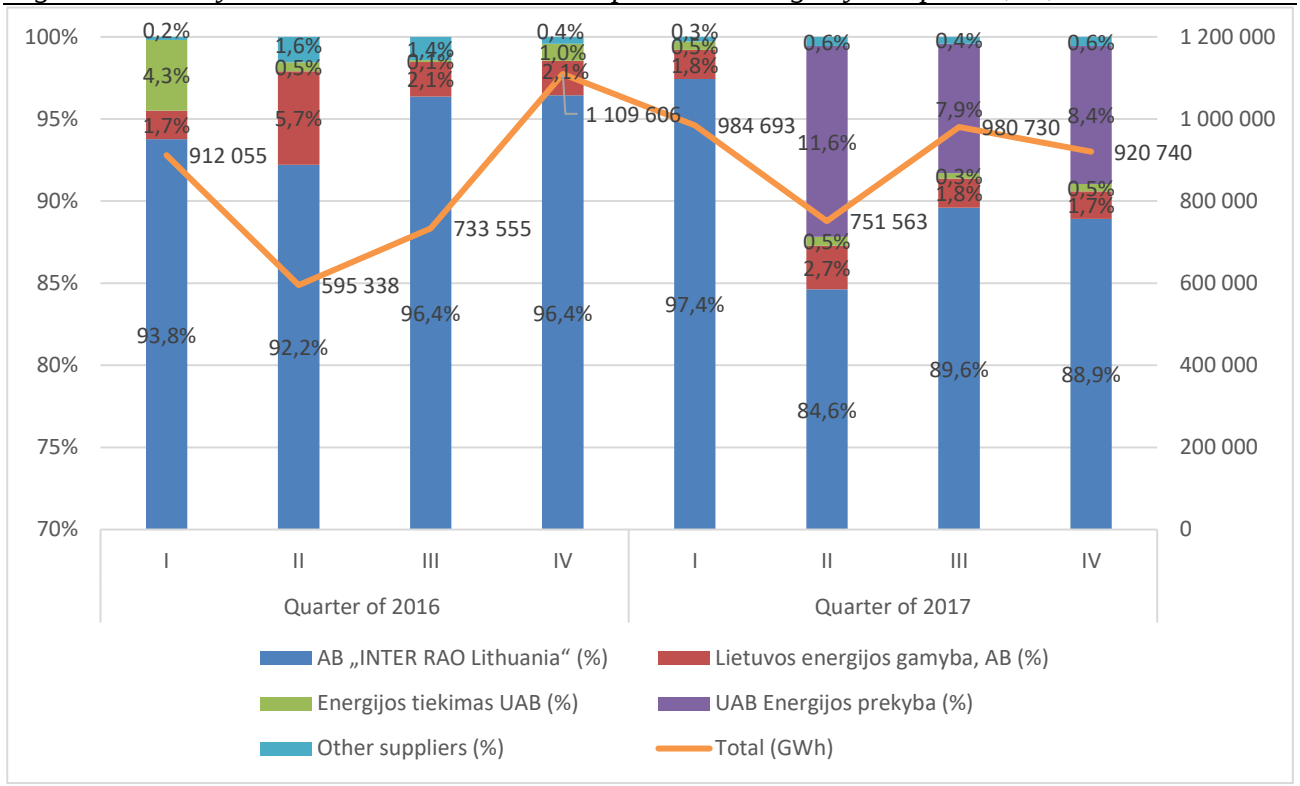
The NCC has also approved:

- the Description of the Balancing Energy Price Regulation Procedure and a standard balancing energy purchase/sale contract in order to harmonize the principles of functioning of the Baltic balancing markets and to create a common Baltic balancing market;
- the methodology of providing data on generation and load;
- the methodology of common network model;
- Market coupling operator functionality plan;
- The deadline for guaranteeing day-ahead capacity;
- The changes of determination of capacity calculation regions;
- The description of the application of the provisions allowing derogation.

In 2017, the electricity price in Lituanian market was 35.13 EUR/MWh. 95.2 % of the total electricity consumption in the country has been imported. 19 participants participated in the day-ahead trading of power exchange, and 10 participants participated in the intra-day trading. A more detailed information is available at www.nordpoolspot.com.

In 2017, there were 3 main suppliers in the wholesale electricity market: AB “INTER RAO Lithuania“, UAB “Energijos prekyba“ and AB “Lietuvos energijos gamyba“. The electricity quantity sold by AB “INTER RAO Lithuania“ accounted to more than 90 % of all electricity sales on the power exchange in 2017. The evaluation of the overall result of AB “INTER RAO Lithuania“, UAB “Energijos prekyba“ and AB “Lietuvos energijos gamyba“ shows that the result exceeded 99% of all electricity sales on the power exchange in 2017.

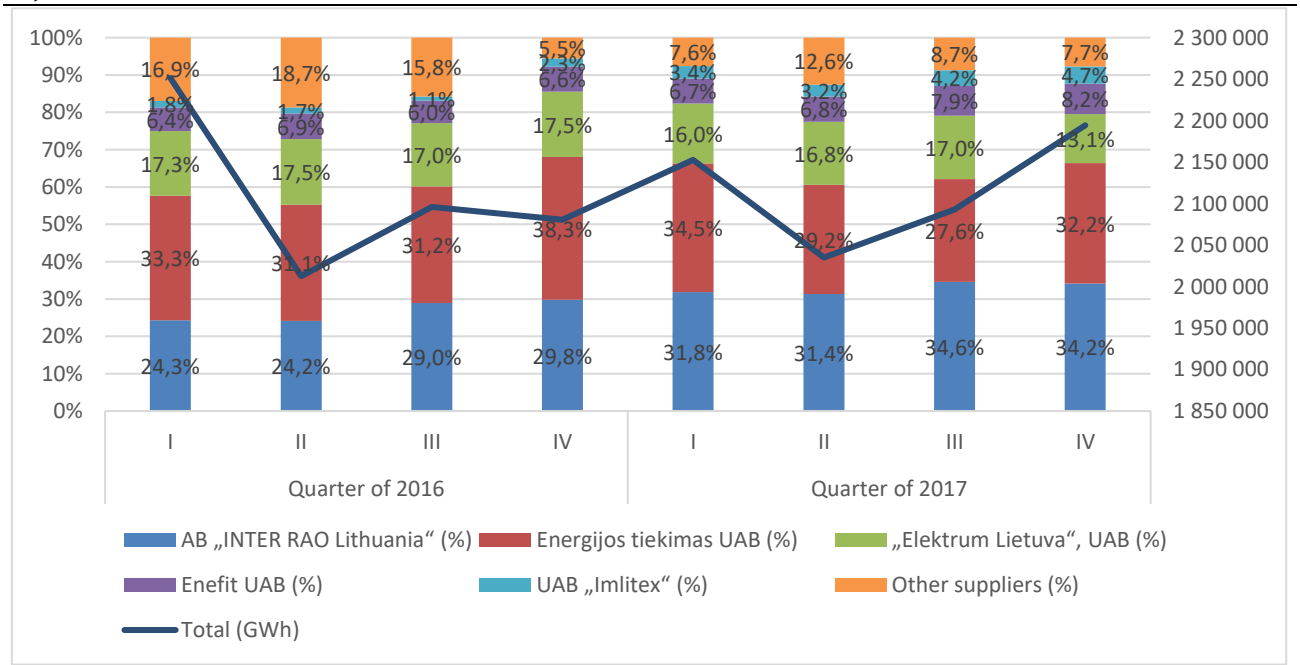
Fig. 9. Electricity sales market structure in the power exchange by companies, %, 2016-2017



Source – The NCC.

In 2017, as in 2016, the purchases of two companies, i.e. AB “INTER RAO Lithuania“ and UAB “Energijos tiekimas“ comprised about two thirds of purchases of all independent suppliers on the power exchange.

Fig. 10. Electricity purchase market structure in the power exchange as per independent suppliers, %, 2016-2017

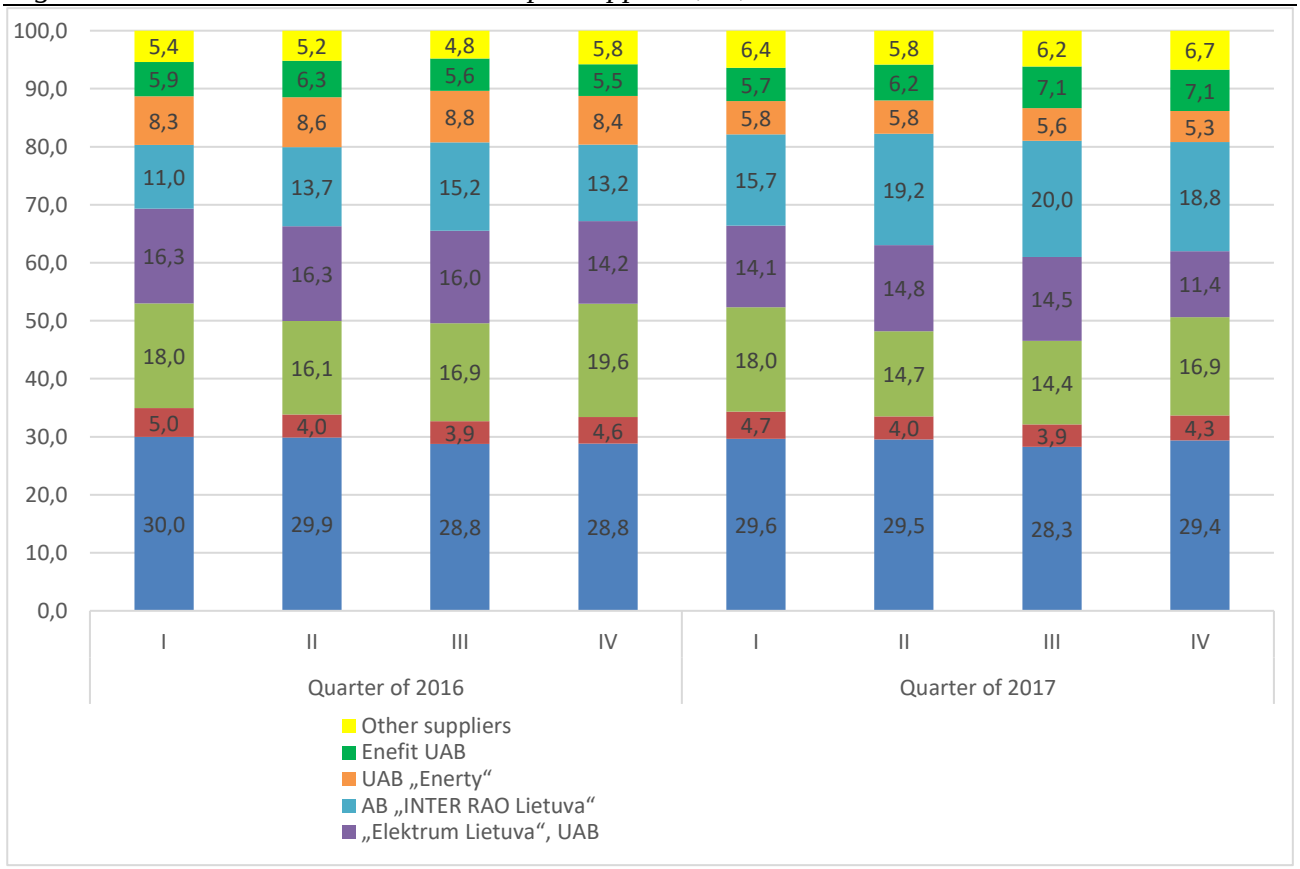


Source – The NCC.

In the structure of the retail supply market, the market share of AB “Energijos skirstymo operatorius” in 2017, compared to the previous year, continued to account for about one third of all

electricity sales in the market. Other market participants maintained similar market positions as in 2016.

Fig. 11. Retail market sales structure as per suppliers, %, 2016-2017



Source – The NCC.

In order to increase the awareness of the market participants and to safeguard that market participants have reliable information, the NCC prepares on regular basis quarterly and annual reports of monitoring of the electricity market and makes them publicly available on the website http://www.regula.lt/elektra/Puslapiai/elektros-rinkos-apzvalga/rinkos-stebesena.aspx.

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

The monitoring of electricity prices is carried out as per the Rules for the monitoring of trading in electricity and natural gas approved by the NCC, under which the NCC carries out monitoring in the electricity market and is entitled to receive information from the market operator and market participants. The monitoring of trading in the electricity market is carried out by analysing the behaviour of the market participants, that is, the conditions for the conclusion of transactions, including making instructions for the sale, explanations of the market participants and other circumstances, in order to ensure that there is no abuse in connection with wholesale electricity markets. Information on the electricity market is published in the electricity market monitoring reports that are made publicly available on the NCC website www.regula.lt (also see section 2.1.3).

It should be noted that the meetings of the Committee for the Development of the Common Baltic Electricity Market attended by the representatives of public authorities, market participants and related associations take place at least once every six months. The meetings are intended for exchanging relevant information and dealing with problematic issues by finding out the causes, and

for foreseeing what steps need to be taken in order to efficiently operate and develop the electricity market.

In order to safeguard transparency, the NCC carries out surveillance of whether the information is duly published in accordance with the provisions of 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 Regulation (EC) No 838/2010 of the European Parliament and of the Council 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. The NCC also makes publicly available on its website all information related to its activities: news, various explanations, statistical information, information about ongoing meetings, material of public meetings, etc.

3.2.2. Retail market

From 2013 all commercial users pay for electricity at market prices and, when necessary, a guarantee supply for a maximum period of 6 months is safeguarded for these customers. The household consumers also have the right to choose an independent electricity supplier and purchase electricity in the market or under bilateral contracts.

During the preceding year, the average annual household consumer consumption has increased from 1696 kWh to 1726 kWh. In 2017, the share in the retail market of the public supplier of electricity AB "Energijos skirstymo operatorius" remained similar – around one third of overall consumption, including a guarantee supply. 46 668 were using the services of the guarantee supplier. 3 largest electricity suppliers in the retail market of independent supply: UAB "Energijos tiekimas", UAB "Elektrum Lietuva" and AB "INTER RAO Lithuania". Their share in the retail market accounted for 68.6 % as per the amount of electricity. AB "Inter RAO Lithuania", compared to 2016, faced the greatest growth of its market share in 2017 among the largest independent electricity suppliers.

In 2017, compared to 2016, the number of consumers in the country increased from 1 691 038 to 1 710 553, 138 392 of whom are non-household consumers. In 2017, consumption of non-household consumers who buy electricity at public prices has decreased from 0,104 TWh to 0,096 TWh. In 2017, consumption of the household consumers who buy electricity at public prices accounted for 2.71 TWh and was slightly higher compared to 2016 (2.64 TWh). In 2017, compared to the preceding year, the number of the household consumers who bought electricity in the market at the agreed prices has increased from 29 to 41. In 2017, AB "Energijos skirstymo operatorius" as result of outstanding debt has cut off electricity transmission for 2 301 customers.

As per the Methodology for Setting Electricity Transmission, Distribution and Public Supply Services'and the Public Price Cap, when implementing the LRAIC model, the price caps of transmission and distribution service have been calculated for the year 2018 (see table 2).

Table 2. Electricity Transmission and Distribution Price Caps for the period 2013-2018 (cent/kWh)

Name of regulated service	Supplier of regulated service	Regulated service price cap (cent/kWh)					Regulated service price cap for the year 2018 (cent/kWh)	Change compared to 2017, %
		2013	2014	2015	2016	2017		
Electricity transmission	AB "Litgrid"	0,699	0,639	0,538	0,691	0,672	0,619	-7,89
Distribution of electricity in medium voltage networks	AB "Energijos skirstymo operatorius"	1,375	1,297	1,178	1,000	0,830	0,798	-3,86

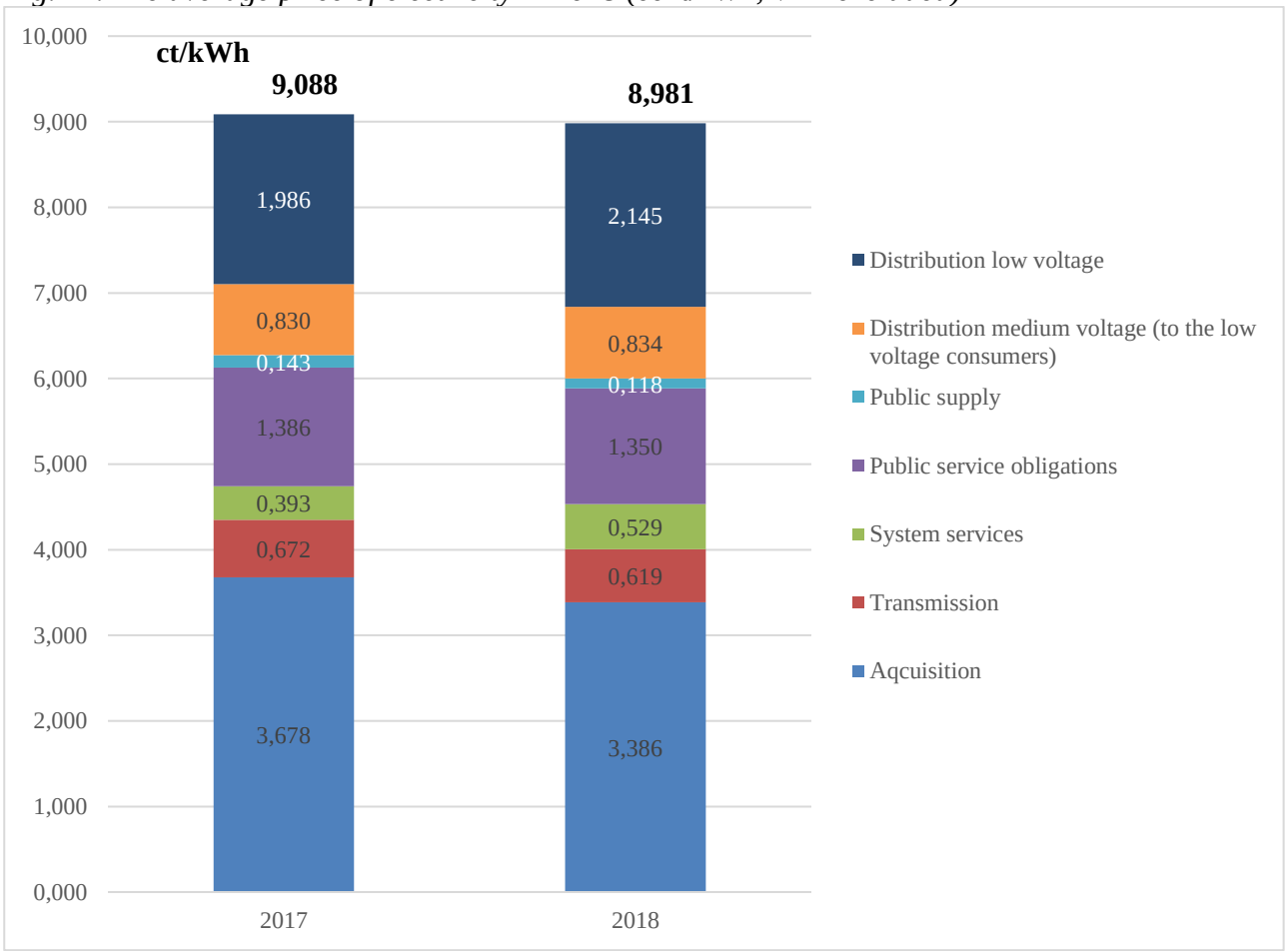
Distribution of electricity in low voltage networks	AB "Energijos skirstymo operatorius"	1,801	1,785	1,550	1,766	1,655	1,716	3,69

Source – The NCC.

The public supplier AB "Energijos skirstymo operatorius" sells electricity both to the regulated consumers as per the public tariffs and as a guarantee supplier as per the principle of calculation of the price of guarantee supply set forth in the LE. Consequently, when calculating the public electricity transmission price cap the NCC assessed the total amount of energy sold both to the consumers paying as per the public tariffs and to the consumers paying as per the tariffs of guarantee supply. In view of this, the NCC has set the price cap for the service of public electricity supply for the year 2018, i.e. 0.118 cent/kWh. Compared to the price cap set in 2017 (0,143 cent/kWh), the price cap for the service of public electricity supply for the year 2018 is 17.5 % lower. This was due to the decrease in the income generated during the period 2014-2015 that exceeded the specified return on investment.

In 2018, the public electricity price for the household consumers who buy electricity from the medium voltage networks is equal to 6.720 cent/kWh (VAT excluded) or 5.4 % lower than in 2017. The public electricity price for the household consumers who buy electricity from low voltage networks is equal to 8.981 cent/kWh (VAT excluded) or 1.2 % lower than in 2017.

Fig. 12. The average price of electricity in 2018 (cent/kWh, VAT excluded)



Source – The NCC.

By the resolution No O3E-474 of 30 October 2017 the NCC has approved the price for using interconnections (hereinafter referred to as UINC) applied in 2018 and which is 5,72 EUR/MWh, i.e. 9.4 % higher than in 2017 (5.23 EUR/MWh). The relevant information on the UINC price is publicly

available on the NCC website www.regula.lt (in English) in the column "Regarding price of the service of access to interconnection lines".

The NCC not later than by the 30th of April of the current calendar year calculates, approves and publishes on its website the tariffs for connecting consumer equipment. The NCC sets new tariffs for connection if, compared to the valid ones, the new tariffs for connection change by 3 % and more. The NCC has recalculated as per the costs associated with connecting new users actually incurred by the electricity networks operators during the previous year and has approved by the Resolution No O3E-127 of 26 April 2018 new tariffs for connecting consumers to electricity networks that became effective from 1 June 2018.

The tariffs for connecting electricity equipment to electricity networks (100 %) calculated and approved by the NCC and applied from 1 June 2018 are presented in tables 2-4 for the following groups of consumers:

- Group I – the consumers who have the equipment to be connected to the network the permissible power for use of which or the permissible power for use being increased is below 50 kW and the installation, change or reconstruction of the operator's electricity objects is not required for the equipment to be connected, also there is no need to prepare the project of connecting consumer equipment to electricity network or such project has to be prepared but it is prepared and harmonised by the consumers;
- Group II – the consumers who have the equipment to be connected to the network the permissible power for use of which or the permissible power for use being increased is below 100 kW (except the consumers of group I);
- Group III – the consumers who have the equipment to be connected to the network the permissible power for use of which or the permissible power for use being increased is from 100 to 500 kW (inclusive).

Table 3. The tariffs for connecting electricity consumer equipment to the electricity networks, EUR (VAT exclusive)

Group of consumers	Tariff for installing or increase of 1 kW of permissible power for use of electricity equipment	Tariff for 1 m of electricity network installed
Group I	19.93	-
Group II	130.93	21.91
Group III	59.90	21.34

Source – The NCC.

Table 4. The tariffs for connecting electricity consumer equipment to the electricity networks for the household and socially vulnerable consumers, EUR (VAT exclusive)*

Group of consumers	Tariff for installing or increase of 1 kW of permissible power for use of electricity equipment	Tariff for 1 m of electricity network installed
Group I	3.99	-
Group II	26.19	4.38
Group III	11.98	4.27

** specified in the list approved by the Government or its authorized institution*
Source – The NCC.

*Table 5. The tariffs for connecting electricity consumer equipment to the electricity networks for other consumers**, EUR (VAT exclusive)*

Group of consumers	Tariff for installing or increase of 1 kW of permissible power for use of electricity equipment	Tariff for 1 m of electricity network installed
Group I	7.97	-
Group II	52.37	8.76
Group III	23.96	8.54

*** except the household consumers or those specified in the list approved by the Government or its authorized institution as socially vulnerable.*
Source – The NCC.

The connection of the electricity equipment of the household and socially vulnerable consumers to the network as the per provisions of the LoE, as in previous years, is subject to payment of 20 % of the tariffs specified above, and in all other cases – 40 % of the tariffs specified above.

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

The average electricity price in Lithuanian market in 2017 was 35.13 EUR/MWh. The average annual retail price of the public supplier for a typical household consumer – 38 EUR/MWh (purchase of electricity and public supply margin), and the price for using electricity networks or transmission service – 39 EUR/MWh.

2018 is the third year of 2016-2020 period of transmission and distribution services regulation. The estimated allowed revenue in every other year is adjusted as per the requirements of the Methodology for Setting Electricity Transmission, Distribution and Public Supply Services‘ and the Public Price Cap approved by the Resolution of the NCC No O3-3 of 15 January 2015 “Regarding the approval of the Methodology for Setting Electricity Transmission, Distribution and Public Supply Services‘and the Public Price Cap“.

In 2018, the price cap of transmission service of AB “Litgrid” was 0.619 cent/kWh, and it is 0.053 cent/kWh or 7.9 % lower compared to the price cap of transmission service set for the company in 2017. The TSO has provided the NCC with information that it plans to order on average 400 MW/h of the secondary emergency power reserve and 483 MW/h of tertiary emergency power reserve in 2018. The changes in the price caps for the services of reserve power ensuring were mainly due to the increased costs for natural gas consumption capacity: formerly lower natural gas consumption capacity was attributed to the service of tertiary active power reserve due to the use of different types of fuels; the cost growth also results from the costs of production equipment of new producers attributed to the provision of the services of tertiary power reserve. The price of systemic services set in 2018 is 0.529 cent/kWh (this price includes the costs of acquisition of the services of ensuring active power primary, secondary and tertiary reserve, the cost of providing services of reactive power and voltage control and prevention of accidents, failures and their liquidation).

In 2018, the price cap of distribution services of AB “Energijos skirstymo operatorius” in the medium voltage is 0.798 cent/kWh (0.032 cent/kWh or 3.9 % lower than in 2017) and 1.716 cent/kWh in low voltage networks (0.061 cent/kWh or 3.7 % higher than in 2017 m.). The changes in the price caps were mainly due to the increasing forecasted to be distributed amount of electricity, decreasing rate of return on investment (from 4.94 % in 2016 to 4.88 % in 2017) and reduction of income from distribution activities of AB “Energijos skirstymo operatorius“ due to the gains accrued during the period 2014-2015 that exceeded return on investment.

As the Government of the Republic of Lithuania did not establish on 29 November 2017 the volume of eligible electricity generation in cogeneration mode in combined cycle power plants generating electricity and heat for the year 2018, the amount required for this public service obligation has not been provided for. However, the producers ensuring the security of electricity supply are

obliged to provide the service of ensuring reserves of electricity systems – in 2018 the NCC has established the needed amount for public service obligations funds of 26.94 million euros for this service.

The budget of public service obligations set for the year 2018 has decreased from 145.78 million euros to 145.11 million euros or by about 0.5 %. Also taking into account the change in the amount of electricity forecasted to be consumed, the price of public service obligations has decreased from 1.386 to 1.350 cent/kWh.

In 2018, the public electricity price for the household consumers who buy electricity from medium voltage networks is 6.720 cent/kWh (VAT exclusive), 0.382 cent/kWh or 5.4 % lower than in 2017, for those who buy electricity from low voltage networks – 8.981 cent/kWh (VAT exclusive), 0.107 cent/kWh or 1.2 % lower than in 2017.

The electricity prices, their application, comparison with the prices applicable in other countries and other related information is available publicly on the NCC website or on the website of AB "Energijos skirstymo operatorius" www.eso.lt. The consumers are informed individually on new prices and tariff plans through self-service website www.manogile.lt, and those who have provided their personal details – are informed in the form of SMS or by e-mails. The company also provides information to the customers about the tariff plans applied and the terms for their application by customer service phone line 1802.

The issues of market opening and efficiency are discussed in sections 3.2.1 and 3.2.2, and more data are available in the CEER database.

3.2.2.2. Recommendations of supply prices, investigations and the application of measures to promote effective competition

The Article 37(1)(o)

Article 8(9)(15) of the Law on Energy establishes that the NCC carries out supervisory actions for the purpose of determining contractual practices restricting competition, including the terms of exclusive rights the application of which may prevent the large non-household consumers from entering into contracts with more than one supplier at the same time or their possibilities to do so can be restricted.

The procedures of submitting information about distortions of or restrictions on the electricity market, including submitting proper information, and submitting investigation of relevant market cases to the Competition Council are carried out in accordance with the laws. In accordance with the Article 8(9)(16) of the Law on Energy, the Article 9(4)(7) of the LoE, the NCC at least once a year announces recommendations related to compliance of the prices of services in the energy sector with the transparency, non-discrimination and other requirements laid down by the legislation, and submits them to the Competition Council.

For more details about the investigation performed and the measures taken by the NCC see section 2.1.2.

Article 37(4)(b)

The NCC assesses the costs of electricity transmission and the repair, maintenance and operation, personnel, administrative and other costs of the main TSO (AB "Litgrid" and AB "Energijos skirstymo operatorius"), small operators of distribution networks (AB "Achema", AB "Akmenės cementas", AB "Lifosa", UAB "Dirbtinis pluoštas" and UAB "E Tinklas") and of public suppliers (AB "Energijos skirstymo operatorius" and UAB "Dirbtinis pluoštas") and of electricity producer with significant influencing power in the market of electricity reserve power AB "Lietuvos energijos gamyba" according to the quarterly reports submitted.

This allows the NCC to be always informed about the costs incurred by the regulated electricity transmission and distribution operators and to provide advice within the shortest possible time on the issues of the allocation of the costs incurred to the regulated activities. After having

assessed the provided data of the quarterly income and expense reports of energy companies, if necessary the NCC addresses queries to the entities in connection with the questions that arose during the cost analysis.

The NCC actively analyses the quarterly operating costs of the said companies in electricity sector with the intention to avoid the situations that occurred in the past when significant irregularities in accounting of costs of regulated activity companies were found after the scheduled inspections of the costs of energy transmission, distribution operators and public supplier of electricity sector were performed, and the consumer overpayments because of their volume were set out in the future periods.

When establishing price caps for the year 2018 the NCC took into account the assessment of regulated activities performed in 2016 by the TSO and the DSO (AB "Litgrid" and AB "Energijos skirstymo operatorius") and the public supplier (AB "Energijos skirstymo operatorius") and the superprofits accrued during the period 2014-2015. The amounts estimated were set out over the next few years, and some of them are expected to be repaid to the consumers in 2018.

3.3. Security of supply (to the extent that the regulator is the competent authority)

Implementation of security measures (Article 42)

The process of renewal of the National Energy Independence Strategy (hereinafter referred to as the Strategy) intended to outline Lithuania's goals in the field of energy by 2050 has continued in 2017 in order to assess changes in the situation after the launch of new interconnections with Poland and Sweden.

The Strategy sets the vision, the principles of its implementation, strategic directions and tasks. Its implementation is detailed in the Action Plan for the years 2020, 2030 and 2050. The Strategy is implemented in the following four strategic directions:

- competitiveness;
- reliability;
- reduction of influence on climate change and air pollution (energy saving and green energy);
- participation of the country's business in the pursuit of energy advancement.

The strategy was approved by the Seimas of the Republic of Lithuania in June 2018.

Lithuania's energy security will be strengthened with a view to integrating the energy systems and markets of the country into EU markets and systems. Two major projects are designed to be implemented for this purpose, namely synchronization of electrical networks with the European system through Poland (by 2025) and gas pipeline interconnection between Lithuania and Poland (by 2021).

Another goal included in the Strategy – to reduce the country's dependence on electricity imports - will also contribute to the country's energy security. In implementing this Strategy, reliable and competitive local power generation will be developed. The goal is to ensure that in 2030 the electricity generated in Lithuania would account to 70 % of the total electric final energy consumed, and in 2050 – all electricity would be generated in the country.

Renewable energy development will not only contribute to energy security by the fact that green energy will be produced in Lithuania but will also contribute to the implementation of the EU and global targets for climate change.

The updated Strategy foresees that by 2030 45 % electricity consumed and even 90 % of heat energy will be generated from renewable energy sources. And in 2050 all electrical and thermal energy consumed in Lithuania will be generated from renewable and other green sources. Renewable energy resources will account to even 80% of all energy consumed in Lithuania.

The Strategy attaches particular importance to small energy producers and the active involvement of energy consumers in energy production. Favourable conditions will be created for the residents who choose to make their own electricity from renewable resources by themselves and

various support measures will be developed. It is planned that by 2030 there should be at least 500 thousand of proconsumers in the country.

3.3.1. Maintenance of supply and demand balance

Article 4

Related information is available in section 3.1.2 of this report.

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

Article 37(1)(r)

According to the provisions of the LoE, the NCC carries out the monitoring of the implementation of the network development plan and carries out its evaluation. Each year, AB "Litgrid" provides 10-year electricity network investment plans that assess scenarios for the development of projected new sources of production.

The plan proposed in 2017 foresees that by 2026 the installed capacity of power generating sources will be 2919 MW. Around 42.0 % of this share would consist of power plants using RES.

It should be noted that the LES has sufficiently strong interconnections with the neighbouring countries and new interconnections "LitPol Link" and "NordBalt" with Poland and Sweden that have been launched contribute to enhancing security of supply of the system. Under such conditions, in any case, technical capacity has been created to cover the lack of electricity generation capacity (if any) using imported electricity.

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

As result of uncompetitive local production capacity, most of electricity in 2017 was imported. In 2017, 33.0 % of the total electricity consumption was produced in Lithuanian power plants and this share is smaller than in 2016 (34.7 %). Electricity import in 2017 accounted to 95.2 % of the total electricity consumption (in 2016 this indicator was 88.3 %, in 2015 – 68.7 %, in 2014 – 72.6 %). The amount of electricity that can be imported depends on the ongoing repairs on the transmission network. In 2017, the hourly average of electricity that could be imported to Lithuania was 3.101 GWh.

Investment in interconnection capacity for the period of 5 and more years ahead
Article 7 of the Directive 2005/89/EC

Each year, AB "Litgrid" provides 10-year electricity network investment plans. The second 400 kV interconnection between Lithuania and Poland and projects related to the strengthening of the internal network are planned in the 2017-2026 Lithuanian Power System 400-110 kV network development plan for synchronous connection with continental European networks. In the process of transition to synchronous operation of the Baltic States with continental Europe's energy system, the systems of the Baltic States and IPS/UPS systems will be connected by asynchronous connections, i.e. DC converters will be installed.

As per the Description of the Procedure of evaluation and coordination of investment of energy companies in the NCC, the TSO coordinates separate investments with a volume equal to or greater than 3.5 million euros. Due to interconnections the value of the strategic projects of transmission network in 2017-2026 should amount to about 325.62 million euros, and all investments of TSO would be about 642.49 million euros.

Expected future demand and prospective power 5 and 5-15 years ahead

The Article 7 of the Directive 2005/89/EC

In 2017, the maximum hourly electricity demand (net) in Lithuania was 1896 MW, i.e. 4.2 % lower than in 2016 (1979 MW, in 2015 – 1748 MW). In 2017, the maximum hourly electricity demand in distribution network accounted to 1665 MW and was 1.8 % lower than in 2016 (1695 MW, in 2015 – 1555 MW).

The most important factors driving electricity consumption are the changes in the country's economic level, which are best defined by gross domestic product (GDP). But there also exist other factors that have a significant impact on future energy demand. Therefore, the forecast of electricity demand should include the following aspects:

- GDP growth;
- electricity efficiency;
- the number of electric vehicles and amount of electricity consumed by electric vehicles;
- the number of heat pumps and amount of electricity consumed by heat pumps.

It is projected that in case of the basic scenario Lithuanian electricity demand in 2026 will increase to 12.67 TWh (on average about 1% annual growth), in event of slower economic growth – to 12.04 TWh (around 0.5 % annual growth), and in case of optimistic scenario – to 13.40 TWh (about 1.6 % annual growth). In case of basic scenario Lithuanian electricity demand in 2020 would be 11.95 TWh. It is projected that peak power demand in case of basic scenario in 2020 would be 1961 MW, in 2026 – 2097 MW.

In 2017, AB "Energijos skirstymo operatorius" has transmitted to its customers 9.825 million kWh (in 2016 – 9.605 million kWh) of electricity (including technological losses and own needs). The electricity amount planned to be transmitted in 2018-2020 is forecasted in accordance with the provisions of the Methodology for Setting Electricity Transmission, Distribution and Public Supply Services' and the Public Price Cap approved by the NCC, i.e. it is planned that electricity consumption will grow and that grow will be equal to ½ of the magnitude of the change to GDP. According to the projections of Lithuanian economic indicators of March 2018 from the Ministry of Finance of the Republic of Lithuania, Lithuania's GDP growth forecasted in 2018-2020 is respectively 3.2 %, 2.8 % and 2.5 % (½ of GDP accounts for respectively 1.60 %, 1.40 % and 1.25 %).

In 2017, electricity supply of AB "Energijos skirstymo operatorius" accounted for 3.22 million kWh (in 2016 – 3.15 million kWh), of them 2.82 million kWh was a public electricity supply and 0.41 million kWh was a guarantee supply. In 2015 a public and a guarantee electricity supply was 2.74 million kWh and 0.41 million kWh respectively. The company forecasts that amount of electricity which is planned to be supplied in 2018–2020 to the public consumers will grow annually by 1.0-1.5 %.

3.3.3. Measures to cover peak demand or shortfalls of suppliers

Article 4

According to the legislation, the responsibility for ensuring electricity balance of the state lies within the electrical TSO AB "Litgrid".

The Procedure of interruption of electricity transmission to consumers and power curtailment scheduling and execution of the schedules was approved by the Order No 176 of the Director General of AB "Energijos skirstymo operatorius" (formerly AB "Lesto") of 11 May 2011 in accordance with the Description of Terms of Temporary interruption of electricity transmission in order to safeguard the public interest and the procedure for calculation and reimbursement of the related losses approved by the Order No 1-121 of the Minister of Energy of the Republic of Lithuania of 19 April 2010 and the provisions of other legal acts. Each year AB "Energijos skirstymo operatorius" schedules power and electricity restriction and emergency shutdown and each year provides the TSO with the appropriate schedules. The restriction schedules (for the period of one year) are made after

summarizing and analysing systemic needs, network parameters and the available information of network users. Consequently, scope of restrictions may vary from year to year. The network users included in the restriction schedule are notified in writing in advance on the scheduled restriction tasks and the arising obligations. The distribution network is capable of meeting the peak demand for electricity consumption because the capacity installed is significantly higher than the existing peaks.

4. GAS MARKET

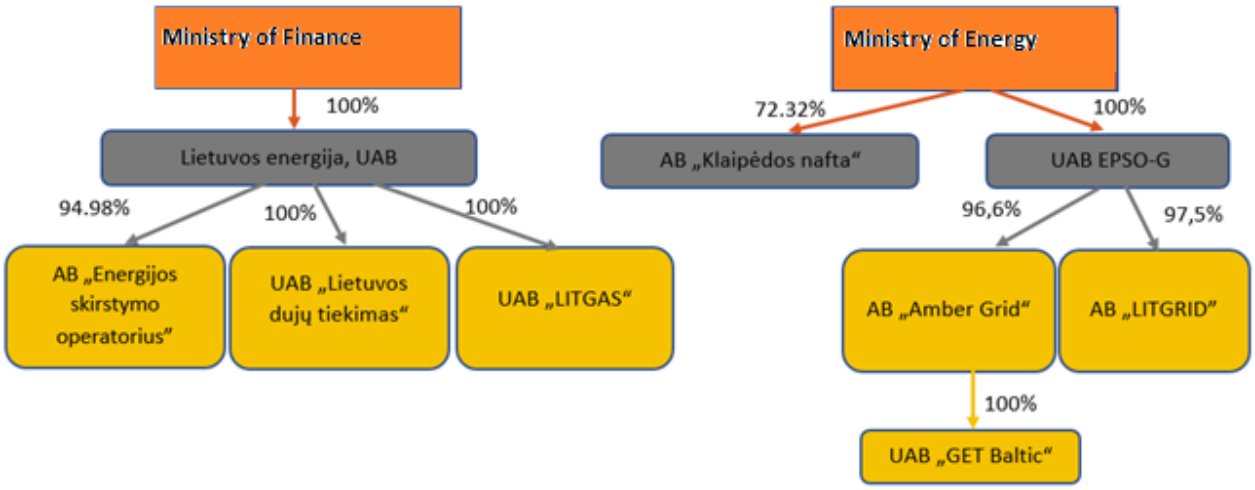
4.1. Network regulation

4.1.1. Unbundling of vertically integrated companies

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

By the Order No O3-242 of 10 April 2015 "Regarding designation of the natural gas transmission system operator and issuance of the license for the natural gas transmission" the NCC has issued AB "Amber Grid" with the license for the natural gas transmission activity according to the provisions of the Law of the Republic of Lithuania on Natural Gas (hereinafter referred to as the Law on Natural Gas) and of Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC. No violations related to licensed natural gas transmission activities were detected in 2017.

Fig. 13. State-owned natural gas companies, April 2018



Source – The NCC.

4.1.2. Technical functioning

Rules for access to the system

The Rules for access to the natural gas systems define the procedure and terms of access to transmission and distribution systems, the rights and obligations of system operators, system users, guidance on cooperation, mechanisms of system capacity allocation and congestion management, the procedure and principles of organization of repair works, announcement thereof and execution, etc.

The Rules for access to AB "Amber Grid" natural gas transmission system (coordinated by the Resolution No O3E-177 of 31 May 2018). The Rules provide for the application of the method of implicit capacity allocation in Kiemėnai entry/exit point not only for the day-ahead daily capacity but also for within-day capacity, the deadlines for ordering capacity in Lithuania and Latvia are unified, the Rules provide for the possibility to offer restricted capacity products, establish specific terms of the system of managing oversubscription and buy-back capacity congestions that are applicable for the contractual capacity congestion, and other editorial changes are made in the Rules.

The Rules for access to AB "Energijos skirstymo operatorius" natural gas distribution system (concerted by the Resolution No O3E-632 of 27 December 2017). The Rules establish that the right of access to small-scale LNG regasification facilities is granted to all users of the system who have entered into natural gas distribution contracts with the Distribution System Operator (hereinafter referred to as the DSO) and who observe the requirements of access to LNG regasification facilities set forth in the Rules, establish a detailed process of access to LNG regasification facilities, and other editorial changes are made in the Rules.

The Rules for access to LNG terminal (concerted by the Resolution No O3E-536 of 28 November 2017). The Rules provide for the possibility to adjust the day-ahead applications of natural gas amount submitted, i.e. the system users will be able, when necessary, to adjust LNG degasification orders submitted for gas during the gas day. And in the case where the users of LNG terminal, when adjusting degasification capacity, will not take advantage of the possibility to agree regarding distribution of different degassed amount at the end of the gas day by providing revised LNG degasification orders – the company in the first place will distribute this amount to those users who have not adjusted amount of degasification during the gas day. The weekly orders were waived and the requirement for small-scaled gas carriers (up to 160 meters) to order fire-fighting equipment has been deleted from the Rules.

Balancing of natural gas systems

The NCC carries out monitoring of the activity of balancing service, assesses costs of and income from balancing service. The pricing in the activity of transmission of balancing service is based on the principle that income from balancing service must meet the costs of balancing activities. The resulting difference between the income from and costs of balancing activities is assessed annually by adjusting the transmission price cap.

By the Resolution No O3E-187 of 31 of May 2018 "Regarding the approval of AB „Amber Grid" report on natural gas transmission networks balancing code's interim measures" the NCC has approved AB „Amber Grid" report on natural gas transmission networks balancing code's interim measures. The NCC has also submitted comments to AB "Amber Grid" regarding the implementation of the provisions of the Commission Regulation (EU) No 312/2014 of 26 March 2014 establishing a Network Code on Gas Balancing of Transmission Networks.

Service quality and reliability indicators

The Law on Natural Gas provides that the NCC sets the indicators for the quality of services of natural gas companies, including indicators of reliability, and the procedure of their evaluation. Based on the Description of Indicators of reliability and quality of natural gas services provided, the procedure of their evaluation approved by the Resolution No O3-90 of the NCC of 11 April 2012, the minimum quality levels for each gas company are set individually for a specific price regulation period.

The main indicators of the quality of continuous supply of natural gas are System average interruption duration index (SAIDI) and System average interruption frequency index (SAIFI) during the reporting period. SAIDI and SAIFI indicators are differentiated according to the reasons of interruption.

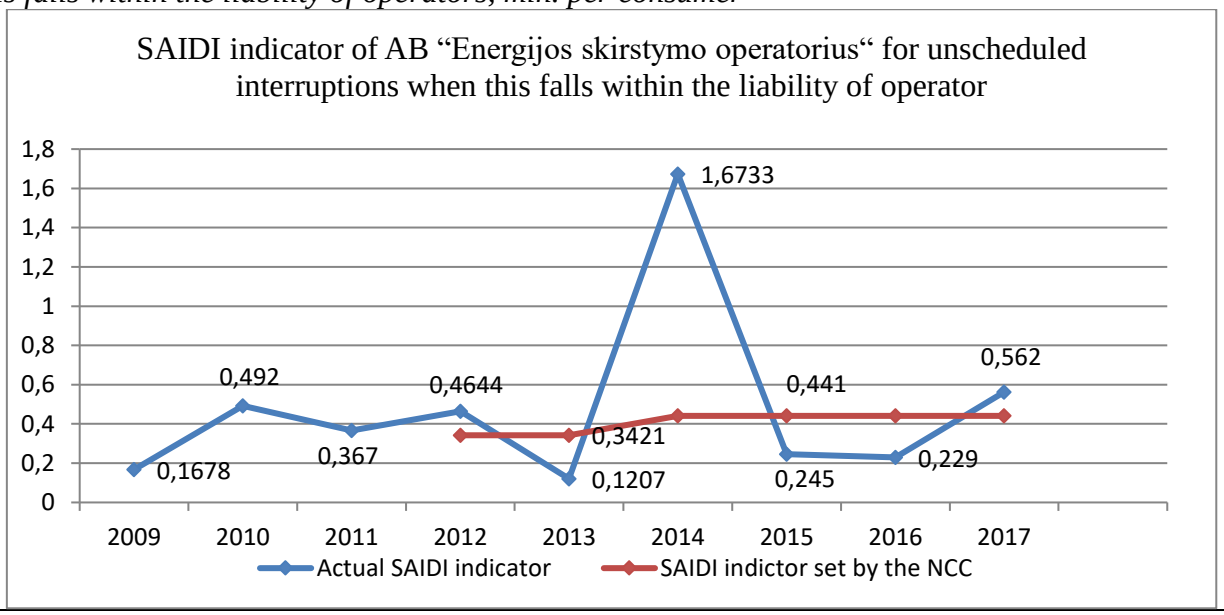
The NCC has set individually for each gas company the minimum quality levels for the regulation period. The gas companies that will provide services at the parameters lower than the minimum levels of quality indicators set for them will be subject to economic impact measures.

By the Resolution No O3E-149 of 10 May 2018 the NCC found that the actual performance quality indicators of AB "Amber Grid", AB "Achema", UAB "Intergas", UAB "Fortum Heat Lietuva", AB agrofirma "Josvainiai" meet the minimum quality levels set for the specific gas company, and 2 actual performance quality indicators (SAIDI and ATSV (percentage of timely sent responses to a new consumer to their request to connect) of AB "Energijos skirstymo operatorius" do not meet the minimum quality levels set for a specific gas company.

Other actual performance quality indicators of AB "Energijos skirstymo operatorius" meet the minimum quality levels set for a specific gas company.

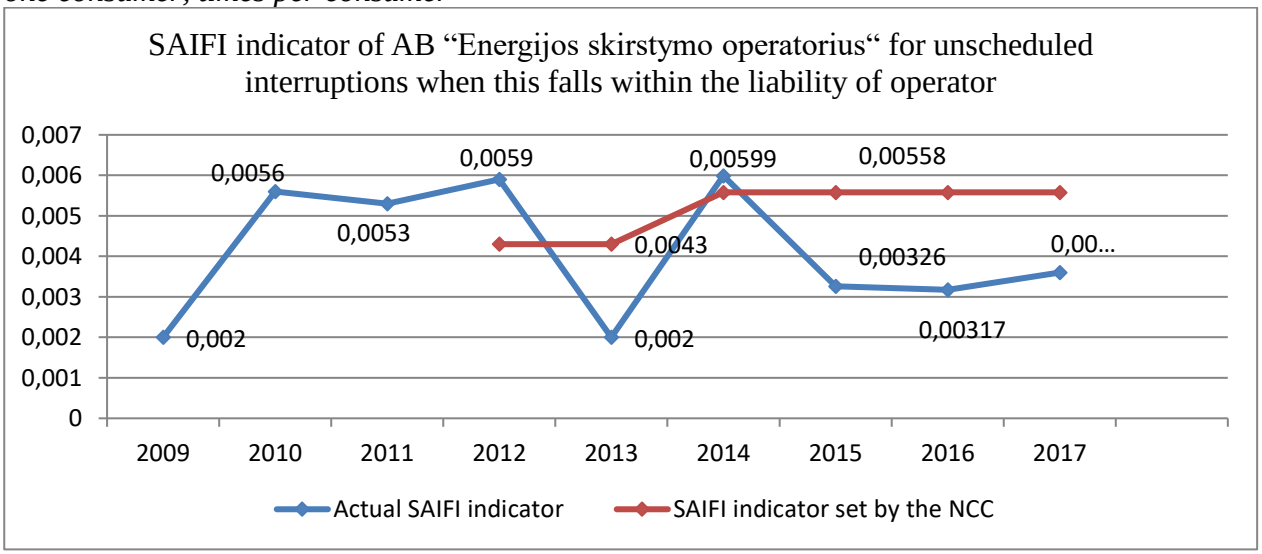
SAIDI and SAIFI indicators of the natural gas DSO AB "Energijos skirstymo operatorius" during the period 2009-2017 are presented in figures below.

Fig 14. SAIDI indicator of AB "Energijos skirstymo operatorius" for unscheduled interruptions when this falls within the liability of operators, min. per consumer



Source – The NCC.

Fig. 15. The average number of AB "Energijos skirstymo operatorius" unscheduled interruptions per one consumer, times per consumer



Source – The NCC.

As can be seen from the figures above, in 2017 the indicators of AB "Energijos skirstymo operatorius" have deteriorated compared to 2016, the average duration of unscheduled interruptions decreased from 0.229 to 0.562 min. per consumer, and the number of interruptions – from 0.00317 to 0.0036 times per consumer. There were no interruptions in other natural gas distribution companies.

Surveillance of duration of the time of consumer connection to network and performance of works of repair

Transmission and distribution system operators provide the service of connecting systems of new consumers to operating transmission or distribution systems that is subject to 2 service quality requirements:

- examining the requests of new users for connecting their systems to operating transmission system;
- connecting the system of new consumer to operating transmission or distribution system as per contract on connection.

There were no consumers not connected to the transmission system within the time established when such failure to connect falls within the liability of the TSO AB "Amber Grid". In 2017, the percentage of responses timely (within 30 calendar days) sent to a new consumer in AB "Amber Grid" accounted for 100 %. In 2016 this indicator also accounted for 100 %.

In 2017, the indicator of timely examined consumer request to connect in the system of the DSO AB "Energijos skirstymo operatorius" in accounted for 99.8 % when the minimum level of the indicator of timely examined consumer request regarding connection established by the NCC was 100 %.

The indicator of timely examined consumer request in the system of the DSO AB "Energijos skirstymo operatorius" in 2016 accounted for 96.97 %, and in 2017 – 96.06 %. Until 31 December 2018 the indicator of timely examined consumer request established by the NCC – 95.43 %. Other companies have examined timely the requests of both household and non-household consumers. Arrival of emergency services to household consumers in connection with the reports received on gas leakage in all companies 100 % matched the time established.

The TSO must publish a schedule of works of repair on its website. The schedule must present works of construction, reconstruction, repair of gas transmission system that are planned to be performed in the current year and that may affect the rights of system users. The schedule of works of repair must specify the objects and names of works that are planned to be performed in the objects, start and end dates of the scheduled works of repair, works of disconnecting in the objects of certain zones, influence on gas supply.

The TSO informs publicly the system users at least 42 calendar days before the start of the works on the scheduled repair of gas systems or on the start of other works of connecting consumer systems if gas transmission is interrupted or restricted during such works. The TSO notifies the system users by post, e-mail, courier or facsimile transmission not later than 5 days prior to the start of gas system repair or other works of connecting consumer systems since when and for how long the gas transmission is terminated or restricted.

The DSO not later than 5 days before the start of gas system repair works or the start of other works of connecting gas systems notifies the system user in writing in one of the aforementioned ways (by post, e-mail, courier, facsimile transmission since when and for how long gas distribution is terminated or restricted.

Access to storage facilities

Currently there is no natural gas storage facility in Lithuania. UAB "Lietuvos dujų tiekimas" uses the underground natural gas storage facility in Inčukalns, Republic of Latvia. Latvian TSO and JSC "Conexus Baltic Grid", which is the operator of the storage facility, distribute the capacity of the gas storage facility in the Republic of Latvia as per the applications submitted.

UAB “Lietuvos dujų tiekimas“, under the contract with JSC “Conexus Baltic Grid“, stores in the gas storage facility located in Inčukalns for the time period established by the state the amount of natural gas that is needed to supply vulnerable consumers and the amount of gas required by non-household consumers who have signed uninterrupted natural gas supply contracts.

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

The Description of the Measures to safeguard the reliability of natural gas supply was approved by the Resolution No 163 of the Government of the Republic of Lithuania of 26 February 2008. The Description provides priorities of gas supply in cases of interruption of gas supply, major gas supply disruption or partial gas supply disruption taking into account the gas amount available in the pipelines, gas storage facilities and technical possibilities of the gas system. Supply companies are responsible for the uninterrupted supply of gas to vulnerable consumers and must accumulate and store gas reserve for such consumers. Supply companies must accumulate and store such amount of gas reserve for the vulnerable consumers to whom they supply gas that would be sufficient to meet the demand for gas of vulnerable consumers in cases set forth in the Article 6 (1) of Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017.

Against this background, the supply companies must not later than by 1 September of each year:

- as per the terms set forth in the aforementioned Regulation establish and accumulate the gas amount required by vulnerable consumers and maintain it to the established and accumulated gas reserve of the next year for the vulnerable consumers;
- provide the NCC in writing with the data on the gas amounts accumulated for the vulnerable consumers.

333.84 GWh of natural gas were stored by UAB “Lietuvos dujų tiekimas“ on 1 September 2017 in the underground natural gas storage facility in Latvia to safeguard the security of natural gas supply. The costs of storage of natural gas are included in household natural gas tariffs for household customers. The component of ensuring security of natural gas supply equal to 0.41 EUR/MWh was included in 2018 in the price of household consumer supply.

4.1.3. Regulation of natural gas transmission, distribution and LNG regasification prices

Separation of accounts and ensuring avoidance of cross-subsidization

Natural gas companies engaged in regulated activities distribute their income, costs and assets by business units and services in accordance with the Description of segregation of accounts of natural gas companies, distribution of costs and the requirements related to segregation of accounts approved by the Regulation No O3-316 of the NCC of 18 July 2013. When implementing separation of accounts a natural gas company must follow the principles of causality, accumulation, objectivity and consistency.

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

Price caps are set for the period of five years, and once a year they are adjusted for 7 entities. The NCC also checks whether the specific prices of regulated services set by gas companies are not discriminative against individual user groups, every half a year approves natural gas tariffs for the household consumers.

Adjustment of transmission price cap of transmission system operator AB “Amber Grid” as per the pricing model of entry-exit points

Clause 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 specifies that in order to increase competition by creating liquid wholesale gas markets it is necessary to ensure that gas can be sold regardless of its location in the system.

Based on the Price methodology, from 2015 the price cap in the transmission activity is set and adjusted for the capacity unit and the pricing model of entry-exit points providing that the NCC sets the price caps and adjusts them at the entry-exit points of transmission system is applied; the said points are established:

1. at entry points of Lithuanian natural gas transmission system:

1.1. at the point of connection of Lithuanian transmission system with the connection of the liquefied natural gas terminal in Klaipeda (hereinafter referred to as LNGT entry point);

1.2. at the point of connection of Lithuanian transmission system with Latvian natural gas transmission system. The natural gas transmitted through this point to Lithuanian natural gas transmission system is accounted for in Kiemėnai Gas Metering Station (hereinafter referred to as Kiemėnai entry point);

1.3. at the point of connection of Lithuanian transmission system with Belarusian natural gas transmission system. The natural gas transmitted through this point to Lithuanian natural gas transmission system is accounted for in Kotlovka Gas Metering Station (hereinafter referred to as Kotlovka entry point).

2. at exit points of Lithuanian natural gas transmission system:

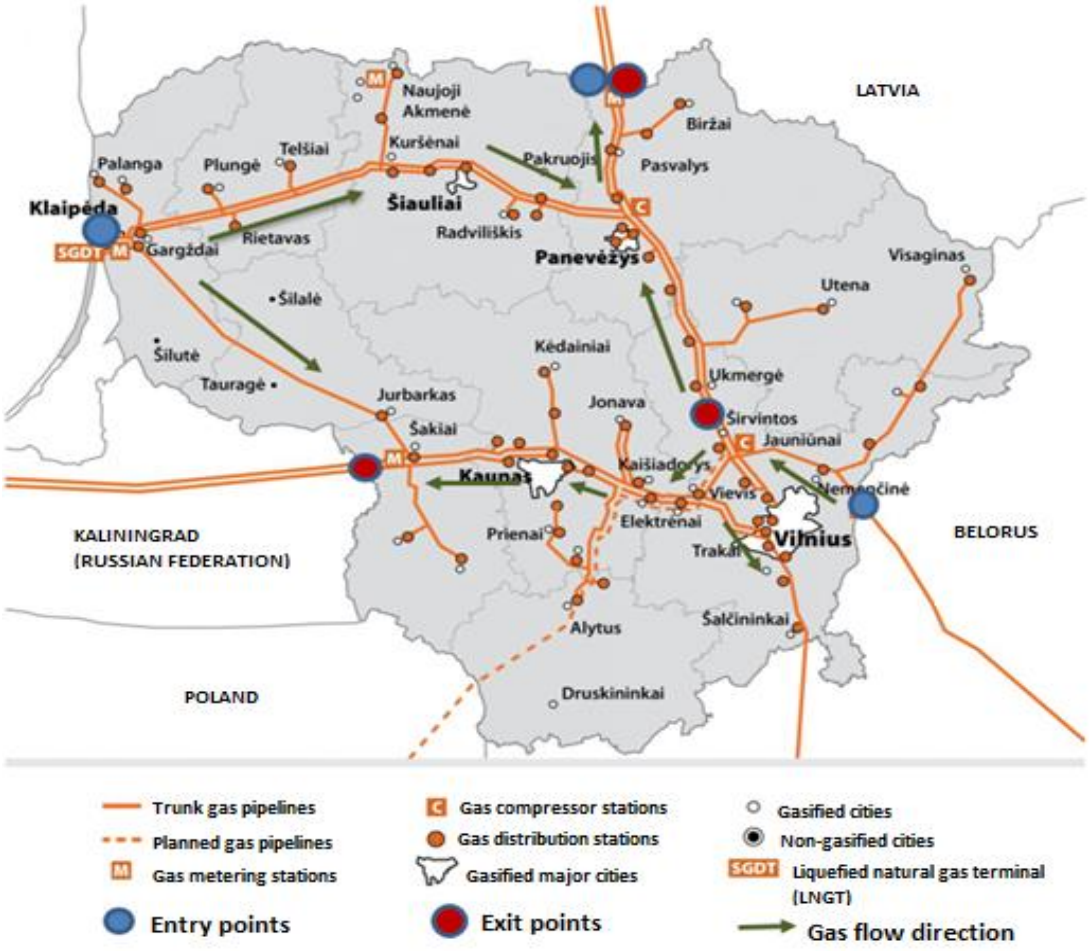
2.1. at the external exit points:

2.1.1. at the point of connection of Lithuanian transmission system with Latvian natural gas transmission system. The natural gas transmitted through this point from Lithuanian natural gas transmission system is accounted for in Kiemėnai Gas Metering Station (hereinafter referred to as Kiemėnai exit point);

2.1.2. at the point of connection of Lithuanian transmission system with the natural gas transmission system located in Kaliningrad region of the Russian Federation. The natural gas transmitted through this point from Lithuanian natural gas transmission system is accounted for in Šakiai Gas Metering Station (hereinafter referred to as Šakiai exit point);

2.2. at the internal exit point – at the points of connection of Lithuanian natural gas transmission system with Lithuanian natural gas distribution systems and Lithuanian consumer systems which are directly connected to Lithuanian natural gas transmission system – which corresponds to one exit point for all users of the country‘s transmission system.

Fig. 16. Topological map of Lithuanian natural gas transmission system as per the application of the pricing model of entry-exit points



Source – The NCC.

The NCC has performed calculations as per the principles of the pricing model of entry-exit points and has set transmission price caps at entry and exit points by evaluating the costs attributed to the main gas pipeline network. The ultimate transmission price caps are calculated after having evaluated the costs attributed to the regional gas network that are attributed to the internal point.

In order to create preconditions for the development of the natural gas market, efficient use of alternative sources of natural gas supply, the emergence of new suppliers and the formation of competitive conditions, the transitional period was started to be applied at the LNGT entry point from 2016 for the capacity price cap by setting the price increase in equal parts over three years until the end of AB "Amber Grid" 2014–2018 regulation period:

2016 – 1/3 of capacity price cap at the LNGT entry point;

2017 – 2/3 of capacity price cap at the LNGT entry point;

2018 – the price is equal to capacity price cap at the LNGT entry point.

Table 6. Comparison of AB "Amber Grid" transmission service price caps 2016-2018, EUR/MWh/day/year

	At entry points of Lithuanian natural gas transmission system:			
	2016	2017	2018	Difference %
LNGT entry point	10.05	20.03	32.91	64.3
Kiemėnai entry point	32.32	31.74	32.91	3.69

Kotlovka entry point	32.32	31.74	32.91	3.69
At exit points of Lithuanian natural gas transmission system:				
At external exit points:				
Kiemėnai exit point	38.05	36.02	40.68	12.94
Šakiai exit point	58.82	56.73	64.77	14.17
At the internal exit point	428.82	421.81	282.76	-32.97

Source – The NCC.

In accordance with the requirements of the Price methodology, the NCC has checked whether the set price caps of natural gas transmission services at entry and exit points meet the term referred to in the ACER findings regarding non-discrimination of system users, i.e. the ratio of the average price per unit of capacity created for gas cross-border transportation with the average price per unit of capacity created for the internal system users must be equal to from 0.9 to 1.1.

The term of non-discrimination of system users is verified by assessing the allocated costs of the capacity created for the main gas pipeline network that is used both for cross-border and internal transportation, i.e. income from the internal consumers of the system is calculated without the costs of the Regional network. The calculation of the ratio of the prices per unit of relevant capacity is presented in the table 7.

Table 7. Calculation of the ratio of prices per unit of capacity at the cross-border and internal point

Exit points	Maximum daily flows, MWh/day (24 hours)	Income, EUR	Price per unit of capacity, EUR/MWh	Ratio of prices of cross-border and internal point capacity
Internal*	216.197	19.133.021	88,50	0,94
Cross-border**	118.560	11.175.421	94.26	

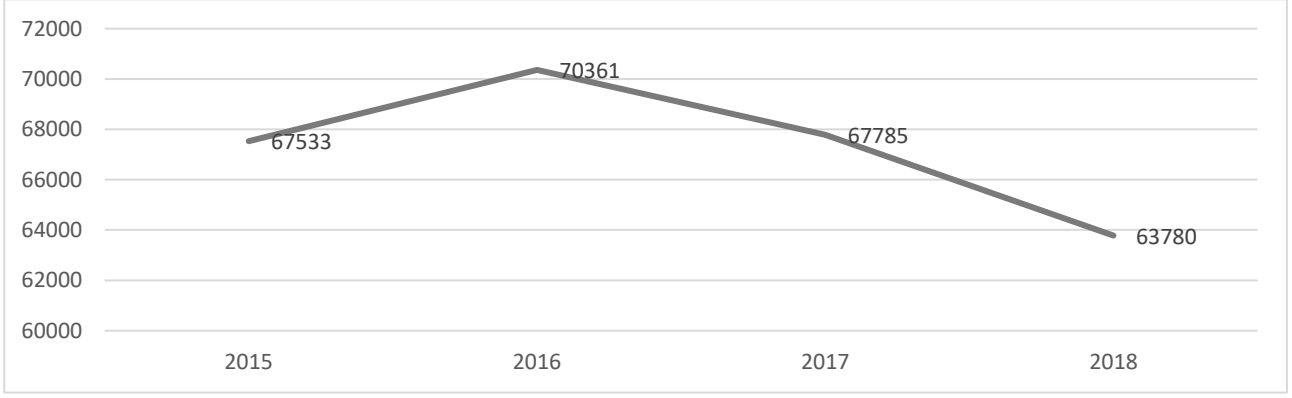
Source – The NCC.

**The maximum daily flows of the internal exit point and Kiemėnai entry point and income at Kotlovka GMS, Klaipėda GMS, Kiemėnai GMS entry points and at the internal exit point are assessed*
***Capacity and income of Šakiai GMS and Kiemėnai GMS exit points and income of Kotlovka GMS are assessed*

Adjustment of price cap of liquefied natural gas re-gasification

The NCC has adjusted the level of income from LNG re-gasification activity for the year 2018 in accordance with the coefficients for adjustment referred to in the Price methodology the influence of which on the overall level of income required for the operation of the LNG terminal is shown in figure 17.

Fig. 17. The level of income from AB "Klaipėdos nafta" LNG re-gasification activity, thousand euros



Source – The NCC.

The level of income established for LNG re-gasification activity for the year 2018, compared to 2018, drops by 3.102.507 EUR, i.e. 5.91 %. The price cap of LNG re-gasification calculated per unit of consumption capacity for the year 2018 accounts for 358.52 EUR/(MWh/per day(24 hours)/year), i.e. 17.51 % more than in 2017. Variable component of the price remains unchanged.

Consumption capacity that, compared to 2017 (187.335 MWh/day(24 hours)/year), decrease by 19.9 %, represent the main reason for increase in the price cap of LNG re-gasification.

Determination of security component

The Law Amending Article 2, 5 and 11 of the Law of the Republic of Lithuania on Liquefied Natural Gas Terminal No XI-2053 adopted on 17 November 2015 provides that the costs of the LNG terminal, equipment of its infrastructure and connection that cannot be financed from other sources available to the company implementing the LNG terminal project, also all fixed operating costs of the LNG terminal, its infrastructure and connection, and reasonable costs of the LNG terminal of supply of necessary amount in accordance with the procedure established by the NCC are included in the security component.

The NCC has assessed all fixed costs of LNG terminal operation by calculating the price cap of LNG re-gasification. Consequently, the NCC calculated the Security component in accordance with the Price methodology as the sum of the costs of the price cap of LNG re-gasification and the designated supplier's supply activities, of the costs of difference of the prices of acquisition and sale of the minimum annual amount of gasified natural gas required to ensure the necessary activity of the LNG terminal and of difference of selling prices, and of LNG terminal funds administration costs per one unit of consumption capacity.

The NCC, in accordance with the Target pricing methodology for natural gas, sets a target price of natural gas, and the designated supplier will have to sell LNG to the regulated energy producers for the target price that has been set. After having assessed the necessary LNG amount that is planned to be supplied, after having verified the specified supply costs of the designated supplier and after having assessed the consumption capacity of prospective character for the year 2018 the NCC has set the supply price of the designated supplier and the Security component.

Table 8. Extra component of natural gas supply security to the price of natural gas transmission paid for consumption capacity at the internal exit point

Extra component of natural gas supply security, EUR/(MWh/day(24 hours)/year)	Until 30 June 2017	Until 31 December 2017	Until 30 June 2018	From 1 July 2018
	473.60	**452.08**	**487.38**	**469.99**
A fixed component of liquefied natural gas re-gasification price for compensation of the fixed operating costs required to ensure operation of the LNG terminal	361.84	361.84	351.83	351.83
The price of the designated natural gas supply	166.15	153.15	139.29	131.35
The component of difference of income from sale of the designated amount in the natural gas market	-51.97	-60.36	9.25	-0.21
The component of liquefied natural gas re-gasification price	-2.87	-3.03	-	-
The component of assessment of change in compensation due to the value of extra Security component	-0.16	-0.17	-13.24	-13.24
The component of LNG terminal funds administration costs	0.61	0.65	0.25	0.25

Source – The NCC.

Setting of specific price for liquefied natural gas re-gasification

The Methodology for Setting state regulated prices in the natural gas sector provides that the NCC sets a specific price at the connecting point of Lithuanian transmission system with the connection of Klaipėda liquefied natural gas floating storage and regasification unit terminal for liquefied natural gas re-gasification taking into account the course of development of the regional natural gas market, the possibilities to safeguard diversified natural gas supply to the natural gas consumers in the Republic of Lithuania under the terms of efficiency competition in the market. In assessing the possibility of transporting natural gas to other Baltic States, the NCC assessed the differences in gas transportation prices when gas is transported through entry points of natural gas transmission system of Kotlovka and LNG terminal. In order to create a level playing field for the system users who transport gas through entry points of Kotlovka and LNG terminal, the NCC has set the price for liquefied natural gas re-gasification which is 0.10 EUR/MWh *(the Resolution No O3-700 of 30 December 2015).*

Adjustment of the distribution price cap

In 2017, the NCC has adjusted the distribution price caps for four DSOs. In 2018 the NCC has set the natural gas distribution price cap of 5.52 EUR for MWh (VAT exclusive) for the largest DSO – AB "Energijos skirstymo operatorius" (until 1 January 2016 – AB "Lietuvos dujos"). Compared to 2017, the distribution price cap falls by 23.8 % or 1.73 EUR/MWh. The main reason for the price decrease is related to the adjustment of return on investment (superprofit) that has accrued in 2014-2016. The change in the distribution price caps of all DSOs in 2011-2018 is presented in the table 9.

Table 9. The natural gas distribution price caps

Company name and type of activity	2011	2012	2013	2014	2015	2016	2017	2018	Change in 2018 compared to 2017, %
	AB "Energijos skirstymo operatorius" *								
Distribution	4.42	4.64	5.00	6.40	7.47	7.92	7.25	5.52	-23.8
	UAB "Fortum Heat Lietuva"								
Distribution	3.81	4.19	4.19	4.43	6.14	6.47	6.25	5.82	-6.78
	UAB "Intergas"								
Distribution	2.34	2.39	2.30	2.29	2.64	7.61	8.17	8.89	8.81
	AB agrofirma „Josvainiai"								
Distribution	1.52	1.65	1.81	1.96	2.05	1.68	1.79	1.10	-38.55

Source – The NCC.

Connection of new consumers

Tariffs for connection for the year 2018, compared to 2017, have not changed. The tariffs that have been set for the largest DSO are presented in the table 10.

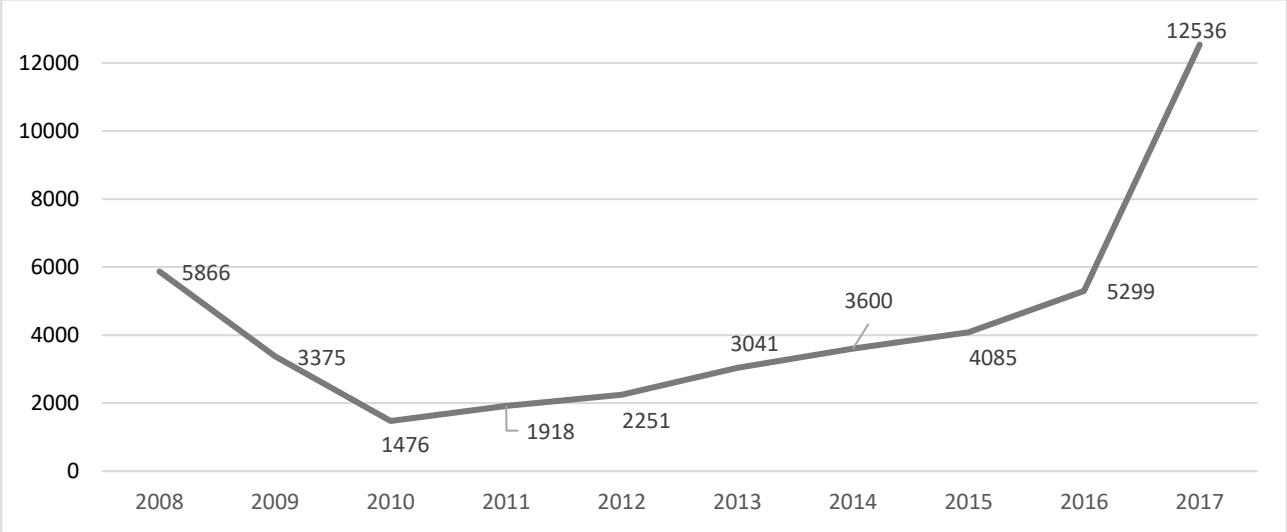
Table 10. Change in the tariffs for connection in 2010-2018

Indicator	Tariff for connection that does not depend on distance, EUR	Tariff per one meter of gas pipeline constructed, EUR/m
Tariff for connection in 2010-2011	406,21	27,36
Tariff for connection in 2012	361,75	14,56
Tariff for connection in 2013	265,16	16,52
Tariff for connection in 2014	208,34	16,15
Tariff for connection in 2015	208,31	14,59
Tariff for connection in 2016	200,79	11,72
Tariff for connection in 2017	228,12	13,67
Tariff for connection in 2018	**228,12**	**13,67**
Change compared to 2017, %	0	0

Source – The NCC.

The total number of consumers newly connected by DSO in 2017 is 12 536 (twelve thousand five hundred thirty-six).

Fig. 18. The number of consumers newly connected to the distribution system of AB "Energijos skirstymo operatorius" in 2008-2017, pcs



Source – The NCC.

4.1.4. Cross-border issues

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

Currently the transmission system of AB "Amber Grid" is connected to the natural gas transmission systems of the Republic of Latvia, the Republic of Belarus and of Kaliningrad region of the Russian Federation, with Klaipėda liquefied natural gas floating storage and regasification unit terminal and with the distribution systems of Lithuanian distribution system operators. The imported

gas from the Russian Federation enters Lithuania through Kotlovka gas metering station (hereinafter referred to as GMS). Furthermore, this point is also used to transmit gas via the territory of the Republic of Lithuania to Kaliningrad region. Šakiai GMS is 100 % used for natural gas transmission to Kaliningrad region, and the connection between Lithuania and Latvia (Kiemėnai GMS) is used not only for the purposes of security of supply, in order to use the underground natural gas storage facility in Inčukalns, Latvia, where a gas is stored for vulnerable consumers in Lithuania for the purpose of ensuring gas supply in case of extreme situation, but also for transmission of commercial gas amounts to Latvia or Estonia.

Currently capacity of Kotlovka GMS for the internal use of the country is distributed as per the principle "first come, first serve" because the capacity at this cross-border point is spare capacity, and neither contractual nor physical congestion occurs there. Technical capacity of Kotlovka GMS is Qmax – 325.4 GWh/day (24 hours). When assessing access to Kotlovka GMS it is necessary to note that in 2017 some part of capacity at this cross-border point was reserved for gas transmission to Kaliningrad (capacity of Šakiai GMS – 109.2 GWh per day (24 hours), the rest of capacity is freely available to consumers of the country. However, it should be stressed out that the Law on Natural Gas provides that in case of gas supply disruption amounts of gas transmitted from the third country to the third country are restricted in proportion to the quantities of gas that are restricted for the consumers of the country.

Technical capacity at the internal exit point has increased by 772 MWh/day (24 hours) after AB "Amber Grid" has completed the construction of Tauragė gas distribution station (hereinafter referred to as the GDS) in 2016. Technical capacity at other entry and exit points of transmission system managed by AB "Amber Grid" did not change in 2016 and 2017.

Technical capacity and its use at the points of great importance of the transmission system are shown in the table 11.

Table 11. Technical capacity and its use at the cross-border points

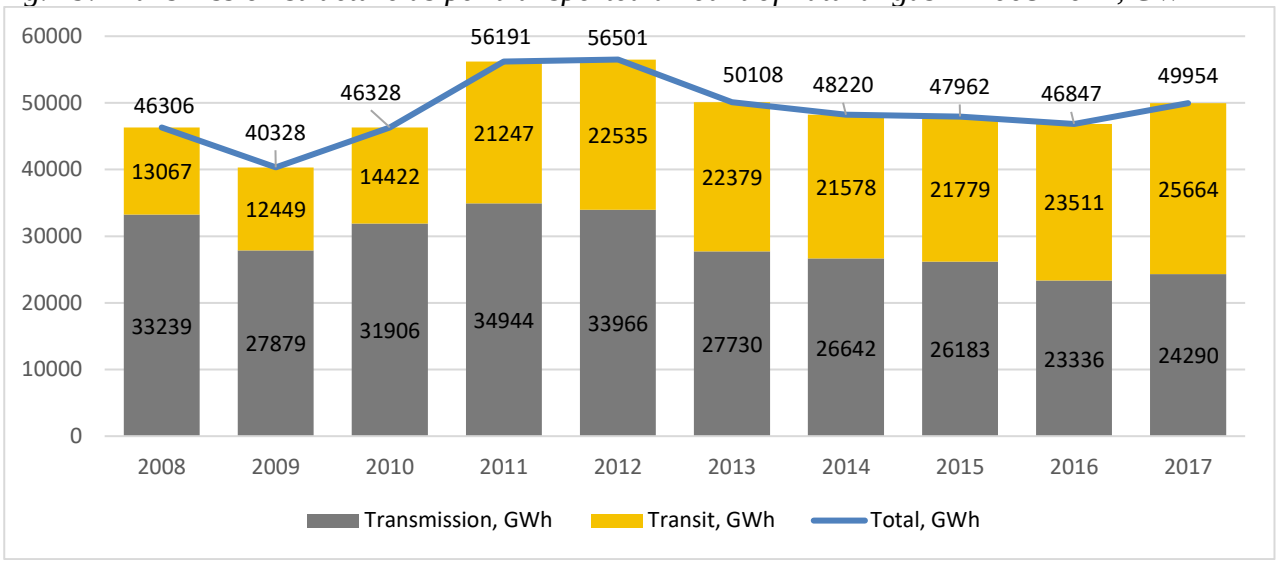
Gas metering station	Technical capacity, MWh/day (24 hours)	Maximum use of capacity in 2017, MWh/day (24 hours)	Maximum use of capacity, %
Kotlovka	325.433,47	221.079,60	67,93
Kiemėnai :			
to Latvia	67.590,03	56.668,75	83,84
To Lithuania	65.086,69	14.882,87	22,87
Šakiai (to Kaliningrad)	109.200	111.919,36	102,49*
Klaipėda (to Lithuania)	122.350,00	102.835,30	84,05

** Gas flow of higher pressure and greater calorific value creates the conditions for the actual provision of technical capacity that is greater than the provided one.*
Source – AB "Amber Grid".

In 2017, the TSO has transported 49.954 GWh of natural gas, of this amount 24.290 GWh (48.62 %) for Lithuanian consumers, and 25.664 GWh (51.38 %) were transported to Kaliningrad region of the Russian Federation. The total amount of natural gas transported in 2017 was 6.22 % bigger than in 2016. In 2017, transmission of natural gas to Lithuanian consumers was 3.93 % bigger than in 2016, whereas the amount of gas transmitted to Kaliningrad region was 8.39 % bigger than in 2016.

On 1 July 2017 the natural gas TSOs of the Baltic States started using the implicit capacity allocation model which is related to gas trading in the natural gas exchange UAB "GET Baltic".

Fig. 19. Transmission structure as per transported amount of natural gas in 2008-2017, GWh



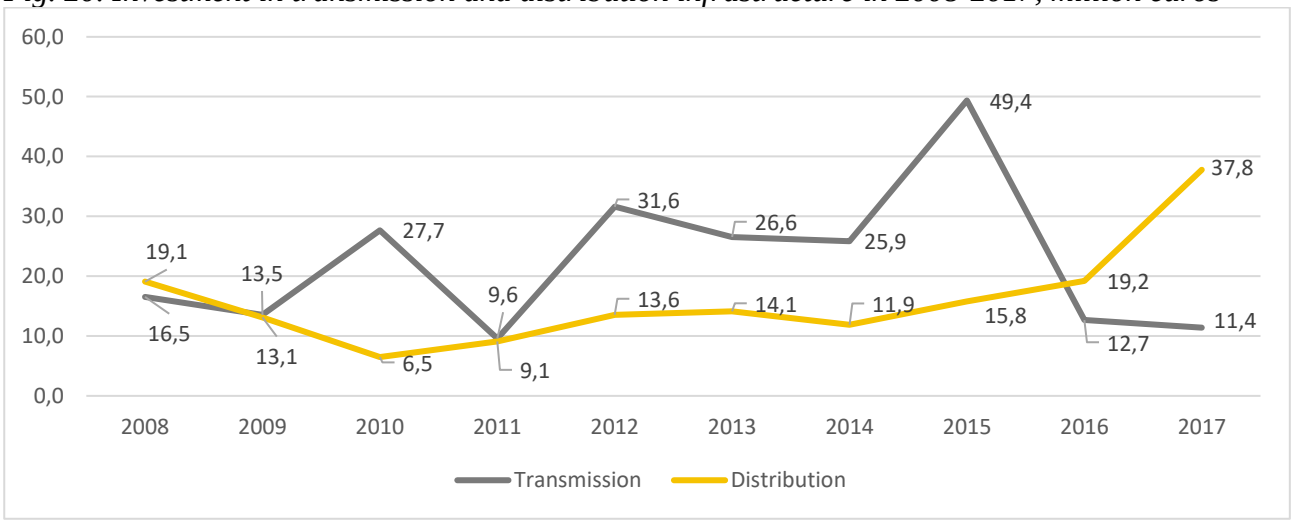
Source – The NCC.

Investment coordination

In 2017, the total amount of actual investment in the natural gas sector accounts for 49.6 million euros, compared to 2016 it increases by 52.2 % (32.6 million euros).

The total amount invested in 2017 by the companies in the natural gas transmission and distribution activities is 49.2 million euros, i.e. 54.2 % more than in 2016 (31.9 million euros). The investment in the natural gas transmission and distribution sectors accounted for 11.4 million euros and 37.8 million euros respectively. The amount invested by the operator of the LNG terminal in 2017 is 317 thousand euros, i.e. 30.7 % more than in 2016. In 2017, investment in the supply activity, compared to 2016, has increased almost twice, i.e. from 76 thousand euros to 133 thousand euros.

Fig. 20. Investment in transmission and distribution infrastructure in 2008-2017, million euros



Source – The NCC.

The regulated entities operating in the natural gas sector every year submit a general list to the NCC for alignment of investment the value of which individually does not exceed 2 million euros or the value of which accounts for less than 5 % of the amount of all planned annual investment and less than 0.15 million euros (the investments of a higher value are aligned separately taking into account economic profitability, payback and influence on the prices of the regulated services). The NCC also safeguards the control of investments of the prior periods by assessing the actual amount of

implementation and other changes. The amount of investment aligned with the NCC by the list of jointly aligned investment: AB "Amber Grid" (natural gas transmission) - 8.930 million euros, AB "Energijos skirstymo operatorius" (natural gas distribution) – 5.455 million euros, AB "Klaipėdos nafta" (LNG re-gasification) – almost 0.531 million euros. The aligned projects of greater importance are presented below. 4 individual investment projects were aligned in 2017 provided that 50 % in the structure of this funding of the projects will be support from the EU structural funds of the total eligible costs of the project:

• Reconstruction of the separate sections of trunk gas pipeline Vilnius–Panevėžys–Ryga (AB „Amber Grid");

• Installation of the system of remote control of technological processes of gas transmission system and collection of readings of gas metering devices (AB "Amber Grid");

• Installation of new advanced distribution systems (AB "Energijos skirstymo operatorius");

• Automation of cathodic safety monitoring of distribution gas pipelines by installing a remote monitoring and control system (AB "Energijos skirstymo operatorius").

By implementing the aforementioned projects, the companies seek to safeguard continuous control over the technological process of gas system objects, collection of readings of gas metering devices as well as security and reliability of gas supply.

The 10-year natural gas transmission network development plan was assessed in January 2018. After having assessed suggestions and needs of the market participants, the actual state of the transmission system, the TSO every year submits the investments that are planned to be made 10 years ahead by adjusting accordingly the works performed or planned in previous years. The plan must specify the most important transmission infrastructure that is required to be installed or renewed, must identify new investments and those regarding which the decision has already been taken, funding of works and the deadlines for implementation.

4.1.5. Compliance with legislation

Wholesale market surveillance

The Regulation (EU) No 1227/2011 provides a continuous EU-wide monitoring of wholesale of energy market products that:

- defines market abuse that may be treated as market manipulation, attempt to manipulate the market and insider dealing;
- prohibits market abuse;
- requires the insider information to be made publicly available in efficient and timely manner;
- obliges the persons who deal professionally with transactions related to wholesale energy products and have a reasonable suspicion that the transaction could be used to abuse the market immediately notify thereof the national regulation authority.

In order to present the REMIT Regulation and the obligations of the market participants arising out of the implementation of this Regulation to the market participants, the NCC has created a special heading "REMIT" in the website designed for the REMIT Regulation. Based on the information provided by the market participants the NCC has prepared the list of entities with the objects the total gas or electricity consumption of which, taking into account the possibility of the equipment that is in the disposition of the entities to operate in uninterrupted maximum mode all day round throughout the year, is greater than 600 GWh.

The NCC performs monitoring of wholesale natural gas market. No violations were determined in 2017 in the natural gas sector.

4.2. Promotion of competition

4.2.1. Wholesale market

4.2.1.1. Monitoring of natural gas price level, transparency, open market and effectiveness of competition in wholesale market

Wholesale market participants and structure

In accordance with clauses 4 to 8 of the Article 2 of the Regulation (EU) 1227/2011, the market participants (natural or legal persons) who enter into transactions in one or more wholesale energy markets, including natural gas supply contracts and contracts with entities whose potential consumption is greater than 600 GWh per year, are attributed to the wholesale energy market.

According to the data available on the NCC's side, there are 15 legal persons in the natural gas sector with the objects the total gas consumption of which, taking into account the possibility of the equipment that is in the disposition of those legal persons to operate in uninterrupted maximum mode all day round throughout the year, is greater than 600 GWh – AB "Klaipėdos energija", UAB "Vilniaus šilumos tinklai", UAB Kauno termofikacijos elektrinė, AB "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", UAB "Arvi cukrus", VĮ "Visagino energija" and UAB "Litesko". The supply transactions entered into with these companies are attributed in Lithuanian gas market to wholesale natural gas supply market.

The amount of natural gas sold and/or consumed in 2017 in the wholesale natural gas supply market is 19173 GWh, i.e. 2.93 % more than in 2016 (the amount of natural gas that was sold and/or consumed in this year was 18628 GWh).

These changes were driven by increasing consumption of natural gas among the wholesale market participants.

Table 12. The structure of wholesale natural gas supply market in 2013-2017, GWh

The structure of wholesale natural gas supply market	2013	2014	2015	2016	2017
Under bilateral contracts in Lithuania	22240	21548	23711	18329	18802
In the exchange*	600	1134	652	299	371
Total	**22840**	**22682**	**24363**	**18628**	**19173**
Change compared to 2017, GWh	-3667	-3509	-5189	545	-
Change compared to 2017, %	-16,05	-15,47	-21,30	2,93	-

* The transactions of natural gas exchange are assessed that involve the purchasers with the trading areas in Lithuania.

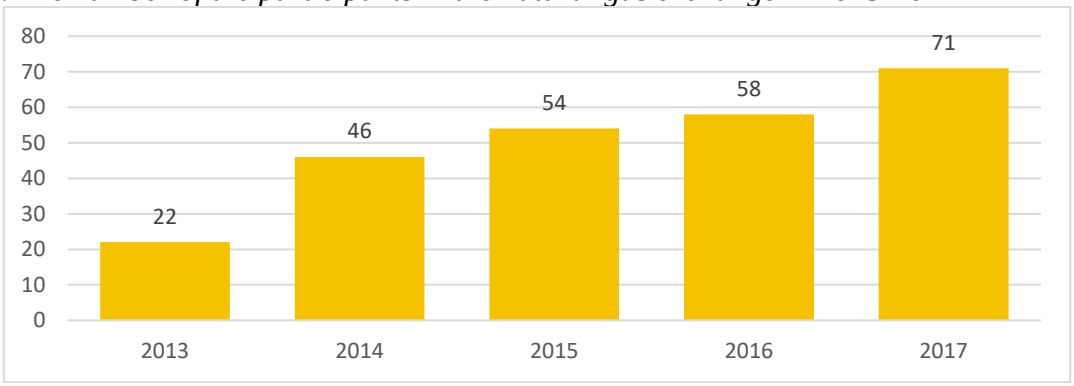
Source – The NCC.

In 2017, the biggest share of market in the wholesale natural gas supply market under bilateral contracts was held by AB "Achema" with the market share of 79.2 % and, compared to 2016, the market share held by this company increased by 9.4 percentage point. The share of wholesale natural gas supply market held by UAB "Dujotekana" under the bilateral contracts concluded was decreasing from 2013, and already in 2016 no natural gas was sold by the company and its market share was equal to 0. In 2017, the market shares held by UAB "Lietuvos dujų tiekimas" and UAB "Litgas", compared to 2016, decreased respectively by 5.4 and 2.7 percentage point.

Trading in natural gas exchanges

In 2017, there was 71 participant registered in the natural gas exchange and the number of the participants was the highest from 2013.

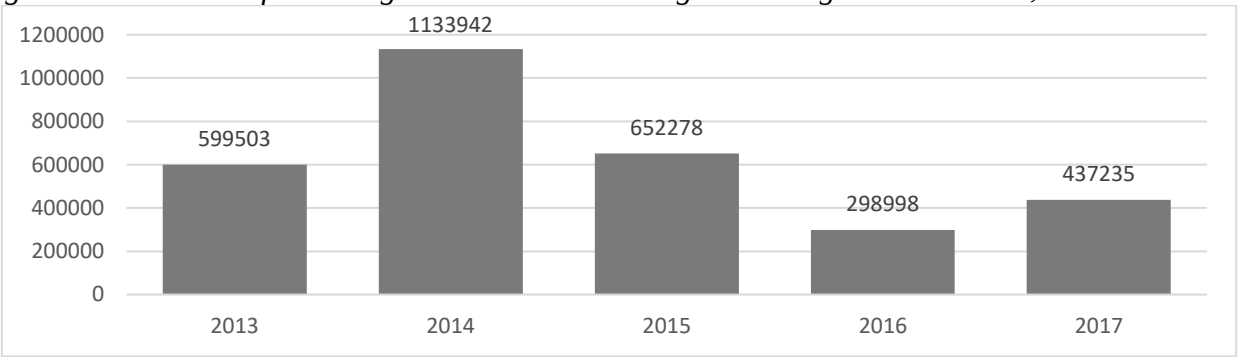
Fig. 21. The number of the participants in the natural gas exchange in 2013-2017



Source – The NCC.

437235 MWh of natural gas were sold in 2017 in UAB "GET Baltic" natural gas exchange. Compared to the period of 2016, the amount of natural gas sold in UAB "GET Baltic" natural gas exchange was 46.23 % bigger than in 2016. It should be noted that trading areas in Latvia and Estonia established by UAB "GET Baltic" natural gas exchange started operating from 1 July 2017.

Fig. 22. The amount of natural gas sold in the natural gas exchange in 2013-2017, MWh



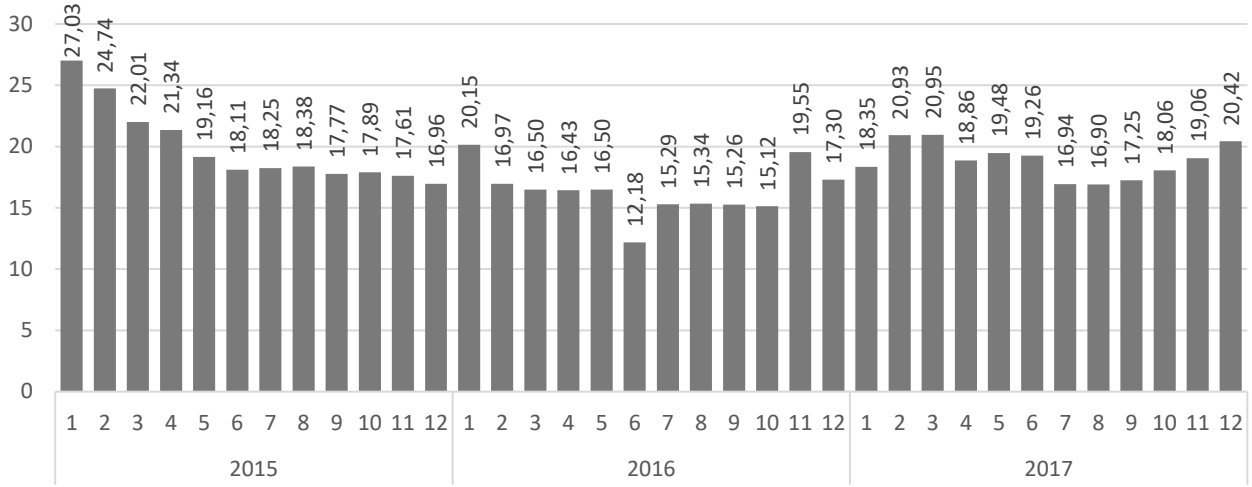
Source – The NCC.

In 2017, the average price of natural gas in UAB "GET Baltic" exchange was 17.61 EUR/MWh[2], or 0.76 % higher than in 2016 (then it was 17.47 EUR/MWh). In 2017, trading turnover in the exchange accounted for 7.7 million euros[3].

[2] The selling price excluding natural gas transportation cost is considered.

[3] The selling amount excluding natural gas transportation cost is considered.

Fig. 23. The average monthly natural gas price in UAB "GET Baltic" natural gas exchange in 2015-2017, EUR/MWh



Source – The NCC.

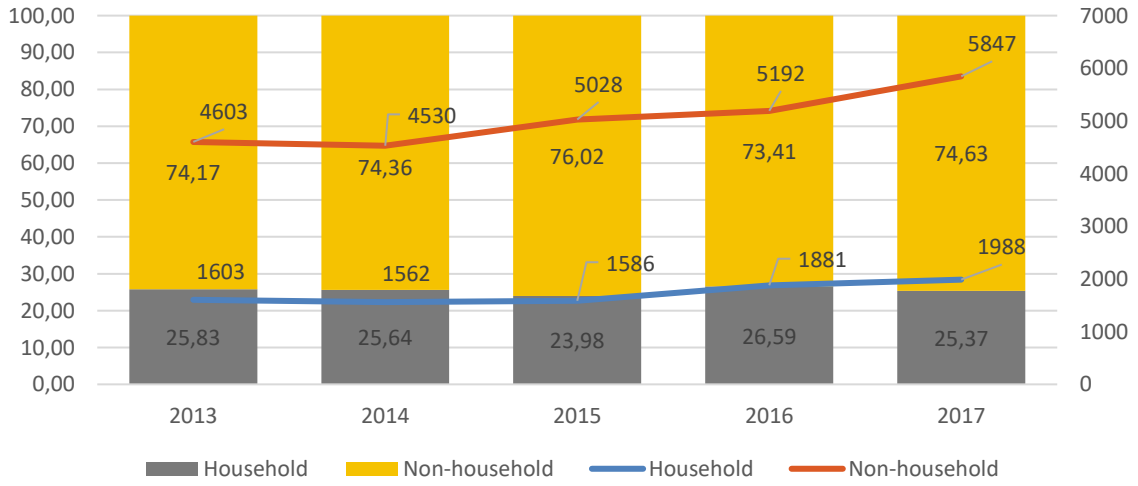
Detailed information on wholesale natural gas supply market is presented in the NCC's Review of Energy and Drinking Water Supply and Wastewater Management Sectors of 2017[4].

4.2.2. Retail natural gas supply market

4.2.2.1. Monitoring of natural gas price level, transparency, open market and effectiveness of competition in retail market

Natural gas supply companies, the market participants (natural or legal persons) who enter into natural gas supply contracts with the end-users who are able to consume less than 600 GWh of natural gas per year are attributed to retail natural gas supply market.

Fig. 24. The market structure as per purchased quantities of natural gas in 2013-2017, GWh and %



Source – The NCC.

[4] https://www.regula.lt/SiteAssets/VKEKK_BENDRAS_metines%20ataskaitos%20priedas%20uz%202017.pdf

In 2017, there were 582 thousand natural gas consumers in Lithuania, of them – 575.3 thousand of household consumers and 7.2 thousand of non-household consumers. In 2016 there were 566.2 thousand of household consumers and 6.8 thousand of non-household consumers.

The household consumers who as per the number of consumers hold 98.77 % of entire retail consumer market have consumed only 25.37 % of natural gas supplied in the retail natural gas supply market. The non-household consumers bought 74.63 % of the amount of natural gas supplied in the retail natural gas supply market, though the number of these consumers, compared to the number of the household consumers, was very low – only 1.23 %.

The segment of the household consumers

In 2017, 4 companies were supplying gas in the retail market to the household consumers, and the DSO AB "Energijos skirstymo operatorius" was responsible for natural gas supply in Druskininkai municipality. The amount of natural gas consumed by the household consumers in 2017 was 1987 GWh, i.e. 5.67 % more than in 2016. The household consumers have paid 69.3 million euros for natural gas, i.e. 1.5 % less than in 2016. UAB "Lietuvos dujų tiekimas" remains in the position of the main natural gas supplier to the household consumers: in 2017 the market share held by this company accounted for 99.9 % of sales.

The natural gas tariffs for the household consumers

The NCC, in accordance with the Article 9 (17) of the Law on Natural Gas, every half year approves the tariffs for the household consumers. In 2017, the NCC has twice a year confirmed the household consumer gas tariffs for 4 gas companies by differentiating them by groups.

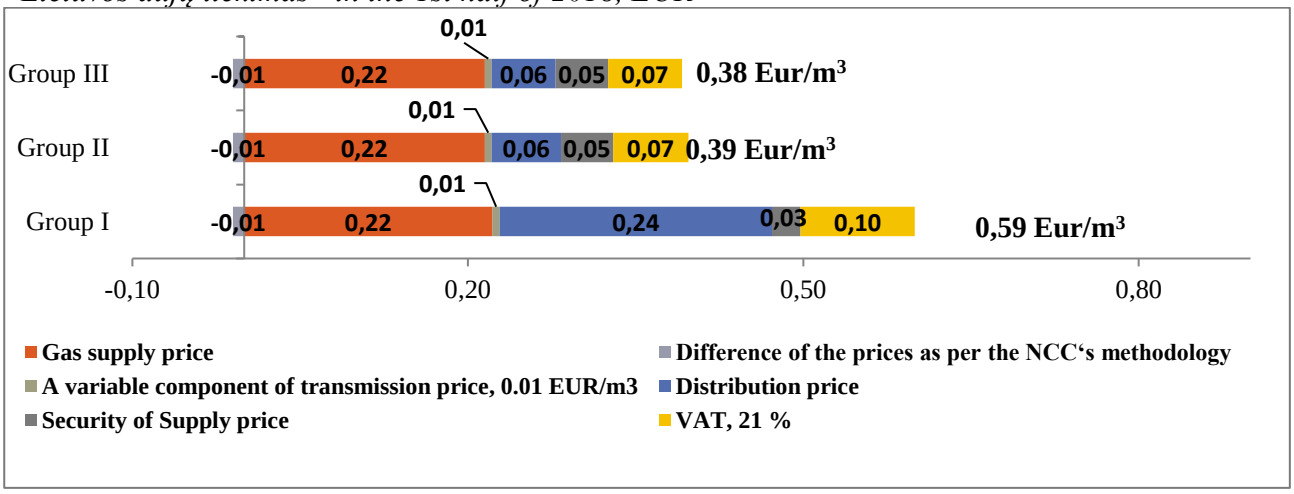
The natural gas tariff for the household consumers consists of the sum of the specific prices of natural gas (product), transmission, distribution, storage, supply, Security component, including LNG re-gasification, LNG relocation and delivery of natural gas to small-scale LNG regasification facility and the difference between the forecasted and actual natural gas (product) prices of the previous tariff validity period. The gas import price for the upcoming half-year is forecasted according to the price calculation formulas or specific prices indicated in the contracts on gas purchase/sale. The income difference arising from difference between the forecasted and actual import price is evaluated by setting the natural gas price for the next half-year. The natural gas supply companies set a binary tariff that consists of a variable component paid for the gas amount consumed and a fixed component when a fixed component of the tariff per month is paid.

Table 13. Natural gas tariffs for the household consumers (VAT inclusive), EUR/m^3

Company	Group	1st half of 2017		2nd half of 2017		1st and 2nd half of 2018	
		Fixed component of tariff	Variable component of tariff	Fixed component of tariff	Variable component of tariff	Fixed component of tariff	Variable component of tariff
UAB "Lietuvos dujų tiekimas"	Group 1	0.56	0.61	0.56	0.64	0.56	0.59
	Group 2	3.99	0.36	3.99	0.39	3.99	0.39
	Group 3	3.99	0.35	3.99	0.38	3.99	0.38
UAB "Fortum Heat Lietuva"	Group 2	3.42	0.45	3.42	0.44	3.42	0.46
AB agrofirma "Josvainiai"	Group 1	0.63	0.39	0.63	0.40	0.63	0.45
	Group 2	3.99	0.31	3.99	0.33	3.99	0.38
UAB "Intergas"	Group 1	1.45	0.40	1.45	0.48	1.45	0.53
	Group 2	1.45	0.33	1.45	0.41	1.45	0.46

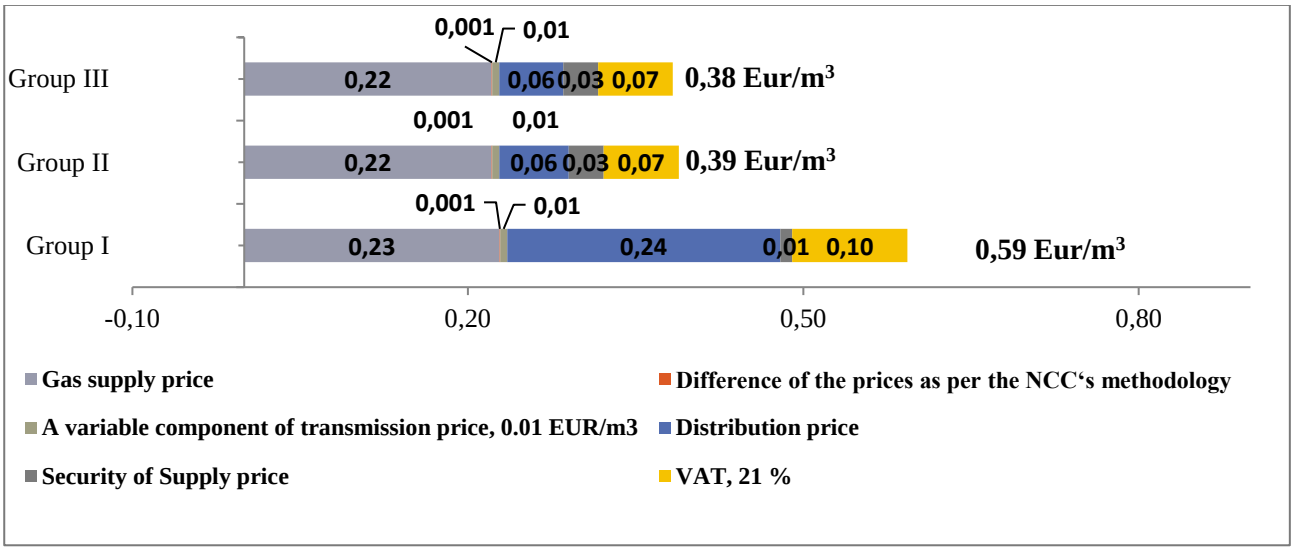
Source – The NCC.

Fig. 25. The structure of a variable component of the tariff for the household consumers of UAB "Lietuvos dujų tiekimas" in the 1st half of 2018, EUR



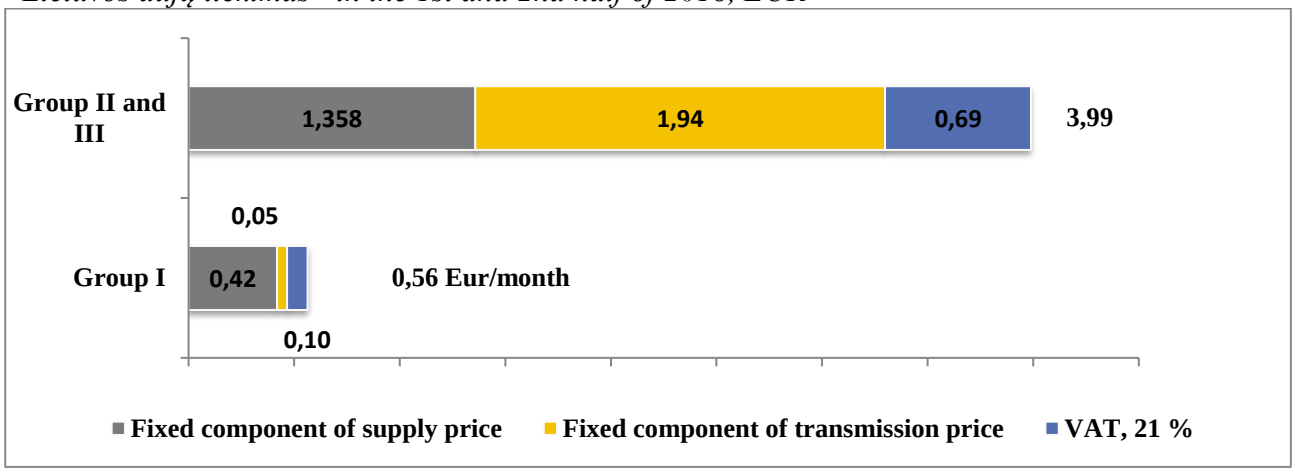
Source – The NCC.

Fig. 26. The structure of a variable component of the tariff for the household consumers of UAB "Lietuvos dujų tiekimas" in the 2nd half of 2018, EUR



Source – The NCC.

Fig. 27. The structure of a fixed component of the tariff for the household consumers of UAB "Lietuvos dujų tiekimas" in the 1st and 2nd half of 2018, EUR



Source – The NCC.

A fixed fee per month is paid for the purpose of keeping up "performance" of the gas system and for the purpose of reservation of power (ensuring capacity) in trunk gas pipelines because each consumer must have a guarantee that at any moment the consumer will be able to get a quality service. A fixed fee also includes accounting, contracting costs (supply price).

Monitoring of natural gas market

The NCC carried out monitoring of the scope and effectiveness of opening up the natural gas market and competition in wholesale and retail. In order to increase the awareness of the market participants thus ensuring that the market participants have reliable information, the NCC every half-year prepares reports on the monitoring of the natural gas market and makes them publicly available on the website of the NCC www.regula.lt. The reports cover the import, transmission, distribution and supply (wholesale and retail) markets for natural gas.

4.2.3. Development of regional natural gas market

The Regional Gas Market Coordination Group (RGMCG) has been established at the beginning of 2015. The Group consists of the national regulatory authorities, ministries responsible for energy sector policies, as well as regional infrastructure operators such as transmission system operators, , the operator of Klaipėda liquefied natural gas floating storage and regasification unit terminal and the operator of the underground natural gas storage facility in Inčukalns. The main purpose of this group is to develop a single natural gas market in the Baltic-Finish region.

In 2017, RGMCG was chaired by the representatives of the Ministry of Economic Affairs and Communications of the Republic of Estonia (formerly it was chaired by Latvia). The tasks provided for the year 2017 by the Unified Market Development Action Plan which envisages development of a single market until the end of 2019 were implemented in 2017.

The NCC, by taking part in the regional Task Force for Gas Transmission Services Pricing and inter-TSO Compensation Mechanism Application, together with the national regulatory authorities of Latvia, Estonia and Finland has prepared the guidelines setting the main pricing principles of the Baltic-Finish natural gas region. It should be stressed out that on 27 November 2017 the said guidelines have been approved by the national regulatory authorities.

In accordance with the principles enshrined in the Guidelines and in order to create from 2020 onwards a single Baltic-Finnish natural gas transmission entry-exit system and to select the most appropriate methodology for calculating the prices of natural gas transmission services of three currently available alternative methodologies ("Postage stamp", Capacity-weighted distance or

Matrix) and to have a model for setting natural gas transmission tariffs for the whole region, in 2017 the national regulatory authorities have implemented a tendering procedure. The tendering procedure has been held under the auspices of the representatives of Finish national regulatory authority, the supplier who has successfully tendered for the procedure was the international consultancy company "Baringa" that in June 2018 provided the final results of the study prepared to the national regulatory authorities. In order to eliminate the cross-border entry and exit points in the region and to have uniform (similar) tariffs at the points of entry to the region, the consultants have suggested, in line with the Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas, to apply the same "postage stamp" methodology in each country of the region separately, and benchmarking shall apply for the justification of region entry tariffs.

4.3. Security of Supply

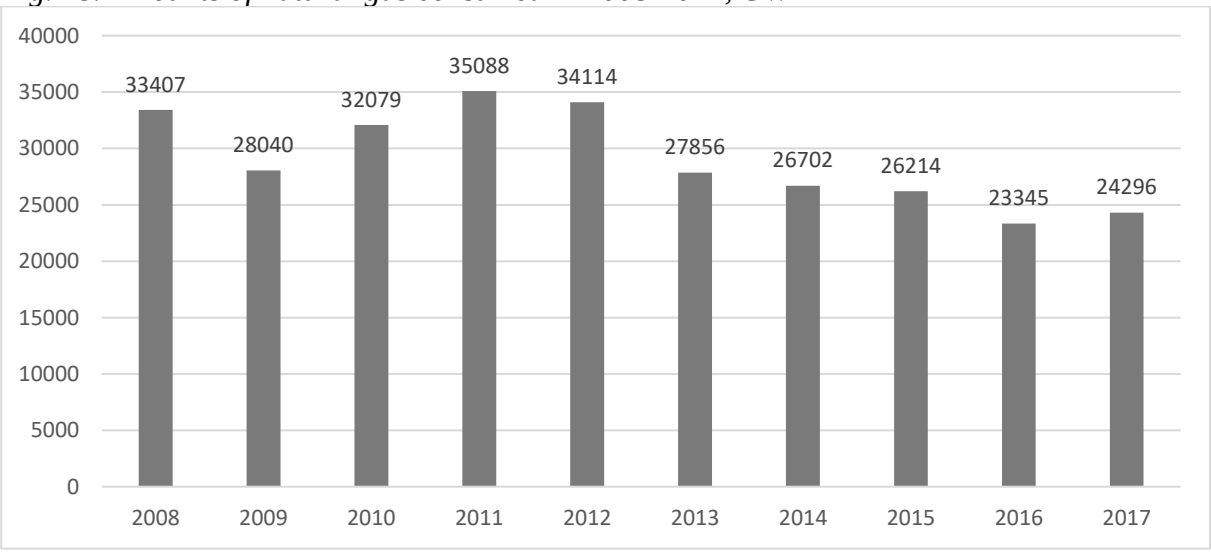
4.3.1. Gas supply and consumption

Gas supply has become diversified after Klaipėda liquefied natural gas floating storage and regasification unit terminal was built, and the country is no longer dependent on a single gas supplier. In this way, the requirement set forth in the Article 5 (1) of Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010 that should disrupting of the operation of one of the largest gas infrastructures occur, the technical capacity of the remaining infrastructure, as established under the formula N-1, would be enough to meet the entire gas demand on an extremely high gas demand day which according to the statistical probability occurs once every 20 years.

The Article 47 of the Law on Natural Gas stipulates that the natural gas suppliers must build-up natural gas reserve that can be used only in accordance with the procedure established by the Government or an institution authorized by it. When implementing this provision UAB "Lietuvos dujų tiekimas" stores about 333.84 GWh of natural gas in the underground natural gas storage facility in Latvia to safeguard security of natural gas supply.

From 2013 consumption of natural gas in Lithuania was decreasing, but in 2017 consumption increased (the amount of natural gas consumed in 2017 was 4.07 % bigger than in 2016).

Fig. 28. Amounts of natural gas consumed in 2008-2017, GWh



Source – The NCC.

4.3.2. Expected consumption of natural gas in the future

According to the data provided by Lithuanian consumers, in 2018 the amount of gas consumed should decrease to 21.6 TWh. The amount of gas expected to be transmitted to Kaliningrad in the future is around 22-26 TWh.

4.3.3. Measures to cover peak demand or shortfalls of suppliers

AB "Amber Grid" prompts the system users to plan the required capacities more accurately and evenly by establishing the transmission price. The total distribution of income of all points between the fees for capacity and the fees for quantity accounts for respectively 70 % and 30 %. Spare (free) capacity is offered in the market by providing for the possibility of concluding contracts for interruptible capacity. After having concluded the contract for the services of natural gas transmission, distribution, the system user can every week and/or every day order (adjust) capacity. The system user can order capacity (adjust the order) online (on the Internet) or in writing under the terms of the contract. At the time of ordering capacity for the relevant period the system user must have a gas amount purchased. The supply mode under the terms of the sale/purchase contract must be aligned with the supply company.

In the normal conditions of operation of the transmission system and supply to Lithuania the peak gas consumption is fully met.

The following measures would be used in event of gas transportation disruptions:

– the system users having signed with the supply company uninterrupted supply contracts have gas reserves in the underground storage facility in Inčukalns;

– the natural gas transmission contracts with the system users directly connected to the transmission system stipulate the priorities of natural gas supply and transportation and specify a chronological order of restriction and gradual curtail of gas supply in the event of an emergency or a gas supply disruption;

– the supply companies must follow the instructions of TSO and DSO in the event of an emergency or a gas supply disruption as stipulated in the National Natural Gas Supply Emergency Management Plan.

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

5.1. Consumer protection

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

When performing the functions of regulation, supervision and control of energy activities, the NCC, in accordance with the Article 4(3) of the Law on Energy, within the frame of its competence safeguards the implementation of the state policy in the field of consumer rights protection in the energy sector. When implementing this function within the frame of its competence the NCC under the advance procedure for complaint and dispute investigation out of court examines the complaints from consumers and energy companies and consumer disputes regarding the activities or omissions of energy companies in supplying, distributing, transmitting, storing energy, regarding not granting the right of access of energy companies to networks and systems, connecting, balancing flows of energy and resources supply, application of prices and tariffs, also disputes between water suppliers and subscribers regarding prices and tariffs for drinking water and wastewater treatment and in accordance with the procedure established by the Law of the Republic of Lithuania on Public Administration provides advice to consumers and entities.

Safeguards to protect consumers are provided for in the Article 57 of the Law on Natural Gas. Consumers have the right to receive from natural gas companies without additional charge regular and proper information on the actual consumption of natural gas and prices of natural gas, and after

having entered into an explicit agreement to allow any registered supply company to use free of charge the readings of their metering devices. The natural gas companies publish on their websites the prices of natural gas and services provided, specify the possibility of payment for gas consumed or services received in cash, using online banking or to enter into a direct debit contract.

Safeguards to protect consumers are provided for in the Article 51 of the LoE. Consumers have the right to receive from the NCC, electricity companies clear and understandable information about their rights regarding electricity consumption and services received. Consumers also have the right of access to electricity consumption data, including amount of electricity consumed, also after having entered into an explicit agreement to allow any supplier to use free of charge the readings of their metering devices. Consumers must also receive a transparent information about the prices, tariffs applied and about all terms related to electricity services. The suppliers must provide adequate and sufficient conditions for consumers to access information and data on payments for electricity supplied to them. Adequate and sufficient means of access include the provision of an invoice to consumer or electronic access to user payment data or other reasonable means.

Consumers have the right to change supplier free of charge. This change has to be fulfilled by companies within three weeks of submitting a request for a change of supplier.

Consumer may receive from the NCC and the State Consumer Rights Protection Authority all the necessary information about their rights, ways of dispute resolution and the current legislation that governs the energy sector.

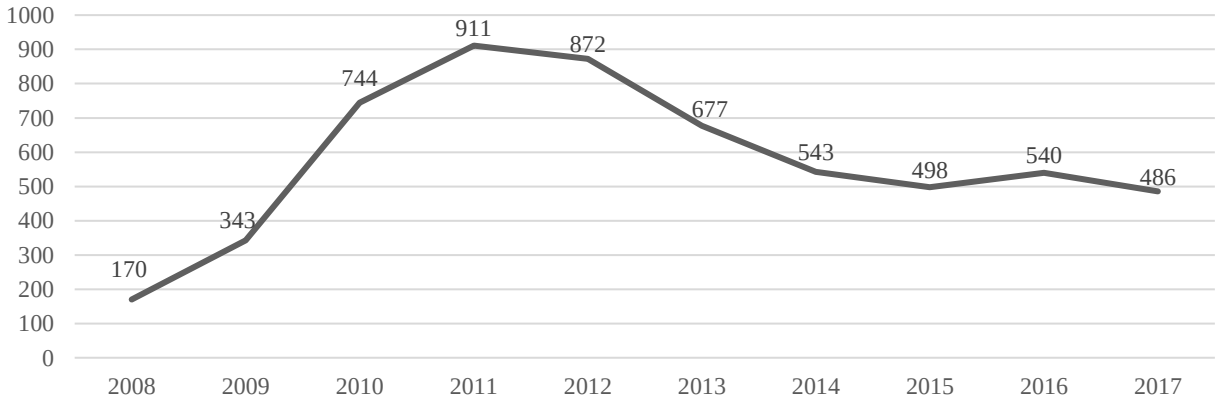
Ensuring access to consumer data (the Article 37(1)(p))

In 2017, user data access conditions did not change significantly compared to 2016. According to the legal regulation, consumers of electricity and natural gas must be provided with adequate and sufficient conditions for access to information and data on actual energy consumption, payments for energy amount supplied to them and/or the services related to energy supply. Adequate and sufficient means of access are the provision of an invoice to the consumer or electronic access to user payment data or other reasonable means. Electricity and gas customers receive services and are served in one place and on the same self-service website www.manogile.lt.

In 2017, compared to 2016, due to the outstanding debt electricity transmission was cut off to a third lower number of consumers, i.e. 2301 customer (in 2016 – 3452, in 2015 – 3218, in 2014 – 3243, in 2013 – 2179). Electricity transmission is not cut off when the maximum diurnal air temperature is below 15 (fifteen) or above 30 (thirty) degrees Celsius and on Fridays and on pre-holiday days.

5.2. Examination of inquiries

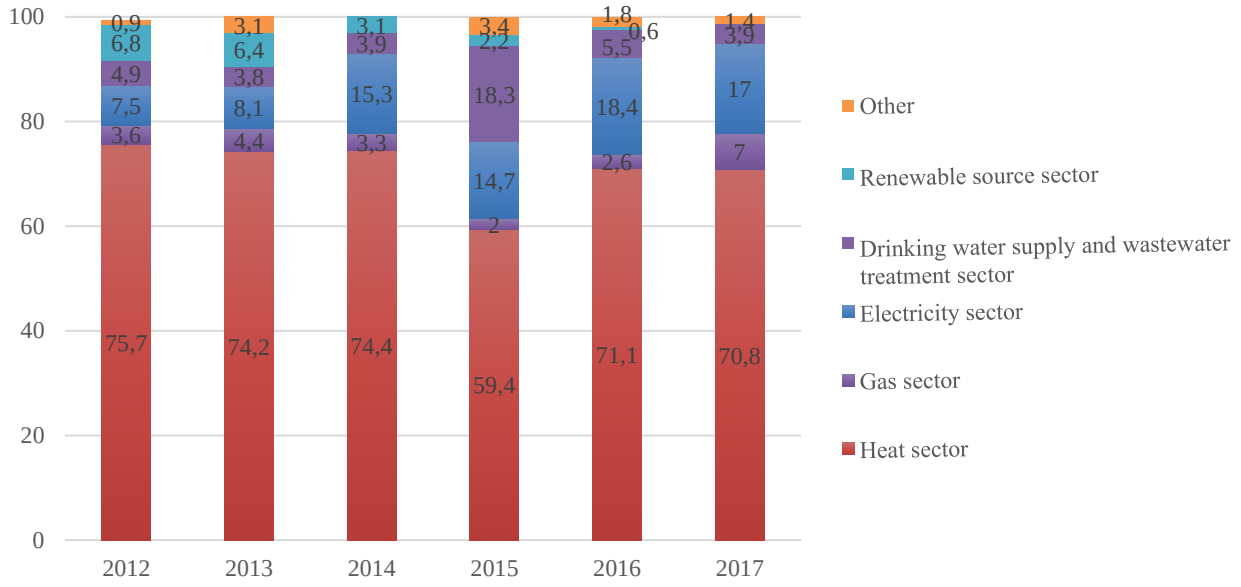
Fig. 29. The dynamics of consumer inquiries submitted in writing that were received in the NCC in 2008-2017 (pcs)



Source – The NCC.

In 2017, the Commission received inquiries (in writing) of 486 consumers. This is the lowest number of inquiries since 2010.

Fig. 30. Distribution of consumer inquiries received in the NCC in 2008-2016 by sectors (%)



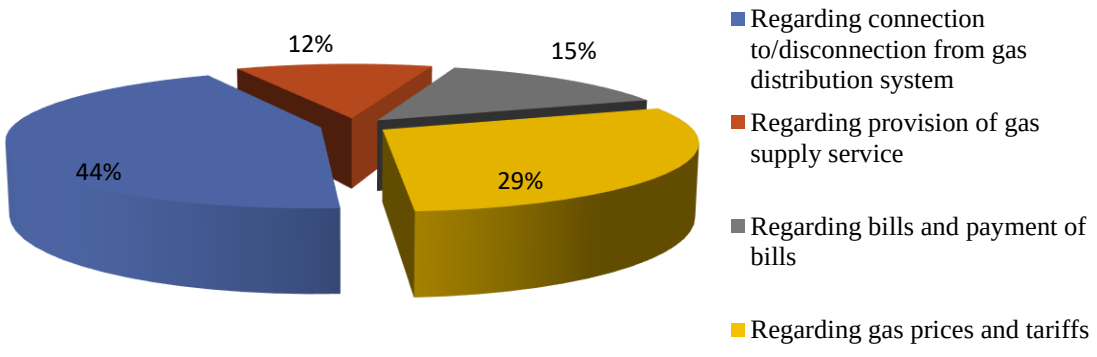
Source – The NCC.

Most of inquiries addressed to the NCC in 2017 were related to heat sector. Regardless of the change in the total number of inquiries, in 2017 the share of inquiries in connection with heat sector accounted for 71 % of the total number of inquiries, and remained rather stable compared to 2016.

In 2017 the NCC received 346 inquiries regarding heat sector, 83 inquiries regarding electricity sector, 19 inquiries regarding water sector and 34 inquiries regarding gas sector.

It should be stressed out than in 2017, compared to 2016, a bigger number of consumer inquiries related to natural and liquefied petroleum gas sector were received: 34 inquiries were received, i.e. 7 % of the total number. In 2016, the inquiries of natural gas sector accounted for only 2.6 % of the total number of inquiries. The queries that are most relevant for the consumers involve the attribution of natural gas consumers to the relevant subgroup based on the actually consumed amount of natural gas, as well as calculation of tariffs of connection to/disconnection from natural gas, liquefied petroleum gas distribution systems and connection to/disconnection from natural gas distribution systems, etc.

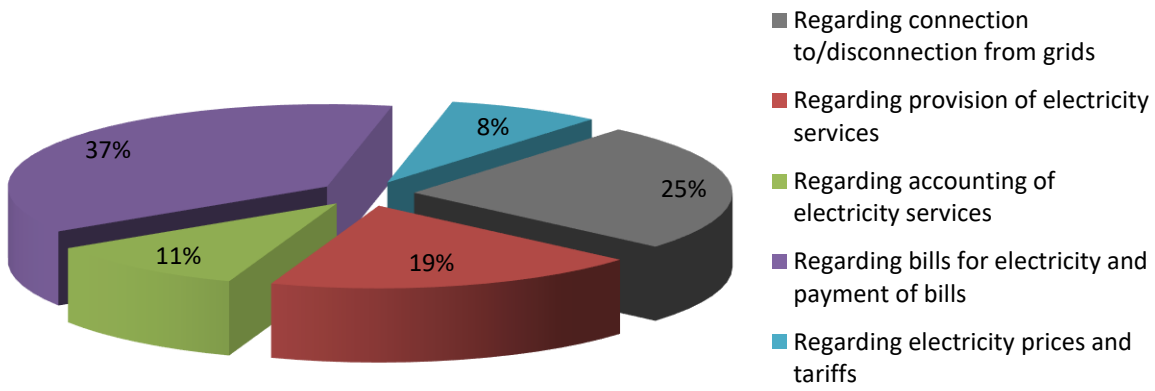
Fig. 31. Consumer inquiries in writing in the gas sector by the nature of inquiry (%)



Source – The NCC.

83 inquiries regarding the electricity sector were received, 17 % of the total number of inquiries. As in the previous year, the consumer have most often applied for a potentially incorrectly calculated payable amount for electricity, in event of failure or inappropriate operation of the metering device, the conditions and tariffs of the connection of electrical equipment of the consumers to power grid, and failure (delay) to perform works of connection to power grid according to the deadlines specified in the contract.

Fig. 32. Consumer inquiries in writing in the electricity sector by the nature of inquiry (%)



Source – The NCC.