

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

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National Energy Regulatory Council

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## 1. FOREWORD

The National Energy Regulatory Council (hereinafter - the Council), as a consolidated institution, following the process when the State Energy Inspectorate under the Ministry of Energy (hereinafter - the SEI) has been reorganised by way of merger and joined to the National Commission for Energy Control and Prices (hereinafter - the NCC), started its activities from 1 July 2019 and took over the economic and technical regulation and market supervision and control functions of energy market in the Republic of Lithuania. The pooling of competencies of the two institutions in the Republic of Lithuania, which had been constantly cooperating before the merger was executed, will ensure the implementation of the European Union (hereinafter - the EU) electricity and natural gas sector network codes, reduce the administrative burden of supervision for the regulated entities, will help to solve customers complaints faster and more efficiently. In addition, work together will strengthen the competencies. Both the NCC and the SEI performed the supervision and control of basically the same entities in the energy sector. With the consolidation of the functions of both institutions, VERT experts will assess the economic feasibility of regulated costs, the technical reliability and safety of the facilities, the need for investment, etc. An essential common area of activity is the technical and economic evaluation of investments of the energy companies. Effective and necessary investments provide consumers with reliable and secure services at cost reflected prices. Investments in infrastructure activities by economic operators are not limited to economic benefits, the major part of the funds goes to ensure the security and reliability, especially in the energy sector.

The Council is performing the following technical functions alongside economic market regulation since 1 July 2019:

- Maintenance of energy facilities and installations;
- Control of energy workers' certification;
- Testing of energy efficiency;
- and Issuing certificates of energy equipment operation activities.

Also a new function - to oversee and license the participants in wholesale and retail market of petroleum products - has been assigned to the Council since 1 July 2019. The Council will issue the permissions or licenses to the companies operating in this sector, following the assessment of the financial, technological and managerial capacity of them.

With respect to the fact, that this Annual Report on Electricity and Natural Gas Markets of the Republic of Lithuania to the European Commission (hereinafter - the EC) is for the year 2018, the NCC abbreviation of the institution will be used further in the report.

As for the main events in the electricity market, it should be noted that in 2018 the NCC has harmonized the Lithuania's share of investments of the project of common interest "Integration and synchronisation of the Baltic States' electricity system with the European networks" that amounts to 167.05 million euros. The total value of the investments implemented in the Baltic States is 432.55 million euros. The synchronisation project consists of investments in the electricity transmission systems of the Baltic states, upgrading and strengthening of control systems that are required for synchronisation. They are necessary regardless of the selected synchronisation scenario. These investments are planned to be implemented in Lithuania by 2025. The synchronisation project is one of the main objectives of the National Energy Strategy that was approved in July of 2018. It is also consistent with the Political Roadmap on the synchronisation of the Baltic States' electricity networks with the Continental European Network that was signed on 28 June 2018 in Brussels between the EC and the leaders of the Baltic States. It should also be noted that the national regulatory authorities of Lithuania, Latvia, Estonia and Poland, being aware of the importance of the integration of the Baltic States' electricity system into the Continental Europe network, on 13 May 2019 have signed the Cooperation Agreement on the implementation of the Project of the synchronisation of the Baltic States' electricity networks with Continental Europe. This is an important step that consolidates the coordinated approach and obligations of the regulators in implementing the Synchronization project, it will allow ensuring smooth process of investment projects' coordination, including adoption of decision on sharing cross-border costs that will be incurred during the implementation of the projects related to

synchronization. The Cooperation Agreement also defines a process of close cooperation with transmission system operators (hereinafter - the TSO) and between regulators, aspects of confidentiality obligations and other essential aspects of cooperation.

In 2018, increase in electricity prices within Lithuanian price zone was recorded, and this was influenced by production volumes in hydropower plants in Sweden and Norway that decreased due to drought and low water level, increase in the cost of emission allowances for electricity produced from polluting sources (on 1 January 2017 - 5 euros, on 1 November 2018 - 15.85 euros) and repairs of NordBalt electricity connection with Sweden. Electricity prices in Lithuanian price zone in the day-ahead market of the Nord Pool in 2018 compared to 2017 rose by 42.3% (the fall in prices in 2017, compared with 2016, amounted respectively to 3.9%).

In 2018, 1 license for electricity distribution activities and 2 licenses for public electricity supply were issued and 2 licenses for electricity distribution activities and 2 licenses for public electricity supply were withdrawn in 2018. In 2018, 13 new authorizations for independent suppliers were issued, 2 authorizations were withdrawn upon receipt of request from independent suppliers to withdraw the available authorization of independent electricity supply. In 2018, the NCC has also changed 1 authorization after the change of the independent supplier's name, has suspended validity of 9 authorizations and has renewed 1 authorization to operate under the request submitted. At the end of 2018, 23 out of 49 independent suppliers holding an authorization were active.

In 2018, compared to 2017 (11.926 TWh) physical import flows have increased (12.847 TWh), and the physical export flow decreased to 3.215 TWh in 2018, compared to 3.249 TWh in 2017. Cross-system connections created the preconditions for these changes. It should be noted that production at the local power plants decreased and amounted to 3.220 TWh in 2018, compared to 3.866 TWh in 2017. The decrease in amount of electricity produced at the local power plants was largely impacted by the decreased production of electricity from non-renewable energy sources (1.128 TWh in 2018, compared to 1.419 TWh in 2017, 1.953 TWh in 2016 and 2.988 TWh in 2015), as well as decreased production of the same period from renewable energy sources (hereinafter - RES) (2.092 in 2018, compared to 2.446 TWh in 2017, 2.024 TWh in 2016 and 1.611 TWh in 2015).

The total electricity consumption of household consumers in the country in 2018 amounted to 2.862 TWh and was 5.49% higher than in 2017 (2.713 TWh). In 2018, the total electricity consumption in the category of non-household consumers amounted to 6.780 TWh (4.33% or 0.282 TWh more than in 2017 ).

In 2018, the maximum hourly electricity demand (net worth) in Lithuania was 1,999 MW, i.e. 5.43% higher than in 2017 (1,896 MW, in 2016 - 1,979 MW). In 2018, the maximum hourly electricity demand in the distribution network was 1,760 MW and was 5.7% higher than in 2017 (1,665 MW, in 2016 - 1,695 MW, in 2015 - 1,555 MW).

In 2018, the "Description of the Requirements for the Accounting Separation and Allocation of Costs of Electricity Companies" was changed, the "Pricing Methodology for PIS in the Electricity Sector" and the "Methodology for Setting Tariffs of Connection of Electrical Equipment to Power Grids" were recast.

In implementing the electricity network codes in the electricity sector, the launch of the European Cross Border Intraday Trading Platform (XBID) that enables trading between states and different platforms of market operators can be identified as an important milestone in 2018. In order for trade to be conducted under clear, transparent and non-discriminatory rules, the NCC and other EU regulators have already adopted important legislation on market coupling, capacity calculation, secure running and operation of the transmission system, and other.

As for the main events in the gas market, it should be noted that in 2018, the NCC, together with the national regulatory authorities of Latvia, Estonia and Finland, actively participated in the Task Force for Gas Transmission Services Pricing and Inter-TSO Compensation Mechanism Application. A common goal for all these countries is to develop in 2020 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). The countries also had a goal to have a model for setting natural gas transmission tariffs for the whole region, therefore in 2017 the national regulatory authorities have implemented a public procurement procedure. The public procurement procedure has been held under the coordination of the representatives of Finish national regulatory authority. The winner of the tender was the international consultancy company “Baringa Partners LLP” (hereinafter - Baringa) which presented the final results of the study to the national regulatory authorities in June 2018. In order to eliminate the cross-border entry and exit points in the region and to have the same (similar) tariffs at the points of entry to the region, the consultants have suggested, in line with the EC Regulation (EU) No. 2017/460 of 16 March 2017 on 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 be applied for the unification of region entry tariffs. Taking this into account, the NCC has changed the methodology and in March 2019 has announced the public consultation on the draft of Services Pricing Methodology of Lithuanian TSO and Preliminary Prices for 2020-2023, implementing the requirements of the tariff network code.

Although in the initial stage the national regulators agreed on a common pricing methodology for the transmission system, however at the later stage a lot of discussions arose regarding the same “game” rules for all natural gas suppliers, both supplying gas through the liquefied natural gas (hereinafter - LNG) terminal and through pipelines from third countries. The compromise regarding the procedure of inter-system compensation, distribution of discounts for Klaipėda LNG terminal (hereinafter - LNGT) and the underground natural gas storage facility in Inčukalns by ensuring competitiveness has not been found. In such a situation, from 2020 Lithuanian partners will form a common natural gas market of 3 countries called Finestlat, without involvement of Lithuania. Lithuania will continue pursuing to join a single regional gas market, but only if the terms and conditions of joining the market will be favourable for Lithuanian consumers.

In 2018, the NCC has twice changed the Methodology for Setting State-Regulated Prices in the Natural Gas Sector, by separating from it the Methodology for Setting the Revenues and Prices of the State-Regulated Natural Gas Transmission Activities. Both methodologies determine the price regulation by establishing a revenue cap and applying an incentive regulation mechanism. The calculation of the component of security of natural gas supply at the transmission price (hereinafter - the Security component) was adjusted in the Methodology for Setting State-Regulated Prices in the Natural Gas Sector, and the ranges between the 1<sup>st</sup> and the 2<sup>nd</sup> groups of household natural gas consumers were changed.

It is also important to note that in 2018, the NCC approved the changes of the Descriptions of the Requirements for the Accounting Separation and Allocation of Costs of all regulated sectors - electricity, natural gas, heating, drinking water supply and wastewater management, where the cost groups were clearly identified, the costs that are not included in the costs of regulated activities were clearly defined and asset depreciation rates across sectors were unified.

In 2018, a new regulatory period (2019-2023) was set for the natural gas TSO - Amber Grid, AB and for the largest natural gas distribution system operator (hereinafter - DSO) - AB “Energijos skirstymo operatorius”, and the price caps for distribution and LNG regasification of some companies were adjusted and the specific prices were approved. The NCC has also set the Security component and has twice approved the tariffs for the household consumers.

The NCC applies regulation in the natural gas sector in respect of 44 entities. Compared to 2017, only the number of natural gas supply companies has changed. The number of the operating supply companies increased from 11 to 15. In 2018, consumption of a natural gas in Lithuania has decreased, and flows of natural gas transit to Russia have increased.

In 2018, volumes of imported natural gas amounted to 23,451 GWh, i.e. about 14% less than in 2017 (27,374 GWh). In 2018, 50,152 GWh of natural gas were transported through the transmission system (0.4% more than in 2017), supplied - 13,894 GWh. In 2018, 22,320 GWh were consumed in Lithuania, i.e. 8.13% less than in 2017.

In 2018, the revenue of the natural gas sector (transmission, distribution, LNG regasification, supply) amounted to 653.5 million euros, i.e. was 22.9% higher than in 2017 (532 million euros).

In 2018, 18,405 GWh of natural gas were sold and/or consumed in the wholesale market for the supply of natural gas, i.e. 4.6% less than in 2017 when 19,293 GWh of natural gas were sold. In 2018, 6,419 GWh of natural gas were sold in the retail market for the supply of natural gas, i.e. 18.07% less than in 2017 when 7,834 GWh of natural gas were sold.

In 2018, the total amount of actual investments in the natural gas sector amounted to 78.3 million euros and, compared to 2017, increased by 57.9% (49.6 million euros).

Chair

A handwritten signature in blue ink, appearing to be 'Inga Žilienė', is positioned in the center of the page between the 'Chair' and 'Inga Žilienė' text.

Inga Žilienė



## **2. MAIN DEVELOPMENTS IN THE GAS AND ELECTRICITY MARKETS**

### **2.1. Electricity Market**

#### **2.1.1. Main Developments in the Electricity Market in 2018**

In 2018, the amount of electricity imported in the Lithuanian electricity system (hereinafter - the LES) continued to grow, and in 2018 amounted to 96.77% of the total electricity demand in the country. In 2018, 3.22 TWh of electricity were produced in the country, electricity imports amounted to 12.347 TWh, and exports - 2.804 TWh. In 2018, consumption of electricity in the country amounted to 12.107 TWh. In 2018, the total installed capacity of the power plants has increased and amounted to 3,679 MW (in 2017 - 3,666 MW). The total network investments in 2018, compared to the previous year, have increased, and this change was caused by increased investments of distribution network operators that amounted to 205.63 million euros (compared to 2017, they have increased by 20.7%). The TSO investments of the same period amounted to 18.89 million euros and were 29.19% lower than in 2017. In 2018, 29.70 thousand new consumers were connected (0.2% more compared to 2017), their permissible power of the object was 422.94 thousand kW (2.04% higher compared to 2017). In 2018, the maximum hourly electricity demand (net worth) in Lithuania was 1,999 MW (5.43% higher compared to 2017), 1,760 MW of them in the distribution network (5.7% lower compared to 2017).

In order to separate the activities of electricity distribution and public electricity supply, from 1 October 2018, the distribution network operator AB "Energijos skirstymo operatorius" has separated the activity of public electricity supply and has passed it to Lietuvos energijos tiekimas, UAB which is another company of Lietuvos Energija Group.

Upon receipt of the request of Lietuvos energijos gamyba, AB, which is recognised as a market participant having significant influence in the power reserves market, the NCC performed the research on active power reserves market. After having performed the effectiveness research of competition in the power reserves market, the NCC found out that the degree of the market concentration is high, there exist barriers for entering the market due to the requirements of the infrastructure using which it is possible to provide services of power reserves and which requires considerable financial resources to create it. Therefore, competition in the market is ineffective. Taking this into account, the NCC provided the cost accounting obligation for Lietuvos energijos gamyba, AB, ORLEN Lithuania, AB, Penevėžio energija, AB and Kaunas CHP plant, UAB to provide the services at the prices not exceeding the cost-based prices, including return on investment (for more information see section 3.2.1.1).

In 2018, the NCC has changed the Description of the Requirements for the Accounting Separation and Allocation of Costs of Electricity Companies, has approved the recast Methodology for Setting the Price of the Public Interest Services in the Electricity Sector and the recast Methodology for Setting Tariffs of Connection of Electrical Equipment to Power Grids were recast (for more information see section 3.2.2).

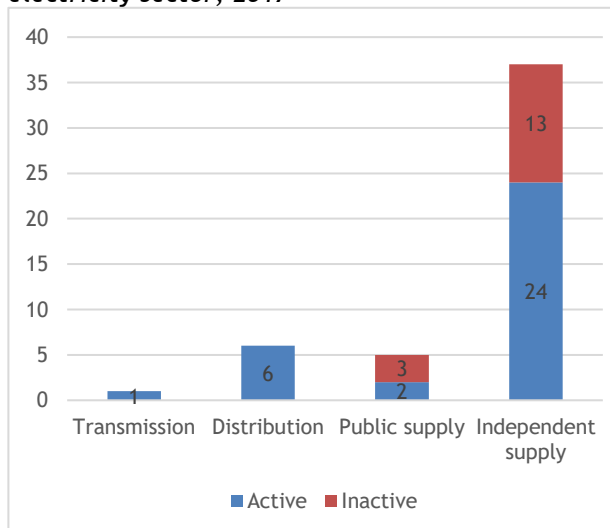
#### **2.1.2. Competition in the Electricity Supply Market and Market Monitoring**

The NCC applies regulation in the electricity sector in respect of 61 entities. The activities of independent power supply, transmission, distribution and public supply are licensed or regulated through authorizations. At the end of 2018, the following entities had the licenses issued by the NCC: Litgrid, AB - electricity TSO, AB "Energijos skirstymo operatorius", Achema, AB, Lifosa, AB, Akmenės cementas, AB, and Dainavos elektra, UAB - distribution system operators (hereinafter - DSOs), Lietuvos energijos tiekimas, UAB, Achema, AB, Lifosa, AB, Akmenės cementas, AB and Dainavos elektra, UAB - public electricity supply operators. In 2018, 49 companies had authorizations of independent electricity supply, 23 of them carried out independent electricity supply activities.

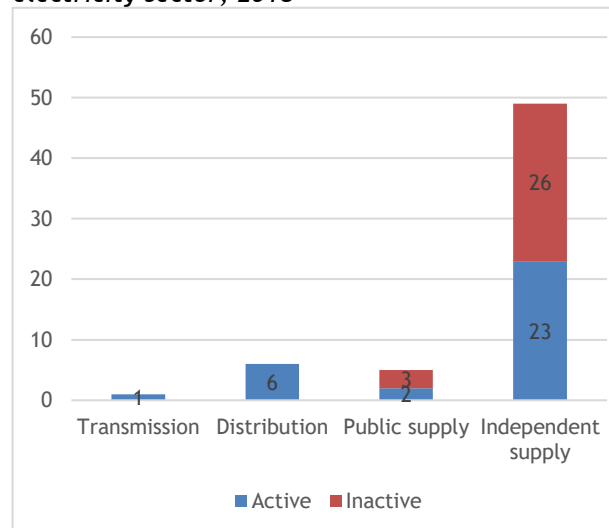
In 2018, the NCC has issued 1 license of electricity distribution activities and 2 licences of public electricity supply, it has withdrawn 2 licenses of electricity distribution activities, and 2 licenses of public electricity supply, i.e. in order to separate activities of electricity distribution and public

electricity supply, from 1 October 2018 the DSO AB „Energijos skirstymo operatorius“ has separated the activities of electricity supply to the residents, and has passed it to Lietuvos energijos tiekimas, UAB which is another company of Lietuvos Energija Group. In 2018, Dirbtinis pluoštas, UAB has also passed the activities of electricity distribution and public electricity supply to Dainavos elektra, UAB, and from the end of 2018, E Tinklas, UAB no longer carries out electricity distribution activities. AB „Energijos skirstymo operatorius“ currently operates in the territory of the licensed activities of this company.

**1 figure** Number of market participants in electricity sector, 2017



**2 figure** Number of market participants in electricity sector, 2018



Source - the NCC.

In 2018, the NCC has issued 13 authorizations of independent electricity supply, 9 authorizations of independent electricity supply were suspended, and 2 authorizations were withdrawn.

## 2.2. Gas Market

### 2.2.1. Main Developments in the Gas Market in 2018

In 2018, the NCC adjusted and revised the legal acts governing the activities of the natural gas sector. The following documents have been changed:

- the **Description of the Requirements for the Accounting Separation and Allocation of Costs of Natural Gas Companies**, which sets out in detail the specified requirements for the natural gas companies regarding the attribution of revenue, costs and assets to the relevant operating business units and services, specifies the accounting criteria for regulated assets, specifically defines which groups of costs and assets cannot be attributed to regulated activities;
- the **Methodology for Setting State-Regulated Prices in the Natural Gas Sector** that includes the calculation of prices of natural gas distribution, LNG regasification, natural gas supply activities, natural gas supply Security component, and natural gas tariffs for household consumers. The pricing for transmission activities has been separated and set out in a separate methodology;
- the **Methodology for Determining the Revenues and Prices of the State-Regulated Natural Gas Transmission Activities** which sets out the regulating part of the pricing of natural gas transmission activities. The pricing of entry-exit points is used in this methodology as it was done previously. However, the prices in individual points are calculated by applying the principle of matrix instead of the principle of Postage Stamp.

Both methodologies state that prices are calculated after setting a permissible revenue level consisting of the necessary costs and return on investment. Unlike the previous methodology, the current methodologies allow price adjustment by adjusting components of costs instead of applying price adjustment coefficients. Such a way of adjustment is clearer, simpler and shows more precisely the reasons of change in the revenue level. Both methodologies provides the incentive regulation.

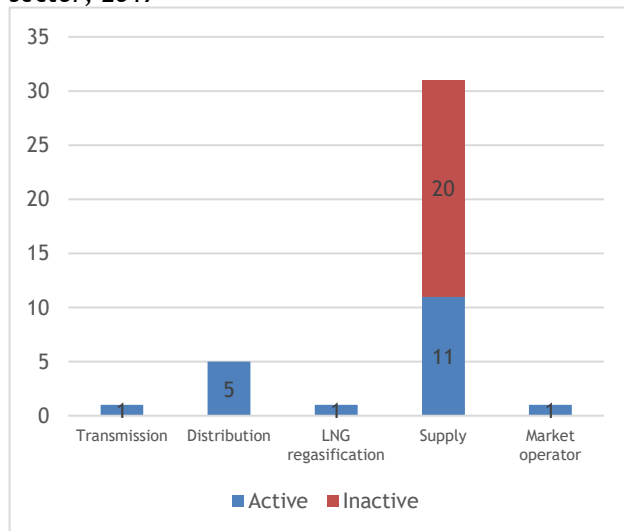
These changes allow unifying regulation in the natural gas and electricity sectors, increasing the objectivity of the assessment of quality levels, and ensuring clarity for regulated entities, on the issues of calculation of natural gas tariffs for household consumers.

### 2.2.2. Competition in the Natural Gas Supply Market and Market Monitoring

In 2018, the NCC regulated 44 entities in the natural gas sector. The activities of transmission, distribution, storage, LNG regasification, supply and activities of the market operator are licensed or regulated through authorizations in the natural gas sector.

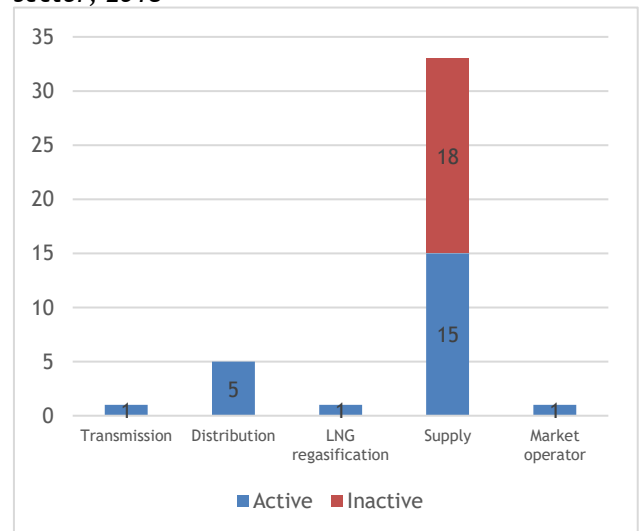
At the end of 2018, the following entities had the licenses issued by the NCC: Amber Grid, AB - the natural gas TSO, AB "Energijos skirstymo operatorius", Achema, AB<sup>1</sup>, Intergas, UAB, Fortum Heat Lietuva, UAB, agrofirma Joscvainiai, AB - the natural gas DSOs, Klaipėdos nafta, AB - a company engaged in LNG regasification activities, GET Baltic, UAB - the natural gas market operator. 33 companies had natural gas supply authorizations, 15 of them were active. In 2018, the NCC has issued 9 natural gas supply authorizations, has withdrawn 2 natural gas supply authorizations<sup>2</sup> and has suspended 2 natural gas supply authorizations.

**3 figure** Number of market participants in gas sector, 2017



Source - the NCC.

**4 figure** Number of market participants in gas sector, 2018



In 2018, volumes of imported natural gas amounted to 23,451 GWh, i.e. about 14% less than in 2017 (27,374 GWh). In 2018, 50,152 GWh of natural gas were transported through the transmission system (0.4% more than in 2017), supplied - 13,894 GWh. In 2018, 22,320 GWh were consumed in Lithuania, i.e. 8.13% less than in 2017.

In 2018, the revenue of the natural gas sector (transmission, distribution, LNG regasification, supply) amounted to 653.5 million euros, i.e. was 22.9% higher than in 2017 (532 million euros). The increase of 40.9% in revenue was influenced by increase of income from the gas supply activities. On the same time the revenue from transmission, distribution and LNG regasification reduced.

In 2018, 18,405 GWh of natural gas were sold and/or consumed in the wholesale market for the supply of natural gas, i.e. 4.6% less than in 2017 when 19,293 GWh of natural gas were sold. In 2018, 6,419 GWh of natural gas were sold in the retail market for the supply of natural gas, i.e. 18.07% less than in 2017 when 7,834 GWh of natural gas were sold.

The number of household and non-household consumers in the natural gas sector is consistently increasing since 2010: in 2018 there were 595 thousand of natural gas consumers, from which

<sup>1</sup> Achema, AB distribution license was withdrawn in January 2019.

<sup>2</sup> The supply authorization of the designated supplier Litgas, UAB was withdrawn due to the reorganization of the company.

587.6 thousand of them were household consumers and 7.4 thousand were non-household consumers. In comparison in 2017 there were 575.3 thousand of household consumers and 7.2 thousand of non-household consumers.

It should be noted that the NCC actively cooperates in the international Regional Gas Market Coordination Group (hereinafter - RGMCG) established in accordance with the Baltic Energy Market Interconnection Plan (hereinafter - 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) No. 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. In this context, the NCC changed its methodology and in March 2019 published for public consultation the draft of Lithuanian TSO's Services Tariffs' Methodology and Indicative 2020-2023 Tariffs implementing the requirements of the tariff network code.

Although in the initial stage the national regulators agreed on a common pricing methodology for the transmission system, however at the later stage a lot of discussions arose regarding the same "game" rules for all natural gas suppliers, both supplying gas through the LNGT and through pipelines from third countries. The compromise regarding the procedure of inter-system compensation, distribution of discounts for Klaipėda LNGT and the underground natural gas storage facility in Inčukalns by ensuring competitiveness has not been found. In such a situation, from 2020 Lithuanian partners will form a common natural gas market of 3 countries called Finestlat, without involvement of Lithuania. Lithuania will continue pursuing to join a single regional gas market, but only if the terms and conditions of joining the market will be favourable for Lithuanian consumers.

On 1 July 2017 the Baltic natural gas TSOs started using the implicit capacity allocation model in order to allocate more effectively short-term natural gas transmission capacity at the interconnection points between the Baltic States. Capacity allocation is related to gas trading in the Natural Gas Exchange GET Baltic, UAB. At the same time GET Baltic, UAB Natural Gas Exchange trading areas started operating in Latvia and Estonia and the Exchange became regional. From 2 July 2018 trade of an intraday 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. The Natural Gas Exchange GET Baltic, UAB, which operates in Lithuania, Latvia and Estonia, plans to expand the geographical scope of its activities to other Nordic countries and to establish a new trading area in Finland since 1 January 2020, thus contributing to greater integration of the Finnish and Baltic gas markets.

### 3. ELECTRICITY MARKET

#### 3.1. Network Regulation

##### 3.1.1. Unbundling

#### ***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 2018 in connection with the implementation of the provisions of the Law on Electricity (hereinafter - LoE) related to the unbundling of the activity and control of Litgrid, AB. The NCC, in accordance with the provisions of the Article 26 of the LoE, continues to monitor and control how the electricity TSO, in pursuing its activities, safeguards the independence and activity unbundling requirements set forth in the LoE.

#### ***Article 26 of the Directive 2009/72/EC***

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 2018.

It should be noted that as of 1 October 2018, AB "Energijos skirstymo operatorius" no longer operates in the field of public electricity supply according to the Resolution No O3E-247 of 31 July 2018 "Regarding the withdrawal of the public electricity supply license No L1-10 (VET) for the Public Limited Liability Company "Energijos skirstymo operatorius".

##### 3.1.2. Technical Functioning

#### ***Balancing Services (Article 37(6)(b), Article 37(8))***

The relations between the players on the electricity market active in electricity wholesaling 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 TSOs that lays down the uniform principles of functioning of balancing markets, in 2017 has approved a new version of the "Description of the Balancing Energy Price Regulation Procedure": a level playing field for all balancing market participants in Lithuania, Latvia and Estonia has been created - until then, each state had defined separate principles for balancing energy pricing. A Common Baltic Balancing Market which includes a standard manual Frequency Recovery Reserve (mFRR) product, common Baltic balance management, a harmonized imbalance accounting model and a common operator settlement model, was launched on 1 January 2018.

#### ***Security and Reliability Standards, Quality of Service and Supply (Article 37(1)(h))***

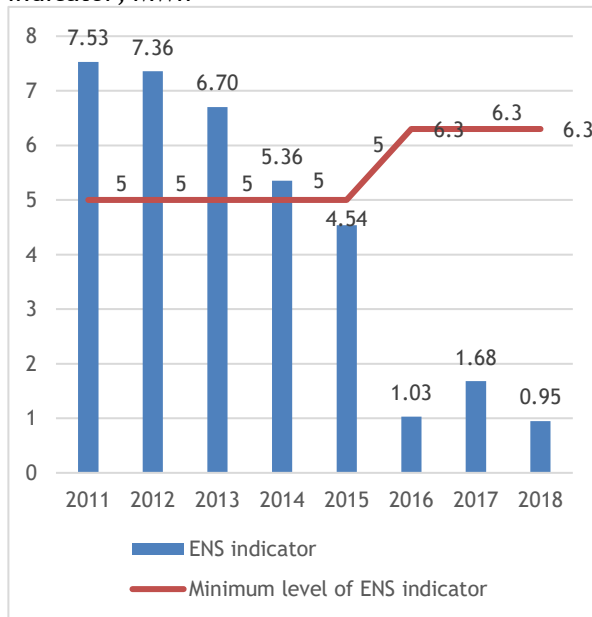
The LoE states that the NCC establishes the electricity transmission reliability and quality of service requirements and controls compliance with them. Given the changed Requirements for the Reliability of Electricity Transmission and Quality of Services, the requirements for the reliability of electricity transmission and quality of services for the new regulatory period should be established by April 15 of the calendar year of the new regulatory period. The indicators for the 2016-2020 period are based on the average of the actual transmission reliability indicators for the period 2011-2015.

The electricity transmission reliability and quality of service 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 is the level of

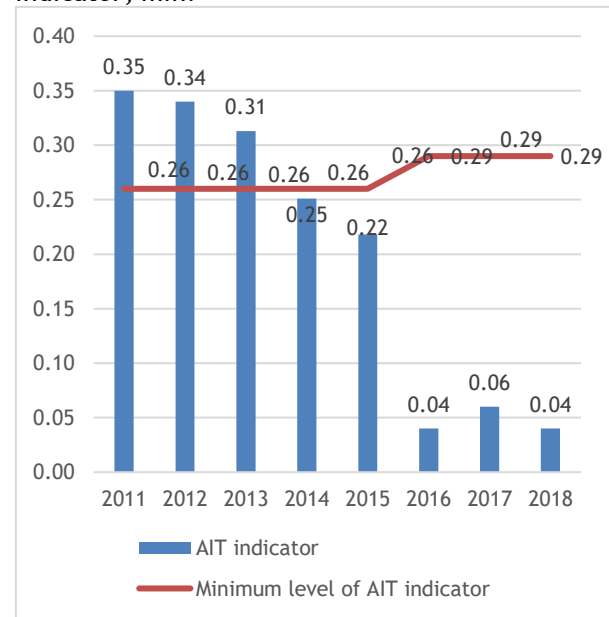
electricity transmission reliability. The calculations are limited to those cases where failure of electricity transmission was due to the reasons attributable to the liability of the system operator or occurred for unidentifiable reasons. Failures caused by *force majeure* or that occurred for external causes do not affect reliability indicators. Reliability of electricity transmission through electricity transmission networks is assessed using two indicators:

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

**5 figure** ENS and the minimum level of this indicator, MWh



**6 figure** AIT and the minimum level of this indicator, min.



Source - The NCC.

The reliability indicators established by the NCC for the year 2018 oblige the TSOs to safeguard that technical quality of the services will be better or equal to the minimum requirements, i.e. the average duration of electricity supply interruption for the consumers should not be longer than 0.29 minute, and the amount of non-transmitted would not be greater than 6.3 MWh. In 2018, compared to the minimum level established for the previous years, the transmission reliability as per ENS indicator was 84.86% lower (did not exceed the maximum value set), as per AIT indicator it was 87.93% lower (did not exceed the maximum value set).

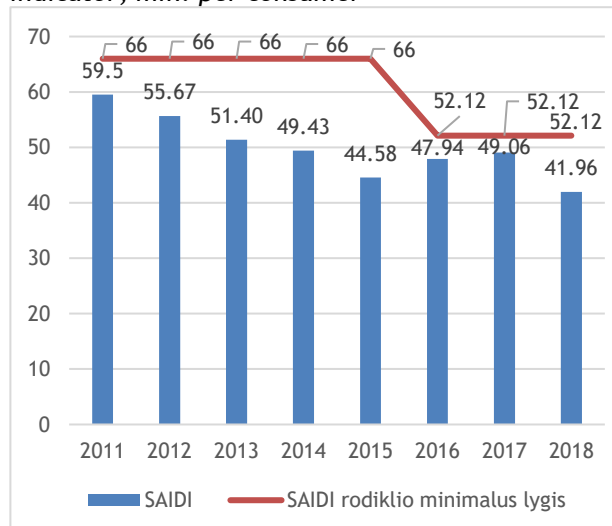
Reliability of electricity transmission through electricity distribution networks is assessed using two indicators:

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

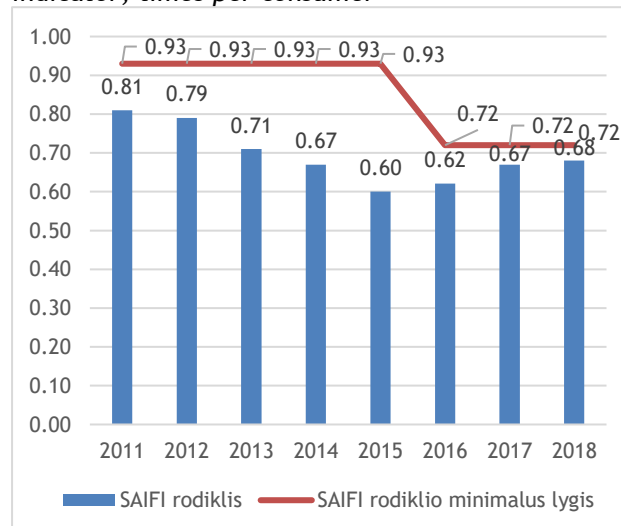
The reliability indicators established by the NCC for the year 2018 oblige the DSOs to safeguard that technical quality of the services will be better or equal to the minimum requirements, i.e. the average duration of electricity supply interruption for the consumers (SAIDI) should not be longer than 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 2018, compared to the minimum level established for the previous years, the transmission reliability as per SAIDI indicator was 19.5% lower (did not exceed the maximum value set), as per SAIFI indicator it was 5.37% lower (did not exceed the maximum value set).

**7 figure** SAIDI and the minimum level of this indicator, min. per consumer



**8 figure** 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, i.e. in 2018, SAIDI decreased by 14.5%, while SAIFI indicators in 2018 increased by 1.7% compared to the previous 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 of the timely (within 20 days from the date of payment of connection fee) connected new consumers;
- the percentage of the timely (within 5 working days to household consumers and within 2 working days to other consumers) resumed electricity transmission to the consumers having paid arrears;
- the percentage of the consumers who were timely informed on a scheduled interruption (10 calendar days in advance);
- the percentage of the timely (within 5 working days) eliminated faults for the consumers;
- the percentage of the consumers of the timely resumption of electricity transmission (depending on the reliability category) after a non-routine interruption;
- the percentage of the timely (within 30 calendar days) investigated complaints of consumers and network consumers.

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

**1 table** Execution of the transmission reliability quality indicators of AB “Energijos skirstymo operatorius” in 2018.

Electricity supply reliability category	Unit of measurement	The established indicator of provision of the service to the consumer	The average indicator of provision of the service to the consumer	Indicator of provision of the service to the consumer at a fixed time (%)
I		Within a period not exceeding automatic switching from one independent power source to another	0.01	98.56
II	hour	2.5	0.44	100
III	hour	24	1.01	100

Source - the NCC.

In 2018, the NCC started an unscheduled inspection of AB “Energijos skirstymo operatorius” to assess whether the company complied with the requirements of reliability of electricity transmission and quality of services during the period from 1 January 2012 to 28 February 2018. The inspection is planned to be completed in September 2019.



The NCC coordinates the process on possible solutions and measures in order to solve the problem of electric voltage fluctuations and micro interruptions in Lithuania, the effect of improving the quality of the network to increase Lithuania's competitiveness. The TSOs and the DSOs are preparing the plans of installing recorders. After completing the information gathering, the quality of the power networks will be determined, and further decisions will be taken to improve the quality parameters of the network, and further consistent network monitoring will be carried out.

### **Maintenance of Security Measures (Article 37(1)(t))**

In accordance with the Article 31(1)(11) of the LoE, Litgrid, AB, acting as a TSO, performs the national 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 Lithuanian Electricity System (hereinafter - 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 have been drawn up and approved.

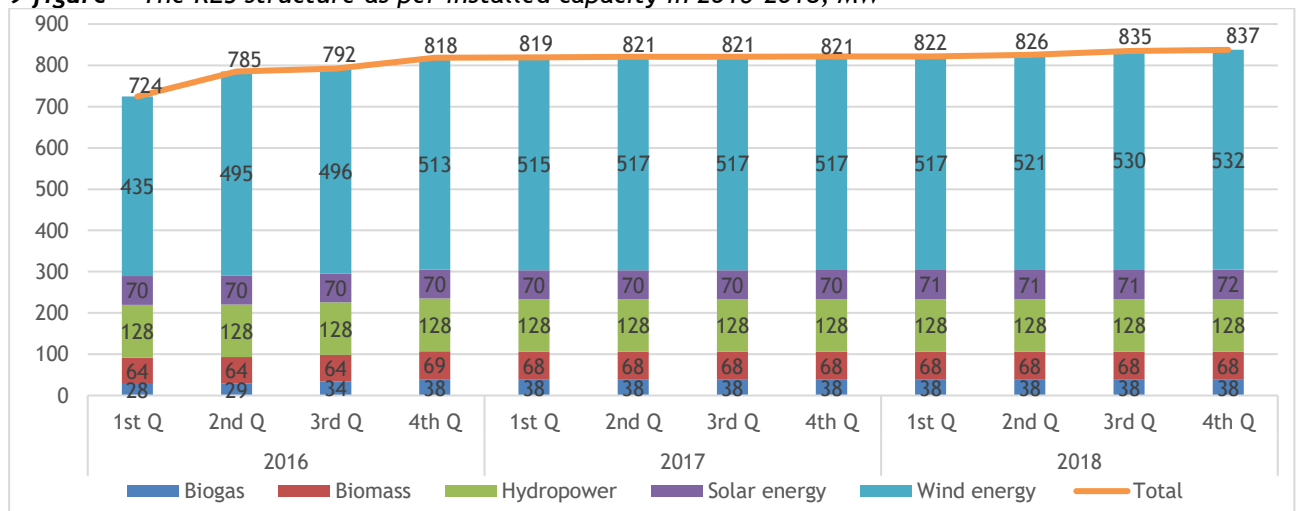
Congestions that lasted for 3 hours have been determined in 2018 in Latvian-Lithuanian interconnection. A capacity during these hours was 900 MW, whereas a physical flow exceeded the established capacity limit by 101-108%. Congestions in Russian-Lithuanian interconnection in 2018 lasted for 480 hours. A capacity during these hours was 300-600 MW, whereas a physical flow exceeded the established capacity limit by 101-116%. No customers have been disconnected or limited by AB "Energijos skirstymo operatorius" due to lack of capacity of the network.

### **RES Regulation Structure: the Report on Connection, Access and Dispatching Regimes for RES, 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 remained unchanged, compared to the previous years, like the other incentives provided in the Law on Energy from Renewable Sources.

The largest market share in the overall structure of renewable resources installed capacity market in 2018 was made up of wind power plants - 63.5%, hydroelectric power stations - 15.3%, solar power plants - 8.5%, biomass - 8.1%, biogas - 4.6%. In 2017, the market share of wind power plants amounted to 63.0%, of hydroelectric power stations - 15.6%, of solar power plants - 8.5%, of biomass - 8.2%, of biogas - 4.7%.

**9 figure** The RES structure as per installed capacity in 2016-2018, MW



Source - the NCC.



In 2018, the share of the installed capacity of RES power stations in the overall balance of installed capacity amounted to 22.8% and, compared to 2017, the share of RES in the overall balance of installed capacity increased by 0.4%.

### **3.1.3. The Network Tariffs for Connection and Access**

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

#### ***Article 37(1)(a)***

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

#### ***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 aligned with the NCC, they cannot be recognized as reasonable and are not included in the price caps.

In 2018, the investments of electricity transmission and distribution activities comprised 224.5 million euros (13.9% more than in 2017). This change was mainly due to 20.7% increase in investment in distribution networks that in 2018 comprised 205.63 million euros. Investments in distribution networks decreased from 26.68 million euros in 2017 to 18.89 million euros in 2018.

The return on investment is determined by the method of weighted average cost of capital (WACC). In 2018, it amounted to 5.00% for generation company, 4.94% for TSO and 5.04% for DSO. The aforementioned and a more detailed information is also publicly available on the website of the NERC [www.vert.lt](http://www.vert.lt).

#### ***Article 37(8)***

The “Methodology for Setting Electricity Transmission, Distribution and Public Supply Service Price Caps 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 - 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 2018, 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.

#### ***Article 37(10)***

In 2018, 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.

#### ***Article 37(12)***

Appeals can be brought against the resolutions of the NCC in accordance with the Law on Administrative Proceedings of the Republic of Lithuania.

### ***Article 37(3)(c) and (d)***

In 2018, 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. Each year, the DSO Litgrid, AB prepares and submits to the NCC a development plan for the next ten years. In harmonizing the plan, the NCC assesses the already implemented investments of the DSO or corrects accordingly the investments that were harmonized earlier but not yet implemented, the deadlines for their performance, amounts of works, etc. On 29 June 2018, 2018-2027 plan of development of 400-110 kV networks of LES for the next decade was received. A public consultation in connection with the above-mentioned plan was announced by the NCC, and after having considered the comments received the NCC confirmed by the resolution No O3E-67 of 28 February 2019 the development plan for the period 2018-2027 prepared by Litgrid, AB.

Litgrid, AB plans that in 2018-2027, investment needs for the development and upgrading of the transmission network will amount to about 765.75 million euros, i.e. 19.18% higher compared to investments planned by Litgrid, AB in 2017-2026. The largest share of investments provided for in the 2018-2027 transmission network development plan will be 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 of regulated activities for the regulation period and submits it to the NCC.

### ***Prevention of Cross-Subsidization (the Article 37(1)(f))***

The functions 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 separation 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 “2017 Annual Report on Electricity and Natural Gas Markets of the Republic of Lithuania to the European Commission”).

#### **3.1.4. Issues of Cross-System Trading**

##### ***Access to Inter-System Infrastructure, Including Power Allocation and Congestion Management Procedures (the Article 37(6)(c), the Article 37(8), the Article 37(9)), Use of Revenues for Interconnections (the Article 37(3)(f))***

In 2018, trading has been restricted (assuming that the interconnections restricted trading if their capacity for trading was fully used) in the following intersections due to the lack of capacity:

- in Lithuania-Latvia interconnection for 49 hours (from Lithuania to Latvia - 5 hours, from Latvia to Lithuania - 44 hours);
- in Lithuania-Belarus interconnection for 3,329 hours (from Belarus to Lithuania);
- in Lithuania-Sweden interconnection 5,284 hours (from Sweden to Lithuania - 3,610 hours, from Lithuania to Sweden - 1,674 hours);
- in Lithuania-Poland interconnection 5,036 hours (from Poland to Lithuania 2,835 hours, from Lithuania to Poland - 2,201 hours);
- in Lithuania-Russia interconnection 375 hours (from Russia to Lithuania).

In August 2018, the NCC has harmonized Lithuania's share of investments of the project of common interest “Integration and Synchronisation of the Baltic States' Electricity System with the European Networks” amounting to 167.045 million euros. The total value of investments in the Baltic States is 432.55 million euros. The entire Synchronization project will be implemented in 3 phases. The investment amount that was harmonized by the NCC includes phase 1 works, the funds will be allocated to the Lithuanian transmission network infrastructure that is needed for better

integration of Baltic energy systems into the networks of continental Europe and market integration. The TSOs will submit separate investment harmonization applications for phases 2 and 3 of the Synchronization Project, they will be the subject of separate decisions by the national regulators. Based on the results of the cost-benefit analysis conducted by the TSOs of the Baltic States, each of the Baltic States receives a positive net benefit. Therefore, each country's investment costs are borne by the respective Baltic TSO. After the decisions on the share of investment costs have been made by Latvian and Estonian National Regulators, in September 2018, the Chairs of the Baltic regulators have signed a joint cost-sharing agreement between the Baltic NRAs which is one of the requirements for the TSOs in applying for EU funds to finance part of the costs of investment project. The EC also provided funding for this important project: the total amount of 323 million euros was allocated for all three Baltic States from the Connecting Europe Facility (CEF), 125 million euros of this amount were allocated for the LES. All these measures will allow ensuring the reliable operation of the Baltic electricity systems by integrating them into European networks and synchronizing with them.

On 13 May 2019, being aware of the importance of integrating the Baltic electricity system into the continental Europe network, the NRAs of Lithuania, Latvia, Estonia and Poland have signed the cooperation agreement<sup>3</sup> on the Implementation of the Project of Synchronization of Baltic Electricity Networks with continental Europe.

This is an important step that consolidates the coordinated approach and commitment of regulators in implementing the Synchronization Project, which will ensure a smooth process of coordination of investment projects, including decision making on the sharing of cross-border costs that will be incurred in implementing the synchronization related projects. The cooperation agreement also provides for the process of close cooperation with the TSOs and between the regulators, confidentiality obligations and other essential aspects of cooperation.

In 2018, the Lithuanian electricity TSO earned 811,748 euros (in 2017 - 1,444,945 euros) 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 2018 congestions have been determined in Latvia-Lithuania and Russia-Lithuania interconnections that lasted for 3 and 480 hours respectively. In 2018, the annual hourly peak demand for electricity (net) was 1,999 MW (in 2017 - 1,896 MW, in 2016 - 1,979 MW). The gross installed capacity of the power plants of the LES amounted to 3,679 MW and was 16 MW higher than in 2017.

All relevant information related to the availability and access to the transmission network is available publicly on the website of Litgrid, AB [www.litgrid.eu](http://www.litgrid.eu) and "Nord Pool" AS website [www.nordpoolspot.com](http://www.nordpoolspot.com).

### ***Monitoring of Technical Cooperation Between the Community and Third-Party 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 continental European networks. Both the study of dynamic stability and the study of frequency stability are required for the final political decision on the scenario of

<sup>3</sup> [https://www.vert.lt/SiteAssets/naujienu-medziaga/2019/geguze/MoU\\_Synchro\\_2019\\_05\\_14.pdf](https://www.vert.lt/SiteAssets/naujienu-medziaga/2019/geguze/MoU_Synchro_2019_05_14.pdf)

synchronization with the continental European networks that has been taken in BEMIP format in June 2018 and for approaching ENTSO-E regarding synchronous connection.

### ***Surveillance of TSO Investment Plans as per the TYNDP (the Article 37(1)(g))***

Surveillance of Litgrid, AB investment plans is carried out as per the conditions referred to in section 3.1.3. enshrined in the LoE; i.e. the NCC assesses the updated 10-year transmission networks development plan submitted every year by the 1 July.

In 2018, the length of the high-voltage power transmission lines was 7,246 kilometres, and there were 236 high-voltage transformer substations. The total electricity demand - 12.85 TWh. Electricity consumption decreased by 3.75%. Currently, the LES is directly connected to five neighbouring (Sweden, Poland, Belarus, Latvia, Russia) power systems. The planned amount of investment in transmission network for the period 2018-2027 is around 765.75 million euros.

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

In order to ensure the representation of Lithuania's interests in connection with better regulation and harmonization of the energy sector, the representatives of the NCC constantly participate - provide positions, proposals - in activities of European and international associations that unite regulators:

- Agency for the Cooperation of Energy Regulators (hereinafter - the ACER);
- Council of European Energy Regulators (hereinafter - the CEER);
- Energy Regulators Forum (hereinafter - the ERF);
- Energy Regulators Regional Association (hereinafter - the ERRA).

The representatives of the NCC also participate in various meetings of workgroups, perform general benchmarking of energy companies, provide answers to various questionnaires, necessary information and monitor the progress of documents being prepared.

After Lithuania joined the Organisation for Economic Cooperation and Development (hereinafter - OECD) in 2018, the representatives of the NCC began participating in the activities of the OECD Network of Economic Regulators (hereinafter - NER).. This network is an open and unique global forum that promotes dialogue between different regulators that operate in the energy, water, transport and communications sectors. The members of the NER share experience, discuss challenges, innovative solutions and priorities in activities of regulators, discuss on the topics of better governance of regulators and their independence.

### **3.1.5. Compliance with Legislation**

#### ***Compliance by the Regulator with the Binding Decisions of the ACER, of the EC (the Article 37(1)(d)) and of the Guidelines (the Article 39)***

The NCC regularly receives information about the legal acts of the ACER and the EC 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 elements of the price of transmission service, determination of capacity of connecting lines and the rules for allocation and congestion management, etc.

#### ***Compliance by the Transmission and Distribution Companies, System Owners and Electricity Companies with the Legislation of the Community, Including Inter-System Issues (the Articles 37(1)(b), 37(1)(q), 37(3)(a),(b),(e) and 37(5) + Applying Fines (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-system 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 companies 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 companies 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 companies and the liability for the infringements is determined, including the sanctions imposed on the energy companies, 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 companies. The energy companies 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 connections have 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" bidding area in 2018 compared to 2017 increased by 42.3% (the fall in prices in 2017, compared with 2016, amounted respectively to 3.9%).

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

The first phase of the IT platform of the single European intraday market of the XBID (cross border intraday) project, that was launched in June 2018, is one of the key events of 2018 in the electricity market at Lithuanian and European level. This system will enable uninterrupted trading and conclusion of commercial transactions between trade orders of the market participants in one trading area and relevant trade orders in another zone within cross-system capacity that is available to the market. The countries participating in the first phase: Austria, Belgium, Denmark, Estonia, Spain, Latvia, Lithuania, Norway, the Netherlands, Portugal, France, Finland, Sweden and Germany.

Other European countries intend to participate in the second phase of implementation of the XBID that is planned in the first half of the year 2019. For this purpose, the NCC approved the "Rules for EU Electricity Trading on Platforms" which, given the Guidelines of Capacity Allocation & Congestion Management (CACM), enshrine common mechanisms and principles for the functioning of EU electricity trading platforms that ensure an effective single market interconnection process. The NCC also approved the uniform requirements for transmission of traded electricity: the unified principles of calculation of electricity sales across the EU for DSOs and have been established and a common procedure for exchange of information between exchange operators and DSOs have been enshrined.

The NCC approved proposals that were harmonized by Litgrid, AB together with Latvian and Swedish DSOs on inter-zone hedging opportunities which will allow ensuring the possibility for the wholesale electricity market participants to acquire long-term inter-zone hedging products, i.e. protect themselves against price fluctuations when purchasing products from another country.

Litgrid, AB prepared proposals regarding the possibilities of inter-zone hedging options together with Swedish and Latvian electricity DSOs and in cooperation with Polish operator. The decision was made to promote the operation of the wholesale markets by investing in increasing the capacity of the transmission network; the most important of them - the construction of the third Estonia-Latvia transmission link. The link is expected to become operational at the end of 2020.

The TSO forecasts that the increase in capacity between Estonia and Latvia in 2020 will reduce the price differences between the Baltic countries. Consequently, the market participants will be able to use the most liquid Scandinavian price hedging products.

The TSO must update their proposals on inter-zone hedging options at least every 4 years, taking into account the effectiveness of existing electricity derivatives as well as other factors.

After having performed the analysis of hedging options of Lithuanian electricity price fluctuations, in May 2017 the NCC stated that: Lithuanian price zone does not have a specifically developed *Nasdaq* derivative instrument hedging product - the Lithuanian market prices are most similar to those in Latvia. Therefore, the most favourable product for the Lithuanian wholesale energy market participants is offered in this country; in the Lithuanian price zone, inter-zone risk management measures are not effective enough compared to Scandinavian countries.

Taking into account the CACM, the NCC approved the joint proposal prepared by Litgrid, AB together with the Latvian and Estonian electricity TSOs for the operation of more than one power exchange operator in the Baltic trading areas. This will ensure equal and non-discriminatory conditions for the access to inter-zone electricity transmission capacity if there is more than one designated electricity market operator in one trading area. No restrictions can be applied in the trading area for the access to the transmission system capacity, and each designated electricity market operator has equal possibilities of using inter-zone capacity - orders of all electricity market participants, irrespective of the fact which designated electricity market operator and its services they use, shall be treated equally.

Currently, electricity in Lithuania is traded by the Nord Pool Spot Exchange. EPEX Spot exchange operator will also start operations once appropriate arrangements have been made in order for several designated electricity market operators to operate in the trade areas of Lithuania, Latvia and Estonia. In 2017, the NCC approved that EPEX Spot has the right to provide day-ahead and intraday trading services.

The interconnection of European intraday markets is an essential step towards completing the European internal energy market. Due to technological advances, the integration of renewable energy sources and the growth of unconventional, abrupt and frequently changing electricity generation in Europe, the interconnection of intraday trading markets for cross-system trade is a crucial solution enabling market participants to maintain their trade and consumption or production balance. Until now, Lithuania, together with the Latvian and Estonian TSOs, had a common capacity calculation methodology. In implementing the CACM, in 2017, after having assessed Lithuania's connections with Sweden, Poland and from the side of Estonia with Finland, the joint Baltic capacity calculation region that includes Sweden, Finland, Poland and the Baltic States was created. Accordingly, the TSOs in this region developed the "Methodology of the Common Coordinated Capacity Calculation for the Baltic Capacity Calculation Region" that was approved by the National regulators. This methodology governs the procedure for calculating, supplying and distributing inter-zone capacity between the power systems of Lithuania, Latvia, Estonia, as well as Poland, Sweden, Finland for the periods of the following year, month and week, and also includes the calculation, determination and allocation of inter-zone capacity for day-ahead and intraday periods. These calculations are required by electricity market participants when trading on an exchange or in bilateral transactions. This is another important step towards a single internal energy market. These calculations are required when electricity market

participants trade on an exchange or in bilateral transactions. This is another important step in developing a single internal energy market.

In accordance with the CACM, in 2019 the “Common Methodology of all TSOs in the Baltic Capacity Calculation Region of Coordinated Redispatching or Countertrading”, that was prepared by Litgrid, AB together with other TSOs in the Baltic capacity calculation region (Estonia, Latvia, Sweden, Poland and Finland), was approved by the NCC.

This methodology is intended to coordinate actions of the TSOs in the Baltic capacity calculation region in order to effectively eliminate congestions in cross-border networks irrespective of whether or not the physical causes of the congestion are outside the area controlled by these operators (i.e. the area of their activities). It also ensured that congestions are not transferred to another state.

Pursuant to the requirements of the EC Regulation on Forecasted Capacity Allocation Guidelines (hereinafter - FCA), the NCC approved the “Methodology for the Provision of Data on Production and Loads”. This methodology obligates the responsible electricity market participants to provide data related to the technical characteristics and availability of generating sources and load units, information on the working schedules of generating sources, load allocation to the TSO.

Taking into account the requirements of the CACM according to which calculations are carried out or a common mechanism for linking the day-ahead and intraday trading markets is implemented, the NCC approved the “Methodology for Determining Alternate Procedures”, the NCC approved the “Methodology for Determining Replacement Procedures”, where it provided that the trading results of the previous day, including the market prices of electricity formed on the power exchange and the nominated capacity for cross-system connections, would apply in the event that the calculations of capacity and prices for each trading zone of the capacity calculation region would fail in executing joint coupling of day-ahead trading markets. This would allow for ensuring efficient, transparent and non-discriminatory allocation of capacity.

After implementing the replacement procedures, costs or revenue resulting from imbalance in the connecting lines of the Baltic capacity calculation region would be considered as regional costs or revenue. In 2018, the NCC approved the “Terms, Provisions and Methodology for the Inter-Zone Capacity Calculation, Nomination and Allocation with third Countries“ that was provided by Lithuanian, Latvian and Estonian TSOs, and that became effective from 1 February 2019. In October 2018, Estonian and Latvian regulators and the NCC informed the Baltic electricity TSOs that they broadly endorse this methodology and believe that this methodology is needed for further calculation of capacity and principles of allocation with the third countries. The guaranteed 200 MW capacity at Lithuanian-Belarusian border is no longer available in this methodology, i.e. the free capacity of this transmission link will every hour depend on the intensity of use of the power transmission system in the Latvia-Estonia cross-section. It has also been established that from the beginning of technological tests of power generation in Belarusian nuclear power plant, the trading capacities of connecting lines between Lithuania and Belarus will be equal to 0 MW, i.e. electricity from third countries with unsafe nuclear power plants will not be able to enter the Lithuanian electricity market. This provision is established in accordance with the Law of the Republic of Lithuania on Necessary Measures of Protection against the Threats Posed by Unsafe Nuclear Power Plants in Third Countries.

In 2018, the TSOs began to actively implement the EU Network Codes for the operation of the electricity transmission system and electricity emergency and restoration. The “Methodology for Generating Common Network Models” is one of the most important documents. This methodology sets uniform requirements for all EU electricity TSOs in connection with system operation, ensuring security, calculation and monitoring of network quality parameters, information collection and analysis. With unified STO data processing and comparability, it will be possible to identify bottlenecks in transmission systems and to make decisions accordingly to ensure the reliable operation of the transmission network. The methodology approved by the NCC was the second legal act in creating a common European network model.

In May 2017, the “Methodology for Building Common Grid Models“ that designs transmission system capacity was approved. In November 2018, the “Common Grid Model Methodology for Long-Term Forecasted Capacity” was approved according to the FCA requirements. Accordingly, the development of a common grid model, first at regional level (Lithuania, Latvia, Estonia, Finland, Sweden and Poland) and then at European, will ensure the unified and reliable operation and run of the electricity grid, effective cooperation between operators, and safer and more cost-effective development of the European electricity network. In implementing the EU Network Codes that set guidelines for capacity allocation and congestion management (CASM), FCA, the NCC approved the requirements for connecting consumers, requirements for generators, the requirements for connecting high voltage DC systems and modules of power park connected by means of a DC line to the grid, the requirements for emergency and restoration of electricity transmission systems and balancing, and other implementing legislation.

In implementing the EU Network Code (the EC Regulation (EU) No 2016/631), the NCC approved the parameters according to which Litgrid, AB and AB “Energijos skirstymo operatorius” will connect new generators to the electricity grid. According to the aforementioned Network Code, fair conditions of competition in the internal electricity market must be ensured for all market participants, as well as system security, the requirements for the integration of electricity from renewable sources must be laid down, and measures to facilitate trade in electricity throughout the EU must be foreseen. The “Key Organisational Requirements, Roles and Responsibilities in Relation to Data Exchange” (hereinafter - KORRR) that have been prepared by Litgrid, AB together with other European electricity TSOs have been approved in accordance with the Regulation (EU) No 2017/1485 laying down guidelines for the operation of the electricity transmission system. The KORRR apply to European TSOs, DSOs and electricity producers that are connected to the transmission system. The KORRR establish at European level a uniform volume of data to be published and a process for organizing the exchange of this data so that each infrastructure manager could obtain the necessary data on the state of the network the part of which affects their installations.

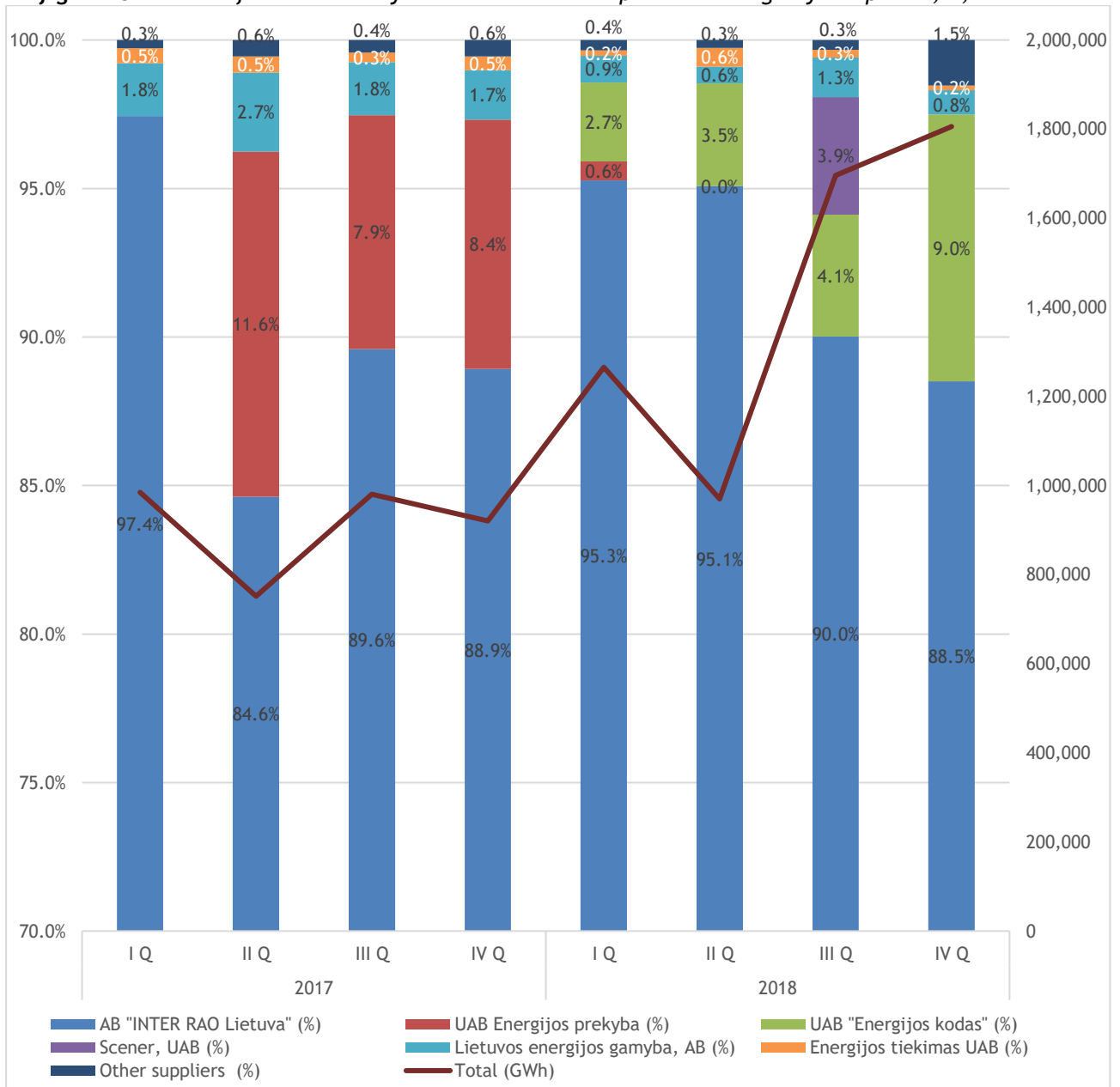
The interrelations of the electricity market participants in conducting wholesale of electricity in the territory of the Republic of Lithuania are governed by the “Rules for Trading Electricity”. The balancing energy prices are calculated in accordance with the “Description of the Balancing Energy Price Regulation Procedure”. In 2017, having regard to the “Harmonised Baltic Imbalance Settlement Model“ prepared by the Baltic electricity TSOs, which lays down the uniform principles of functioning of balancing markets, the NCC approved a new version of the “Description of the Balancing Energy Price Regulation Procedure”: a level playing field for all balancing market participants in Lithuania, Latvia and Estonia was ensured - until then, each state had defined separate principles for balancing energy pricing. A common Baltic Balancing market was launched on 1 January 2018.

In 2018, the electricity price in Lithuanian market was 43.48 EUR/MWh. 96.77% of the country's total electricity demand were imported. 21 participant participated in the power exchange day-ahead trading, and 10 participants - in intraday trading. Further information is available on [www.nordpoolspot.com](http://www.nordpoolspot.com).

In 2018, there were 4 main suppliers in the wholesale electricity market: AB “INTER RAO Lietuva“, UAB “Energijos kodas“, AB “Lietuvos energijos gamyba“ and UAB “Scener“. More than 90% of all electricity sales on the power exchange in 2018 accounted for the amount of electricity sold by AB “INTER RAO Lietuva“. In terms of overall result of AB “INTER RAO Lietuva“, UAB “Energijos kodas“, AB “Lietuvos energijos gamyba“ and UAB “Scener“, it exceeded 99% of all electricity sales on the power exchange in 2018.



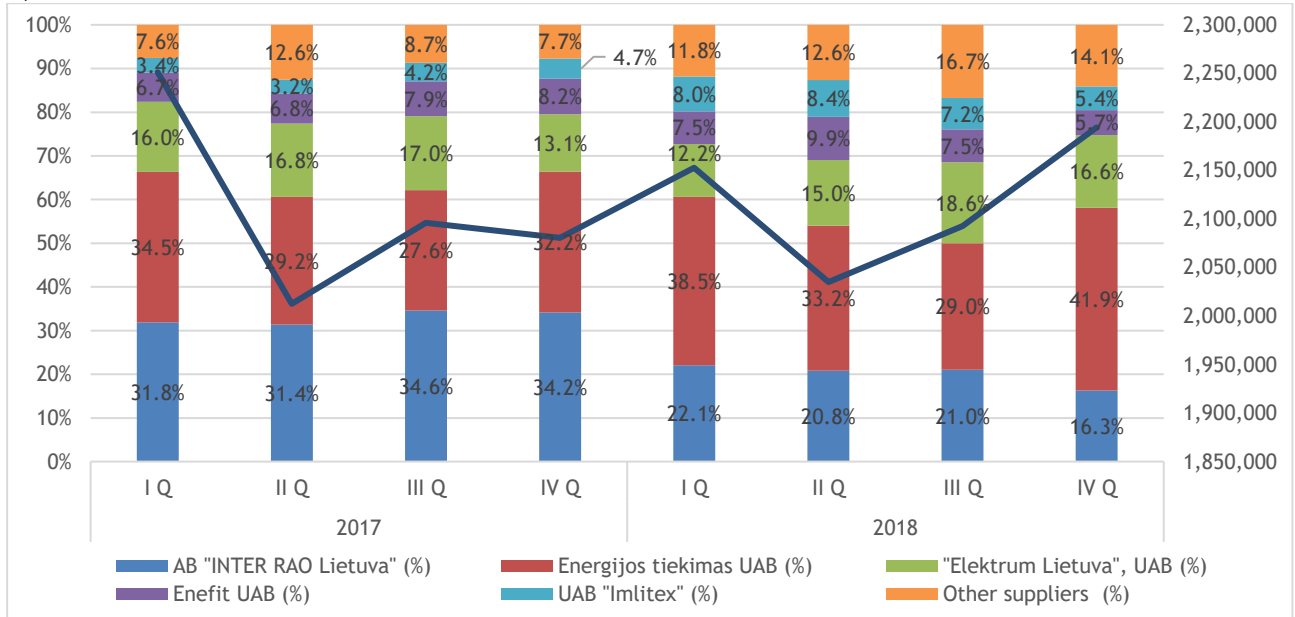
**10 figure** Structure of the electricity sales market on the power exchange by companies, %, 2017-2018



Source - the NCC.

In 2018, as in 2017, about two-thirds of all electricity purchases by independent suppliers on the power exchange were the purchase of two companies - AB "INTER RAO Lietuva" and UAB "Energijos tiekimas".

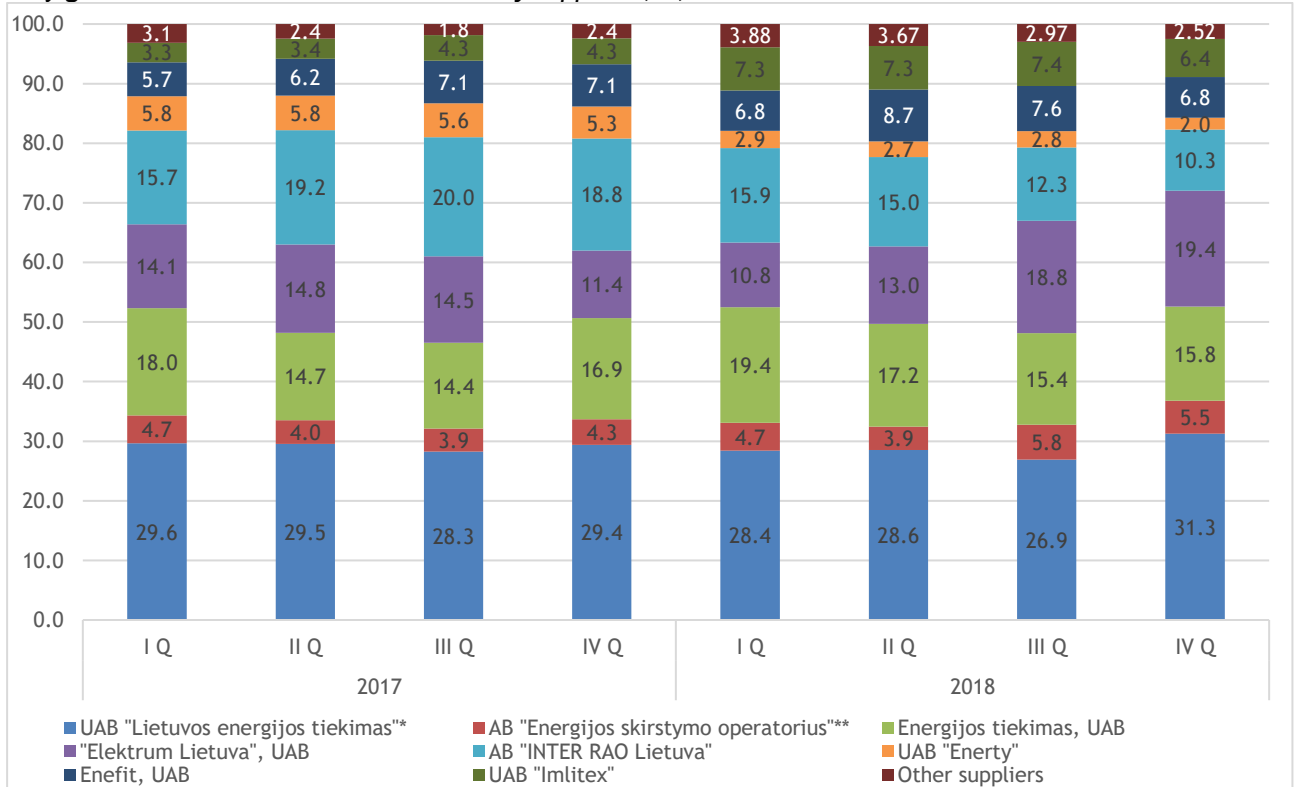
**11 figure** Structure of the electricity purchases market on the power exchange by independent suppliers, %, 2017-2018



Source - the NCC.

In 2018, compared to the previous year, in the structure of the retail supply market, the market share of AB "Enerģijas skirstymo operatorius" continued to account for about one third of all electricity sales in the market. In the first 3 quarters, public supply activities were carried out by AB "Enerģijas skirstymo operatorius", and from 1 October 2018, public electricity supply activities were taken over from AB "Enerģijas skirstymo operatorius" by Lietuvos energijos tiekimas, UAB. Other market participants maintained similar market positions as in 2017.

**12 figure** Retail market sales structure by suppliers, %, 2017-2018



\*Public electricity supply. Until 1 October 2018, public electricity supply activities were carried out by AB "Enerģijas skirstymo operatorius". \*\*Guaranteed electricity supply.

Source - the NCC.

In order to increase the awareness of the market participants and to safeguard that market participants have reliable information, the NERC prepares on regular basis quarterly and annual

reports of monitoring of the electricity market and makes them publicly available on the website of the NERC<sup>4</sup>.

### **3.2.1.1. Surveillance of Price Level, Transparency Level, Market Opening Efficiency and Competition, the Articles 37(1)(i), (j), (k), (l), (u) and 40(3)**

The surveillance of electricity prices is carried out as per the “Rules for the Surveillance of Trading in Electricity and Natural Gas” approved by the NCC, under which the NCC carries out surveillance in the electricity market and is entitled to receive information from the market operator and market participants. The surveillance 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 NERC website [www.vert.lt](http://www.vert.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 NERC 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 NERC 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 consumers 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.

In the preceding year, average annual consumption per household has increased from 1.726 kWh to 1.800 kWh. As of 1 October 2018, AB “Energijos skirstymo operatorius” no longer operates in the field of public electricity supply according to the Resolution No O3E-247 of 31 July 2018 “Regarding the withdrawal of the public electricity supply license No L1-10 (VET) for the Public Limited Liability Company “Energijos skirstymo operatorius”. From 1 October 2018, these activities were taken over by Lietuvos energijos tiekimas, UAB. In 2018, as in 2017, the share of the public electricity supplier in the retail market remained similar - about one-third of total consumption, including guaranteed supply. 52,192 consumers used the services of the guarantee supplier. 3 largest independent electricity suppliers in the retail market of independent supply: AB “INTER RAO Lietuva“, UAB “Energijos kodas“, AB “Lietuvos energijos gamyba“ and UAB “Scener“. Their share in the retail market accounted for 68.27% by amount of electricity. In 2018, compared to 2017, the market share of UAB “Elektrum Lietuva“ grew most among the largest independent electricity suppliers.

In 2018, compared to 2017, the number of consumers in the country increased from 1,710,553 to 1,732,539 consumers, of them 138,392 were household consumers. In 2018, the consumption of

<sup>4</sup> <https://www.vert.lt/elektra/Puslapiai/elektros-rinkos-apzvalga/rinkos-stebesena.aspx>

non-household consumers that purchase electricity at public prices increased slightly from 0.096 TWh to 0.098 TWh. In 2018, the consumption of household consumers that purchase electricity at public prices accounted for 2.86 TWh and was slightly bigger compared to 2017 (2.71 TWh). In 2018, compared to the previous year, the number of household consumers which purchased electricity on the market at contract prices decreased from 41 to 36.

As result of unpaid debt of 2017, in the 1st-3rd quarters of 2018 AB “Energijos skirstymo operatorius” disconnected electricity transmission to 1,779 customers, and after Lietuvos energijos tiekimas, UAB took over activities of public electricity supply from AB “Energijos skirstymo operatorius” from 1 October 2018, in the 4th quarter of 2018, as result of unpaid debts, electricity transmission was disconnected for 482 customers.

As per approved the “Methodology for Setting the Power Transmission, Distribution and Public Supply Services’ and Public Price Cap”, in implementing the LRAIC model, the price caps of transmission and distribution service have been calculated for the year 2019 (see table below).

**2 table** Electricity Transmission and Distribution Price Caps for the period 2014-2019 (ct/kWh)

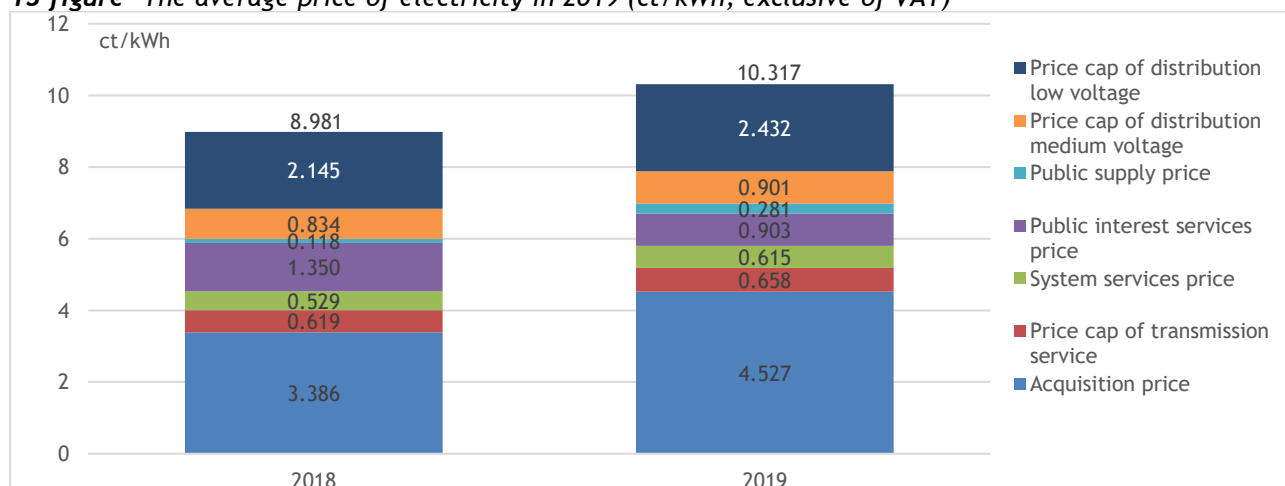
Name of Regulated Service	Supplier of Regulated Service	Regulated Service Price Cap (ct/kWh)					Regulated Service Price Cap for the Year 2019 (ct/kWh)	Change Compared to 2018, %
		2014	2015	2016	2017	2018		
Electricity transmission	Litgrid, AB	0.639	0.538	0.691	0.672	0.619	0.658	6.3
Distribution of electricity in medium voltage networks	AB “Energijos skirstymo operatorius”	1.297	1.178	1.000	0.830	0.798	0.862	8.0
Distribution of electricity in low voltage networks	AB “Energijos skirstymo operatorius”	1.785	1.550	1.766	1.655	1.716	1.871	9.0

Source - the NCC.

Public electricity supply price cap: public supplier Lietuvos energijos tiekimas, UAB sells electricity to customers that pay under public tariffs. Therefore, in calculating the public electricity supply price cap, the NCC assessed the amount of energy sold. Taking this into account, the NCC set the price cap of 0.281 ct/kWh for the public electricity supply service for 2019. Compared to the price cap that was set for the year 2018 (0.118 ct/kWh), the price cap of the public electricity supply service that was set for 2019 is 0.163 ct/kWh bigger. The lower amount of electricity that was projected to be distributed in 2019, compared to 2018, had a major impact on the growth of the price cap. In 2018, also ended the period during which the company returned to the consumers the extra return on investment (surplus).

In 2019, the public electricity price for the household consumers who buy electricity from the medium voltage networks is equal to 7.760 ct/kWh (exclusive of VAT) or 15.5% higher than in 2018. The public electricity price for the household consumers who buy electricity from low voltage networks is equal to 10.317 ct/kWh (exclusive of VAT) or 14.88% higher than in 2018.

**13 figure** The average price of electricity in 2019 (ct/kWh, exclusive of VAT)



Source - the NCC.

By the resolution No O3E-353 of 25 October 2017 the NCC has approved the price for using interconnections (hereinafter - UINC) applied in 2019 and which is 5.71 EUR/MWh, i.e. 0.18% lower than in 2018 (5.72 EUR/MWh). The relevant information on the UINC price is publicly available on the NERC website [www.vert.lt](http://www.vert.lt) (in English) in the column “Regarding price of the service of access to interconnection lines”.

Not later than by the 30 April of the current calendar year, the NCC 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.

To ensure that **the consumers pay for connecting electricity equipment the price that is based on the necessary costs**, and the costs of the development or reconstruction of electricity networks where this is needed to connect customers are paid not only by the consumers being connected but are also distributed proportionately for the consumers who are later connected to the same infrastructure, in 2018, the NCC approved a new version of the “Methodology for Setting Tariffs of Connection of Electrical Equipment to Power Grids”.

#### Essential provisions:

- a separate tariff is charged for design works;
- the procedure for reimbursement of design costs when the connection project is prepared by consumers at their own expense has been changed;
- the calculation of the tariff for the construction of 1 meter of electricity grid has been changed (the geometric distance not the actual length of the grid being constructed is used for the calculation);
- the procedure for calculating connection fees when the consumers of the 1st and 2nd power supply reliability categories are connected has been changed;
- to ensure that the price of developing the electricity grids is distributed in a proportionate way for the consumers being connected and for those who later intend to connect to power grids, the procedure for calculating the part of the connection tariff paid by the consumer for the development of power grids changes.

By the Resolution No O3E-60 of 28 February 2019, the NCC also approved **the new tariffs for connecting to the distribution networks of AB “Energijos skirstymo operatorius”** (are valid from 1 April 2019). There is a separate tariff for design works: the consumer can choose between two options - the project of connection works is prepared by the operator and the consumer pays the operator accordingly for the project prepared by the operator (the design rate), or the consumer prepares the project by himself and receives compensation for the project prepared at his own expense (maximum reimbursable design cost). Therefore, the project preparation costs will not be included when calculating the tariff for 1 kW power installation. This will allow consumers to see clearly the structure of the connection price.

The tariffs for connecting electricity equipment to electricity networks (100%) calculated and approved by the NCC and applied from 1 April 2019 are presented in tables 2-5 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).

**3 table** The tariffs for constructing 1 m of power grid and for installing or increasing 1 kW permissible power for use (100%\*), EUR, VAT exclusive

Group of Consumers	The Tariff for Installing or Increasing 1 kW Permissible Power for Use of Electricity Equipment (EUR, Exclusive of VAT)			The Tariff for Constructing 1 m of Power Grid (EUR, Exclusive of VAT)		
	Valid until 31 March 2019	Valid from 1 April 2019	Change, %	Valid until 31 March 2019	Valid from 1 April 2019	Change, %
I	19.93	20.87	+4.72%	-	-	-
II	130.93	115.75	-11.59%	21.91	31.55	+44.00%
III	59.90	62.65	+4.59%	21.34	24.05	+12.70%

\* The NCC approves the 100% corresponding connection tariffs, of which the specific tariffs applicable to household and non-household customers, that correspond to 20% and 40% of the total tariff, are calculated.

Source - the NCC.

The tariff for the consumer Group II for installing or increasing 1 kW permissible power for use decreased by 11.59%, while the tariff for the Group I increased by 4.72%, and for the Group III - by 4.59%.

The connection tariff for constructing 1 m of power grid was not calculated for the Group I since this group includes the consumers the connection of whom does not require constructing of power grid; the tariff for the Group II increased by 44%, for the Group III - by 12.70%. The increase is associated with the change in the prices of construction works of engineering equipment in 2017-2018, as well as with changes in legal regulation, ensuring that the amount of the tariff reflects the costs actually incurred by the operator in performing works of the construction of the grid.

**4 table** The tariffs of connecting equipment of electricity consumers, the tariff for project preparation (when the project is prepared by the operator) and the maximum reimbursable design price (when the project is prepared by the consumer) for household and socially vulnerable\* consumers

Group of Consumers	The Tariff for Installing or Increasing 1 kW Permissible Power for Use of Electricity Equipment (EUR, Exclusive of VAT)			The Tariff for Constructing 1 m of Power Grid (EUR, Exclusive of VAT)		
	Valid until 31 March 2019	Valid from 1 April 2019	Change, %	Valid until 31 March 2019	Valid from 1 April 2019	Change, %
I	3.99	4.17	+4.51	-	-	-
II	26.19	23.15	-11.61	4.38	6.31	+44.06
III	11.98	12.53	+4.59	4.27	4.81	+12.65

\*listed on the list approved by the Government or the authority authorized by it

Source - the NCC.

**5 table** The tariffs of connecting equipment of electricity consumers, the tariff for project preparation (when the project is prepared by the operator) and the maximum reimbursable design price (when the project is prepared by the consumer) for other consumers\*\* (except for 1 MW consumers)

Group of Consumers	The Tariff for Installing or Increasing 1 kW Permissible Power for Use of Electricity Equipment (EUR, Exclusive of VAT)			The Tariff for Constructing 1 m of Power Grid (EUR, Exclusive of VAT)		
	Valid until 31 March 2019	Valid from 1 April 2019	Change, %	Valid until 31 March 2019	Valid from 1 April 2019	Change, %
I	7.97	8.35	+4.77	-	-	-
II	52.37	46.30	-11.59	8.76	12.62	+44.06
III	23.96	25.06	+4.59	8.54	9.62	+12.64

\*\*except for household consumers and those who are listed as socially vulnerable on the list approved by the Government or the authority authorized by it

Source - the NCC.

**6 table** The tariff for project preparation (when the project is prepared by the operator) and the maximum reimbursable design price (when the project is prepared by the consumer) (100% \*), valid from 1 April 2019

Group of Consumers	Household consumers		Non-household consumers	
	The Project Preparation Tariff (EUR, Exclusive of VAT)	The Maximum Reimbursable Design Price (EUR, Exclusive of VAT)	The Project Preparation Tariff (EUR, Exclusive of VAT)	The Maximum Reimbursable Design Price (EUR, Exclusive of VAT)
I	-	-	-	-
II	148.55	59.21	297.10	445.66
III				
The consumers whose newly connected or increased permissible for use power is greater than 500 kW	-	594.21	-	445.66
The consumers whose newly connected or increased permissible for use power is not less than 1MW	-	-	-	445.66/668.48**

\*the NCC approves the 100% corresponding connection tariffs, of which the specific tariffs applicable to household and non-household customers, that correspond to 20% and 40% of the total tariff, are calculated.

\*\*depending on whether the consumer signs the agreement on commitment not to reduce permissible power for consumer for 10 years (if signed, a compensation of 668.48 euros is applied)

Source - the NCC.

According to the provisions of the LE, when electricity equipment of household and socially vulnerable consumers is connected to the grid, then 20% of the tariffs calculated above are paid, and when non-household consumers are connected - 40% of the tariffs calculated above; when consumers whose permissible for use power is greater than 1 MW (and who undertake not to reduce this power for 10 years) are connected, then 10% of the actual costs of connection are paid.

### 3.2.2.1. Surveillance of Price Level, Transparency Level, Market Opening Efficiency and Competition, the Articles 37(1)(i), (j), (k), (l), (u) and 40 (3)

In 2018, the average electricity price in Lithuanian market was 43.48 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 - 35 EUR/MWh.

2019 is the fourth year of 2016-2020 period of transmission and distribution services regulation. The estimated allowed revenue in every other year is adjusted as per the "Methodology for Setting Electricity Transmission, Distribution and Public Supply Service Price Caps and the Public Price Cap" approved by the Resolution of the NCC No O3-3 of 15 January 2015.

In 2018, the price cap of transmission service of Litgrid, AB is 0.619 ct/kWh, and it is 0.053 ct/kWh or 7.9% lower compared to the price cap of transmission service set for the company in 2017. The change in the price caps was mainly due to the bigger amount of electricity that was projected to be distributed, higher electricity purchase costs, and one-off compensations approved by the Government for land easements provided in constructing power lines. Changes in the operating revenue of Litgrid, AB have also been adjusted due to the returned profit exceeding the permitted investment return for 2014-2015 (6.620 million euros).

Since 2016, the NCC has been applying the LRAIC model for pricing electricity transmission services. The model is designed to provide the operator with financing for the necessary investments intended for upgrading and optimizing depreciated network elements. Considering the fact that the actual 2016-2017 investments in model-optimized depreciated assets accounted for a minor part, i.e. a significant difference was found between the expected outcomes of the model and the fact, in determining the return on investments for 2016-2017 that exceeds the amount set by the NCC, the allowable return on investment in the first two years of the regulatory period was calculated based on the value of the assets and costs of depreciation, when calculated in historical costs (considering the actual investments made and assets created by the company). The resulting difference in return on investment (11.099 million euros) was considered in determining the eligible revenue from transmission activities and service prices for 2019.

The TSO provided information to the NCC that in 2019 it plans to order on average 400 MW/h of secondary emergency power reserve that will be ensured by Kruonis pumped storage plant, 520 MW/h of tertiary emergency power reserve, and 260 MW of tertiary active power reserve for voltage control in 330 kV transmission network and for restoring the secondary emergency active power reserve. The price change of the tertiary power reserve is the result of increase of supplementary component of natural gas supply security to the price of natural gas transmission and adjustments due to previous periods. In 2019, the price of system services - 0.615 ct/kWh was set for 2019 (this price includes costs of purchase of services for ensuring active power primary, secondary, and tertiary reserve, costs of provision of services of reactive power and voltage control, and of prevention and elimination of accidents and disturbances. In 2019, the price cap of distribution services of AB "Energijos skirstymo operatorius" in the medium voltage is 0.862 ct/kWh (0.064 ct/kWh or 8.9% lower than in 2017) and 1.871 ct/kWh in low voltage grids (0.155 ct/kWh or 9.0% higher than in 2018). The change in the price caps was mainly due to the bigger amount of electricity that was projected to be distributed, higher electricity purchase costs, and one-off compensations approved by the Government for land easements provided in constructing power lines. Changes in the operating revenue of AB "Energijos skirstymo operatorius" have also been adjusted due to the returned profit exceeding the permitted investment return for 2015 (13.64 million euros).

Since 2016, the NCC has been applying the LRAIC model for pricing electricity distribution services. The model is designed to provide the operator with financing for the necessary investments intended for upgrading and optimizing depreciated network elements. Considering the fact that the actual 2016-2017 investments in model-optimized depreciated assets accounted for a minor part, i.e. a significant difference was found between the expected outcomes of the model and the fact, in determining the return on investments for 2016-2017 that exceeds the amount set by the NCC, the allowable return on investment in the first two years of the regulatory period was calculated based on the value of the assets and costs of depreciation, when calculated in historical costs (considering the actual investments made and assets created by the company). The resulting difference in return on investment (41.39 million euros) was considered in determining the eligible revenue from distribution activities and service prices for 2019. The impact of these adjustments will be considered in determining the eligible revenue and price caps for the next regulatory period and further applying the LRAIC model in order to maintain an integral level of financing of reasonable and necessary investments in asset renovation.

In 2018, the NCC approved a new version of the "Pricing Methodology for PIS in Electricity Sector". The fundamental change is that all additional costs related to provision of PIS (administration, borrowing costs, etc.) are split equally between those services for which the need for PIS funds is foreseen, and from now on a separate price is set for each PIS (the final price of PIS is calculated as a sum of prices of individual services).

This change will allow large electricity consumers, who consume more than 1 GWh of electricity per year, to calculate the recoverable part (85%) of paid PIS amount of the PIS that was intended to support the production of renewable energy.

In 2019, PIS funds are not allocated for power plants that are determined for ensuring reserves of the LES, and the operation of which is necessary for ensuring the state energy security. However, the NCC has obligated AB "Lietuvos energijos gamyba" to repay 2.765 million euros to the PIS budget because of profit that in 2017 exceeded the allowable return on investment. In 2019, almost all PIS funds are allocated to support and promote local production from renewable energy sources. As a result, the PIS budget that was set for 2019 decreased from 145.11 million euros to 108.968 million euros, or by 24.9%. The PIS price for all persons that was set by the NCC for 2019 is 0.903 ct/kWh exclusive of VAT. From 2019, the PIS price for producers (for combined heat and power plants) that use self-produced electricity for their own needs, and the PIS price for all other consumers is the same.

In 2019, the public electricity price for the household consumers who buy electricity from medium voltage networks is 7.760 ct/kWh (exclusive of VAT), 1.040 ct/kWh or 15.48% higher than in 2018, for those who buy electricity from low voltage networks - 10.317 ct/kWh (exclusive of VAT), 1.336 ct/kWh or 14.88% higher than in 2018.



The electricity prices, their application, comparison with the prices applicable in other countries and other related information is available publicly on the NERC website [www.vert.lt](http://www.vert.lt) or on the website of AB “Energijos skirstymo operatorius” [www.eso.lt](http://www.eso.lt). The consumers are informed individually on new prices and tariff plans through self-service website [www.manogile.lt](http://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 CEER database.

### ***3.2.2.2. Recommendations of Supply Prices, Market Research and the Application of Measures to Promote Effective Competition***

#### ***Article 37(1)(o)***

It is established in the Article 8(9)(15) of the Law on Energy establishes 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 research 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 LE, 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 research performed and the measures taken by the NCC see section 2.1.3.

#### ***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 (Litgrid, AB and AB “Energijos skirstymo operatorius”), small distribution network operators (Achema, AB, Akmenės cementas, AB, Lifosa, AB, Dirbtinis pluoštas, UAB<sup>5</sup> and E Tinklas, UAB<sup>6</sup>) and of public suppliers (AB “Energijos skirstymo operatorius”<sup>7</sup> and Dirbtinis pluoštas, UAB) of electricity producer with significant influencing power in the market of electricity reserve power AB “Lietuvos energijos gamyba” according to the quarterly reports submitted on repair, maintenance and operation, personnel, administrative, and other costs.

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 revenue 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. Active analysis of the quarterly operating costs of the said companies of electricity sector by the NCC is intended for avoiding 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

<sup>5</sup> From 1 June 2018, the territory of electricity distribution activities of Dirbtinis pluoštas, UAB was taken over by Dainavos elektra, UAB.

<sup>6</sup> From 1 January 2019, E Tinklas, UAB no longer carries out electricity distribution activities.

<sup>7</sup> From 1 October 2018, the public electricity supply activities of AB “Energijos skirstymo operatorius” were taken over by Lietuvos energijos tiekimas, UAB.

supplier of electricity sector were performed, and the consumer overpayments because of their volume are set out in the future periods.

In 2018, the NCC also changed the Description of requirements for separation of accounts and allocation of costs of electricity companies. Substantial changes:

- additional service of compensations for servitudes is provided for in electricity transmission and distribution activities;
- obligation to calculate congestion revenue of non-current assets acquired through EU funds, grants and subsidies, and equivalent funds, depreciation (amortization) costs according to the depreciation rates applicable to a particular unit of assets is provided for;
- the list of non-allocated costs has been supplemented with compensations for consumers for electricity transmission that was not restored timely, costs that are not included in the costs of regulated activities are more clearly regulated, an exemption for the costs of insurance against accidents at work for persons carrying out hazardous work and / or working with potentially dangerous equipment is provided for, and the prohibition to allocate the costs of holiday accruals has been revoked;
- it is provided that an electricity company that presents depreciation (amortization) rates of units of non-current assets and / or their groups shall at the same time present capitalization criteria for works of reconstruction and repair of property, plant and equipment that are applied in the company.

In setting the price caps for 2019, the NCC took regard of evaluation of regulated activities of the DSO and TSO (Litgrid, AB and AB “Energijos skirstymo operatorius”) that was carried out in 2016, and profit surplus that resulted in 2014-2015. The estimated amounts have been distributed over the next few years and a part of them is expected to be returned to consumers in 2019.

Since 2016, the NCC has been applying the LRAIC model for pricing electricity distribution services and electricity distribution. The model is designed to provide the operator with financing for the necessary investments intended for upgrading and optimizing depreciated network elements. Considering the fact that the actual 2016-2017 investments in model-optimized depreciated assets accounted for a minor part, i.e. a significant difference was found between the expected outcomes of the model and the fact, in determining the return on investments for 2016-2017 that exceeds the amount set by the NCC, the allowable return on investment in the first two years of the regulatory period was calculated based on the value of the assets and costs of depreciation, when calculated in historical costs (considering the actual investments made and assets created by the company). The resulting difference in return on investment was considered in determining the eligible revenue from transmission activities and service prices for 2019. The impact of these adjustments will be considered in determining the eligible revenue and price caps for the next regulatory period and further applying the LRAIC model in order to maintain an integral level of financing of reasonable and necessary investments in asset renovation.

In 2018, after having received the request of AB “Lietuvos energijos gamyba”, which is recognized as an entity with significant power in the reserve power market, and having regard to the fact that the market research is carried out at least every five years, and in order to examine the effectiveness of competition and to find out whether electricity producers have significant power in the reserve power market and may impose exorbitant prices due to a lack of effective competition or use price pressure, the NCC carried out market research of electricity reserve power.

After the services of electricity reserve power ordered by the DSO in 2016-2019, their scope, geographical coverage have been assessed during the market research, the following markets whose competition efficiency in the territory of Lithuania was investigated, have been defined:

- the service of the secondary emergency active power reserve (the secondary active power reserve must be activated not later than within 15 minutes);
- the service of the tertiary active power reserve that is intended for restoration of the secondary emergency active power reserve (*the tertiary active power reserve must be activated within 12 hours*);

- the service of the tertiary active power reserve intended for voltage management in 330 kV transmission network and for recovery of the secondary emergency active power reserve (*the tertiary active power reserve must be activated within 12 hours*).

The services of electricity reserve power are provided by 4 entities: AB “Lietuvos energijos gamyba“, AB “ORLEN Lietuva“, AB “Panevėžio energija“ and UAB Kauno termofikacijos elektrinė (Kaunas Combined Heat and Power Plant).

The study of the effectiveness of competition in the electricity reserve power market showed that the degree of market concentration is high, there exist barriers of market entry due to the requirements of infrastructure using which services of electricity reserve power can be provided and for the development of which significant financial resources are required. Therefore, competition in the market is inefficient.

**7 table** *Entities with significant power in the reserve market and their obligations*

AB “Lietuvos energijos gamyba“ is recognized as an entity with significant power in providing:	From 2020, the company will be subject to the following obligations:
The service of the secondary emergency active power reserve	Cost accounting obligation to provide services at the prices that are not higher than those based on costs, including return on investment, setting price caps.
The service of the tertiary active power reserve that is intended for voltage management in 330 kV transmission network and for recovery of the secondary emergency active power reserve	Cost accounting obligation to provide services at the prices that are not higher than those based on costs, including return on investment, setting price caps.
The service of the tertiary active power reserve that is intended for recovery of the secondary emergency active power reserve	In all cases, obligation of cost accounting.
	<u>In the event</u> that it is known before the beginning of auction that the available power of other producers is insufficient to satisfy the need of the TSO that due to available significant technical capacity can only be satisfied exclusively by AB “Lietuvos energijos gamyba” - to provide services at the prices that are not higher than those based on costs, including return on investment, setting price caps.
	<u>In the event</u> that the TSO orders capacity of all producers that can provide the service of the tertiary active power reserve and isolated operation, i.e. where the demand of the TSO would match or exceed the supply of production facilities of all producers and competition would be impossible - to provide services at the prices that are not higher than those based on costs, including return on investment, setting price caps.
AB “ORLEN Lietuva“, AB “Panevėžio energija“ and UAB Kauno termofikacijos elektrinė (Kaunas Combined Heat and Power Plant) are recognized as entities with significant power in providing:	From 2020, the companies would be subject to the following obligations:
The service of the tertiary active power reserve that is intended for recovery of the secondary emergency active power reserve <u>only in cases</u> the TSO orders capacity of all producers that can provide the service of the tertiary active power reserve and isolated operation, i.e. where the demand of the TSO would match or exceed the supply of production facilities of all producers and competition would be impossible. .	Cost accounting obligation to provide services at the prices that are not higher than those based on costs, including return on investment, setting price caps.

Source - the NCC.

It is also foreseen that in all cases, AB “ORLEN Lietuva“, AB “Panevėžio energija“ and UAB Kauno Termofikacijos Elektrinė (Kaunas Combined Heat and Power Plant), upon separate request from the NCC, would provide information on the available capacity of the facilities, the reasons why the available capacity of the facilities increased or decreased, explanations on the amount of the price bids submitted for the auction of the tertiary active power reserve that is intended for recovery of the secondary emergency active power reserve.

The NCC conducts market research to ensure effective competition in the electricity sector and at the same time prevent market participants from applying excessive prices or applying price pressure due to lack of effective competition, thus causing harm to the market participants.

### **3.3. Security of Supply (to the Extent that the Regulator is the Competent Authority)**

#### ***Implementation of Security Measures (the Article 42)***

In 2018, the process of renewal of the National Energy Independence Strategy intended to outline Lithuania's goals in the field of energy by 2050 was continued in order to assess changes in the situation after the launch of new interconnections with Poland and Sweden.

The National Energy Independence 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 National Energy Independence 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 producing consumers in the country.

#### **3.3.3. Maintenance of Supply and Demand Balance**

##### ***Article 4***

Related information is available in section 3.1.2 of this report.

#### **3.3.4. Surveillance of Investment in Production Capacity Related to Security of Supply**

##### ***Article 37(1)(r)***

According to the provisions of the LE, the NCC carries out the surveillance of the implementation of the network development plan and carries out its evaluation. Each year, Litgrid, AB provides

10-year electricity network investment plans that assess scenarios for the development of projected new sources of production.

The 2018 plan foresees that by 2027 the installed capacity of power generating sources will be 2,920 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 7***

As result of uncompetitive local production capacity, most of electricity in 2018 was imported. In 2018, 26.6% of the total electricity consumption were produced in Lithuanian power plants and this share is smaller than in 2017 (30.0%). In 2018, electricity import accounted for 96.77% of the total electricity demand in the country (in 2017 this indicator was 89.61%, in 2016 - 82.48%, in 2015 - 63.19%). In 2018, 3.22 TWh of electricity were produced in the country, electricity import accounted for 12.347 TWh, and export - 2.804 TWh. In 2018, electricity consumption in the country accounted for 12.107 TWh.

The amount of electricity that can be imported depends on the ongoing repairs on the transmission network. In 2018, the hourly average of electricity that could be imported to Lithuania was 2.924 GWh.

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

Each year, Litgrid, AB provides 10-year electricity network investment plans.

The 2018 - 2027 development plan of the LES 400-110 kV networks provides for plans to construct a 330 kV electricity transmission line (hereinafter -ETL) Vilnius - “Neris” for synchronous interconnection with the networks of continental Europe, to install a 330 kV switchgear “Mūša”, to optimize the northeast Lithuania power transmission network and to prepare for synchronous operation with the networks of continental Europe (installation of 330/110/10 kV Ignalina Nuclear Power Plant transformer substation, to reconstruct 330/110/10 kV Utena transformer substation, and installation of Ignalina Nuclear Power Plant controlled shunt reactor in Lithuania Power Plant), development of 330 kV network in western Lithuania; reconstruction of 330 kV aerial line Vilnius-Lithuania Power Plant, construction of 110 kV electricity transmission line Pagėgiai-Bitėnai and expansion of 330/110/10 kV Bitėnai transformer substation (stage 2), and other projects (such as stage 1 of expansion of “LitPol Link“ connection, ENTSO-E Technical Specifications Study, modernization of control systems, installation of voltage control unit, etc.). In transition to the synchronous operation of the Baltic States with the energy system of continental Europe, the Baltic 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 alignment of investment of energy companies in the NCC, the TSO aligns separate investments with a volume equal to or greater than 3.5 million euros. Due to cross-system connections, the value of the strategic projects of transmission network in 2017-2026 should amount to about 418.74 million euros, and all investments of TSO would be about 765.75 million euros.

***Expected future Demand and Prospective Power 5 and 5-15 Years Ahead  
Article 7 of the Directive 2005/89/EC***

In 2018, the maximum hourly electricity demand (net) in Lithuania was 1,999 MW, i.e. 5.43% higher than in 2017 (1,896 MW, in 2016 - 1,979 MW). In 2018, the maximum hourly electricity demand in

distribution network accounted for 1,760 MW and was 5.7% higher than in 2017 (1,665 MW, in 2016 - 1,695 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 included the following aspects:

- GDP growth;
- electricity efficiency;
- the number of electric cars and amount of electricity consumed by electric cars;
- 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 2027 will increase to 14.47 TWh (on average about 2.1% annual growth), in event of slower economic growth - to 14.00 TWh (around 1.8% annual growth), and in case of optimistic scenario - to 14.71 TWh (about 2.3% annual growth). In case of basic scenario Lithuanian electricity demand in 2020 would be 11.95 TWh. The projected peak power demand in case of basic scenario in 2027 would be 2,403 MW.

In 2018, AB "Energijos skirstymo operatorius" has transmitted to its customers 10.201 million kWh (in 2017 - 9.825 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 Service Price Caps 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 2019 from the Ministry of Finance of the Republic of Lithuania, Lithuania's GDP growth forecasted in 2019-2021 is respectively 2.6%, 2.4% and 2.3% (½ of GDP accounts for respectively 1.3%, 1.2% and 1.15%).

In 2018, electricity supply of AB "Energijos skirstymo operatorius"<sup>8</sup> accounted for 3.48 million kWh (in 2017 - 3.22 million kWh), of them 2.977 million kWh was a public electricity supply and 0.51 million kWh was a guarantee supply. In 2017, a public and a guarantee electricity supply was 2.82 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%. Lietuvos energijos tiekimas, UAB that in the 4th quarter of 2018 took over public electricity supply activities from AB "Energijos skirstymo operatorius" forecasts that amount of electricity which is planned to be supplied to public consumers in 2019-2021 will grow by 1-1.5% annually.

### 3.3.5. Measures to Cover Peak Demand or Lack of Suppliers

#### *Article 4*

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

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

<sup>8</sup> From 1 October 2018, AB "Energijos skirstymo operatorius" took over public electricity supply activities from Lietuvos energijos tiekimas, UAB.

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 consumers. Consequently, scope of restrictions may vary from year to year. The network consumers 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.

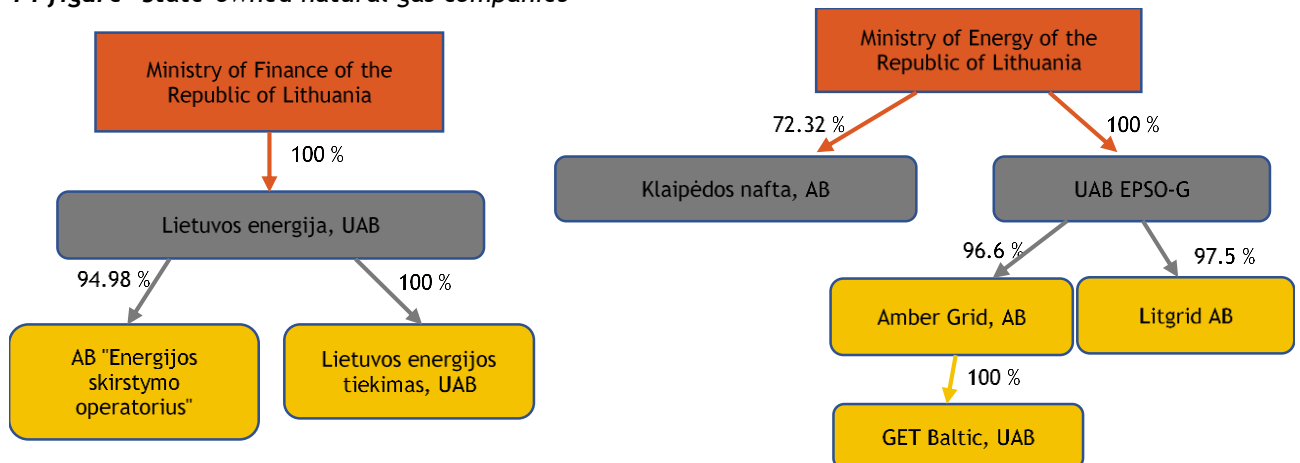
## 4. GAS MARKET

### 4.1. Network Regulation

#### 4.1.1. Unbundling of Vertically Integrated Companies

In 2018, activities in the natural gas sector were further refined. Klaipėdos nafta, AB has separated LNGT activities from activities of another company by establishing a subsidiary SGD terminalas, UAB on 27 December 2018.

14 figure State-owned natural gas companies



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 consumers, 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 Amber Grid, AB Natural Gas Transmission System” (harmonised 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 intraday 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” (harmonised 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 consumers of the system who have entered into natural gas distribution contracts with the Distribution System Operator (hereinafter - 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” (harmonised by the Resolution No O3E-536 of 28 November 2017). The rules provide for the possibility to adjust the submitted day-ahead applications of natural gas amount, i.e. the system consumers will be able, when necessary, to adjust LNG degasification orders submitted during the gas day. And in the case where the consumers 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 consumers 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 (41(6)b, 41(8))***

The NERC carries out surveillance of the activity of balancing service, assesses costs of and revenue 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 Amber Grid, AB Report on Natural Gas Transmission Networks Balancing Code's Provisional Measures“ the NCC has approved Amber Grid, AB report on natural gas transmission networks balancing code's provisional measures. The NCC also submitted comments to Amber Grid, AB regarding the implementation of the provisions of the EC Regulation (EU) No 312/2014 of 26 March 2014 establishing a Network Code on Gas Balancing of Transmission Networks.

By the Resolution No O3E-263 of 24 August 2018 “Regarding Harmonization of Amber Grid, AB Natural Gas Transmission System Balancing Rules” the NCC has harmonized Amber Grid, AB natural gas transmission system balancing rules prepared in accordance with the requirements of the Balancing Code. By the Resolution No O3E-314 of 5 October 2018 the NCC has approved the “Methodology for Determining the Revenues and Prices of the State Regulated Natural Gas Transmission Activities” that provides for calculation of the imbalance charge in accordance with the principle of neutrality, i.e. the TSO neither generates profit nor incurs loss in carrying out balancing activities.

### ***Service Quality and Reliability Indicators (Article 41(1) h)***

The Law of the Republic of Lithuania on Natural Gas (hereinafter - LNG) provides that the NERC 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 Services Provided by Natural Gas Companies, and of 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. By the Resolution No O3E-62 of the NCC of 8 March 2018 “Regarding the Approval of the Description of Indicators of Reliability and Quality of Services Provided by Natural Gas Companies, and of the Procedure of their Evaluation“, the “Description of Quality Indicators” was adjusted and was supplemented with more precise formulas for calculating indicators and more specific reporting forms.

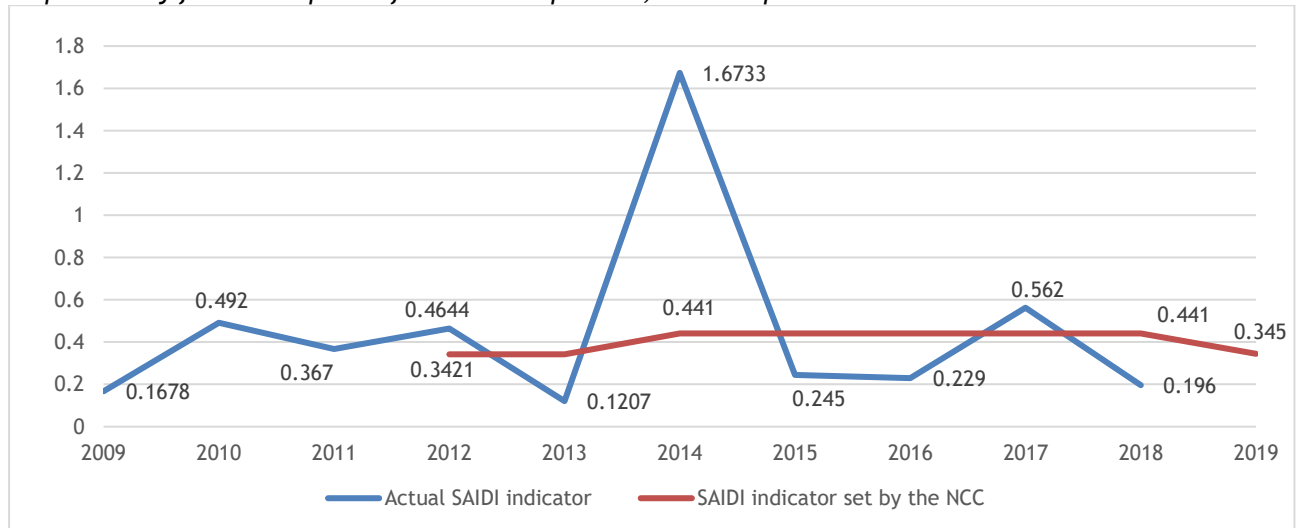
The main indicators of uninterrupted supply of natural gas are: System average interruption duration index (SAIDI) and System average interruption frequency index (SAIFI) during the reporting period. SAIDI and SAIFI indicators are differentiated by reasons for interruption.

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.

In 2018, SAIDI and SAIFI indicators of DSO AB “Energijos skirstymo operatorius” were lower than the minimum quality levels established by the NCC.

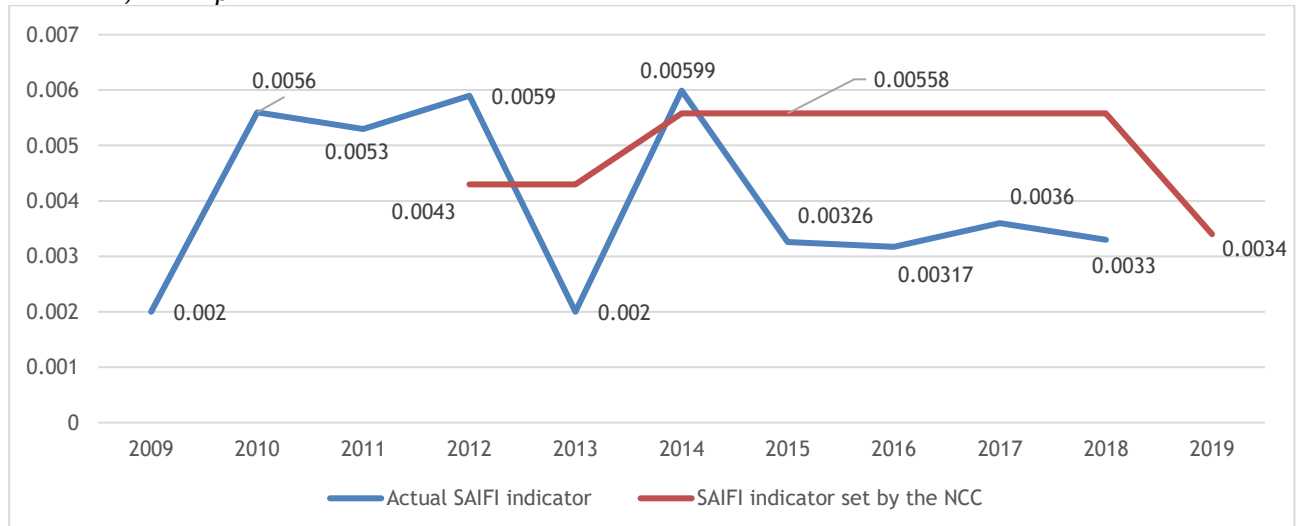
SAIDI and SAIFI indicators of the natural gas DSO AB “Energijos skirstymo operatorius” in 2009-2018 are shown in the figures below.

**15 figure** SAIDI indicator of AB “Energijos skirstymo operatorius” for unscheduled interruptions when responsibility for interruptions falls on the operator, minutes per consumer indicator



Source - the NCC.

**16 figure** AB “Energijos skirstymo operatorius” average number of unscheduled interruptions per consumer, times per consumer



Source - the NCC.

As can be seen from the figures above, in 2018 the indicators of AB “Energijos skirstymo operatorius” have improved compared to 2017, the average duration of unscheduled interruptions decreased from 0.562 to 0.196 min per consumer, and the number of interruptions - from 0.0036 to 0.0033 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 (Article 41(1)m)**

The TSO and TSO 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 consumers 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 responsibility of the TSO Amber Grid, AB. In 2018,

the percentage of responses timely (within 30 calendar days) sent to a new consumer in Amber Grid, AB accounted for 100%. In 2017 this indicator also accounted for 100%.

In 2018, the indicator of timely examined consumer request to connect in the system of the DSO AB “Energijos skirstymo operatorius” accounted for 99.44%, and the minimum level of the indicator of timely examined consumer request regarding connection established by the NCC - 100%.

The indicator of timely examined consumer request in the system of the DSO AB “Energijos skirstymo operatorius” in 2018 accounted for 100%, and in 2017 - 96.06%. 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 consumers. 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 consumers 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 consumers 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 TSO notifies the system consumer in writing not later than 5 days before the start of gas system repair works or the start of other works of connecting gas systems 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 (Article 41(1)n)***

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.

#### ***Maintenance of Security 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 NERC in writing with the data on the gas amounts accumulated for the vulnerable consumers.

In 2019, 393.59 GWh of natural gas are stored by UAB “Lietuvos dujų tiekimas“ 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. In 2019, the component of ensuring security of natural gas supply equal to 0.09 EUR/MWh was included in the price of household consumer supply.

#### **4.1.3. Regulation of Natural Gas Transmission, Distribution and LNG Regasification Prices**

##### ***Segregation of Accounts and Ensuring Avoidance of Cross-Subsidization (Article 41(1)f)***

The natural gas companies engaged in regulated activities allocate revenue, costs and assets by business units and services in accordance with the “Description of the Requirements of Segregation of Accounts and Allocation of Costs of Natural Gas Companies” approved by the resolution No O3E-464 of the NCC of 21 December 2018. The said description was redrafted and contains the following changes:

- actual rates of non-current assets depreciation are enshrined;
- it introduces a new requirement for including costs of write-down of regulated non-current assets and the residual value of the unit of non-current assets no longer used or of a part thereof in the asset base of a regulated service;
- the costs of purchasing luxury goods, the costs of additional insurance are included in the list of non-allocated costs, an exemption for the costs of insurance against accidents at work for persons carrying out hazardous work and / or working with potentially dangerous equipment is provided for;
- it is prohibited to attribute to the services (products) of regulated prices and relevant business units the costs of write-down of non-current assets which are less than 1 thousand euros and which together represent more than 0.03% of the value of the regulated non-current assets of the natural gas company in cases of TSO and DSO.

In the natural gas sector the NERC prepares and approves the methodologies of setting state regulated prices and sets (adjusts) revenue caps and / or price caps.

Price caps are set for the period of five years, and once a year they are adjusted for 6 entities. The NERC also verifies whether the specific prices of regulated services set by gas companies are not discriminative against individual consumer groups, every half a year approves natural gas tariffs for the household consumers.

##### ***Setting Price Caps (Article 41(1)a)***

##### ***Transmission Activities***

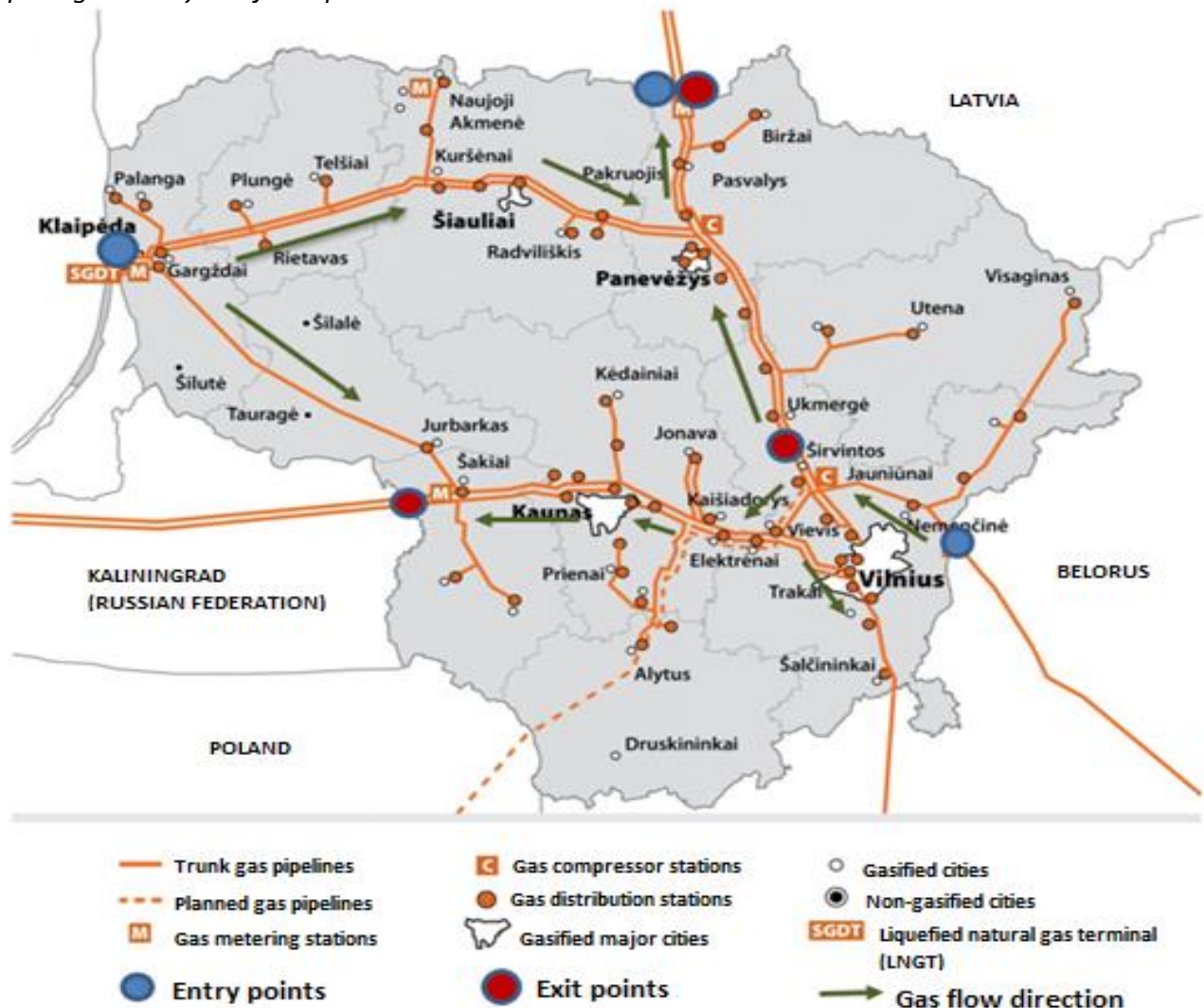
Transmission activities in Lithuania are carried out by 1 TSO - Amber Grid, AB.

As of 2015, the price cap in transmission activities is set and adjusted per unit of capacity, and the pricing model of entry and exit points is applied when price caps are set and adjusted at the entry and exit points of the transmission system:

1. At the entry points of Lithuanian natural gas transmission system:
  - 1.1. at the point of connection of Lithuanian transmission system with the LNG terminal in Klaipėda (hereinafter - LNG Terminal 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 at Kiemėnai Gas Metering Station (hereinafter - 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 at Kotlovka Gas Metering Station (hereinafter - Kotlovka Entry Point).
2. At the 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 - 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 - 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 consumers of the country's transmission system.

17 figure Topological map of Lithuanian natural gas transmission system as per the application of the pricing model of entry-exit points



Source - the NCC.

By the Resolution No O3E-314 of the NCC of 5 October 2018 the “Methodology for Determining the Revenue and Prices of the State Regulated Natural Gas Transmission Activities” was approved. In this methodology:

- principles of determining revenue and prices of transmission activities were separated from other regulated activities of the natural gas sector;
- switching to one of the alternative methodologies provided for in the Tariff Network Code - the “postage stamp” methodology which provides a breakdown of revenue level between entry-exit points based on a defined entry-exit ratio and, as a general rule, leads to uniform tariffs of entry and exit points of the natural gas transmission system;
- principles of cost adjustment are established;
- provides for the possibility to apply a discount at the LNGT entry point for the purpose of increasing competition of sources of natural gas imports;
- the pricing of the natural gas transmission system balancing service is aligned with the provisions of the Balancing Code;
- a mechanism to promote operating cost efficiency is foreseen.

In 2018, the NCC approved the price caps of transmission for the new regulatory period 2019-2023 when the level of revenue from transmission activities is 43,922.96 thousand euros, i.e. 12.67% less than was set in 2017 (49,475.65 thousand euros), and 14.59% higher than was set in 2018 (37,515.31 thousand euros because profit surplus of 11 million euros was taken into consideration). The price caps of transmission services at each entry and exit point were calculated based on the set level of revenue.

**8 table** Changes in the price caps of transmission service of Amber Grid, AB in 2015-2018 and prices of long-term transmission services of natural gas transmission in 2019, EUR/MWh/day/year

	Gas Metering Station <sup>9</sup>	2015	2016	2017	2018	2019	Change in 2019, compared to 2018, %
At entry points	Kotlovka GMS	49.58	32.32	31.74	32.91	43.46	32.1
	Kiemėnas GMS	49.58	32.32	31.74	32.91	43.46	32.1
	Klaipėda GMS	0	10.5	20.03	32.91	9.56**	-71.0
At exit points	At the internal exit point	300.68	428.82	421.81	282.76	308.25	9.0
	Kiemėnai GMS	49.58	38.05	36.02	40.68	152.95	276.0
	Šakiai GMS	54.02	58.82	56.73	64.77	48.06	25.8

*\*In 2019, the new principle of “postage stamp” established in the “Methodology for Determining the Revenue and Prices of the State Regulated Natural Gas Transmission Activities” approved by the Resolution No O3E of the NCC of 5 October 2018 has been introduced.*

*\*\* A discount of 75% is applied at the entry point of Klaipėda GMS.*

*Source - the NCC*

In order to create preconditions for the development of the natural gas market, effective use of alternative sources of natural gas supply, emergence of new suppliers and formation of competitive conditions, in 2015 the capacity price cap at the entry point of Klaipėda GMS LNGT was set at zero. In 2016, the NCC applied the transition period for the price calculated at the entry point of the LNGT and set the price increase in equal instalments over the three years by the end of 2014-2018 regulatory period of Amber Grid, AB:

- In 2016 - 1/3 of the amount of the price cap of the capacity at the entry point of the LNGT;
- In 2017 - 2/3 of the amount of the price cap of the capacity at the entry point of the LNGT;
- In 2018 - the price is equal to the amount of the price cap of the capacity at the entry point of the LNGT

A discount of transmission price can be applied at the entry point of the LNGT, as well as at the entry points from the infrastructure set up to bridge the gap between Member States' gas transmission systems, and at the exit points to such infrastructure in order to increase security of energy supply and promote the competitiveness of the natural gas market. The percentage ratio of the average unit price of the capacity foreseen for cross-border gas transportation to the average unit price of capacity foreseen for internal system consumers is 5.88%, i.e. the

transmission service prices at the entry and exit points are such as to satisfy the condition of non-discrimination of the system consumers.

In 2019, the average price per capacity unit at the internal point of Lithuanian transmission system is 308.52 EUR/(MWh/day/year), i.e. increases by 9% compared to 2018.

### **Distribution Activities**

In 2018, natural gas distribution activities were carried out by 5 DSOs. However, in 2019, only 4 TSOs will continue distribution activities because from 24 January 2019 the license of natural gas distribution of Achema, AB was withdrawn at the request of the company.

By the Resolution No O3E-469 of 28 December 2018 the NCC approved a new version of the "Methodology for Determining the State Regulated Prices in the Natural Gas Sector". The methodology:

- enshrines the principles of adjusting the natural gas price cap through cost adjustment; foresees a mechanism to promote operating cost efficiency;
- establishes that the operating and wages costs for the first year of the new regulatory period will be determined as per the sound actual audited or penultimate year data established by the NCC considering the changes in the consumer price index and projected changes in wages reduced by the efficiency ratio;
- provides for the principles against which adjustments to operating costs and wages will be made;
- strips of the 1st and 2nd consumer sub-group are changed: the 1st consumer group includes the individuals who consume up to 3,120 kWh or 300 m<sup>3</sup> of natural gas (was - up to 5,200 kWh or up to 500 m<sup>3</sup>), the consumers of the 2nd group will be those individuals who consume from 3,121 kWh or from 301 m<sup>3</sup> to 207,980 kWh or to 20,000 m<sup>3</sup> (was - from 5,200 kWh or from 500 m<sup>3</sup> to 207,980 kWh or up to 20,000 m<sup>3</sup>).

In 2018, the NCC adjusted the distribution price caps for two DSOs (UAB "Intergas" and UAB "Fortum Heat Lietuva), and for other two distribution operators (the largest DSO - AB "Energijos skirstymo operatorius" and for AB agrofirma "Josvainiai") the NCC set the distribution price cap for the new regulatory period: 2019-2023.

The change in distribution price caps of all DSOs in 2013-2019 is presented in table 9.

**9 table** *The natural gas distribution price caps*

Entity	From 01/01/2013	From 01/01/2014	From 01/01/2015	From 01/01/2016	From 01/01/2017	From 01/01/2018	From 01/01/2019	Change in 2019 / 2018, %
AB "Energijos skirstymo operatorius"	5.00	6.40	7.47	7.92	7.25	5.52	5.32	-3.62
UAB "Fortum Heat Lietuva"	4.19	4.43	6.14	6.47	6.25	5.82	7.03	20.79
UAB "Intergas"	2.57	2.55	2.73	7.61	8.17	8.89	10.54	18.56
UAB "Druskininkų dujos" *	40.38	37.18	35.09	37.75	-	-	-	-
AB agrofirma "Josvainiai"	1.81	1.96	2.05	1.68	1.79	1.10	1.20	9.09
Achema, AB	1,07					0.88	0.88	-

\* The licence of natural gas distribution of UAB "Druskininkų dujos" was withdrawn from 1 November 2016.

Source - the NCC.

Due to the decreasing amount of distributed gas, the distribution price cap increases for all companies, except for AB "Energijos skirstymo operatorius". In 2019, the NCC has set for AB "Energijos skirstymo operatorius" the distribution price cap that is 3.6% lower than in 2018. The price cap decreases because, according to the data of AB "Energijos skirstymo operatorius", 7,443,000 MWh of natural gas will be distributed in 2019, i.e. 6.3% more than the amount planned in 2018 (7,001,151 MWh). In addition, as the company received a higher-than-permissible return on investment for 2014-2016, that amount, accordingly, was used to reduce costs for the future periods.

The specific prices of natural gas distribution are differentiated for different groups of consumers as per amount of gas consumed.

The NCC carries out scheduled inspections of regulated natural gas companies to determine how the companies comply with the level of the set costs and prices. In 2018, the scheduled inspection of AB agrofirma "Josvainiai" was carried out.

It has been determined that the company unreasonably included 19,119 euros in 2014-2017 operating costs of natural gas distribution activities and accordingly set higher values of the regulated assets needed to calculate the natural gas distribution price cap. The NCC addressed warning to AB agrofirma "Josvainiai" for violations found during the inspection.

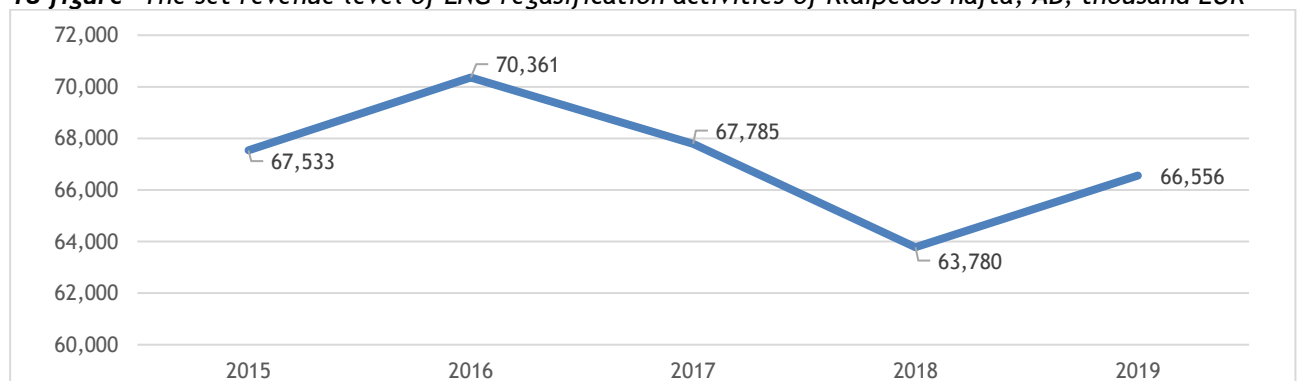
### **LNG Regasification Activities**

Taking into account amendment to the Law on LNGT, the NCC made corrections in the "Methodology for Determining the State Regulated Prices in the Natural Gas Sector" in connection with regulation of the price of LNG degasification service (the Resolution No O3E-469 of the NCC of 28 December 2018):

- regulation of revenue caps instead of regulation of price caps is provided for;
- regulation of the LNG supply price of the designated supplier and setting the selling price of LNG required quantity have been surrendered;
- calculation of LNG security component has been changed: this price includes the costs resulting from the difference between the purchase price of the LNG required quantity of the designated supplier and the average actual price of natural gas import into the Republic of Lithuania established by the NCC, calculating the regasified and / or reloaded part of the necessary quantity of LNG of each month of the reporting period, the costs of the necessary quantity for technological purposes, the costs of financing the long-term guarantee of supply of the necessary quantity.

In accordance with the adjusted methodology, the NCC set the revenue level of LNG regasification activities for 2019 of 66,556 thousand euros, i.e. 4.35% (2,776 thousand euros) higher than in 2018.

**18 figure** The set revenue level of LNG regasification activities of Klaipėdos nafta, AB, thousand EUR



Source - the NCC.

In 2019, LNG regasification price cap per unit of consumption capacity amounts to 429.81 EUR/(MWh/day/year), i.e. 19.88% higher than in 2018.

The change was mainly driven by lower projected consumption capacity in 2019 and the projected higher costs of the LNG floating storage facility with the gasification facility that are laid down in the lease agreement and that are related to exchange rate changes, planned necessary dry dock repairs, and verifications of class compliance of the LNG ship-storage.

### **Setting the Specific Prices of LNG Regasification**

The price of LNG regasification consists of a fixed component and a variable component: a fixed component is calculated per unit of established capacity of consumption of transmission system



consumers (EUR/MWh/day/year), a variable component - per unit of LNG quantity that is planned to be degasified (EUR/MWh).

The LNGT operator sets a variable component of LNG regasification price, taking into consideration the course of development of regional natural gas market, possibilities to ensure diversified natural gas supply to natural gas consumers of the Republic of Lithuania under conditions of effective market competition and by applying the benchmarking principle as per the data of other prices of LNGT regasification service.

The NCC approved a fixed component of the price of LNG regasification - EUR 390.42 (MWh/day/year) and a variable component of the price - EUR 0.13 EUR/MWh. The calculated fixed component of the price of LNG regasification is included in the Security component.

**10 table** *Supplementary component of the security of natural gas supply to the natural gas transmission price paid for the consumption capacity at the internal exit point*

Supplementary component of the security of natural gas supply, EUR/(MWh/day/year)	Until 30/06/2017	Until 31/12/2017	Until 30/06/2018	From 01/07/2018	From 01/01/2019
		473.60	452.08	487.38	469.99
A fixed component of the price of LNG regasification to compensate for the fixed operational costs that are necessary for ensuring LNG activities	361.84	361.84	351.83	351.83	390.42
Price of designated natural gas supply	166.15	153.15	139.29	131.35	-
Difference between the price payable by the designated supplier for the acquisition of LNGT necessary quantity for the LNG quantity that was degasified and/or reloaded during the reporting month and the average price of import set by the NCC	-	-	-	-	108.17
The component of difference of revenue from realisation of the designated quantity on the natural gas market	-51.97	-60.36	9.25	-0.21	-
The component of the price of LNG regasification	-2.87	-3.03	-	-	-
Component of evaluation of compensation for the change in the amount of supplementary Security component	-0.16	-0.17	-13.24	-13.24	-
Costs of LNG quantity consumed by the designated supplier for LNGT technological needs	-	-	-	-	20.74
Costs of financing of long-term guarantee of supply of LNGT necessary quantity	-	-	-	-	1.63
Component of difference of actual and forecasted reasonable costs of supply of LNGT necessary quantity	-	-	-	-	37.94
Component of the costs of administration of LNGT funds	0.61	0.65	0.25	0.25	0.44

Source - the NCC.

### Connection of New Consumers

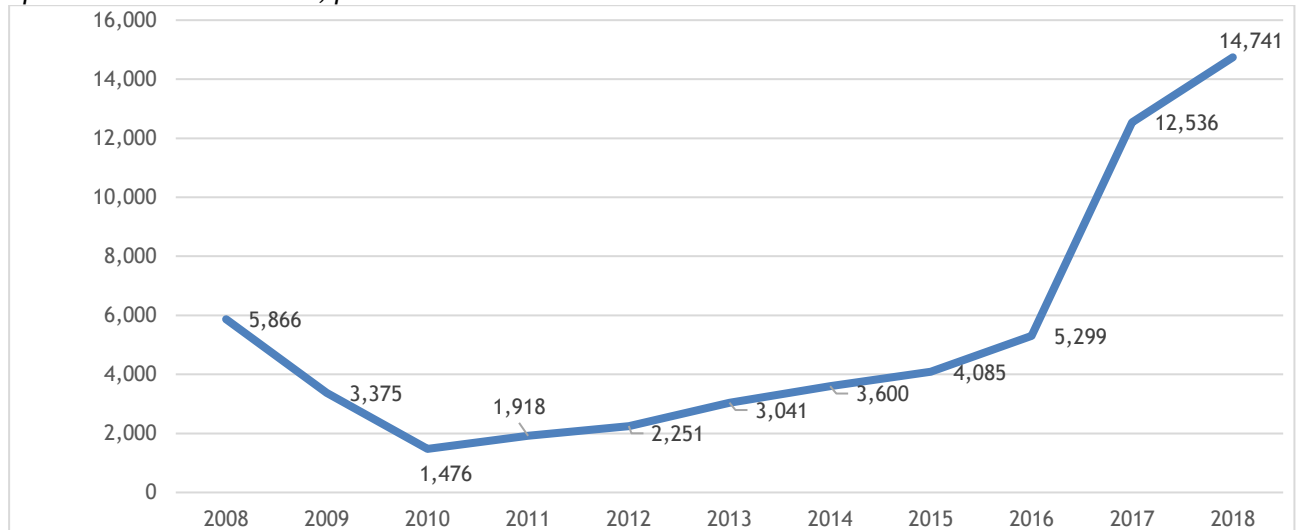
In 2018, DSO connected a total of 14,752 new consumers, of which 14,741 new users were connected by the largest DSO - AB "Energijos skirstymo operatorius", whose connection fees in 2019, compared to 2018, did not change. The table 3 presents the fees set by AB "Energijos skirstymo operatorius".

**11 table** *Change in connection fees in 2010-2018*

Indicator	Connection fee independent of the distance, EUR	Fee per one meter of gas pipeline constructed, EUR/m
Connection fee 2010-2011	406.21	27.36
Connection fee 2012	361.75	14.56
Connection fee 2013	265.16	16.52
Connection fee 2014	208.34	16.15
Connection fee 2015	208.31	14.59
Connection fee 2016	200.79	11.72
Connection fee 2017	228.12	13.67
Connection fee 2018	228.12	13.67
Connection fee 2018	228.12	13.7
Change compared to 2018, %	0	0

Source - the NCC.

**19 figure** Number of new consumers connected to the distribution system of AB "Energijos skirstymo operatorius" in 2008-2018, 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 Amber Grid, AB 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 - 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  $Q_{max} - 325.4$  GWh/day (24 hours). When assessing access to Kotlovka GMS it is necessary to note that in 2018 some part of capacity at this cross-border point was reserved for gas transmission to Kaliningrad (capacity of Šakiai GMS - 114.2 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 LNG 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 increased to 772 MWh/day (24 hours) after Amber Grid, AB has completed the construction of Tauragė gas distribution station (hereinafter - GDS) in 2016. To ensure reliable transmission of natural gas, in February 2018 the automated control systems of Šakiai GMS were renovated and the capacity of Šakiai gas distribution station was increased to 114,200 MWh per day (24 hours). Technical capacity at other entry and exit points of transmission system managed by Amber Grid, AB did not change in 2017 and 2018.

Technical capacity and its use at the points of great importance of the transmission system are shown in the table 12.

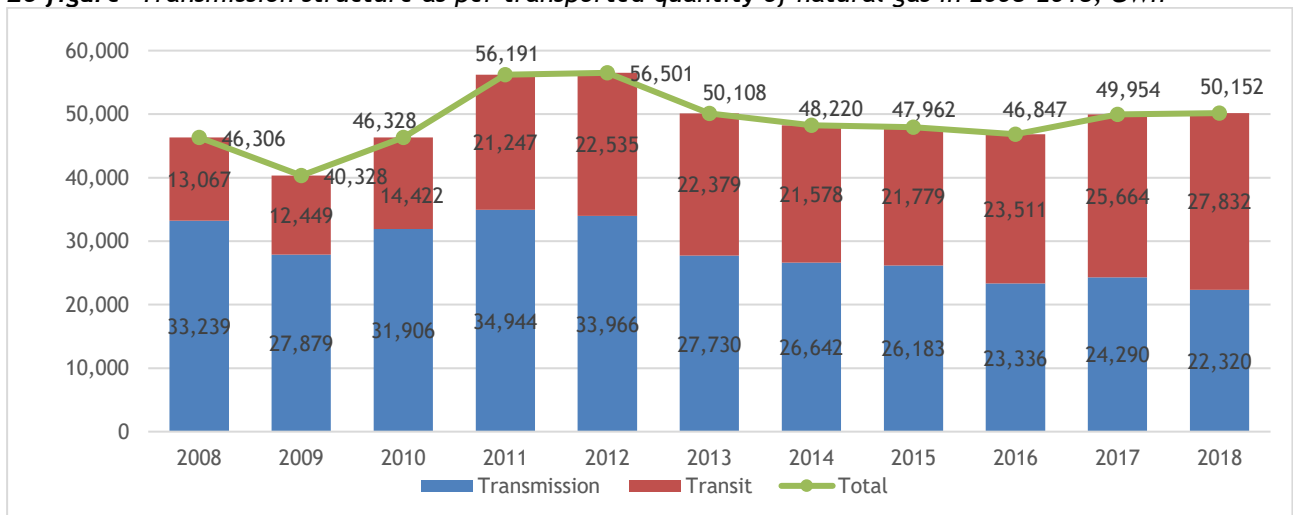
**12 table** Technical capabilities and their use at cross-border points

Gas metering station	Technical capacity, MWh/day	Maximum use of capacity in 2018, MWh/day	Maximum use of capacity, %
Kotlovka	325,433.47	216,059.96	66.39
Kiemėnai:			
to Latvia	67,590.03	47,822.61	70.75
to Lithuania	65,086.69	51,099.73	78.51
Šakiai (to Kaliningrad Region)	4,200.00	116,740.96	102.23*
Klaipėda (to Lithuania)	122,350.00	65,593.77	53.61

\*Gas flow of higher pressure and calorific value enables actual provision of technical capacity which is higher than the provided one.

Source - Amber Grid, AB.

In 2018, the TSO has transported 50,152 GWh of natural gas, of this amount 22,320 GWh (44.5%) for Lithuanian consumers, and 27,832 GWh (55.5%) were transported to Kaliningrad region of the Russian Federation. The total amount of natural gas transported in 2018 was 0.4% bigger than in 2017. In 2018, transmission of natural gas to Lithuanian consumers was 8.1% lower than in 2017, whereas the amount of gas transmitted to Kaliningrad region was 8.5% bigger than in 2017.

**20 figure** Transmission structure as per transported quantity of natural gas in 2008-2018, GWh

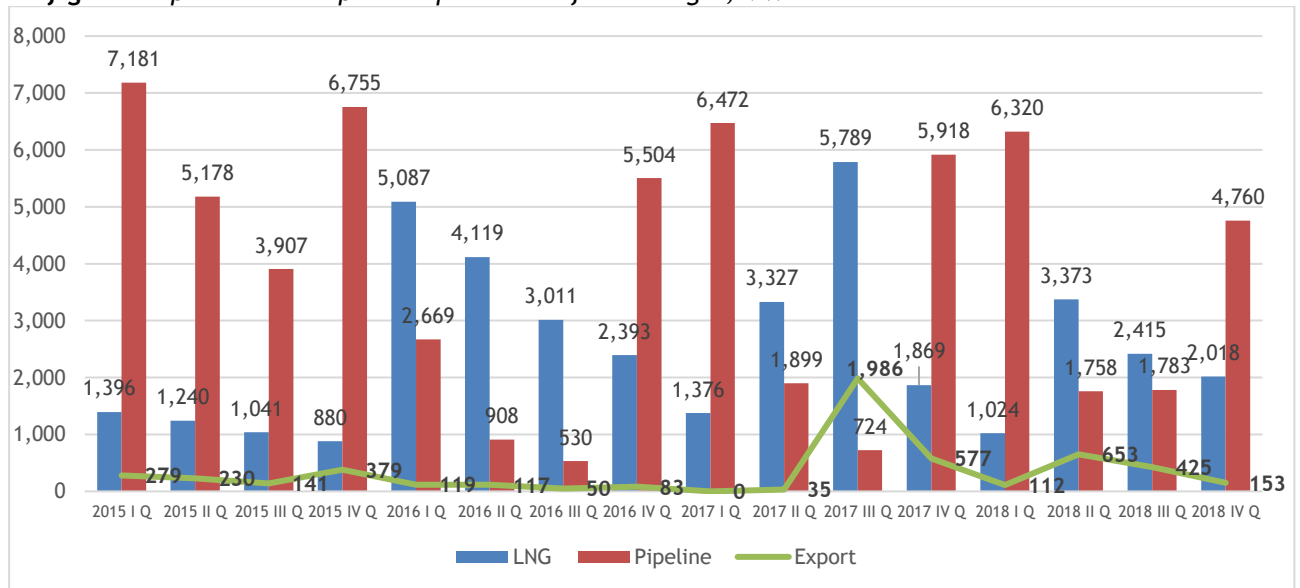
Source - the NCC.

## The Process of Creating a Regional Natural Gas Market

### Trade

From 2015, the NCC participates in the international Regional Gas Market Coordination Group (RGMCG) in creating a natural gas market in the three Baltic States and Finland with the aim of establishing rules for the functioning of the single market for natural gas, including the principles of joint pricing. In 2018, the outlines of the Baltic and Finnish natural gas market in conducting trading, in creating pricing rules to facilitate access to the natural gas transmission system became evident.

From 1 July 2017, the Baltic natural gas DSOs started using the implicit capacity allocation model that is linked to gas trading on the natural gas exchange UAB "GET Baltic". In June 2018, the NCC aligned amendments to the Regulations of UAB "GET Baltic" trading on the natural gas exchange which ensure greater liquidity of the natural gas exchange in Lithuanian, Latvian and Estonian trading areas. The said Regulation is adapted to implicit capacity allocation method for the intraday product. In 2018, 23.16 TWh of natural gas were imported to Lithuania, 38% of this quantity were degasified in Klaipėda LNGT, the remaining quantity (almost 62%) was imported via Kotlovka and Kiemėnai points.

**21 figure** Imported and exported quantities of natural gas, MWh

Source - the NCC.

### Regional Pricing

After the Seimas of the Republic of Lithuania adopted the amendments to the Law on Natural Gas, the NCC has an obligation to ensure that the pricing model of natural gas transmission services, the inter-system compensation procedure of the DSO, if applicable, and the prices of gas transmission services that are applied at the regional level must be economically beneficial to the country's consumers. The decision on Lithuania's accession to the regional market area will be made by the Government after it will assess the conclusions provided by the Ministry of Economy and by the NCC on the economic benefit of such decision to the country's consumers.

To create a single regional market for natural gas in the Baltic States and Finland, in 2018 the NCC approved the new "Methodology for Determining the Revenues and Prices of the State Regulated Natural Gas Transmission Activities" that establishes "postage stamp" principle of calculation of natural gas transmission prices. The "postage stamp" methodology provides for a breakdown of revenue level between entry-exit points based on a defined entry-exit ratio and, as a general rule, leads to uniform tariffs of entry and exit points of the natural gas transmission system. It also provides for the possibility of applying a discount at the LNGT entry point in order to increase competition for sources of natural gas imports.

The decision to apply the "postage stamp" methodology was adopted after a detailed analysis to determine the best methodology for setting tariffs for natural gas transmission services, which would be applied in the Baltic-Finnish natural gas transmission entry-exit system.

In 2018, the Baltic and Finnish states failed to agree on a mutually acceptable result. The countries mostly debated on distribution of discounts in the transmission tariffs to Klaipėda LNGT and the underground natural gas storage facility in Inčukalns, and application of the procedure of cross-system compensation. Taking this into account, from 2020 Finland, Estonia and Latvia (hereinafter - Finestlat) will form a common area where cross-border entry-exit points of the natural gas transmission system will be eliminated - the zero pricing will be applied, and natural gas entry to Finestlat area, regardless of country, will have the same price. Lithuania could join Finestlat area at the later stage when compromise solutions that are acceptable to all countries will be found.

### Harmonization of System Access and Balancing Rules

In developing a regional market, it is important to have a common balancing area and a common capacity allocation between all DSOs. In 2019, Latvian and Estonian DSOs submitted for

harmonisation common rules for access to the transmission system and balancing. Taking this into account, in March 2019 the NCC made comments on the said rules.

### ***Authorization Procedure***

From 2018, the conditions of exercise of gas supply activities were liberalized in the natural gas sector by simplifying the authorization procedure for the supply of natural gas, by refusing the issue of the official document adopted by the authority supervising the licenced activities that grants the right to exercise the said activities. In December 2017, the Seimas of the Republic of Lithuania adopted the relevant amendments to the legal acts and from 2018 authorizations in the natural gas sector are issued under the simplified procedure that was harmonized with the National Regulators of the Baltic States.

### ***Network Codes***

#### ***Code of Capacity Allocation Networks***

From 1 July 2017, the Baltic natural gas DSOs started using the implicit capacity allocation model to more efficiently allocate short-term natural gas transmission capacity at interconnection points between the Baltic States. Capacity allocation is linked to gas trading on the natural gas exchange UAB "GT Baltic". At the same time, the trading areas of UAB "GET Baltic" natural gas exchange started operating in Latvia and Estonia, and the exchange became regional. Considering the implicit capacity allocation model implemented by the Baltic DSOs, the procedure of attribution of capacity allocation and natural gas quantity applications and quantities at the point of connection of Lithuanian and Latvian transmission systems has changed.

The NCC approved the amendment to the "Rules for Access to the Natural Gas Transmission System of Amber Grid, AB": the application of the method of allocation of the implicit capacity at Kiemenai entry-exit point is foreseen; earlier deadlines for ordering capacity have been set in order to align them with the deadlines for ordering capacity that are applied by Latvian DSO, and this allows more flexible ordering of capacity of Lithuanian and Latvian transmission systems; the possibility of applying charge for unused capacity is foreseen; the possibility for the operator to offer limited capacity products which grant the right of transporting gas only to a specific point or points of the transmission system has been introduced, etc.

#### ***Balancing Network Code***

In order to enable market participants to balance more effectively the natural gas quantities that are allocated to them, in implementing the requirements of the EC Regulation on natural gas balancing, the NCC approved amendments to the "Rules for Balancing the Natural Gas Transmission System of Amber Grid, AB": the marginal purchase-sale price of balancing gas is set on the basis of the price of the natural gas exchange; from 31 March 2019, the tolerance threshold does not apply, i.e. the disbalance gas quantity for which the disbalance fee is calculated by applying a weighted average price of natural gas sold on the trade platform (exchange) at Lithuanian virtual point of sale. According to the Balancing Network Code, the natural gas DSO could apply the tolerance threshold, i.e. provisional measures for a period not exceeding 5 years only if wholesale in short-term standardized gas supply products was not sufficiently liquid and in order to promote it this way.

#### ***Codes of Capacity Allocation, System Interoperability and Data Exchange Networks***

Taking into account the provisions of the EC Transmission Network Balancing Code, the NCC approved the "Provisional Measures Report of Natural Gas Transmission Network Balancing Code" prepared by Amber Grid, AB and extended the applicable tolerance level (provisional measure) until 16 April 2019.

The level of tolerance is the maximum quantity of gas that is permitted to be deviated from the gas quantity that was planned to be consumed per day by the system user, up to which the imbalance charge is calculated on the basis of the weighted average gas price. The natural gas

DSO only applies provisional measures, i.e. the tolerance threshold if wholesale in short-term standardized gas supply products is not sufficiently liquid and this way it is promoted. After 16 April 2019, the imbalance fee determined on the basis of the marginal gas purchase-sale price is applied for the whole attributed imbalance quantity.

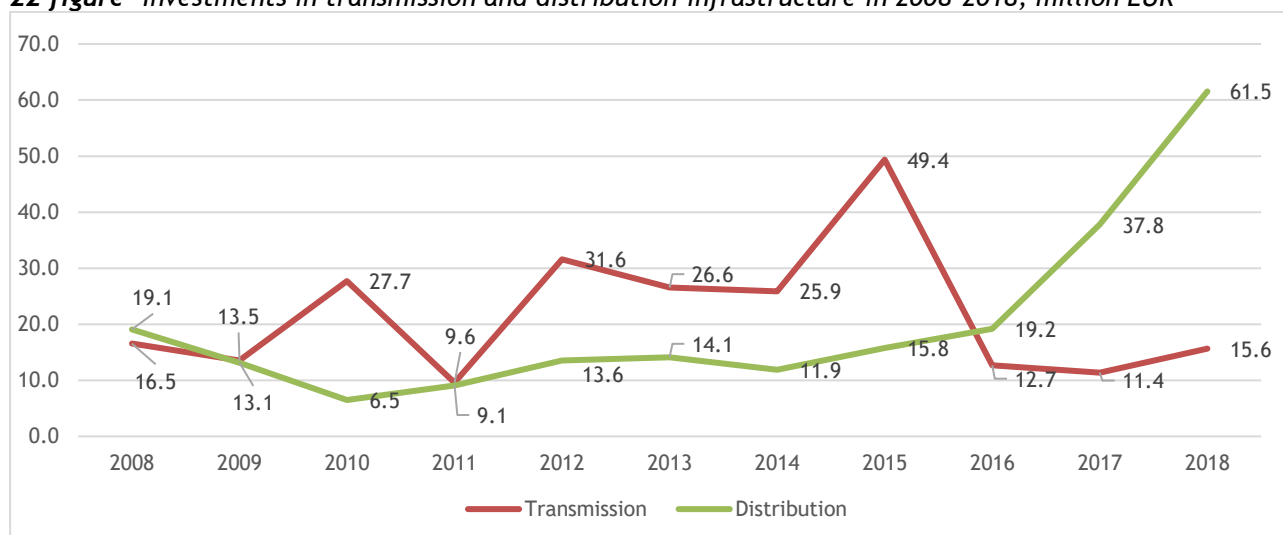
### Investment Alignment

In 2018, the total amount of actual investment in the natural gas sector accounts for 78.3 million euros, compared to 2017 it increases by 57.9% (49.6 million euros).

The total amount invested in 2018 by the companies in the natural gas transmission and distribution activities is 77.2 million euros, i.e. 56.9% more than in 2017 (49.2 million euros). The investment in the natural gas transmission and distribution sectors accounted for 15.6 million euros and 61.5 million euros respectively. The amount invested in 2018 by the operator of the LNGT is 778 thousand euros, i.e. 145.4% more than in 2017. In 2018, investment in the supply activity, compared to 2017, has increased by 133.8%, i.e. from 133 thousand euros to 311 thousand euros.

The increase in the amount of investment in the natural gas sector was mainly influenced by the investment of AB "Energijos skirstymo operatorius" in connection of new consumers of natural gas.

**22 figure** Investments in transmission and distribution infrastructure in 2008-2018, million EUR



Source - the NCC.

The regulated entities operating in the natural gas sector every year submit a general list to the NERC 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 NERC also safeguards the control of investments of the prior periods by assessing the actual amount of implementation and other changes.

The amount of investment in 2018 aligned with the NCC by the list of jointly aligned investment: Amber Grid, AB (natural gas transmission) - 5.71 million euros, AB "Energijos skirstymo operatorius" (natural gas distribution) - 13.91 million euros, Klaipėdos nafta, AB (LNG re-gasification) - almost 0.219 million euros. The aligned projects of greater importance are presented below. In 2018, 3 individual investment projects were aligned 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:

- Replacement of tap units and connection to remote control system SCADA (Amber Grid, AB);

- Installation of start-up and receiving chambers for the control device and implementation of technological control of gas TSO (stage 2) (Amber Grid, AB);
- Automation of maintenance of cathodic security of gas distribution 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 two years 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.

In 2018, the NCC approved regasification investments of Klaipėdos nafta, AB for an amount of 0.219 million euros. The majority of the investments is for the purchase of new or modernisation of the available assets that are necessary to ensure the security and reliability of LNGT operation. This includes installation of information and cyber security measures, purchase of additional equipment necessary for efficient organization of LNG reloading from the floating storage facility to small gas carriers, etc.

#### **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” 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.

## **4.2. Promotion of Competition**

### **4.2.1. Wholesale Gas 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***

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 (Kaunas Combined Heat and Power Plant), AB “Lietuvos energijos gamyba“, Achema, AB, AB “Šiaulių energija“, AB “Panevėžio energija“, AB “Jonavos šilumos tinklai“, AB “Kauno energija“, Klaipėdos nafta, AB, Lifosa, AB, Nordic Sugar Kėdainiai, AB, UAB “Lietuvos 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 2018 in the wholesale natural gas supply market is 18,405 GWh, i.e. 4.0% less than in 2017 (the amount of natural gas that was sold and/or consumed in 2017 was 19,173 GWh).

**13 table** The structure of the wholesale natural gas supply market in 2013-2018, GWh

The structure of the wholesale natural gas supply market	2013	2014	2015	2016	2017	2018
Under bilateral contracts in Lithuania	22,240	21,548	23,711	18,329	18,856	17,463
On the exchange*	600	1,134	652	299	371	941
<b>Total</b>	<b>22,840</b>	<b>22,682</b>	<b>24,363</b>	<b>18,628</b>	<b>19,293</b>	<b>18,405</b>
Change compared to 2018, GWh	-4,435	-4,277	-5,958	223	-888	-
Change compared to 2018, %	-19.41	-18.86	-24.45	-1.20	-4.00	-

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

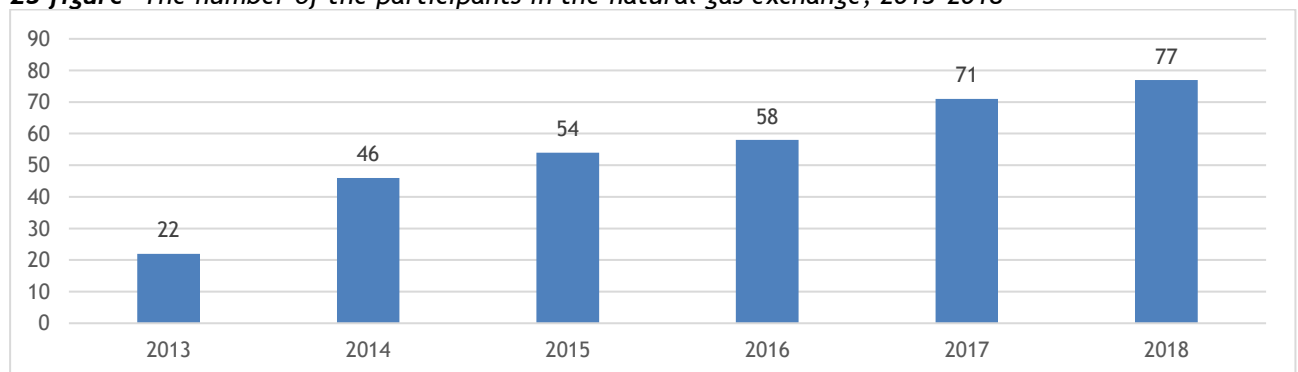
Source – the NCC.

In 2018, the biggest share of market in the wholesale natural gas supply market under bilateral contracts was held by Achema, AB with the market share of 74% and, compared to 2017, the market share held by this company decreased by 4.9%. The market share held by Lietuvos energijos tiekimas, UAB in 2018, compared to 2017, decreased by 0.8%, and the market share held by UAB “Litgas” increased by 2.5%.

### Trading on Natural Gas Exchange

In 2018, there were 77 consumers registered on the natural gas exchange and their number was the highest since 2013.

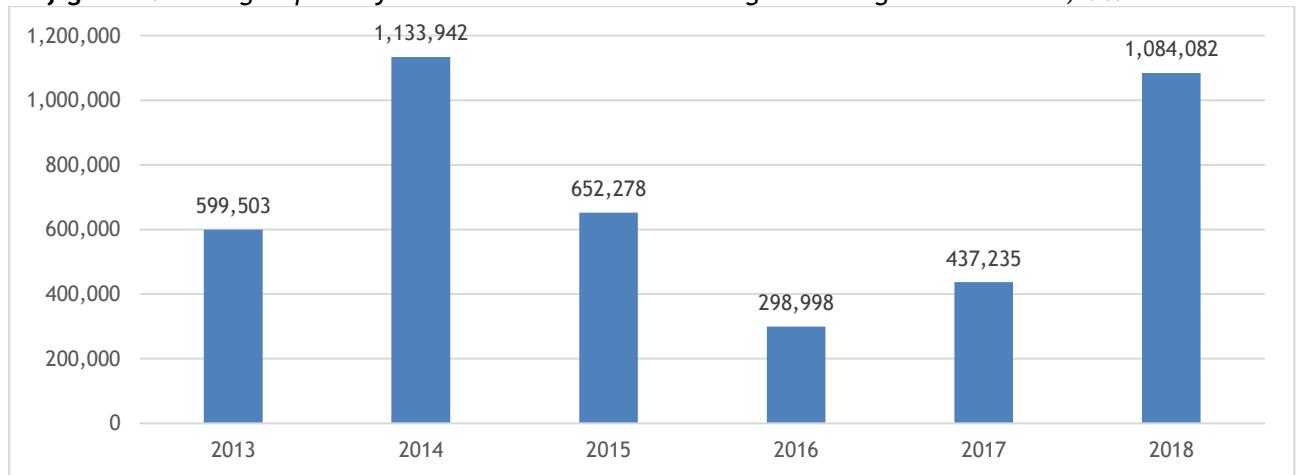
**23 figure** The number of the participants in the natural gas exchange, 2013-2018



Source – the NCC.

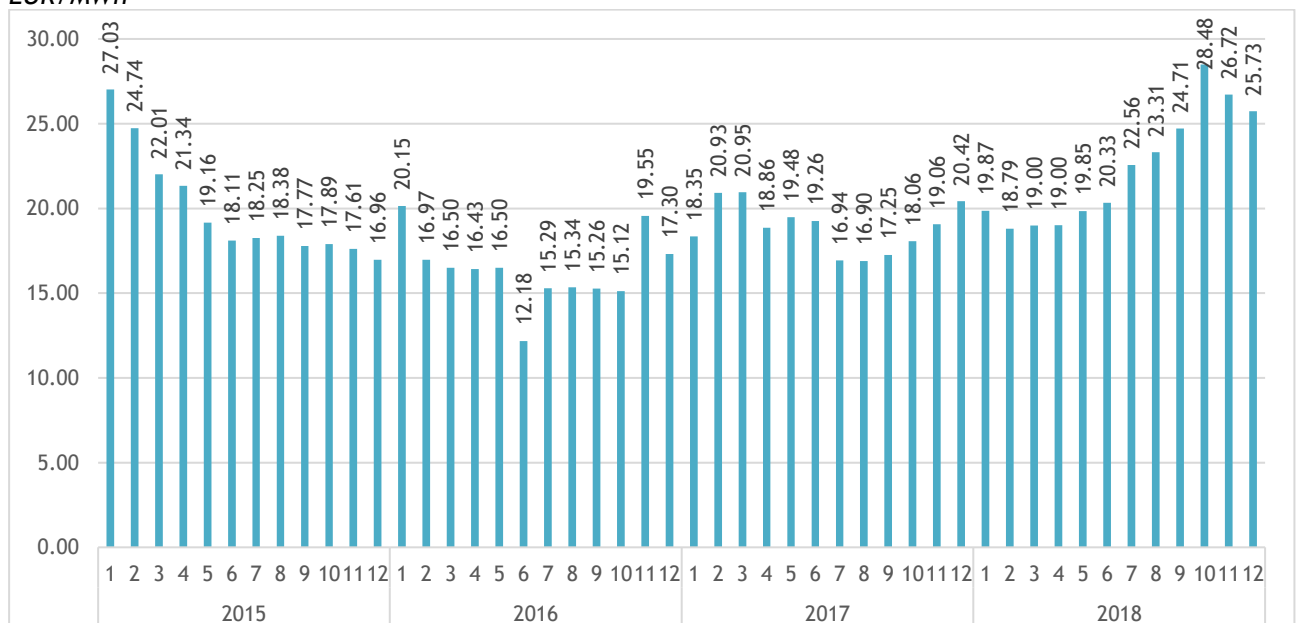
1,084,082 MWh of natural gas were sold in 2018 on UAB “GET Baltic“ natural gas exchange. Compared to the period of 2017, the amount of natural gas sold on UAB “GET Baltic“ natural gas exchange was 147.94% bigger than in 2017. It should be noted that trading areas in Latvia and Estonia established by UAB “GET Baltic“ natural gas exchange started operating from 1 July 2017.



**24 figure** Natural gas quantity that was sold on the natural gas exchange in 2013-2018, MWh

Source – the NCC.

In 2018, the average price of natural gas on UAB “GET Baltic“ exchange was 21.55 EUR/MWh<sup>10</sup>, or 22.39% higher than in 2017 (then it was 17.61 EUR/MWh. In 2018, In 2017, trading turnover on the exchange accounted for 23.4 million euros<sup>11</sup>, i.e. 203.4% bigger than in 2017.

**25 figure** The average monthly natural gas price on UAB “GET Baltic“ natural gas exchange in 2015-2018, 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 2018”<sup>12</sup>.

#### 4.2.2. Retail Natural Gas Supply Market

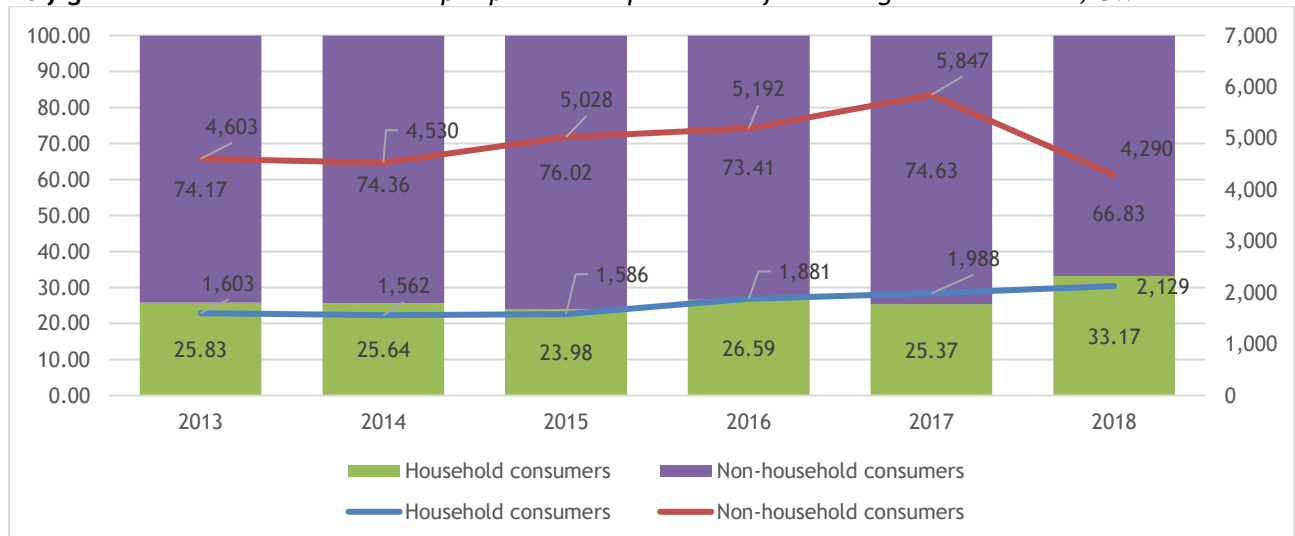
##### 4.2.2.1. Monitoring of Natural Gas Price Level, Transparency, Open Market and Effectiveness of Competition in Retail Market

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.

<sup>10</sup> The sales price which does not include the transportation price of natural gas is estimated.

<sup>11</sup> The sales amount which does not include the transportation price of natural gas is estimated.

<sup>12</sup> [https://www.vert.lt/SiteAssets/VKEKK\\_BENDRAS\\_metines%20ataskaitos%20priedas%20uz%202017.pdf](https://www.vert.lt/SiteAssets/VKEKK_BENDRAS_metines%20ataskaitos%20priedas%20uz%202017.pdf)

**26 figure** The market structure as per purchased quantities of natural gas in 2013-2018, GWh and %

Source – the NCC.

In 2018, there were 595 thousand natural gas consumers in Lithuania, of them - 587.6 thousand of household consumers and 7.4 thousand of non-household consumers. In 2017 there were 575.3 thousand of household consumers and 7.2 thousand of non-household consumers.

The household consumers who as per the number of consumers hold 98.76% of entire retail consumer market have consumed only 33.17% of natural gas supplied in the retail natural gas supply market. The non-household consumers bought 66.83% 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 1.24%.

### **The Segment of the Household Consumers**

In 2018, 4 companies were supplying gas in the retail market to the household consumers. The amount of natural gas consumed by the household consumers in 2018 was 2,129 GWh, i.e. 7.11% more than in 2017. The household consumers have paid 76.4 million euros for natural gas, i.e. 10.25% more than in 2017. UAB "Lietuvos dujų tiekimas" remains in the position of the main natural gas supplier to the household consumers: in 2018 the market share held by this company accounted for 99.9% of all sales to the household consumers.

### **The Natural Gas Tariffs for the Household Consumers**

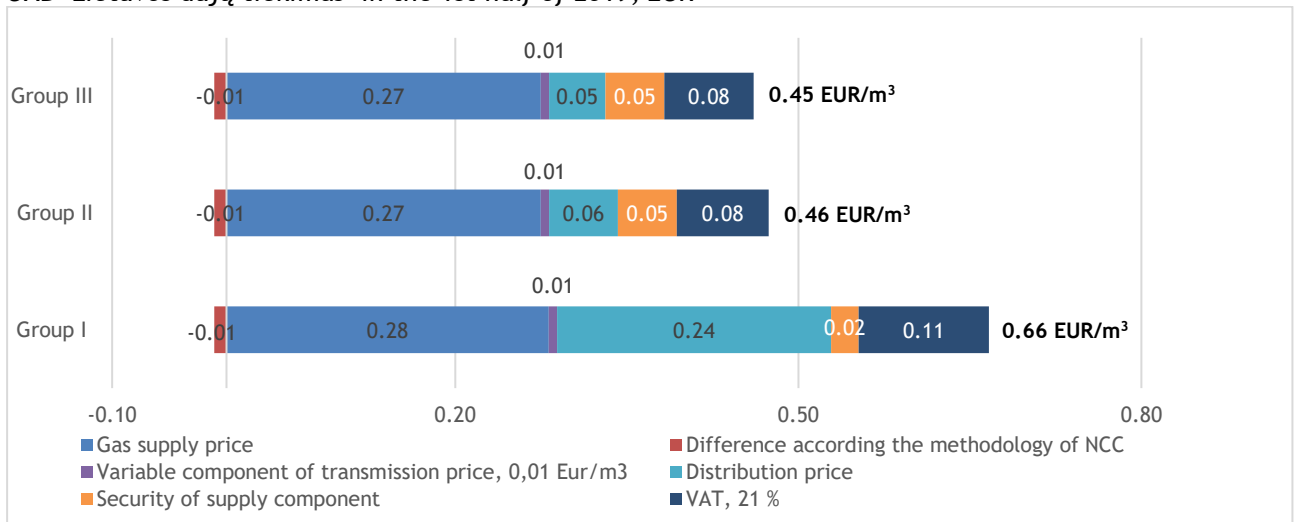
The NCC, in accordance with the Article 9 (17) of the LNG, every half year approves the tariffs for the household consumers. In 2018, the NCC has twice a year confirmed the household consumer gas tariffs for 4 gas companies by differentiating them by groups.

The natural gas tariff for the household consumers consists of the sum of the specific prices of transmission, distribution, storage, supply, Security component of the forecasted natural gas (product), including LNG re-gasification, LNG congestion 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.

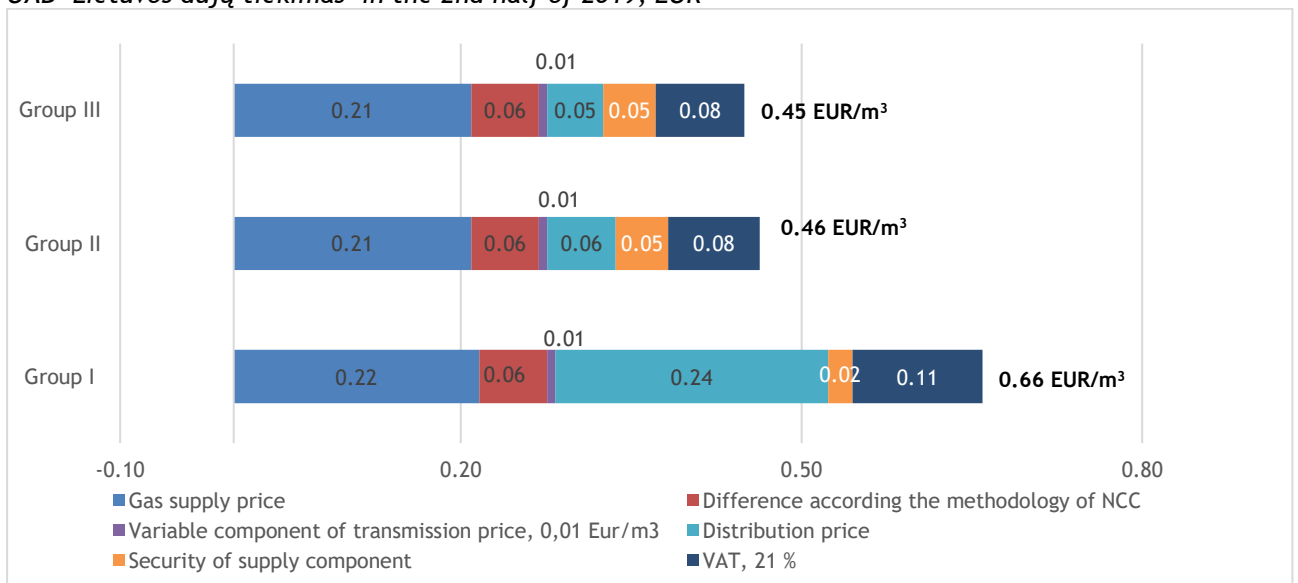
**14 table** Natural gas tariffs for household consumers (VAT inclusive)

Company	Group	1st half of 2018		2nd half of 2018		1st half of 2019		2nd half of 2019	
		Fixed component of tariff, EUR/month	Variable component of tariff EUR/m <sup>3</sup>	Fixed component of tariff, EUR/month	Variable component of tariff EUR/m <sup>3</sup>	Fixed component of tariff, EUR/month	Variable component of tariff EUR/m <sup>3</sup>	Fixed component of tariff, EUR/month	Variable component of tariff EUR/m <sup>3</sup>
Lietuvos energijos tiekimas, UAB	I	0.56	0.59	0.56	0.59	0.56	0.66	0.56	0.66
	II	3.99	0.39	3.99	0.39	3.99	0.46	3.99	0.46
	III	3.99	0.38	3.99	0.38	3.99	0.45	3.99	0.45
UAB "Fortum Heat Lietuva"	II	3.42	0.46	3.42	0.56	4.31	0.61	4.31	0.56
AB agrofirma "Josvainiai"	I	0,63	0.45	0.63	0.41	0.63	0.48	0.63	0.51
	II	3.99	0.38	3.99	0.35	3.99	0.42	3.99	0.44
UAB "Intergas"	I	1.45	0.53	1.45	0.55	1.45	0.57	1.45	0.53
	II	1.45	0.46	1.45	0.48	1.45	0.51	1.45	0.47

Source – the NCC.

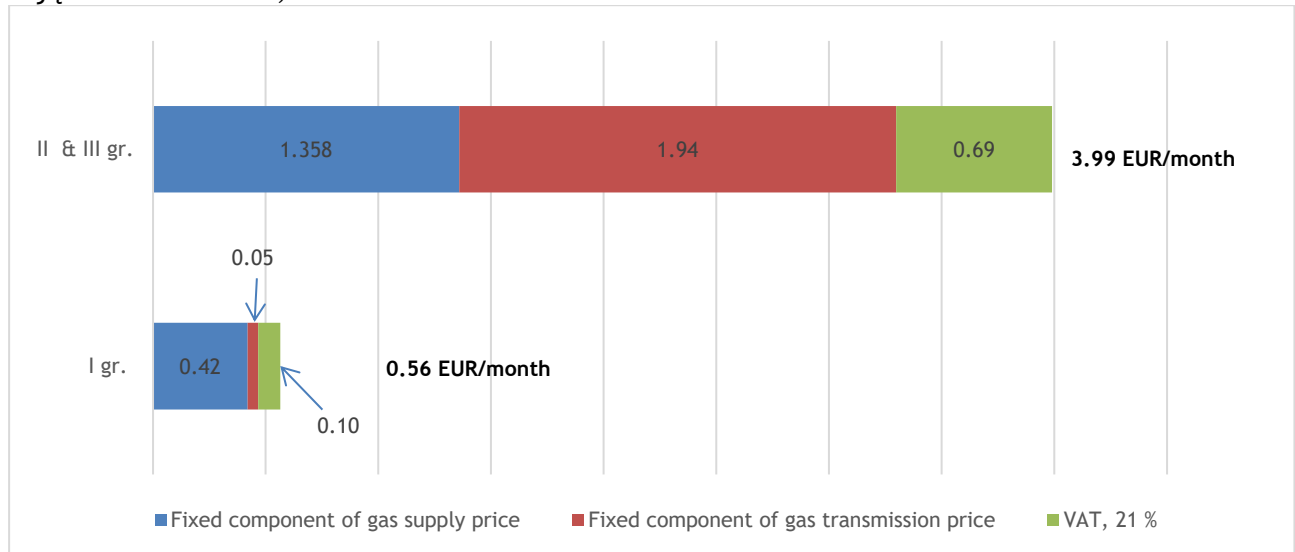
**27 figure** The structure of a variable component of the tariff for the household consumers of UAB "Lietuvos dujų tiekimas" in the 1st half of 2019, EUR

Source – the NCC.

**28 figure** The structure of a variable component of the tariff for the household consumers of UAB "Lietuvos dujų tiekimas" in the 2nd half of 2019, EUR

Source - the NCC.

**29 figure** The structure of a fixed component of the tariff for the household consumers of UAB "Lietuvos dujų tiekimas" in 2019, 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).

### Surveillance of Natural Gas Market

The NCC carries out surveillance 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.vert.lt](http://www.vert.lt). The reports cover the import, transmission, distribution and supply (wholesale and retail) markets for natural gas.

By monitoring the level and effectiveness of competition in wholesale and retail trade, the NCC conducts scheduled and unscheduled inspections of natural gas companies. In 2018, a non-scheduled inspection of the regulated activities of UAB “Geros dujos” was conducted. The NCC found that the company specified bigger quantities of natural gas in consumer bills, higher consumption and long-term outsourced capacity, and failed to comply with the contractual provisions with some consumers, and as result earned more revenue - for period 2016-2017 July the Company unduly collected EUR 99,193.46.

UAB “Geros dujos” was imposed with a fine of EUR 22,866.96 for infringements found during the inspection (6% of the revenue from the regulated activities). The NCC imposed a fine of EUR 1,143,00 (0,3% of the revenue from regulated activities) on the company for failure to submit the information specified by the NCC within the deadlines established and ordered the company to repay the overpayments to the consumers.

In disagreement with the resolution of the NCC, whereby the NCC obligated the company to repay to the consumers an amount of EUR 99,193.46 and to recalculate amounts to be paid by the consumers for the period from August 2017 to August 2018, the company brought an appeal against the resolution before Vilnius Regional Administrative Court. On 16 January 2019, Vilnius Regional Administrative Court adopted the judgement whereby the court dismissed the company’s appeal as unfounded. The judgement is final and binding.

### 4.3. Supply Security

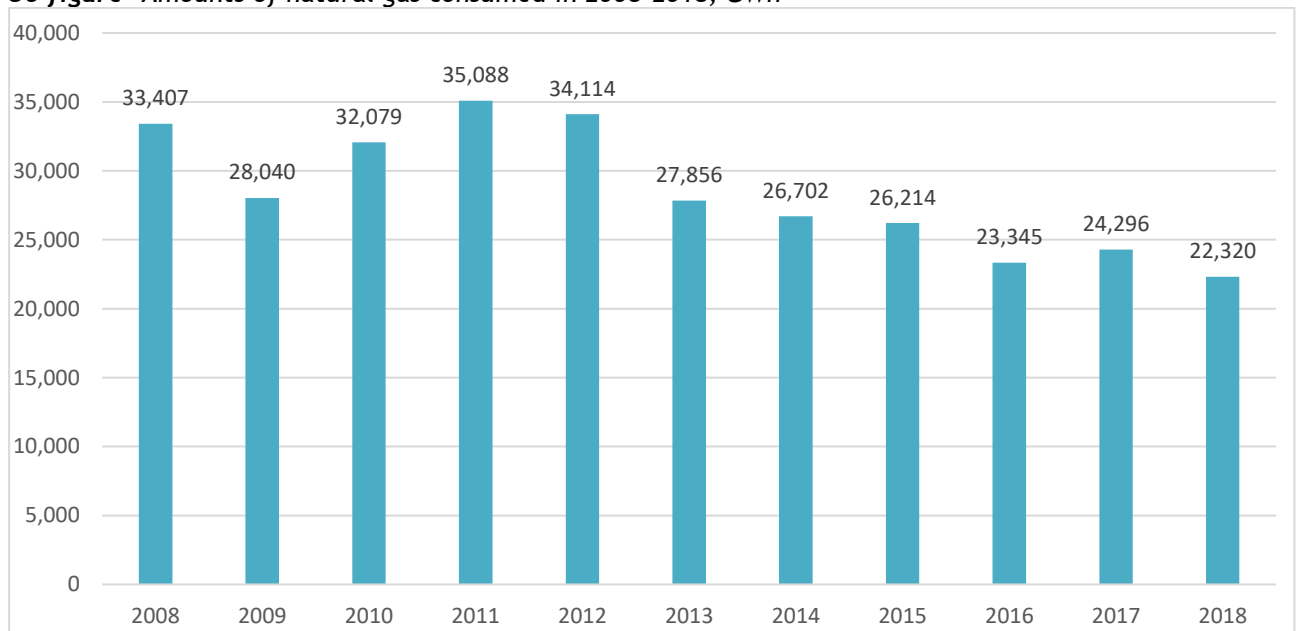
#### 4.3.1. Gas Supply and Consumption

Gas supply has become diversified after LNGT in 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 LNG 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 393.84 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).

**30 figure** Amounts of natural gas consumed in 2008-2018, 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 Supplier Shortages

Amber Grid, AB prompts the system consumers 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 consumer can every week and/or every day order (adjust) capacity. The system consumer 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 consumer 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 consumers 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 consumers directly connected to the transmission system stipulate the priorities of natural gas supply and transportation and specify a chronological order of restriction and gradual shutdown 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))*

In performing the functions of regulation, surveillance 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 examination outside the 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 LNG. 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 possibilities of payment for gas consumed or services received.

Safeguards to protect consumers are provided for in the Article 51 of the LE. 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))*

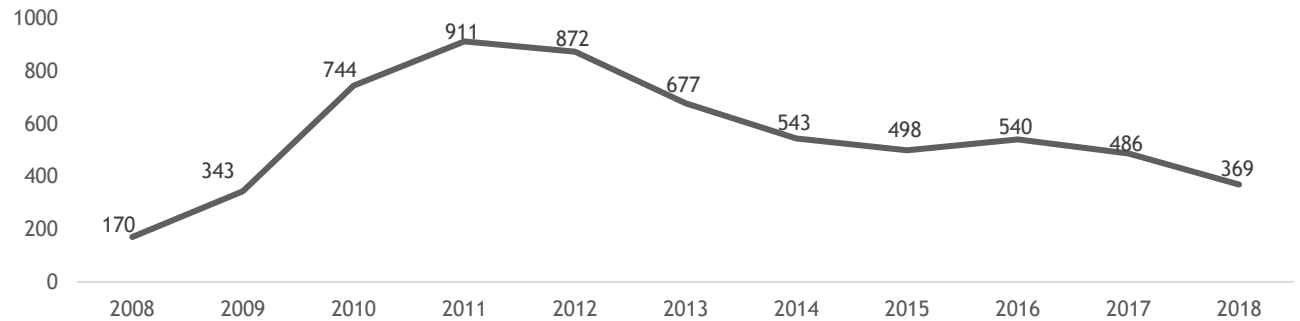
In 2018, user data access conditions did not change significantly compared to 2017. According to the legal regulation, consumers of electricity and natural gas must be provided with adequate and sufficient conditions for access to information and data on actual energy consumption, payments for energy 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](http://www.manogile.lt).**

In 2018, due to the outstanding debt electricity transmission was cut off to a third lower number of consumers, i.e. 1.779 customers (in 2017 - 2.301, in 2016 - 3.452, in 2015 - 3.218, in 2014 -

3.243, in 2013 - 2.179). 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

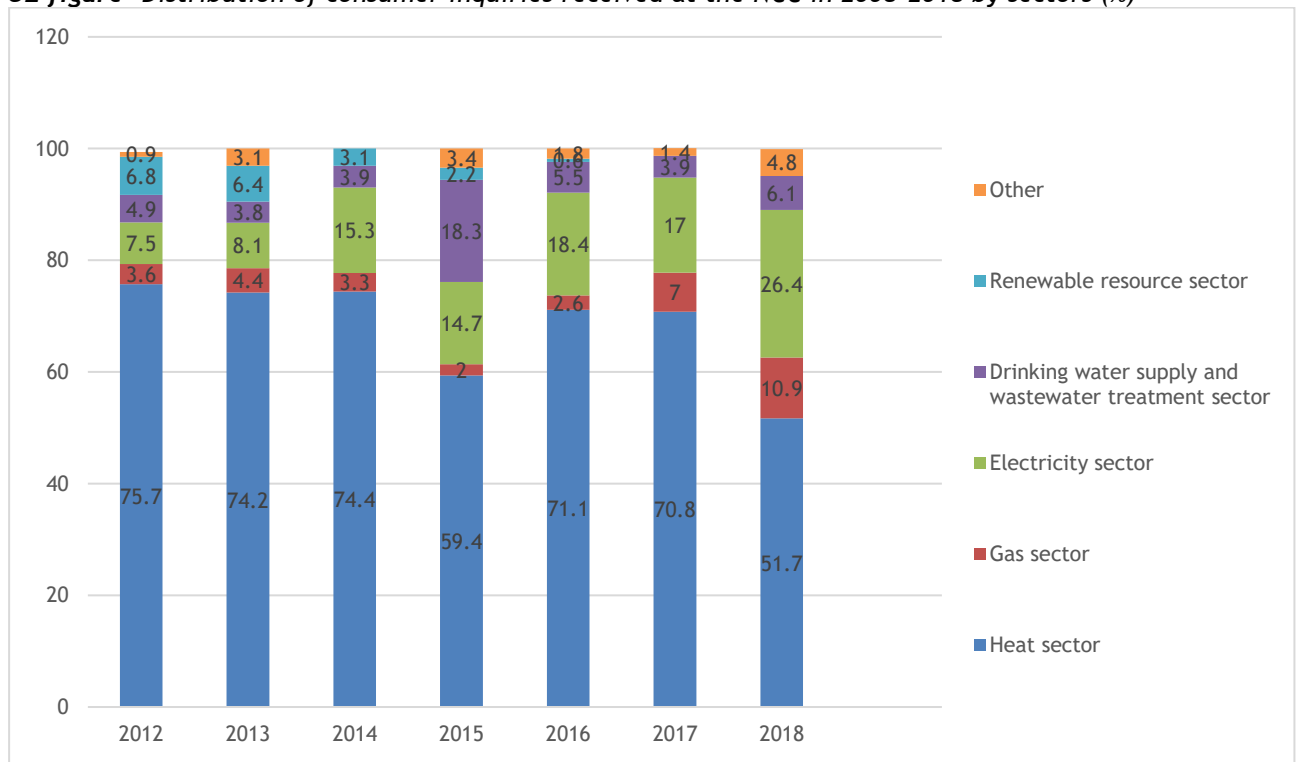
**31 figure** The dynamics of consumer inquiries submitted in writing that were received at the NCC in 2008-2018 (pcs)



Source – the NCC.

In 2018, the NCC received inquiries (in writing) of 369 consumers. This is the lowest number of inquiries in the recent years.

**32 figure** Distribution of consumer inquiries received at the NCC in 2008-2018 by sectors (%)

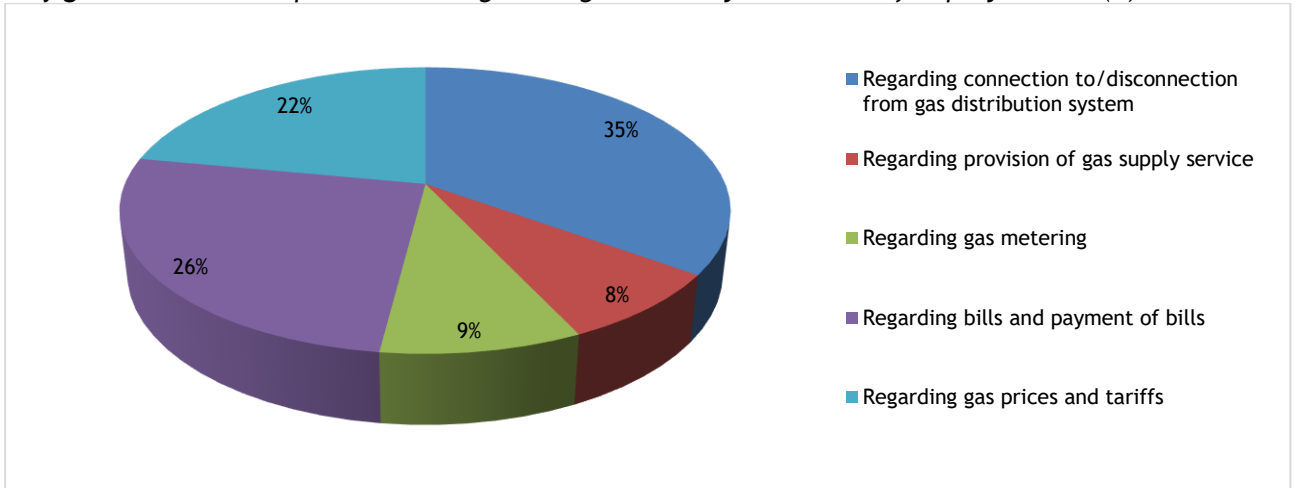


Source – the NCC.

In 2018, more consumer inquiries related to the natural gas sector were received: in 2018, 41 inquiries were received, and in 2017 - 34 inquiries (3% of the total number of inquiries). The increased number of inquiries in the natural gas sector can be explained by the fact that the number of new consumers connected has increased significantly in the last two years. The issues that are of the biggest relevance for the consumers are those that concern connection to and disconnection from the natural gas distribution system: calculation of fees, connection conditions, formation of quarters, timely execution of works according to the concluded contracts, as well as payment for the consumed natural gas or LPG.



**33 figure** Consumer inquiries in writing in the gas sector by the nature of inquiry in 2018 (%)

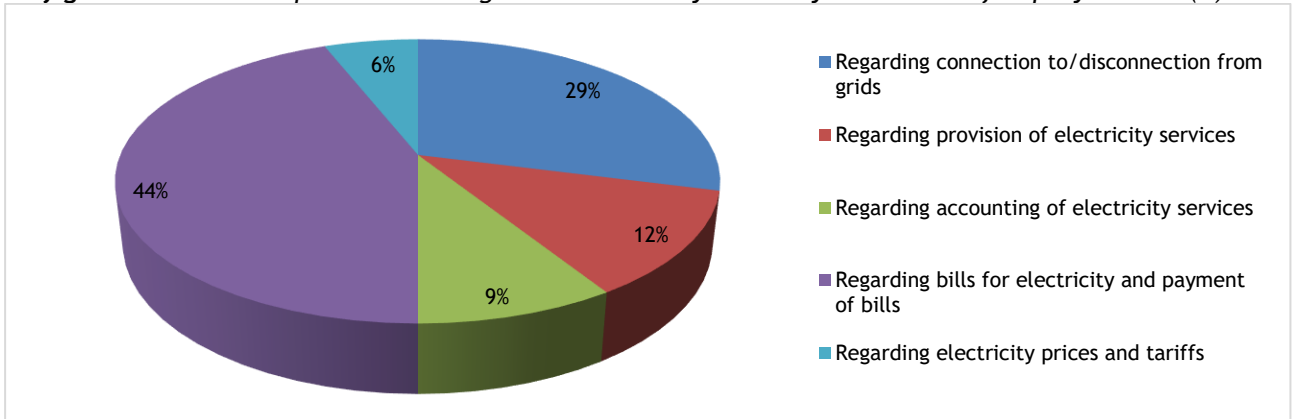


Source – the NCC.

**99 inquiries** regarding the electricity sector were received, 26% of the total number of inquiries.

As in the previous years, consumers mostly applied for payments for electricity consumed calculated for them, conditions of connecting electrical equipment of consumers to the electricity networks, and for tariffs and non-performance (delay in performing) of works of connecting to the network within the deadlines set out in the contract.

**34 figure** Consumer inquiries in writing in the electricity sector by the nature of inquiry in 2018 (%)



Source – the NCC.