NATIONAL ENERGY REGULATORY COUNCIL

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

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TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

1. FOREWORD

In the middle of 2019, the National Energy Regulatory Council (NERC), having gained considerable strength and attained new competences after the merger of the National Commission for Energy Control and Prices (hereinafter referred to as the NCC) and the State Energy Inspectorate under the Ministry of Energy (hereinafter referred to as the SEI), started its activities. The competences of economic regulation and maintenance institutions have been merged in order to achieve more efficient sector's regulation, as well as to improve the quality of the services provided to the consumers and market participants. Following the merger of the two institutions, the NERC in addition to the already performed NCC's functions of economic regulation already not only have subserved the maintenance functions taken over from the SEI, such as the maintenance of energy facilities and equipment, the control of the certification of energy personnel, inspections of the energy efficiency, the issue of certificates for the operation of energy equipment but also gained a new function, namely the to carry out licensing of persons operating in the wholesale and retail markets of oil products trade.
Given that this report is submitted for the year of 2019, when the NERC was already in operation, the name of the institution (NERC) will be used in the following text.

In 2019-2020, the NERC, acting as the authority for energy regulation in Lithuania, continued to contribute to the decisions concerning the integration into a single EU market and regulation area, ensuring transparent, non-discriminatory and predictable operating conditions within the energy sector and the protection of rights and legitimate interests of the consumers. In April 2020, the NERC coordinated investments of the second stage of the project of synchronisation of the Baltic electricity networks with continental Europe borne by the electricity transmission system operator (TSO) AB "Litgrid", and the joint agreement between all regulators – Lithuania, Latvia, Estonia and Poland on cross-border cost allocation – was also signed. This was an important step, which enabled the TSOs of the four countries to submit requests for funding to the European Commission under the ***Connecting Europe Facility*** (CEF). The total costs of the second stage of the synchronisation incurred by Lithuania, Latvia, Estonia and Poland amount to more than EUR 1.22 billion, while the costs incurred by Lithuania alone amount to EUR 474 million. EU funds can be used to finance up to 75% of the total value of the second-stage synchronisation projects: this is the maximum possible support granted to projects concerning energy infrastructure. The national energy regulators of all four countries, recognising the importance of integration into the continental European network, ensured smooth process of the project coordination, as well as effective cooperation. The signing of a joint agreement on cross-border cost allocation ensured the successful continuation of the project.

In September 2019, the NERC coordinated the investments regarding the smart metering project carried out by the electricity and gas distribution system operator (DSO) AB "Energijos skirstymo operatorius", the total value of which amounted to EUR 147 million – its value decreased by EUR 79 million compared to the initial project that was submitted for coordination. The initial project envisaged a simultaneous implementation of the smart natural gas metering system. However, following the analysis of both the economic aspects and the timing of the project performed by the NERC, the undertaking decided not to invest in smart meters within the gas sector. Smart meters will be installed to all electricity consumers by 2023: 100% of commercial consumers and 54% of household consumers who consume more than 1000 kWh per year. On the basis of the experience of European countries, the installation of smart metering reduces the consumption of electricity by up to 6% on average, leading to a potential reduction in the final cost incurred by the consumers of electricity due to lower consumption.

As the liberalisation of the electricity market continues, it is also important to note that, once the smart metering systems are implemented, consumers will be able to engage more actively in the energy market, choose more flexible electricity billing plans in accordance with their monthly consumption, compare their own consumption with that of similar consumers, receive detailed data and make decisions concerning saving, changing their consumption habits or choosing a different supplier. Once smart meters are installed, they will enable the suppliers of electricity to offer new and innovative services for the consumers as regards the management of peak and off-peak consumption. It should be added that the amendments of the Law on Electricity (hereinafter – LE) adopted in May **2020 will allow Lithuania to join the majority of the EU countries, whose consumers can choose an electricity supplier best suited to their individual needs.** From 1 January 2021 to 1 January 2023, the monopoly services of the public supplier will be consistently terminated and conditions will be created for the active engagement of electricity suppliers. **Liberalisation will be implemented in the following stages: 1) from 1 January 2021** — for all household consumers whose actual electricity consumption in the facility during the period from 1 June 2019 to 31 May 2020 is no less than 5000 kWh, as well as for household consumers whose facilities are connected to medium-voltage electricity networks, with the exception of consumers like gardener communities, communities of individual car garage owners, multi-apartment housing or dormitory associations, community organisations and associations, as well as vulnerable consumers who have obtained the status of a vulnerable consumer at least once during the period from 1 June 2019 to 31 December 2020; 2) from 1 January 2022 – for all household consumers whose actual electricity consumption in the facility during the period from 1 June 2020 to 31 May 2021 is no less than 1000 kWh, with the exception of consumers like gardener communities, communities of individual car garage owners, multi-apartment housing or dormitory associations, community organisations and associations, as well as vulnerable consumers who have obtained the status of a vulnerable consumer at least once during the period from 1 June 2022 to December 2021; 3) from 1 January 2023 – for all of the remaining consumers who are supplied with electricity at a public electricity price, including consumers such as gardener communities, communities of individual car garage owners, multi-apartment housing or dormitory associations, community organisations and associations, as well as vulnerable consumers.

However, the infrastructural components of the final tariff (monopoly services) will continue to be determined by the regulator, taking into account the requirements of both national and EU legal acts. More attention will have to be paid by the NERC to the supply market: questions such as whether the services are provided to the consumers on a transparent, non-discriminatory basis and whether the suppliers do not abuse their dominant position in the market will have to be addressed. The NERC will also set the price for the service of guaranteed supply provided to vulnerable consumers.

In order to promote the integration of renewable energy sources, in September 2019, the NERC organised the first technologically neutral auction, which was open to the developers of projects concerning all renewable technologies, whether they used solar, wind, biogas or biomass energy. The participants competed for the opportunity of obtaining a price premium added to the exchange price. The winner of the auction was a producer of renewable energy who offered a price premium of EUR 0/MWh for the entire promotion quota proposed for 2019 – 0,3 TWh. It is a signal to the market that producers of renewable energy can operate under market conditions without direct financial stimulation from the State. Secondly, the NERC, acting as the authority that organised the auction, could identify areas of legislation that require improvement, thus, in the run-up to the new auction announced in May 2020, the Auction Regulations were amended: excessive administrative

procedures were abandoned and the process of participants' preparation and submission of required documents was simplified.

In 2019, the NERC carried out a unscheduled inspection of AB "Energijos skirstymo operatorius", the purpose of which was to determine whether the undertaking complied with the requirements regarding the reliability of electricity transmission and the quality of the provided services from 1 January 2012 to 28 February 2018. Throughout the inspection, the NERC established that the DSO AB "Energijos skirstymo operatorius" provided the NERC with false information concerning qualitative indicators of the distribution service.

In 2019, the NERC also amended the Methodology for the Pricing of Electricity, Reserve Capacity and the Services Ensuring the Isolated Operation of the Electricity System, as well as the Methodology for the Setting of Prices of Electricity Transmission, Distribution and Public Supply Services and of the Public Supply Price Caps; for the first time, the price of the isolated operation service was set for 2020. In addition, the NERC approved the General Methodology for the Redistribution of Loads or Allocation of the Compensatory Trade Costs for All TSOs of the Baltic Capacity Calculation Region prepared by AB "Litgrid" together with other TSOs of the Baltic capacity calculation region, namely the TSOs of Estonia, Latvia, Sweden, Poland and Finland.

Taking into account the requirements of the European Commission Regulation (EU) No 2017/2195, which establishes the electricity balancing guidelines, in 2019, the NERC approved the Standard Terms and Conditions for the Imbalance Sales Contract drawn up by AB "Litgrid", which apply to the entities operating in Lithuania and ensure uniform and non-discriminatory operating conditions for all system users by providing clear regulations regarding the mutual obligations of market participants and TSOs, the conditions for the submission, amendment and adjustment of balance sheet schedules, and the payment procedure. The NERC also approved the Standard Terms and Conditions for the Balancing Service Sales Contract prepared by AB "Litgrid", which are mandatory for the suppliers of balancing services operating in Lithuania.

In 2019, the investigation into the breach of the provisions of Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency (REMIT) was concluded. The NERC established that UAB "Geros dujos", while performing sales transactions on the Lithuanian natural gas exchange, violated the REMIT provisions on market manipulation.

Within the natural gas sector, the NERC continued its cooperation in the regional gas market coordination group (RGMCG) to create a common natural gas market of the three Baltic States and Finland. On 1 January 2020, the common natural gas tariff zone of Finland, Estonia and Latvia (FINESTLAT) was launched. In 2020, the Lithuanian transmission system is considered to be a separate tariff zone. However, in an effort to efficiently develop the regional gas market in the Baltic-Finnish countries and to seek further integration of said countries, the entry point prices approved for 2020 were harmonised with other prices set by FINESTLAT, i.e. the entry price is the same at all entry points of the Baltic-Finnish region. It is important to note that in April 2020, the roadmap for the integration of regional markets between Estonia, Finland, Latvia and Lithuania, which provides for a common zone of the prices of the four countries starting from 2022, was approved in the High Level Group on the Baltic **Energy Market Interconnection** Plan (BEMIP). Said roadmap determines the integration actions for the years 2020-2022 to establish a gas transport pricing encompassing all of the four countries (by scrapping cross-border tariffs and establishing the related procedure of the TSOs' intersystem compensation), a capacity allocation system for the

regional gas transmission system, the principles of data exchange, as well as common information systems for the servicing of this model of a regional gas market.

It should be noted that in March 2019, the NERC published a public consultation document on the methodology for the pricing of the services provided by the Lithuanian natural gas TSO AB "Amber Grid" in compliance with the requirements of Commission Regulation (EU) No 2017/460 of 16 March 2017, which establishes the network code on harmonised transmission tariff structures for natural gas (hereinafter referred to as the Tariff Network Code), regarding the application, publication and consultation concerning the reference price methodology. Taking into account Article 27(2) of the Tariff Network Code, the European Union Agency for the Cooperation of Energy Regulators (ACER) has published the analysis on the NERC's public consultation document defining the principles of the pricing of the services provided by the Lithuanian natural gas TSO AB "Amber Grid". With a view to the conclusions drawn by ACER and having verified that the prices of the natural gas transmission services provided by AB "Amber Grid" do not discriminate separate consumer groups and do not exceed the upper-income limit established for 2020, the NERC approved the prices of the natural gas transmission services, which have been valid from 1 January 2020.

According to the new liquefied natural gas (LNG) terminal financing model, which could be implemented only after the Seimas of the Republic of Lithuania decided that Lithuania would need a LNG terminal and after 2024, the NERC established a 38 % lower natural gas security component, which came into force on 1 January 2020. The decisions co-ordinated by all responsible authorities – the Parliament of the Republic of Lithuania, the Government, the Ministry of Finance, the Ministry of Energy, the NERC – regarding both Lithuania's energy security, which would be ensured by creating competitive conditions in the natural gas import market, and the reduction of the costs of the maintenance of the LNG Terminal will allow the consumers of natural gas to save EUR 36 million per year. These benefits are already shared by household consumers and businesses alike. In 2019, 51 LNG carriers, which offloaded 3 million cubic metres of LNG and resulted in 19.36 TWh of natural gas having been outgassed, passed through the Klaipėda LNG terminal. This number is more than 2 times higher than the 2018 outgassing indicators and corresponds to around 85% of Lithuania's annual consumption of natural gas. The significant intensification of the exploitation of the terminal was due to the situation that had come about in the international natural gas markets: for the majority of 2019, the import of natural gas via the terminal was more beneficial to the market participants (Lithuanian and Estonian state-owned and private undertakings) than the import via pipelines (the undertakings importing natural gas assess all of the price components and infrastructure charges).

In November 2019, the NERC also coordinated the amendments to the regulation of UAB "GET Baltic" trading on the natural gas exchange , which shall ensure greater liquidity of the natural gas exchange of the Baltic States in the trading platforms of Lithuania, Latvia, Estonia and Finland starting from 2020: the procedure regarding the allocation period for implicit capacity was changed, adjustments concerning the lengthening of the trading session of the product of the intra-day day were also made.

Chair Inga Žilienė

2. MAIN DEVELOPMENTS IN THE GAS AND ELECTRICITY SECTORS

2.1. Market development and surveillance

- Electricity market

In September 2019, the NERC, having assessed in detail the project for the implementation of smart electricity metering in Lithuania in 2020-2023 submitted by the DSO AB "Energijos skirstymo operatorius", decided to coordinate it. The DSO AB "Energijos skirstymo operatorius" expects to start installing smart electricity metering devices in the first half of 2021.

In 2019, the NERC carried out a unscheduled inspection of AB "Energijos skirstymo operatorius", the purpose of which was to determine whether the company complied with the requirements regarding the reliability of electricity transmission and the quality of the provided services from 1 January 2012 to 28 February 2018. Over the course of the inspection, the NERC established that the DSO AB "Energijos skirstymo operatorius" provided the NERC with false information concerning qualitative indicators of the distribution network – the interruptions in supply were unreasonably attributed to *force majeure* or to factors beyond the control of the DSO AB "Energijos skirstymo operatorius" , which led to incorrect calculations of the indicators of the reliability of electricity transmission and the quality of the provided services during the period from January 2012 to February 2018 (SAIDI and SAIFI).

In 2019, the NERC also amended the Methodology for the Pricing of Electricity, Reserve Capacity and the Services Ensuring the Isolated Operation of the Electricity System, whereby price caps for the secondary emergency active power reserve, the tertiary active power reserve, the prevention of and response to accidents and disruptions, and the service of the prevention of or response to the accidents occurring within the isolated operation of the electricity system and/or total breakdown of the electricity system were established for 2020. The NERC also amended the Methodology for the Setting of Prices of Electricity Transmission, Distribution and Public Supply Services and of the Public Supply Price Caps. On the basis of these amendments, the price caps for the public electricity supply services and the public electricity price were established (see Section 3.2.2 for more details).

In 2019, the amount of electricity imported within the Lithuanian Power System (hereinafter referred to as the LPS) continued to grow and accounted for 103.1% of the total electricity demand in the country. In 2019, the country produced 3.64 TWh of electricity, the import of electricity amounted to 13.39 TWh, while its export equalled 4,04 TWh. In 2019, the country's consumption of electricity amounted to 12.15 TWh. In power plants, the total installed capacity increased and reached 3681 MW in 2019 (compared to 3679 MW in 2018).

Compared to the previous year, the total network investments decreased in 2019: the investments of DSOs amounted to EUR 138.58 million (a decrease of 32.6% compared to 2018), the investments of TSOs made during the same period amounted to EUR 45.93 million and were 1.4 times higher than those recorded in 2018. The maximum hourly electricity demand (net) in Lithuania amounted to 2032 MW in 2019 (1.65 % higher than in 2018), of which 1733 MW was recorded within the distribution network (1.5 % lower than in 2018).

In 2019, NERC's regulation applied to 3476 entities within the electricity sector. This number includes licensed or authorised activities of independent supply, transmission, distribution, public

supply and generation of electricity, as well as authorisations granted for the development of generation capacity, the import and export of electricity from/to non-Member States. At the end of 2019, the following enterprises were in possession of licences issued by the NERC: AB “Litgrid” – electricity TSO, AB „Energijos skirstymo operatorius“, AB “Achema”, AB “Lifosa”, AB “Akmenės cementas” and UAB “Dainavos elektra” – DSO, UAB “Ignitis” (former UAB “Lietuvos energijos tiekimas”), AB “Lifosa” and AB “Akmenės cementas”, AB “Achema” and UAB “Dainavos elektra” – public electricity suppliers. In 2019, 59 undertakings had permits for the independent supply of electricity, of which 27 were engaged in the activity of the independent supply of electricity.

Since 1 July 2019, after the transfer of all rights and obligations of the State Energy Inspectorate to the NERC, the NERC also issues permits for the development of electricity generation capacity, the generation of electricity, the import of electricity from non-Member States and the export of electricity to non-Member States. In 2019, 2759 entities (natural and legal persons) were in possession of permits for the generation of electricity issued by the NERC, of which 1089 were energy producing consumers.

Fig. 1. Number of market participants regulated by the NERC within the electricity sector in 2018

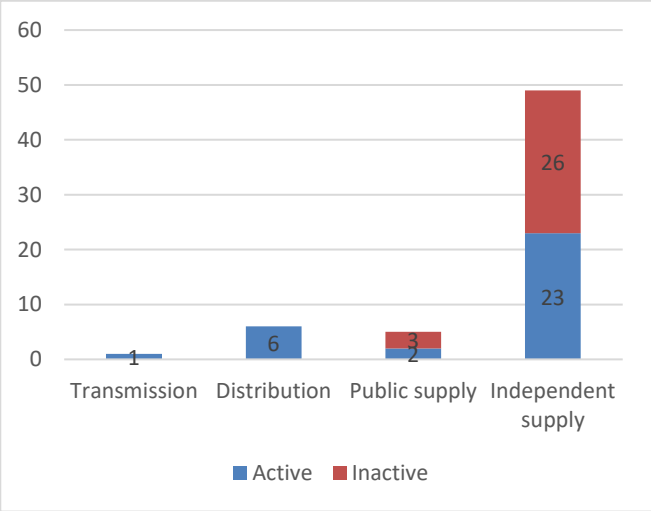
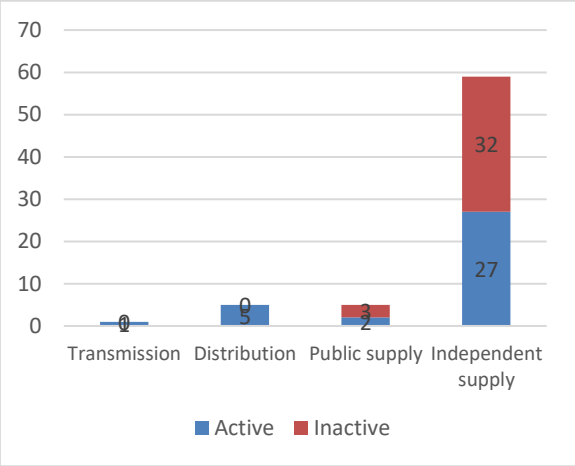
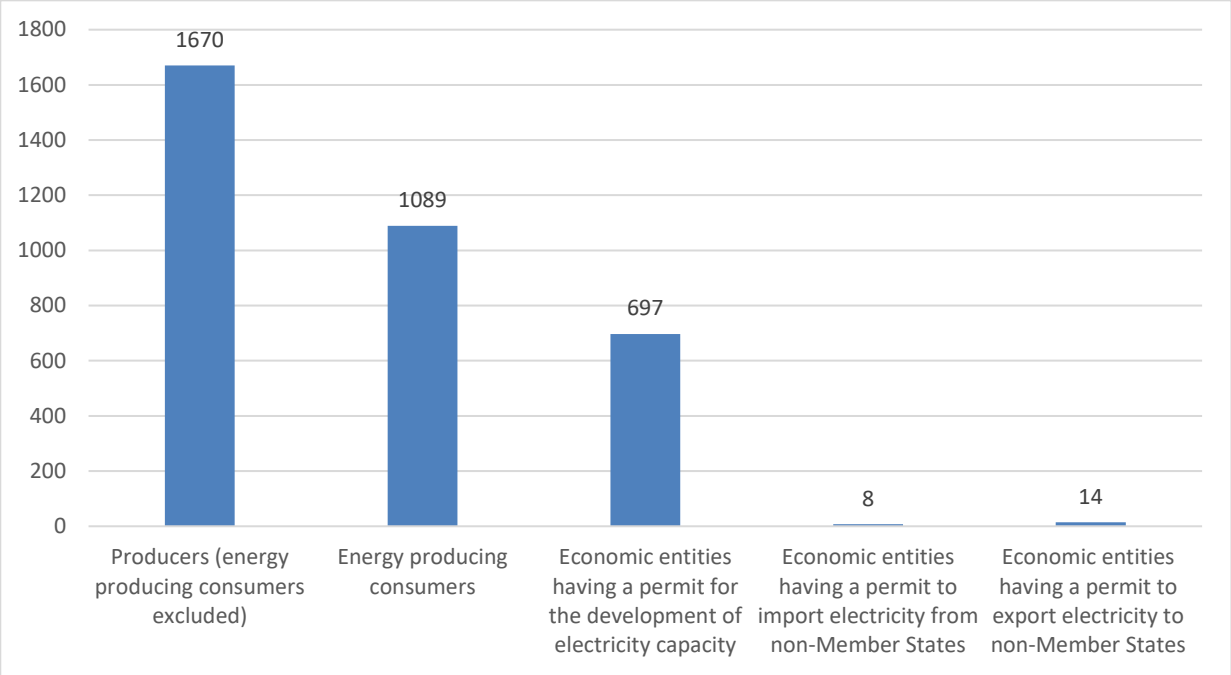


Fig. 2. Number of market participants regulated by the NERC within the electricity sector in 2019



Source: NERC.

Fig. 3. Number of market participants regulated by the NERC since 1 July 2019



Source: NERC.

Over the course of 2019, the NERC changed 1 licence for the activities of electricity distribution and 2 licences for the public supply of electricity, revoked 1 public supply licence, i.e. in 2019, the DSO AB "Lifosa" reduced the area used for its activities of electricity distribution, a part of the territory wherein AB "Lifosa" decided to discontinue its activities was taken over by the DSO AB "Energijos skirstymo operatorius", taking into account the fact that the territory wherein AB "Lifosa" performs its activities of electricity distribution is smaller than the territory recorded in 2018, the undertaking's public supply licence was changed. The DSO AB "Achema" refused to carry out the activities of the public supply of electricity within the territory designated for its activities of electricity distribution, thus, taking this fact into account, the NERC revoked the undertaking's public supply licence. The public supply activities within the territory designated for the activities of electricity distribution carried out by AB "Achema" were taken over by UAB "Ignitis".

In 2019, the NERC issued 8 permits for the independent supply of electricity, 7 permits for the independent supply of electricity were suspended and 2 permits were revoked.

The entities wishing to perform activities within the electricity sector must obtain a permit from the NERC. When applying for a permit to develop electricity generation capacity, in addition to other mandatory documents, it is necessary to submit a copy of the pre-conditions for the connection of the power plant to the energy networks issued by the network operator. The NERC's permit for the development of electricity generation capacity is not required if a person plans to build or install electricity generation capacity whose installed capacity does not exceed 30 kW and to generate electricity solely for personal use and their domestic needs without supplying electricity to the electricity networks, or if a person seeks to become a generating consumer and plans to build or install electricity generation capacity utilising renewable energy sources, while its installed capacity does not exceed 30 kW. The NERC's permit for the generation of electricity is not required if a person intends to generate electricity using equipment that generate electricity from renewable energy sources and whose installed capacity does not exceed 30 kW.

In 2019, 506 permits for the generation of electricity, 800 permits for the development of electricity generation capacity and 6 permits for the import of electricity from non-Member States were issued. The NERC also adopted 18 resolutions on the revocation of permits for the import of electricity, 1 resolution on the revocation of a permit for the export of electricity to non-Member States, 1 resolution on the amendment (by revoking) of a permit for the import of electricity into a non-Member State, 17 of which were adopted due to inactivity, while 2 of which were adopted upon request of the permit holders to revoke the permit.

The NERC approved the All Baltic Capacity Calculation Region TSOs' common methodology for redispatching and countertrading cost sharing prepared by AB "Litgrid" together with other TSOs of the Baltic capacity calculation region, namely the TSOs of Estonia, Latvia, Sweden, Poland and Finland. The methodology will ensure optimal use of the transmission infrastructure by eliminating congestions in the field of electricity generation, trade and supply. The adoption of the said methodology is a further important step towards the establishment of common operational principles within the Baltic capacity calculation region.

Taking into account the requirements of the European Commission Regulation (EU) No 2017/2195, which establishes the electricity balancing guidelines, the NERC approved the Standard Terms and Conditions for the Imbalance Sales Contract drawn up by AB "Litgrid", which apply to the entities operating in Lithuania. The approved standard terms and conditions for imbalance sales contracts ensure uniform and non-discriminatory operating conditions for all system users by providing clear regulations regarding the mutual obligations of market participants and TSOs, the conditions for the submission, amendment and adjustment of balance schedules, and the payment procedure. The NERC also approved the Standard Terms and Conditions for the Balancing Service Sales Contract prepared by AB "Litgrid". The approved conditions are mandatory for the suppliers of balancing services operating in Lithuania.

In addition, other important decisions related to the harmonisation of the balancing market among the EU countries were adopted at EU level – they are discussed in more detail in Chapter 3.1.

- Natural gas market

Key changes in the regulation of prices within the natural gas sector. In 2019, the NERC adjusted and specified the legislation that regulates the activities of the natural gas sector. The following legislation was amended:

The Methodology for the Setting of State-regulated Prices Within the Natural Gas Sector, wherein: 1) the calculation of the upper income limit for the LNG regasification service was supplemented by providing for the possibility of a bank loan granted for the purpose of financing part of the costs of the rent of the floating LNG storage facility, and by including the disbursement of the refinancing loan and the payment of interest, the bank guarantee given to the owner of a floating LNG storage facility and the bank guarantee intended to ensure the granting of a State guarantee amongst the costs; 2) the changes in the calculation of the costs of the LNG regasification service after the redemption of the floating LNG storage facility were established; 3) the assessment of the cost-effectiveness of the activities was clarified; 4) the possibility of maintaining the stability of the natural gas tariffs for household consumers in the event of significant price fluctuations on the gas product market was provided; 5) it was established that the LNG overload price shall be set for one year and the principles of LNG overload calculation were specified.

By a separate decision, the possibility of adjusting the additional component of supply security alongside the natural gas transmission price twice a year was established.

The Methodology for the Setting of Income and Prices for the State-regulated Natural Gas Transmission Activities, wherein: 1) taking into account the provisions of the Law on Natural Gas of the Republic of Lithuania (hereinafter – LNG) and the application of the principles of the "postage stamp" methodology, which provides for the division of the income level between entry-exit points according to the established entry-exit ratio, the decision was taken to set/adjust the upper-income limits for each year of the regulatory period, eliminating the setting/adjustment of price caps; 2) in accordance with the provisions of LNG and the Tariff Network Code, the decision was taken to establish the possibility of the intersystem compensation for the natural gas TSOs; 3) the criteria for assessing the technological costs of the natural gas TSOs were clarified.

The Description of the Requirements for the Unbundling of Accounts and the Cost Allocation of Natural Gas Undertakings, wherein: 1) it was decided to treat the funds received from the contributions due for the connection to the gas system as grants. This principle shall apply to the new investments in the connection of systems; 2) new provisions regarding the increase of the authorised capital of a natural gas undertaking, which should be used for the calculation of the depreciable value in such a case where the authorised capital is increased by an asset contribution, were established – how depreciation (amortisation) costs should be calculated and what additional information the undertaking should provide to the NERC.

The Methodology for the Calculation of the Rates of the Connection of New Natural Gas Users, wherein: 1) the principle of the setting of connection contributions for household consumers, which is based on the principle of geometric distance, was established with a view to shortening the time limits for the connection of new consumers and reducing the administrative burden of gas undertakings; 2) a more cost-reflective principle of fixing the contributions and rates for the connection of non-household consumers, which is based on the calculation of the present financial net value, was established; 3) in an effort to maintain the stability of contributions and rates, the principle whereby the value of contributions and rates is linked to the changes in the price caps of gas undertakings during the regulatory period and the adjustments of the return on investments of gas undertakings was established; 4) the principles of setting connection contributions and rates, which shall be applied when gasifying the general consumer group, were specified.

In 2019, the NERC regulated 30 entities within the natural gas sector. Within the natural gas sector, the activities of transmission, distribution, storage, LNG regasification, supply and market operation are licensed or regulated by permits. At the end of 2019, the following enterprises were in possession of licences issued by the NERC: AB "Amber Grid" – natural gas TSO, AB "Energijos skirstymo operatorius", UAB "Intergas", UAB "Fortum Heat Lietuva", AB agro firm "Josvainiai" – natural gas DSO, AB "Klaipėdos nafta" – LNG regasification undertaking, UAB "GET Baltic" – natural gas market operator. 23 undertakings had permits for the supply of natural gas, of which 17 were operating. In 2019, 2 permits for the supply of natural gas were issued, 11 permits for the supply of natural gas were revoked, and 1 natural gas distribution licence was also revoked.

Fig. 4. Number of market participants in the gas sector in 2018

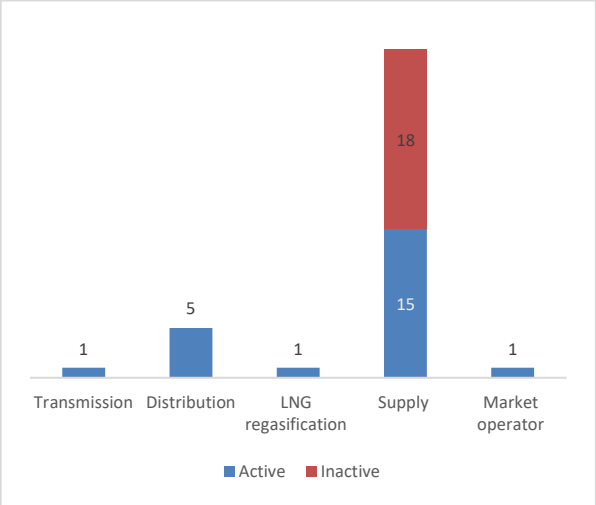
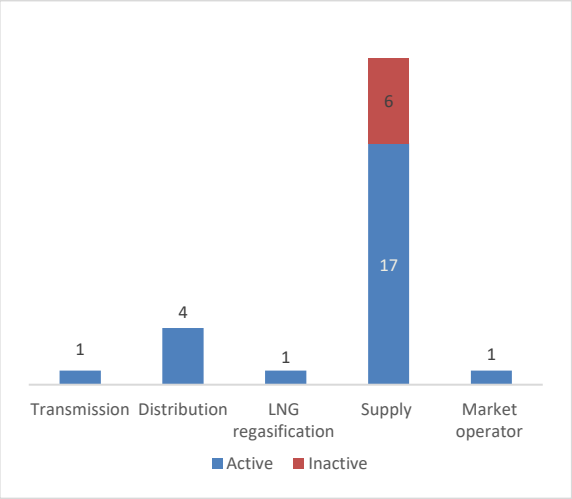


Fig. 5. Number of market participants in the gas sector in 2019



Source: NERC.

In 2019, the volume of imported natural gas amounted to 28.464 GWh and was 21.37% higher than in 2018.
Compared to 2018, in 2019, the sales within the natural gas sector increased by 3.74% – from 13.894 to 14.414 GWh.

In 2019, the total income within the natural gas sector (transmission, distribution, LNG regasification, supply) amounted to EUR 481million, i.e. 28,53 % lower than the income recorded in 2018 (EUR 673 million). In 2019, the income from the regulated activities of transmission and LNG system operators was higher than in 2018, while the income from the activities of DSOs and supply undertakings was lower than in 2018. The income of natural gas supply undertakings decreased due to a decrease in the price of imported natural gas (product) purchased under bilateral transactions and on exchanges that were observed in 2019.

In 2019, the investments within the natural gas sector amounted to EUR 69 million (a decrease of 11%). The decrease in the number of investments recorded within the natural gas sector resulted mainly from the decrease in investments made by AB “Energijos skirstymo operatorius”.

On 13 September 2019, the heads of the energy regulators of the Baltic States and Finland held a meeting in Vilnius, the purpose of which was to discuss the progress and further steps towards the creation of a common regional natural gas market. The discussions focused on the preconditions for Lithuania to join the regional gas market. During the meeting, scenarios regarding the accession to the natural gas market encompassing the three countries (Finland, Estonia, Latvia – FINESTLAT) both in the short term, i.e. starting from 2020, and in the long term, i.e. starting from 2022, were discussed.

With a view to the integration of the four countries and in cooperation with the representatives of the European Commission, a roadmap for the further integration of regional markets between Estonia, Finland, Latvia and Lithuania was drawn up and discussed. The Roadmap on regional gas market integration between Estonia, Finland, Latvia and Lithuania provides for the integration actions for the years 2020-2022 with a view to establishing a gas transport pricing encompassing all of the four countries (by scrapping cross-border tariffs and establishing the related procedure of the TSOs’ intersystem compensation), a capacity allocation system for the regional gas transmission

system, the principles of data exchange, as well as common information systems for the servicing of this model of a regional gas market. In accordance with the roadmap, the representatives of the work group must assess the benefits of market integration. The assessment of the benefits shall be carried out with the help of independent consultants. It must be noted that the possibilities of creating a common balancing zone, the recovery of the costs of regional infrastructure, the harmonisation of the requirements for building permits and questions regarding biogas regulation will also be discussed.

The NERC coordinated the amendments to the regulation of UAB "GET Baltic" trading on the natural gas exchange, which shall ensure greater liquidity of the natural gas exchange of the Baltic States in the trading platforms of Lithuania, Latvia, Estonia and Finland starting from 2020. The key amendments to the regulation include the regulation of the operation of trading platforms in Finland and the common trading platform of Latvia and Estonia, as well as the changes in the procedure regarding the implicit capacity allocation period and the lengthening of the trading session of the product of the intra-day.

An investigation into the infringement of the REMIT provisions was carried out: UAB "Geros dujos", while performing sales transactions on the Lithuanian natural gas exchange, violated the REMIT provisions on market manipulation (see the section "Surveillance of the Natural Gas Market" for more details).

2.2. Implementation of the clean energy package

The NERC, acting as the national authority for energy regulation, is obligated by Article 59(1)(u) of Directive (EU) 2019/944 of the European Parliament and of the Council on common rules for the internal electricity market amending Directive 2012/27/EU (hereinafter referred to as the Electricity Directive or Directive (EU) 2019/944) to monitor the implementation of the rules related to the roles and obligations of TSOs, DSOs, suppliers, consumers and other market participants in accordance with Regulation (EU) 2019/943 of the European Parliament and of the Council on the internal market for electricity (hereinafter referred to as the Electricity Regulation).

In 2019, the NERC, together with the other EU national energy regulators, assessed the minimum level of available capacity for cross-zonal trade of TSOs, which shall account for at least 70% of the total transmission capacity, taking into account operational security in accordance with the requirements of Article 16(8)(a) of the Electricity Regulation. Having assessed the BRELL agreement on the calculation of capacity, it was established that the position of the Baltic TSOs and ACER differs from each other. According to the Baltic TSOs, under the current legal framework, including the provisions of the BRELL agreement, the available capacity for cross-zonal trade of the Baltic TSOs meet the minimum level of 70%. The discussions with the colleagues from ACER on the assessment of the 70% threshold regarding the LT-LV connection, as well as the LV-EST connection, are still ongoing. In a report[1], ACER stated that the intersystem connections of PL-LT and SE-LT were below the minimum threshold of 70%. Technical issues originate from the side of SE and PL – the TSOs of said countries requested an exemption under Article 16(9) of the Electricity Regulation, which was granted to them.

[1] 11/11/19 ACER Market Monitoring Report 2018 – Electricity Wholesale Markets Volume:https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER%20Market%20Monitoring%20Report%202018%20-%20Electricity%20Wholesale%20Markets%20Volume.pdf

Although the demand response and aggregation rules are set out in detail in the Electricity Directive, Article 3(e) of the Electricity Regulation states that the market is organised by aggregating the electricity generation from multiple electricity-generating facilities or load from multiple demand response facilities, thus enabling the end-users and small businesses to participate in the market so that they can make joint offers on the electricity market and jointly operate in the electricity system, in line with the EU competition law. To this end, the NERC was actively involved in the coordination and assessment of the amendment of the LE, which provides for the implementation of Articles 13 and 17 of the Electricity Directive. The Law on the Amendment of Articles 2, 9, 12, 16, 17, 30, 31, 33, 35, 39-1, 41, 59, 69 and the Annex of the Law on Electricity No VIII-1881 of the Republic of Lithuania and Supplementation of the Law by Article 61^1 was passed by the Parliament of the Republic of Lithuania on 4 June 2020[2].

[2]https://eseimas.lrs.lt/portal/legalAct/lt/TAD/907d0740aa5011ea8aadde924aa85003?positionInSearchResults=10&searchModelUUID=840859a5-6290-40e5-89bc-a0eb4fcbaa89-

3. ELECTRICITY MARKET

3.1. Regulation and technical functioning of the network

- Unbundling of activities
- Article 59(1)(j) of Directive (EU) 2019/944: Cross-subsidisation

In 2019, there were no changes regarding the implementation of the LE provisions related to the unbundling of activities and control of AB "Litgrid". The NERC, in accordance with the provisions of Article 26 of the LE, continues to constantly monitor and control the manner in which the electricity TSO, while conducting its activities, ensures the requirements of independence and unbundling of activities established by the LE.

In the event of a change in circumstances that would prevent the implementation of the requirements of the unbundling of activities and accounting laid down in Article 54(1) and (3) of the LE, AB "Energijos skirstymo operatorius" shall be obliged to inform the NERC no later than within 5 working days from the change in said circumstances. No change in circumstances was recorded in 2019.

Also, in accordance with Article 8(11)(12) of the Law on Energy and Article 9(4)(5) of the LE, the functions assigned to the NERC to control the effective unbundling of activities in the energy sector, thus ensuring the independence of energy transmission and distribution activities from the commercial interests of energy activities and avoiding cross-subsidisation, have not changed when compared to the previous year.

- Network extension and optimisation
- Article 59(1)(k) of Directive (EU) 2019/944: Investment plans

The rights and obligations established for the TSOs and the NERC in accordance with Article 33 of the LE as regards the preparation, evaluation and monitoring of the 10-year plan for the development of transmission networks remained unchanged over the course of 2019. The supervision of the investment plans of AB "Litgrid" is carried out in accordance with the terms and conditions laid down in the LE, i.e. every year by 1 July, the TSO AB "Litgrid" prepares and submits to the NERC an updated 10-year plan for the development of transmission networks. While coordinating the plan, the NERC assesses the investments already made by the TSO or adjusts accordingly the investments previously agreed on but not yet implemented, the deadlines for the completion of said investments, the cost of the works, etc. On 28 June 2019, the LPS 400-110 kV network development plan for the period of 2019-2028 was received. The NERC announced a public consultation regarding the plan and, having assessed the received comments, the NERC approved the development plan for the period of 2019-2028 prepared by AB "Litgrid" by Resolution No O3E-85 of 28 January 2020.

In 2019, the length of high-voltage electrical power transmission lines was 7190 kilometres, while the number of high-voltage transformer substations amounted to 237. The total electricity demand was 12.154 TWh. Electricity consumption decreased by 5.42%. At the moment, the LPS is directly connected to five neighbouring power systems (Sweden, Poland, Belarus, Latvia and Russia).

AB “Litgrid” foresees that during the period of 2019-2028, the need for investment in the development and renewal of the transmission network will amount to approximately EUR 1062.48 million, i.e. it will increase by 38.75% compared to the investments planned by AB “Litgrid” for the period of 2018-2027. The majority of the investments foreseen in the 2019-2028 transmission network development plan will be constituted by the project of the interconnection of the LPS with the continental European networks for the purpose of synchronous operation, the system management and data centre security project and the transmission network projects aiming at ensuring reliability (restoration and modernisation of the network, major repairs; new construction).

Over the course of 2019, AB “Litgrid” made significant progress in implementing projects of common interest in the European Union, as well as other strategic projects:

1) In implementing the project of the interconnection of the electricity system of the Republic of Lithuania with the continental European networks (“Synchronisation”), all 14 guidelines provided for in the 2019 action plan of said project have been implemented. The following achievements are to be noted:
A. In the project “LitPol Link Development Stage 1”, three auto-transformers were ordered and the technical project was prepared, documents permitting the construction were obtained.
B. The construction works concerning the reconstruction of the 330 kV Bitėnai transformer substation were completed.
C. Contracts regarding spatial planning services for new projects of the development of the electricity transmission infrastructure were concluded.
D. The funding for the studies from the CEF for project “Harmony Link” was approved.

2) The construction of the system management and data centre in Vilnius was completed.
In accordance with the Description of the Procedure for the Assessment and Coordination of Investments of Energy Enterprises at the National Commission for Energy Control and Prices approved by the NERC, the DSO prepares a long-term investment programme regarding the regulated activities for the regulatory period and submits it to the NERC.
Starting from 2018, the DSO AB „Energijos skirstymo operatorius“, as a DSO serving more than 100.000 consumers, publishes its investment plans on its website in accordance with the obligation laid down in Article 39^1 of the LE. Prior to the publication of the 10-year plan for the development, renewal, modernisation and investments of distribution networks, the DSO conducts transparent and public consultations with competent public authorities and other interested parties. The investment plan for the period of 2019-2028 is currently published. AB „Energijos skirstymo operatorius“ foresees that in 2019-2028, the need for the investments in the development and renewal of the electricity distribution network will amount to approximately EUR 1779 million, i.e. it will decrease by 4.9 percent compared to the period of 2018-2027 (EUR 1872 million). The main investment directions shall be as follows: the enhancement of network reliability (replacement of overhead electricity lines with underground electricity lines while prioritising the replacement of unreliable and incident-prone lines, wooded areas and solutions aimed at the improvement of voltage quality), network smartification (installation of automated equipment or equipment that is monitored and controlled by the dispatcher remotely, as well as installation of smart meters for the consumers), customer experience and market empowerment (development of a data exchange platform (hereinafter referred to as “the Data Hub”), updates of information systems, etc.).

By the end of 2019, AB „Energijos skirstymo operatorius“ had implemented the following functionalities of the Data Hub*:* the provision of historical consumption data to the suppliers (with

the consumer's consent) and the process of changing the supplier. On 1 May 2020, the implementation of the functionality of a joint contract and account was completed. Said functionalities were implemented while developing the existing systems – the basic version of the data platform. The full version of the Data Hub will now be developed.

- Article 59(1)(l) of Directive (EU) 2019/944: Smart grid development

In 2019, the TSO initiated a pilot 1 MW battery project within the transmission network, which aims at analysing the flexibility and applicability of battery technology for the provision of system services.

In order to ensure the quality of supplied electricity within the context of its growing demand, the DSO AB "Energijos skirstymo operatorius" plans for the reconstructions of the electricity network and is also implementing a pilot project in 2019-2020 regarding the use of storage systems in controlling the voltage within the network and reducing the costs of network reconstruction. In addition, starting from 2019, the DSO AB "Energijos skirstymo operatorius" started installing voltage regulators in the lines as an alternative to costlier network reconstructions. In 2019-2020, the DSO AB "Energijos skirstymo operatorius" is also carrying out a study, the purpose of which is to analyse the qualitative parameters of the distribution network and, on the basis of the conclusions of the study, the DSO plans to install voltage quality recorders within the distribution network, which will be designed to analyse and later to adopt technological solutions regarding voltage drops and interruptions, as well as the improvement of other qualitative parameters of the network.

AB "Energijos skirstymo operatorius" actively implements self healing network (which operates without the involvement of the dispatcher during faults) solutions in 10 kV networks. Currently, >20 units of 10 kV overhead lines are configured in a way that, in the case of a failure, allows to automatically localise (by controlling/switching commutators) said failure in accordance with set algorithms, thus restoring the supply of power for the remaining consumers.

Given the increasing volume of energy redistributed through distribution networks, it is necessary to consider the possible alternatives regarding the enhancement of capacity and reliability. The traditional approach is to increase the capacity of the network by developing transformer substations and related infrastructure (lines and other facilities), one of the alternatives to said approach being micro-islands and micro-networks capable of operating in a micro-island mode for a certain period of time. To this end, in 2019-2020, the DSO AB "Energijos skirstymo operatorius" is implementing a micro-island pilot project, the conclusions of which will be instrumental in preparing the micro-island development concept aimed at solving the problems of network development and reliability. It is estimated that a micro-network operating or capable of operating in a micro-island mode allows ensuring a higher level of reliability, as well as helps to control the parameters of load and voltage, especially within those sections of the network where numerous renewable energy sources are integrated.

With the rapid growth in the number of distributed generation equipment, electric cars and equipment for the charging of said cars within the network, the distribution system faces major challenges as to how to ensure the management of the network load and the quality of supplied energy in the most cost-effective and optimal manner. To this end, the DSO AB "Energijos skirstymo operatorius" seeks to replace the usual method of network development planning with an innovative method of planning that utilises advanced network load management and forecasting information systems. As a result, in 2019, the DSO "Energijos skirstymo operatorius" initiated a

project aimed at implementing the programme of electricity network load calculation and analysis of the network parameters, the procurement procedures and installation works are expected to be completed in 2020.

In September 2019, the NERC, having assessed in detail the project of the implementation of smart electricity metering in Lithuania in 2020-2023 submitted by AB "Energijos skirstymo operatorius", adopted the decision to coordinate it.
In 2019, AB "Energijos skirstymo operatorius" launched the procurement of the smart metering infrastructure. The procurement is expected to be completed by the end of 2020 when the contract regarding the acquisition of approximately 1.2 million smart meters, communication infrastructure and IT systems will be signed.

AB "Energijos skirstymo operatorius" expects to begin installing the smart electricity metering devices in the I half of 2021 – the main installation stage is expected to take place in 2020-2023 (100% for commercial consumers and 54% for household consumers who consume more than 1000 kWh/year). The NERC will carry out the remote monitoring of the project's implementation, i.e. the NERC instructed AB "Energijos skirstymo operatorius" to develop a monitoring system by 31 December 2021 and to obtain the approval of the NERC regarding said system. In 2022 and 2023 (no later than by 1 July), AB "Energijos skirstymo operatorius" will have to submit reports on the implementation of the project, as well as supporting documents, to the NERC in order to ascertain that the created benefits correspond to the financial and economic indicators of the investment project coordinated by the NERC. In subsequent periods, reports will be submitted twice over the course of the regulatory period.

- Network tariffs

- Article 59(1)(o) of Directive (EU) 2019/944: Evolution of network tariffs

The NERC, in accordance with the provisions of the Law on Energy and the LE, approves the methodologies for the calculation of price caps for the services of electricity transmission, distribution, sets the price caps for state-regulated services and electricity, and assesses the prices and tariffs submitted by service providers. It also approves the fees for the connection of the electrical equipment of consumers and producers to electricity networks, the methodology for fees' determination, which also lays down the terms and conditions of the calculation of said fees, in accordance with the general requirements for the setting of fees specified in this law.

At the end of 2015, the Methodology for the Setting of Price Caps for Electricity Transmission, Distribution and Public Supply Services and the Public Supply, which implements the Long-Run Average Incremental Cost model (hereinafter referred to as "the LRAIC") that aims at improving the efficiency of the operation of electricity networks suited to the demand, was approved. In accordance with the new model, the price caps for electricity transmission and distribution services for the regulatory period of 5 years (2016-2020) were set.

Related information is also provided in Chapter 3.2.2 of this report.

- Security and reliability regulation

- Article 59(1)(m) of Directive (EU) 2019/944: Network security and reliability rules

It is indicated in the LE that the NERC establishes the requirements for the reliability of electricity transport and the quality of the services, as well as controls the ways in which said requirements are being implemented. Taking into account the amended Requirements for the Reliability of Electricity Transport and the Quality of the Services, by 15 April of the calendar year of a new regulatory period, the requirements for the reliability of electricity transport and the quality of the services are set for the new regulatory period. For the period of 2016-2020, the indicators have been set on the basis of the average of the actual indicators of transport reliability for the period of 2011-2015.

The indicators of the reliability of electricity transport and the quality of the services, as well as their minimum levels, are calculated separately for the electricity transmission system and the distribution network (see Figures below). The lower the value of the indicator, the higher the level of the reliability of electricity transport. In the calculations, only those cases are assessed wherein the interruption of electricity transport has occurred due to reasons falling under the responsibility of the system operator or due to unidentified reasons. Interruptions that have occurred due to *force majeure* or reasons related to external effects have no impact on reliability indicators. The reliability of electricity transport via transmission networks shall be assessed on the basis of two indicators:

The amount of energy not supplied via the transmission network (hereinafter referred to as "ENS");

Average energy transmission interruption time (hereinafter referred to as "AIT").

Fig. 6. ENS and the minimum level of this indicator, MWh

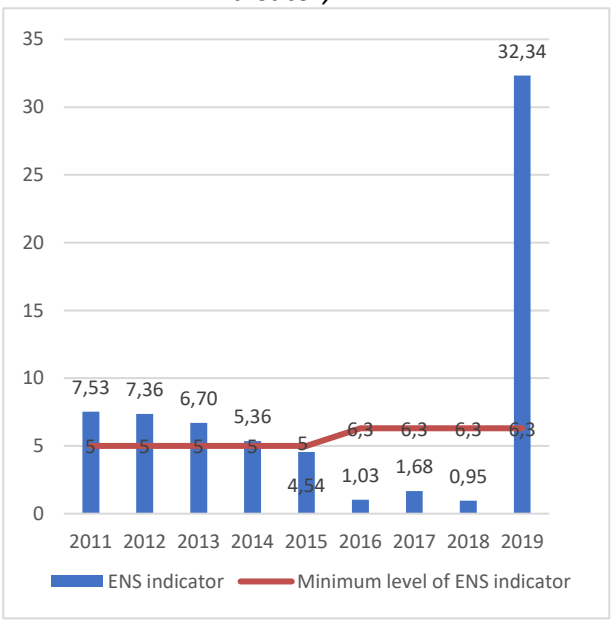
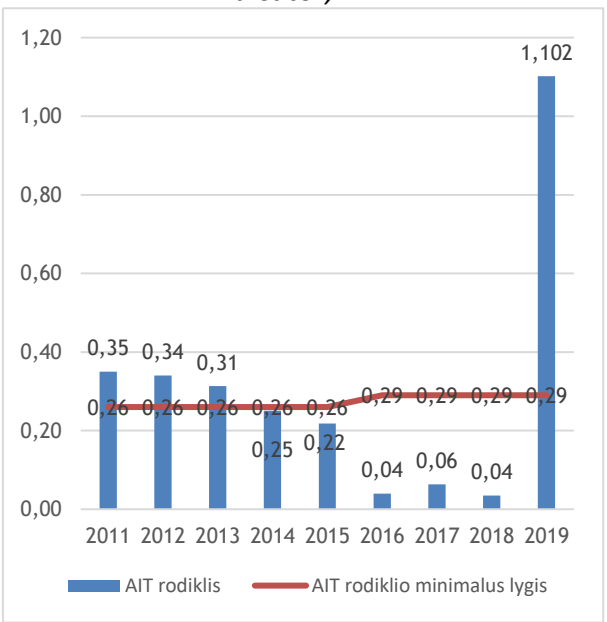


Fig. 7. AIT and the minimum level of this indicator, min.



Source: NERC.

The reliability indicators established by the NERC in 2019 oblige the TSO to ensure that the technical quality of the services is better than or equal to the minimum requirements, i.e. the average energy interruption time for the consumers should not exceed 0.29 minutes, the amount of energy not supplied should not exceed 6.3 MWh. In 2019, the value of the ENS indicator was 33 times higher than the set minimum level, while the AIT indicator was 26 times than the set minimum level. The TSO indicated that the increase in the 2019 indicators was caused by a failure in the Kapsai 110/10

kV transformer substation that took place in July 2019. During the reconstruction of the substation, the only operating transformer disconnected and the power supply to a large part of consumers located in the city of Marijampolė was disrupted. The process of restoring the power supply lasted for 2 hours and 7 minutes, which resulted in 23800 kWh not being supplied to the consumers. In addition to this event, there were seven other events over the course of the year wherein the power supply to consumers was interrupted. The main causes of the events were the failure of old electrical equipment (6603 KWh ENS), trees that had fallen on 110 kV overhead lines while contractors were cleaning the routes (402 KWh ENS) and staff error while operating electrical equipment (1534 KWh ENS).

The reliability of electricity transport via distribution networks is assessed on the basis of two indicators:

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

The reliability indicators established by the NERC in 2019 oblige the DSO to ensure that the technical quality of the services is better than or equal to the minimum requirements, i.e. the average electricity interruption duration (SAIDI) for the consumers should not exceed 52.12 minutes per year, the average number of interruptions (SAIFI) due to the fault of the DSO per consumer should not exceed 0.72 times.

Fig. 8. SAIDI and the minimum level of this indicator, min. per consumer

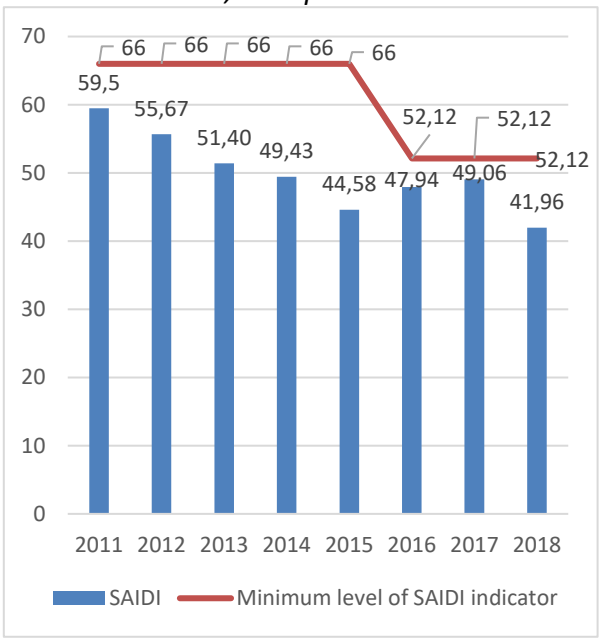
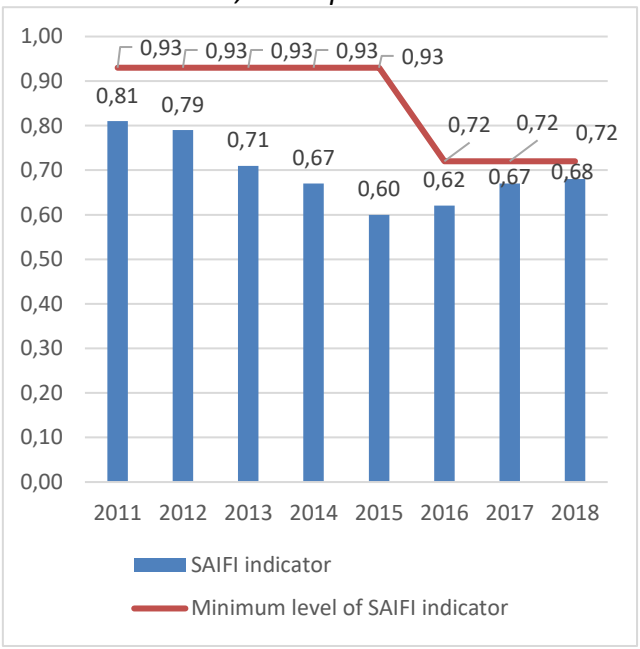


Fig. 9. SAIFI and the minimum level of this indicator, times per consumer



Source: NERC.

In 2019, the NERC carried out an unscheduled inspection of AB "Energijos skirstymo operatorius", the purpose of which was to assess whether the undertaking complied with the requirements for the reliability of electricity transport and the quality of the services from 1 January 2012 to 28 February 2018. During the inspection, it was established that AB "Energijos skirstymo operatorius" provided erroneous information concerning the qualitative indicators of the distribution network to the NERC: supply interruptions were attributed to *force majeure* or to factors beyond the control of

AB “Energijos skirstymo operatorius” without due grounds, which led to incorrect calculation of the indicators of the reliability of electricity transport and the quality of the services during the period between January 2012 and February 2018 (SAIDI and SAIFI).

Taking into account the results of the unscheduled inspection of AB “Energijos skirstymo operatorius” carried out in 2019 – the company provided erroneous information to the NERC, which resulted in incorrect calculation of the indicators of the reliability of electricity transport and the quality of the services (SAIDI and SAIFI) – the data provided by AB “Energijos skirstymo operatorius” for the year 2019 is not evaluated.

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

- the percentage of new customers connected on time (within 20 days after the payment of the connection fee);
- the percentage of electricity transport renewed on time (within 5 working days for household consumers and within 2 working days for other consumers) to consumers who have paid their debts;
- the percentage of consumers informed about scheduled interruption on time (10 calendar days in advance);
- the percentage of malfunctions resolved on time (within 5 working days) for the consumers;
- the percentage of electricity transport renewed on time (depending on the reliability category) after unscheduled interruption for the consumers;
- the percentage of the complaints of consumers and network users processed on time (within 30 calendar days).

Only one indicator of the quality of the services is established for the TSO, namely the percentage of complaints processed on time (within 30 calendar days).

The implementation of the indicators of the transport reliability quality carried out by AB “Energijos skirstymo operatorius” over the course of 2019 was not assessed on the basis of the results of the unscheduled inspection of AB “Energijos skirstymo operatorius” mentioned above.

- Article 59(10) of Directive (EU) 2019/944: Congestion management

In accordance with Article 19(5) of the Electricity Regulation, the NERC prepares and publishes a report of congestion income for the year 2019 (hereinafter referred to as “the Statement”), which is also provided by ACER. The report is based on data provided by the TSO.

1. Pursuant to Article 19(5)(a) of the Electricity Regulation, information is provided on congestion income generated during the 12 months preceding 31 December of the previous calendar year, i.e. during the period of 01/01/2019-31/12/2019.

Table 1. *Congestion income generated during the period of 01/01/2019-31/12/2019*

Interconnection	Income generated, EUR
Lithuania – Latvia	380 150
Lithuania – Poland	10 160 009
Lithuania – Sweden	16 825 674
Total	**27 365 833**

2. In accordance with Article 19(5)(b) of the Electricity Regulation, information is provided on how congestion income has been used in accordance with Article 19(2) of the Electricity Regulation, including specific projects and the amount of income transferred to a separate line of the account. In the data, AB "Litgrid" indicated that the income was used in accordance with Article 19(2)(a) of the Electricity Regulation in order to ensure that the allocated capacity could actually be utilised, including compensation for non-compliance with the capacity guarantee, as well as in accordance with Item b in order to maintain or increase cross-zonal capacity by optimising the use of existing interconnections through coordinated corrective actions, where applicable, or in order to cover the costs of network investments, which are important in seeking to reduce interconnection congestion. Table 2 provides detailed information on the use of the generated income during the period of 01/01/2019-31/12/2019.

Table 2. *Use of congestion income generated during the period of 01/01/2019-31/12/2019*

	Used income, EUR
Ensuring the utilisation of allocated capacity in accordance with Article 19(2)(a) of the Regulation	**201 663**
Network investments in accordance with Article 19(2)(b) of the Regulation:	**3 786 786**
For the funding of the investment project "Expansion of 330 kV Bitėnai transformer substation (TS) to 330/110/10 kV Bitėnai TS (Stage II) and Construction of the 110 kV Electricity Transmission Line Pagėgiai-Bitėnai'	3 043 714
For the funding of the investment project "Stage I of the Expansion of the LitPol Link (400/330 kV auto-transformers in Alytus TS)"	743 072
Remaining income transferred to a separate internal account line	**23 377 384**
Total	**27 365 833**

3. In accordance with Article 19(5)(c) of the Electricity Regulation, information on the amount used to calculate network tariffs must be provided.

Congestion income was not used when setting the transmission service price cap for 2020.

4. In accordance with Article 19(5)(d) of the Electricity Regulation, information is provided on the verification of whether the amount referred to in Item c has been used in accordance with the Electricity Regulation and the methodology prepared in accordance with Article 19(3) and (4) of the Electricity Regulation. In Article 19(3) of the Electricity Regulation, it is established that if the priority objectives set out in Article 19(2) of the Electricity Regulation are duly met, income may be used as revenue, which must be taken into account by the regulatory authorities when approving the methodology for the calculation of network tariffs and/or the setting of network tariffs. The remaining income is transferred to a separate internal account line and kept there until

it can be spent for the purposes set out in Article 19(2) of the Electricity Regulation. In Article 19(4) of the Electricity Regulation, it is also established that, under Article 19(2)(a) or (b) of the Electricity Regulation, income shall be used in accordance with the methodology that has been proposed by the operators of the transmission system in consultation with the regulatory authorities and stakeholders, and that has been approved by ACER. At the very least, the methodology shall specify the conditions under which income may be used for the purposes specified in Article 19(2) of the Electricity Regulation, the conditions under which said income may be held in a separate internal account line in order to be used for such purposes in the future, and for how long said income may be held in such separate account line.

The congestion income has not been used in accordance with Article 19(5)(c) of the Electricity Regulation, therefore, under Article 19(5)(d) of the Electricity Regulation, no further assessment is being carried out.

5. On 31 December 2019, the balance of unused congestion income was EUR 38 889 thousand. Of this balance, EUR 26 240 thousand was added to the account of UAB "EPSO-G" group. It should be noted that on 26 March 2019, the NERC received the letter No 19SD-2081 from AB "Litgrid" (hereinafter referred to as "the Letter"), by which AB "Litgrid" requested the NERC to confirm that the account with the accumulated congestion funds could be connected to the account of UAB "EPSO-G" group of undertakings, thus avoiding the risk of inefficient intergroup use of the money and freezing of said money until 2023, until the funds will begin to be used for the funding of the project of synchronisation with the continental Europe.

Having assessed the information contained in the Letter in accordance with its scope of competence, the NERC, by letter No R2-(E)-917 of 26 April 2019, indicated that it does not object to the connection of the account with the accumulated congestion funds to the account of UAB "EPSO-G" group of undertakings if AB "Litgrid" undertakes to ensure that the income generated from the congestion is used for the purposes set out in the guidelines of the then applicable 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" regarding the management and allocation of transmission capacity of interconnections between existing national systems. Also, in accordance with the principle of transparency, AB "Litgrid" should provide information on the accumulated income and its use to the NERC on an annual basis.

- Monitoring of the balance of demand and supply

- Article 59(1)(v) of Directive (EU) 2019/944: Investments in generation and storage capacities related to security of supply

In accordance with the provisions of the LE, the NERC monitors and evaluates the implementation of the network development plan. Each year, AB "Litgrid" submits the 10-year plans of electricity network investments, which assess the scenarios for the development of foreseen new sources of generation.

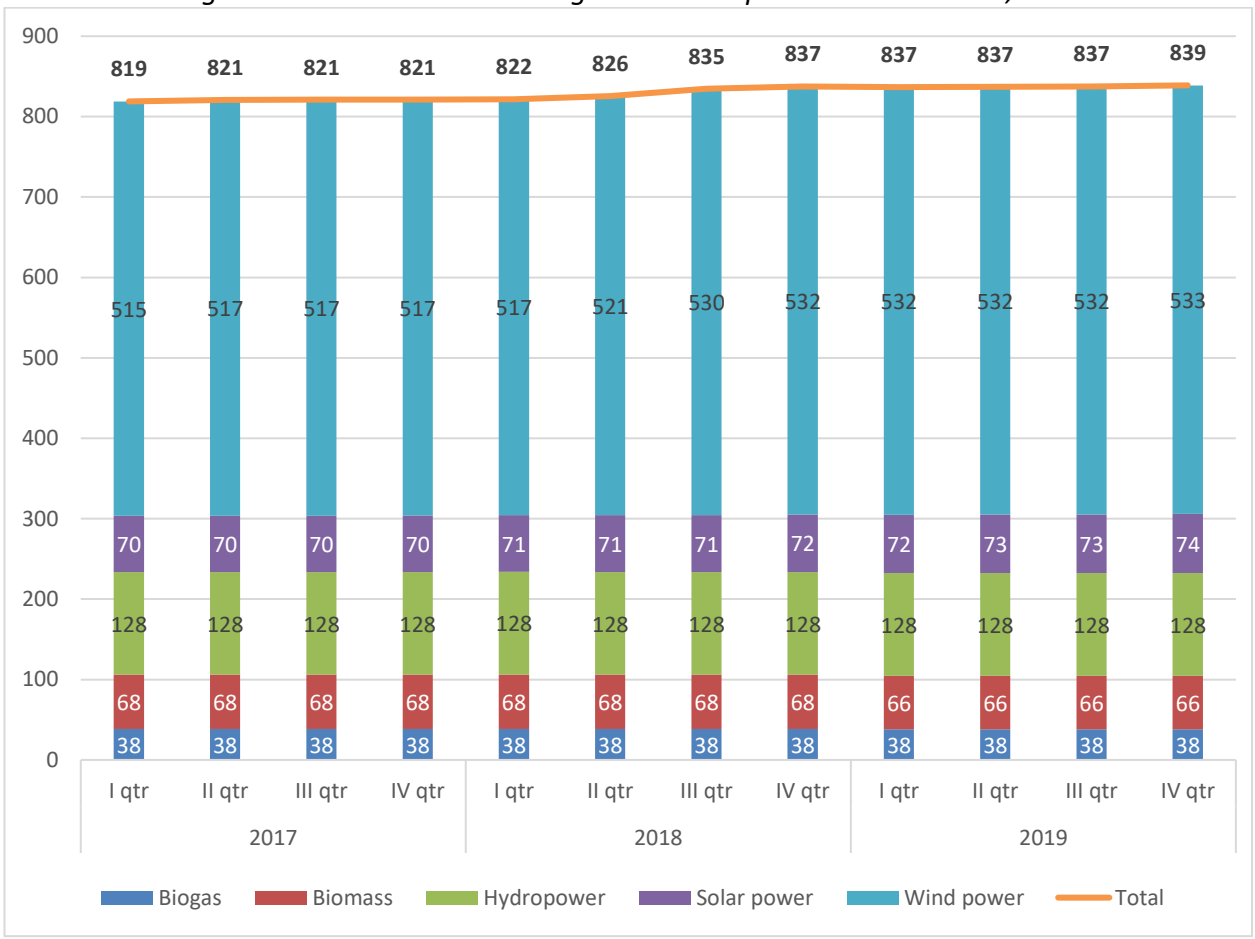
In the plan submitted in 2019, it is predicted that by 2028, the installed capacity of electricity producing sources will amount to 3168 MW. About 48.0 % of this number would be made up of power plants using renewable energy sources (hereinafter referred to as "RES").
It should be noted that the LPS has sufficiently strong cross-system interconnections with the neighbouring countries and the new cross-system interconnections with Poland and Sweden ("LitPol

Link" and "NordBalt") contribute to the enhancement of the security of supply of the system. Under these conditions, it is in any case technically possible to cover the lack of generation capacity (if such arises) with the help of imported electricity.

The NERC performs the monitoring of the investments in generation capacity by issuing permits for the development of electricity generation capacity and the generation of electricity to persons in accordance with the provisions of the LE, with the exception of those persons whose generation equipment has an installed capacity exceeding 30 kW and the electricity generated in said equipment is used only for personal and household needs without supplying the electricity to electricity networks, as well as persons intending to generate electricity in equipment having an installed capacity not exceeding 30 kW and producing electricity from renewable energy sources.

In 2019, as in 2018, the largest market share in the overall market structure of the installed capacity of renewable sources was held by wind power plants – 63.5% in 2019 and 2018, hydroelectric power plants – 15.2% and 15.3% respectively, solar power plants – 8.8% and 8.5%, biomass power plants – 7.9 % and 8.1 %, and biogas power plants – 4.6% in 2019 and 2018.

Fig. 10. RES structure according to installed power in 2017-2019, MW



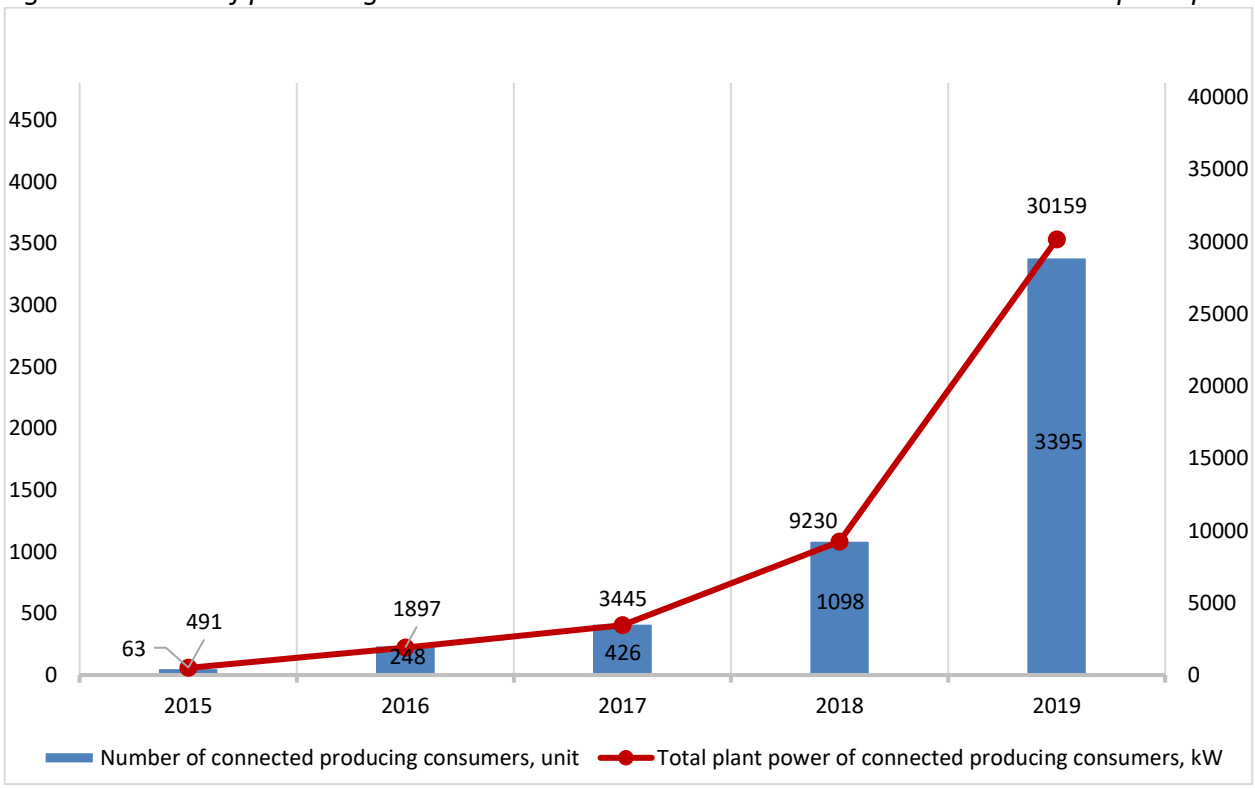
Source: NERC.

In 2019, as in 2018, the share of the installed power of the RES power plants in the overall balance of installed power amounted to 22.8%.

In accordance with the provisions of the Law on Energy from Renewable Sources, the electricity network operator provides information to the NERC on a monthly basis on the connection conditions issued to producing consumers and persons seeking to become producing consumers

and intending to construct or install power plants using renewable sources, for which, in accordance with the procedure established in the LE, a permit for the development of electricity generation capacity is not required in.

Fig. 11. Number of producing consumers connected to distribution networks and total plant power



Source: NERC

In 2019, compared to 2018, the number of consumers producing electricity from RES increased by 3 times – from 1098 to 3395 – while the installed power increased from 9.230 MW at the end of 2018 to 30.159 MW at the end of 2019.

The growth in the number of consumers producing electricity from RES is stimulated by greater possibilities to make use of financial support measures provided by the EU and more flexible conditions for the installation of a power plant: starting from July 2019, the NERC permit for the installation of a power plant whose power does not exceed 30 kW is not required.

In the development plan for 2019-2028 prepared by the TSO AB "Litgrid", said undertaking indicated that in view of the interconnection agreement signed by Poland, the three Baltic States and the electricity transmission operators of the supporting countries on 29 May 2019, as well as the technical interconnection conditions, the project "Installation of the Battery Energy Storage System in the LPS" was initiated in order to ensure the reliable operation of the system, and in the investment plan for 2019-2028 prepared by the DSO AB "Energijos skirstymo operatorius", said undertaking indicated that a pilot project on the use of storage systems for controlling voltage within the network and reducing the costs of network reconstruction is being carried out in 2019-2020. Nevertheless, prior to coordinating such investments, the NERC, in accordance with the provisions of Directive (EU) 2019/944, will require that a market investigation be carried out as to whether there is a potential possibility and the interest of other persons to invest in energy storage facilities.

Operational network security

Due to uncompetitive local production capacity, the majority of electricity was imported in 2019. In 2019, only 29.9% of the total electricity consumed in the country was produced by power plants operating in Lithuania, which is a higher share than that recorded in 2018 (26.6%). In 2019, electricity imports accounted for 103.1% of the total electricity demand in the country (the figure was 96.77% in 2018, 89.61% in 2017 and 82.48% in 2016). In 2019, the country produced 3,64 TWh of electricity, electricity imports amounted to 13,385 TWh and its exports measured 4,041 TWh. In 2019, the domestic electricity consumption amounted to 12.153 TWh.

The amount of electricity that can be imported depends on the repairs carried out within the transmission network. In 2019, an average of 3.430 GWh could be imported to Lithuania every hour.

Expected future demand and power anticipated for the coming 5 and 5-15 years

In Lithuania, the maximum hourly electricity demand (net) in 2019 was 2.032 MW, i.e. 1.65% higher than in 2018 (1.999 MW), respectively in 2017 – 1.896 MW, in 2016 – 1.979 MW. In 2019, the maximum hourly demand for electricity within the distribution network amounted to 1.733 MW, which was 1.53% lower than in 2018 (1.760 MW), respectively in 2017 – 1.665 MW, in 2016 – 1.695 MW.

The most important factors determining electricity consumption are changes in the country's economic level, which are best defined by the gross domestic product (hereinafter referred to as "GDP"). However, there are other factors that have a significant impact on the future demand for electricity, thus in the forecast of electricity demand, the following factors have been assessed:

- GDP growth;
- electricity efficiency;
- the number of electric vehicles and their electricity consumption;
- the number of heat pumps and their electricity consumption;
- distributed generation, which currently accounts for a very small share of the entire energy system. The development of distributed generation depends to a large extent on technological progress and competitiveness within the market, which, in view of the current prospects, will not lead to a significant change in the short term.

It is projected that the total electricity consumption in Lithuania will reach 14.63 TWh in 2028 (annual growth of around 2% on average), while the final electricity consumption will reach 13.54TWh.

Over the course of 2019, AB "Energijos skirstymo operatorius" transferred 10.194 TWh (10.201 TWh in 2018) of electricity to its clients (including technological losses and own needs). The amount of electricity to be transferred in 2020-2022 is projected in accordance with the provisions of the Methodology for the Setting of Price Caps for Electricity Transmission, Distribution and Public Supply Services and the Public Supply approved by the NCC, i.e. it is expected that electricity consumption will grow by a rate of change amounting to ½ of GDP. According to the projections of Lithuania's economic indicators of March 2019 of the Ministry of Finance of the Republic of Lithuania,

Lithuania's GDP growth projected for 2020-2022 was respectively 1.3%, 2.2% and 2.2% (½ of GDP amounts to 0.65%, 1.1% and 1.1% respectively).

In accordance with Article 44 of the LE, the guaranteed supply function is performed by the distribution system operator for those consumers whose equipment is connected to the electricity networks managed by the distribution system operator, and by the distribution system operator servicing more than 100 000 consumers for those consumers whose equipment is connected to the electricity networks managed by the transmission system operator. In 2019, the guaranteed supply of electricity of AB "Energijos skirstymo operatorius" amounted to 0.47 TWh (0,51 TWh in 2018, 0,41 TWh in 2017). AB "Energijos skirstymo operatorius" expects that due to the introduction of quarantine and the reduced energy demand within the country, the guaranteed supply level will decrease by 5-15% in 2020. The DSO AB "Energijos skirstymo operatorius" predicts that from 1 January 2021, once the public supplier ceases to provide the public supply service for some of the consumers (i.e. those consuming >5000 kWh/year) to whom electricity was supplied at regulated prices[3], some household consumers will not choose an independent supplier in due time, therefore the quantities of guaranteed supply consumers and guaranteed supply service are likely to increase. It is anticipated that the largest growth of guaranteed supply will be observed in 2022 when all household consumers who consume between 1 and 5 thousand kWh per year are expected to choose an independent supplier.

In 2019, the public electricity supply amounted to 2.884 TWh. In 2018, the public and guaranteed electricity supply measured 2.979 TWh and 0.51 TWh respectively. The undertaking estimates that the amount of electricity planned to be supplied to consumers purchasing electricity from public electricity suppliers over the period of 2020-2022 will change by 0% to 1% each year (without considering the decision of consumers to purchase electricity from independent suppliers and the liberalisation of the electricity retail market). It should be noted that, in accordance with the amendments of the LE considered and adopted by the Parliament of the Republic of Lithuania, the public supply will cease to be performed starting from 2023[3].

- Cross-border issues

- Article 59(1)(w) of Directive (EU) 2019/944: Technical cooperation between transmission system operators of the EU and third countries

In 2019, the existing level of technical cooperation with the operators from third countries, which is essential when seeking to ensure reliable operation and high quality of electricity of the LPS and to prepare for the desynchronisation from the UPS/IPS system in a timely and appropriate manner, continued to be maintained.

In accordance with the official referral and proposal of the European Commission, the issues of desynchronisation from the UPS/IPS system are discussed in the BRELL (Belarus, Russia, Estonia, Lithuania, Latvia) Committee and the operational planning and management work group, where transmission system operators present information on the current situation of system development. The Committee meets twice a year, while the working groups meet as needed.

The BRELL agreement regulates technical cooperation issues, which are meant to ensure coordinated and reliable operation of a single synchronous zone. In 2019, there were no identified obstacles that could affect cross-border trade and the use of transmission infrastructure with third

[3]In May 2020, an amendment of the LE was adopted regarding the liberalisation of the electricity supply market.

countries, there were also no new cooperation agreements concluded with the transmission system operators of third countries in 2019.

- Implementation of network codes and guidelines

- Article 59(7) of Directive (EU) 2019/944: Network codes

- Demand connection
- Requirements for generators
- High-voltage direct current connections

As part of the implementation of Regulation (EU) 2016/1388 on a network code establishing the requirements for demand connection and Regulation (EU) 2016/1447 on a network code establishing the requirements for the grid connection of high-voltage direct current systems and direct current-connected power park modules, the NERC approved, respectively, the general technical requirements for the grid connection of new electrical demand objects, high-voltage direct current systems and direct current-connected power park modules. These requirements – frequency stability, reactive power and voltage requirements, network characteristics, etc. – will apply to newly connected installations. If they do not meet said requirements, the transmission system operator may refuse to connect them. The general technical requirements will ensure fair conditions of competition for all market participants, as well as security of the electricity system while integrating electricity produced from renewable sources, and will also facilitate the trading of electricity throughout the European Union by adopting effective measures.

- Operation

Pursuant to Regulation (EU) 2017/1485, which establishes guidelines for the operation of the electricity transmission system, the Key Organisational Requirements, Roles and Responsibilities Relating to Data Exchange and Operational Security (KORRR) prepared by AB “Litgrid” together with other European electricity transmission system operators were approved. Said KORRR applies to European transmission system operators, distribution system operators and electricity producers connected to the transmission system. The KORRR establishes at European level a uniform volume of published data and the process of the organisation of the exchange of said data in order to enable each infrastructure manager to obtain the necessary data on the condition of the network whose portion affects their installations. ACER, in accordance with Commission Regulation (EU) 2017/1485, which establishes guidelines for the operation of the electricity transmission system, approved the methodology for the coordinated analysis of operational security of the network (CSAM) and the methodology for assessing the relevance of assets for outage coordination (RAOCM). The decision regarding CSAM is the basis for pan-European regional proposals on operational security coordination for each capacity calculation region (CCR). Among other things, the CSAM decision covers harmonised rules that are meant to determine which network elements the TSO is responsible for observing in real time and what actions, which are meant to ensure network operation within the defined operational limits, are to be taken by the TSOs inside a common CCR and the TSOs in different CCRs. RAOCM sets out harmonised rules for the coordination of disconnection of installations between different TSOs for all synchronous zones and describes the methodology for the calculation of the influence of installations on the system.

- Resolution of accidents and restoration of operation

The NERC, together with the national regulatory authorities of Estonia and Latvia, submitted comments to the TSOs on the methodologies submitted for approval on rules for the suspension and restoration of market activities and on rules for the settlement of imbalance in the case of market suspension, which had been developed in accordance with Regulation (EU) 2017/2196 on a network code that establishes the requirements for the resolution of accidents within the electricity system and the restoration of operation. The process of the approval of said rules is still under way.

- Allocation of forward capacity

In 2019, the decision adopted by the NERC on cross-zonal risk hedging opportunities was being implemented. By the decision of the NERC, the operation of wholesale markets must be encouraged by investing in the enhancement of the transmission network capacity, the most important of which is the construction of the third Estonian-Latvian transmission link. The project is expected to be implemented by the end of 2020, the transmission system operators also predict that the enhancement of capacity between Estonia and Latvia in 2020 will reduce the price differences between the Baltic States, thus market participants will have access to the most liquid products of Scandinavian price risk hedging.

In accordance with the Network Code on Forward Capacity Allocation, the NERC must update the analysis of cross-zonal risk hedging opportunities at least every 4 years, taking into account the efficiency of the existing electricity derivatives and other factors.

- Capacity allocation and congestion management

The NERC approved the All Baltic Capacity Calculation Region TSOs' common methodology for redispatching and countertrading cost sharing (hereinafter referred to as “the Methodology”) prepared by AB “Litgrid” together with other TSOs of the Baltic region – Estonia, Latvia, Sweden, Poland and Finland.

The approved methodology will ensure optimal use of the transmission infrastructure by eliminating congestion in the area of electricity production, trade and supply. The methodology provides for the sharing of the incurred countertrading costs, which will be shared between the the relevant TSOs responsible for the redispatching of loads, and for the obligation to perform the redispatching of loads and countertrading on the basis of the principle of lowest cost, i.e. the offers of the lowest price must be activated first, without prejudice to the requirements of system security. The obligation of the transmission system operator to collect statistical information on the redispatching of loads and countertrading and to publish said data accordingly on the ENTSO-E Transparency Platform is also set out.

The approval of the methodology is another important step towards the establishment of common operational principles in the Baltic capacity calculation region, as the Methodology has complemented the Common Methodology of Coordinated Capacity Allocation for the Baltic Capacity Calculation Region approved by the NERC on 16 November 2018, the the All Baltic Capacity Calculation Region TSOs’ common methodology for coordinated redispatching and countertrading approved on 14 February 2018, the All Baltic Capacity Calculation Region TSOs’ common methodology for coordinated redispatching and countertrading of 15 February 2019. Said methodologies are planned to be implemented at the same time.

The NERC extended the deadline for the beginning of the operation of several nominated electricity market operators in the bidding zones of Lithuania, Latvia and Estonia. Such a decision was adopted

on the basis of a joint request by the Baltic transmission system and exchange operators regarding the need to extend the deadline in order to allow for the conclusion of relevant agreements on the use of cross-zonal electricity transmission capacity. Currently, the nominated electricity market operator "European Market Coupling Operator" is carrying out its activities in the bidding zones of the Baltic States, another operator, SE "EPEX SPOT", which is entitled to engage in its activities, does not plan to start operating in 2019-2020.

As of 16 December 2019, the NERC appointed "European Market Coupling Operator" to perform the functions of the nominated electricity market operator in Lithuania (for 4 years, until 15 December 2019 (inclusive), the nominated electricity market operator was AS "Nord Pool Spot"). "European Market Coupling Operator" is part of the AS "Nord Pool Holding" group (as of 1 November 2018 AS "Nord Pool Spot" has been reorganized). The NERC assessed the financial, technical indicators of "European Market Coupling Operator" and its ability to ensure transparency. The nominated electricity market operator will ensure a transparent platform for the trading of electricity in order to create a single and integrated electricity market in Europe. "European Market Coupling Operator" will perform the functions of the nominated electricity market operator not only in the Lithuanian electricity bidding zone, but also in Latvia, Estonia, the Scandinavian countries.

The NERC approved the joint proposal prepared by AB "Litgrid" together with the Swedish and Polish TSOs and the nominated electricity market operators (NEMOs) on the European cross-border distribution of the intraday regional costs (LIP16). The total costs, which include the integration of the Lithuania-Poland electricity interconnection "LitPol Link" and the Sweden-Poland electricity interconnection into the common European cross-border IT platform for intraday electricity trading (XBID), will be divided equally amongst all the countries implementing the project. In the meantime, as regards the manner in which the costs reasonably incurred will be shared, the TSOs and the exchange operators cooperating in a specific region will have to agree on a joint proposal to be approved separately by the competent national institutions of the Member State of the region (the NERC received such a proposal in February 2020).

Once the common European cross-border IT platform for intraday electricity trading (XBID), where trading between states and platforms of different exchange operators is carried out, begins to operate, the transmission and exchange operators cooperating in a specific region must agree on a joint proposal on how the costs reasonably incurred will be shared, said proposal shall subsequently be separately approved by the competent national institutions of each Member State of the region. In February 2020, the NERC received a proposal on the allocation of costs for the incorporation of the Baltic States into the XBID (LIP13), which will be subject to the decisions adopted by the regulators of the Baltic Sea Region.

- Electricity balancing

In accordance with the requirements of Regulation (EU) 2017/2195, which establishes guidelines on electricity balancing, the NERC approved the Standard Terms and Conditions of the Imbalance Sales Contract drawn up by AB "Litgrid", which will apply to the entities operating in Lithuania. The approved standard terms and conditions of the imbalance sales contracts will ensure uniform and non-discriminatory operating conditions for all system users by clearly regulating mutual obligations between market participants and the transmission system operator, conditions for the submission, modification and adjustment of balance schedules, settlement procedure. The NERC also approved the Standard Terms and Conditions of the Balancing Service Contract drawn up by AB "Litgrid". The approved terms and conditions will be mandatory for the suppliers of balancing services operating

in Lithuania, will ensure uniform and non-discriminatory conditions for all producers/market participants, and will allow the transmission system operator to ensure efficient system operation. In the terms and conditions, the requirements are set out for the potential supplier of balancing services, it is also established how the trading of balancing electricity is to be performed: the transmission system operator announces an auction of balancing capacity (for the secondary active power reserve) no later than by 20 September (thus the first auction of the sourcing of said service will be organised by 20 September 2020 when capacities are sourced for the year 2021); the suppliers of balancing services submit balancing energy bids for the amount of power sold at the auction or free power.

In accordance with Regulation (EU) 2017/2195, which establishes guidelines on electricity balancing, the NERC approved the procedure prepared by AB "Litgrid" together with other TSOs on the common settlement rules for the unintended exchange of energy, i.e. the amount of energy resulting from power and frequency management errors in the systems of the TSOs, between asynchronously connected TSOs. This legislation ensures clear and non-discriminatory conditions of settlement between TSOs.

On 28 January 2020, ACER published three decisions on the framework of the implementation of the common European Union trading platforms for electricity balancing, which will effectively integrate all separate national balancing markets into a single EU electricity balancing market. A single balancing market will allow the EU Member States to share the resources used by their TSOs in order to ensure balance between electricity generation and consumption. This should help to enhance security of supply, limit emissions of carbon dioxide and reduce the costs incurred by consumers. Two of the decisions adopted by ACER regulate the electricity balancing from frequency restoration reserves with manual activation (mFRR) and with automatic activation (aFRR), i.e. balancing services/products procured by the TSOs. The third decision establishes a harmonised methodology for the pricing of balancing energy. It is expected that, in accordance with the decisions adopted by ACER, the TSOs will develop two common European trading platforms, which will enable all balancing energy bids to compete at EU level and thus promote competition in all of the EU Member States, within 30 months of the adoption of said decisions. These two platforms will contain energy bids from the providers of balancing services across the EU, while all TSOs will be able to balance their national transmission systems by activating the cheapest available bids. This will allow the TSOs to balance their systems in a more cost-effective and safe manner. Under this proposal, all suppliers of balancing energy will receive a price based on the marginal pricing algorithm (pay-as-cleared) for the bids placed on the platform and subsequently activated. This is a significant step forward, as the majority of TSOs are currently using another algorithm wherein the price is equal to the supplier's order price (pay-as-bid). Marginal pricing creates efficient price signals for the existing providers of balancing services and the potential new investors.

The NERC, together with the national regulatory authorities of Estonia and Latvia, provided clarification to the transmission system operators on the exemption from the rules for the TSO-TSO settlement of imbalances due to intended energy exchanges within the synchronous zone in accordance with Article 50(3) of Regulation (EU) 2017/2195, which establishes guidelines on electricity balancing. This legislation is not approved as an exemption applies to the Baltic States due to the fact that they belong to the BRELL ring. In cooperation with the national regulatory authorities of other countries of the European Union, while engaging in the activities of international working groups, comments were made regarding the three additional methodologies submitted by the EU transmission system operators on the implementation of Regulation (EU) 2017/2195 (methodology for the classification of the activation purposes of balancing energy offers, rules for

the TSO-TSO settlement of imbalance due to intended energy exchanges, procedure for the harmonisation of the key features of the settlement of imbalance). The national regulatory authorities did not reach a common agreement on the aforementioned methodologies due to protracted discussions regarding the content of the documents, thus, in accordance with the provisions of the Regulation, the approval of the methodologies will be subject to the decisions adopted by ACER.

3.2. Promotion of competition and functioning of the market

3.2.1. Wholesale market

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

- Article 59(1)(n) and (o) of Directive (EU) 2019/944

In accordance with the provisions of the LE, the NERC continuously monitors and controls compliance of the electricity market participants with the requirements of transparency, non-discrimination and competition within the electricity sector set out in the LE and other legislation, compliance with the conditions and requirements for licensed activities or activities for which a permit is required within the electricity sector, how consumer rights and legitimate interests are protected and defended, including the reliability of the information provided to consumers. Entities operating in the wholesale electricity market must make publicly available the information provided for in separate legislation. In accordance with the approved description of the information to be made publicly available, the NERC publishes on the NERC website the list of the information to be published by the entities of the electricity sector[4] (hereinafter referred to as "the List"). In accordance with the aforementioned description, the NERC also annually checks the manner in which the information contained in the List is made publicly available by the entities. Having identified deficiencies in the published information, the NERC draws up recommendations related to compliance of the prices of the services within the energy sector with the requirements of transparency, non-discrimination and other requirements set out in legislation. In accordance with the provisions of the Law on Energy, these recommendations are published at least once every 5 years and submitted to the Competition Council of the Republic of Lithuania.

In order to carry out the monitoring of the market, the NERC, in accordance with the approved Rules for the Provision of Information of the Undertakings active in Energy, Drinking Water Supply and Waste Water Treatment, Surface Waste Water Treatment, collects information from the entities that activities are subject to licences, certificates and/or state-regulated prices. On the basis of the information submitted by said entities, in order to enhance the awareness of market participants and ensure that the market participants have access to reliable information, the NERC regularly draws up half-yearly reports on the monitoring of the electricity market and publishes them on the NERC website[5].

The level of transparency related to wholesale prices is monitored in accordance with the provisions of REMIT. In addition, the NERC, in accordance with the Rules for the Monitoring of the Trading of

[4] https://www.regula.lt/elektra/Puslapiai/elektros-energetikos-sektoriaus-ukio-subjektu-viesai-skelbiamos-informacijos-sarasas.aspx
[5] https://www.vert.lt/elektra/Puslapiai/elektros-rinkos-apzvalga/rinkos-stebesena.aspx

Electricity and Natural Gas[6] approved by the NERC, has established limits on the disclosure of information that is considered to be publicly unavailable.

The monitoring of trade in the electricity market is carried out by analysing the behaviour of market participants, i.e. conditions of entering into transactions, including submission of orders to trade, explanations of market participants and other circumstances, in order to ensure that wholesale electricity markets are not abused. As part of their implementation of REMIT, the NERC and ACER **carried out continuous monitoring of the wholesale electricity and natural gas markets,** analysis of information published on platforms for the disclosure of publicly unavailable information[7] in the Lithuanian bidding zone (in the gas and electricity sector, there were 16 incorrectly/inaccurately published urgent market messages (UMM)).

In 2019, the NERC also **carried out registration of market participants** (7 market participants were registered), assessment of bilateral contracts on wholesale energy products and their compliance with the requirements of REMIT, monitoring of orders and transactions submitted on the exchanges by market participants. ACER performs the monitoring at European Union level, a platform for reporting possible infringements was developed for this purpose. In 2019, the NERC received 2 reports of possible REMIT infringements within the electricity sector via this platform: in 2019, the analysis of said reports was still under way, thus the analysis of the aforementioned potential infringements is still ongoing.

In order to create the preconditions for the development of effective competition within the electricity markets and prevent the abuse of significant influence of persons within the electricity markets, the NERC conducts market research in accordance with the Rules for Market Research. Accordingly, the NERC regularly publishes market research reports on its website and updates said reports, with the exception of information that is considered confidential, and publishes and updates the final decisions on the market research results or parts thereof without confidential information. It was noted that no market research was carried out in 2019.

It should be noted that at least once in each half year, the meetings of the National Committee for the Development of the Common Baltic Electricity Market, which are attended by the representatives of state institutions, market participants and related associations, take place. In these meetings, relevant information is exchanged, problematic issues are discussed while clarifying their causes, and the steps to be taken in order to achieve efficient operation and development of the electricity market.

While monitoring market development, it should be noted that the electricity interconnections "NordBalt" and "LitPol Link" have opened up new opportunities for the development of the Lithuanian electricity market. The decrease in electricity prices was recorded in both the Lithuanian and Latvian price zones, where electricity prices on the "Nord Pool" day-ahead electricity exchange decreased by more than 7% in 2019 when compared to 2018 (compared to 2017, in 2018, an increase in prices, which amounted to 42.3% respectively, was recorded).

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

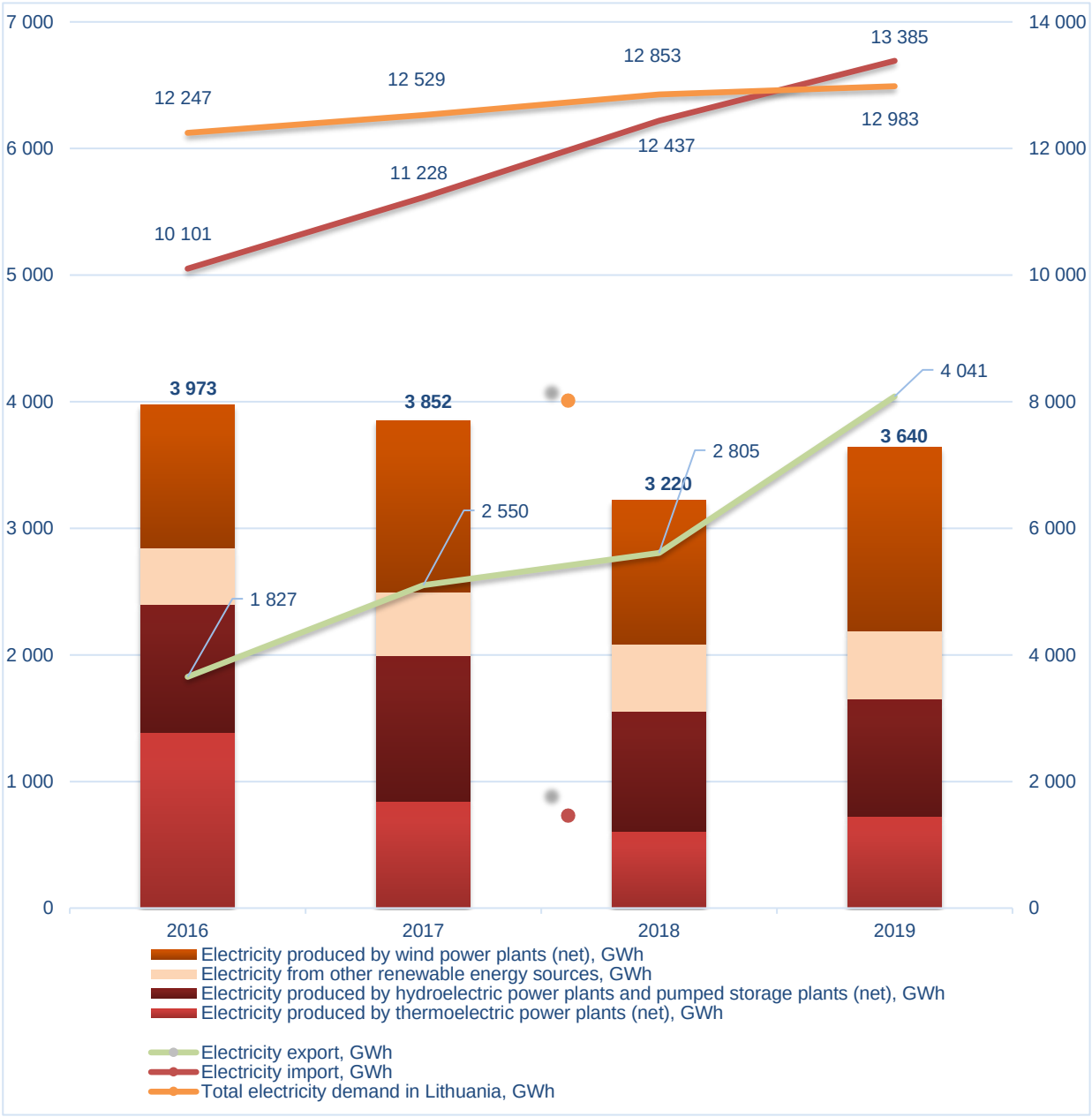
[6] https://www.e-tar.lt/portal/lt/legalAct/fbc3b880c84711e69dec860c1f4a5372/asr
[7] https://umm.nordpoolgroup.com/#/messages?publicationDate=lastweek&eventDate=nextyear
https://umm.getbaltic.com/public-umm

The harmonisation of rules between different EU countries should have a significant impact on the promotion of competition and the functioning of the market. The relevant implemented measures related to the implementation of the network codes are set out in the above section titled “Implementation of the network codes and guidelines”.

As in previous years, the NERC, in order to achieve transparency, enhancement of the awareness of market participants and consumers, published all the information related to its activities on its website: said information included news, various clarifications, statistical information, information on ongoing meetings, public hearing material, etc.

Information on the country’s total electricity demand, the amount of electricity produced in the country (net), the amount of imported and exported electricity is provided below in Figure 12.

Fig. 12. Electricity production, import, export and the total domestic electricity demand in 2016-2019



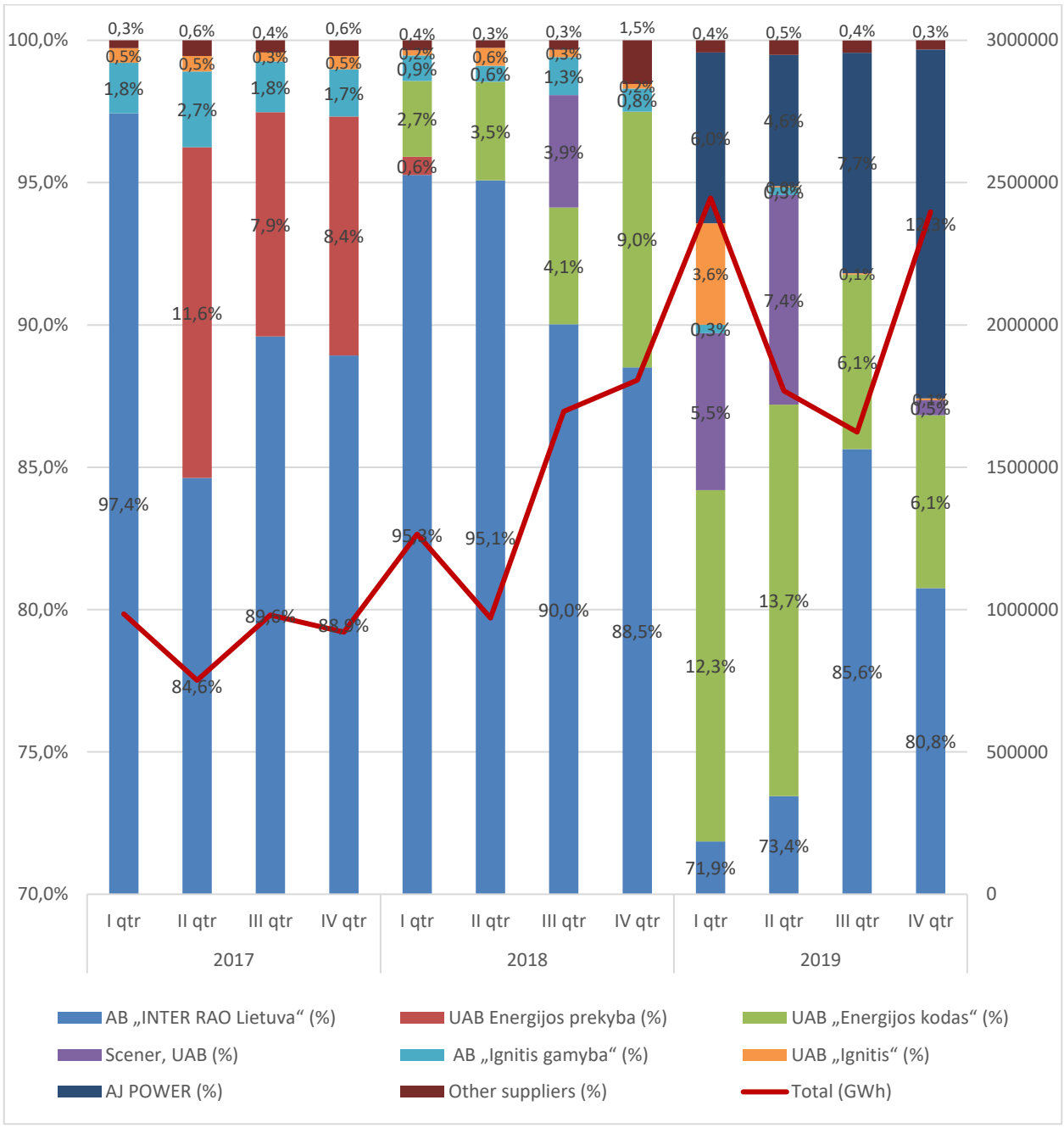
Source: NERC.

In 2019, the electricity price in the Lithuanian market amounted to EUR 46.12/MWh. 103.1% of the total electricity demand in the country was imported. Further information is available at www.nordpoolspot.com.

In 2019, the sales of electricity on the electricity exchange were carried out by 10 suppliers, while the purchases were performed by 15 suppliers.

In 2019, there were 4 main suppliers in the wholesale electricity market: AB “INTER RAO Lietuva”, UAB “Energijos kodas”, AJ POWER and UAB “Scener”. More than 70% of all sales of electricity on the electricity exchange in 2019 consisted of the volume of electricity sold by AB “INTER RAO Lietuva”. Considering the overall result of AB “INTER RAO Lietuva”, UAB “Energijos kodas”, AJ POWER and UAB “Scener”, it exceeded 98% of all sales of electricity on the electricity exchange in 2019.

Fig. 13. Structure of the electricity sales market on the electricity exchange by undertaking, %, 2017-2019



Source: NERC.

In 2019, more than 40% of all purchases of electricity performed by independent suppliers on the electricity exchange consisted of the purchases of UAB “Ignitis”[8].

[8]UAB “Energijos tiekimas” was merged with UAB “Lietuvos energijos tiekimas”. In 2019, the undertaking changed its name to UAB “Ignitis”.

Fig. 14. Structure of the electricity purchases market on the electricity exchange by independent supplier, %, 2017-2019

Source: NERC.

3.2.2. Retail market

- Monitoring of the price level, the level of transparency, the efficiency of market opening and competition

- Article 59(1)(o) of Directive (EU) 2019/944: Market opening and competition

In principle, the retail market is monitored analogously and controlled in accordance with the same principles set out in Chapter 3.2.1.

As of 2013, all commercial consumers pay for electricity at market prices, and, if necessary, the guaranteed supply to these consumers is ensured for no longer than 6 months. Household consumers also have the right to choose an independent electricity supplier and purchase electricity in the market or under bilateral contracts.

In 2019, compared to 2018, the number of consumers in the country grew from 1 732 539 to 1 754 464, of which 146 347 were non-household consumers. During 2019, the consumption of non-household consumers purchasing electricity at public prices decreased slightly from 0,098 TWh to 0,097 TWh. The consumption of household consumers purchasing electricity at public prices during 2019 amounted to 2,79 TWh and was slightly lower than that recorded in 2018 (2,86 TWh). The number of household consumers purchasing electricity in the market at contractual prices increased

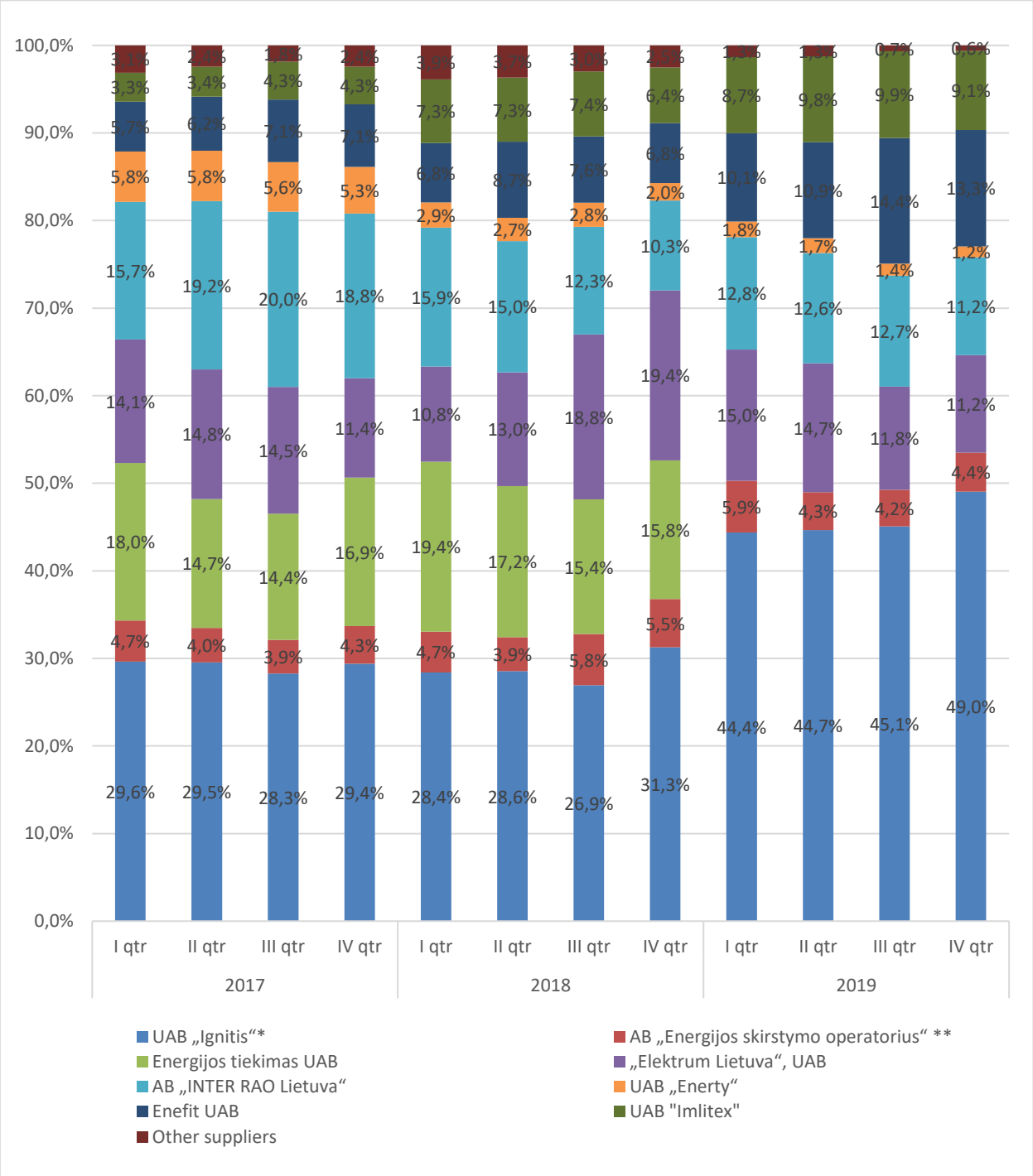
from 36 to 47 in 2019 when compared to the previous year. In 2019 I-IV quarters, due to outstanding debt, AB „Energijos skirstymo operatorius“ terminated the transmission of electricity to 3447 customers, of which 2935 were household consumers. The termination of electricity due to debts is carried out at any time of the year. The termination of electricity is not carried out:

- when the maximum daily air temperature is below minus 15 (fifteen) degrees Celsius;
- when the maximum daily air temperature is above plus 30 (thirty) degrees Celsius;
- on Fridays, Saturdays, Sundays, public holidays and days preceding public holidays.

The 4 largest independent electricity suppliers in the independent supply retail market are as follows: UAB “Ignitis”, UAB “Elektrum Lietuva”, AB “INTER RAO Lietuva”, UAB “Enefit”. Their share in the retail market amounted to 82.4% according to the volume of electricity. Amongst the largest independent electricity suppliers, in 2019, compared to 2018, UAB “Enefit” experienced the largest growth in its market share.

In the structure of the retail market of supply, the market share of UAB “Ignitis” accounted for more than 40% of the total electricity sales in the market in 2019. At the end of 2018, said undertaking began performing the activities of the public supply of electricity in place of UAB “Energijos skirstymo operatorius”. Following the 2019 merge of UAB “Lietuvos energijos tiekimas” with UAB “Energijos tiekimas” and the change of the name of the undertaking to UAB “Ignitis”, said undertaking also performs the activities of the independent supply of electricity. Compared to 2018, the share of the electricity sales of AB „Energijos skirstymo operatorius“ in the retail market decreased and amounted to 4.6%. The decrease in the sales of said undertaking in the retail market was due to the fact that as of the third quarter of 2018, it has ceased performing the activities of the public supply of electricity, i.e. the company provides the service of guaranteed supply of electricity. Other market participants maintained market positions similar to those observed in 2018.

Fig. 15. Sales structure of the retail market by supplier, %, 2017-2019



** Public supply of electricity. Up to 1 October 2018, the activities of the public supply of electricity were carried out by AB "Energijos skirstymo operatorius". In 2019, UAB "Ignitis" is carrying out the public supply of electricity and the independent supply of electricity.*
*** Guaranteed supply of electricity.*

Source: NERC.

The NERC assesses the costs of repairs, technical maintenance and operation, staff, administrative costs and other costs of electricity TSO and the main DSO (AB "Litgrid" and AB "Energijos skirstymo operatorius"), small distribution network operators (AB "Achema", AB "Akmenės cementas", AB "Lifosa" and UAB "Dainavos elektra") and operating public suppliers (UAB "Ignitis" and UAB "Dainavos elektra"), as well as the electricity producer AB "Lietuvos energijos gamyba" with a significant influence in the electricity reserve power market, in accordance with the submitted quarterly reports.

This makes it possible for the NERC to be constantly informed of the costs incurred by the regulated electricity transmission and distribution operators and to provide consultations on the issues of allocation of the incurred costs to regulated activities within the shortest possible period of time. Having assessed the submitted data of the quarterly reports on the income and costs of electricity undertakings, the NERC, according to the need, submits requests to the entities on the issues arising from the analysis of the costs. By actively analysing the quarterly operating costs of the aforementioned undertakings of the electricity sector, the NERC seeks to avoid situations that occurred in the past when, after routine inspections of the costs of electricity transmission, distribution operators and the public supplier of the electricity sector, significant violations of cost accounting of the undertakings engaging in regulated activities were recorded, and consumer overpayments, due to their volume, were spread over subsequent periods.

In 2019, the NERC also amended the Methodology for the Setting of Price Caps for Electricity Transmission, Distribution and Public Supply Services and the Public Supply, which provides for the following changes:

☐ in the case of provision of the public supply service, the volume of the working capital necessary for the activities of public supply shall be calculated by multiplying the average deadline for the payment of household consumers after the billing day (40 days) by the average daily distribution costs of a public supplier and taking into account the difference between the actual and forecast electricity purchase price;

☐ the price caps for the electricity distribution service in the medium-voltage and low-voltage networks may be adjusted by the difference between the costs incurred by the distribution network operator when carrying out the supply of guaranteed electricity and the income generated from the guaranteed supply of electricity;

☐ the principles for the adjustment of the public electricity price cap regarding the application of electricity distribution price caps of different distribution network operators when the public supplier provides the service of the public supply of electricity in the territories of licensed activities of several distribution network operators have been established;

☐ different price cap for the electricity distribution service in medium-voltage networks, applicable within the public price cap, shall be determined by taking into account the coefficient of the allocation to household consumers of the costs of the provision of the electricity distribution service, which is to be presented by the distribution network operator;

☐ it has been determined how the difference between the forward electricity purchase price and the actual electricity purchase price is to be refunded when it is spread over a period of more than one year;

☐ within the public electricity price cap, the coefficient of the allocation to household consumers of the costs of the provision of the electricity distribution service applicable to the price cap for the distribution service in low-voltage networks has been increased to 1,4 (from the former 1,3) for the next period of regulation of distribution activities;

☐ The inclusion of the operating costs of energy enterprises, arising from the implementation of strategic projects of synchronisation with the continental European networks or the

implementation of projects of common interest, in the regulated prices has been regulated. These amendments began to be applied when setting/adjusting the price caps for electricity transmission, distribution and public supply services, as well as their public price caps, for 2020 and subsequent periods.

As of 2016, when setting the prices for electricity transmission services and electricity distribution, the NERC uses the LRAIC model, purpose of which is to ensure the funding of the operator regarding necessary investments aimed at upgrading and optimising the depreciated elements of the network. Taking into account the negligible share of the actual investments in the depreciated assets optimised by the model in 2016-2017 (i.e. a significant difference between the expected and the actual results of the model was established), resulting in return on investments of 2016-2017 exceeding the threshold established by the NERC, the allowable return on investments was calculated in the first two years of the regulatory period on the basis of the value of the assets and the depreciation costs while using historical costs (assessing the actual investments made by the undertaking and the created assets). The resulting difference in return on investments was assessed in full when determining the income generated from transmission activities and the prices of services in 2019, and the part of resulting difference was assessed when determining the allowable income generated from electricity distribution activities and the prices of services in 2019. The remaining part of the difference in return on investments was assessed when determining the income generated from electricity distribution activities and the prices of services in 2020. The impact of these adjustments will be assessed when establishing the allowable income and price caps for the next regulatory period and continuing to apply the LRAIC model in order to maintain an integral level of funding of reasoned and necessary investments in asset renewal.

In 2019, the average electricity price in the Lithuanian market amounted to EUR 50.76/MWh. The public supplier's average annual retail price for a typical household consumer was EUR 47.8/MWh (electricity purchase and public supply margin), while the price of the use of electricity networks or the service of transport was EUR 46/MWh.

2020 is the fifth year of the period of regulation of transmission and distribution services of 2016-2020. In 2020, the NERC adopted the decision to extend the period of regulation of transmission and distribution services by another year. The allowable income calculated in each following year shall be adjusted in accordance with the Methodology for the Setting of Prices of Electricity Transmission, Distribution and Public Supply Services and of Their Public Price Caps approved by Resolution of the NCC No O3-3 of 15 January 2015.

In 2020, the transmission service price cap of the TSO AB "Litgrid" amounts to 0.814 c/kWh, which is 0,156 c/kWh or 23.68% higher than the transmission service price cap established for the undertaking in 2019 (0,658 c/kWh). The change in the transmission service price cap (an increase of 23.68%) was mainly due to:

☐ the need of funds when implementing the synchronisation of the electricity transmission network with the networks of the continental Europe and other investment projects ensuring reliable operation of the transmission system: transfer of auto-transformers (influence on the price – 0.042 c/kWh) and wage costs for the implementation of the project (influence on the price – 0.013 c/kWh);

☐ also, when setting the 2019 price cap for the electricity transmission service, the NERC reduced the income level by the excess profit of AB "Litgrid" resulting from unimplemented investments

and amounting to almost EUR 18 million. The return on investment of AB “Litgrid”, calculated on the basis of the value of all regulated assets, for 2020 should amount to EUR 17.559 million.

The transmission price within the average undifferentiated electricity price amounts to about 6.4%.

In 2019, the TSO AB “Litgrid” submitted information to the NERC that in 2020, it plans to order a service ensuring the secondary emergency power reserve of 400 MW/h on average, which will be provided by the Kruonis Pumped Storage Hydroelectric Plant. The service of the tertiary active power reserve will be ordered in the volume of 475 MW/h from the winner of the auction for the tertiary active power reserve service – AB “Ignitis gamyba”. The service will be provided with the help of Unit 7 of the Lithuanian Power Plant managed by AB “Ignitis gamyba” (in the volume of 260 MW) and Unit 8 of the Lithuanian Power Plant (in the volume of 215 MW).

It should be noted that in 2019, the NERC amended the Methodology for the Pricing of Electricity, Reserve Capcity and Services Ensuring the Isolated Operation of the Electricity System, which provided for the following key changes:

☐ this methodology shall be applied when setting electricity prices for those producers who provide the services of isolated operation of the electricity system and/or prevention or liquidation of major accidents in the electricity system. It has been established that a producer providing the services of isolated operation of the electricity system shall be entitled to receive return of investment by selling the produced electricity in accordance with the terms and conditions set out in the Rules for the Trading of Electricity;

☐ the regulation of the prices of the tertiary active power reserve has been established: it has been provided that for a producer subject to the mandatory preparation of the regulatory accounting system, the price cap for the service of the tertiary active power reserve shall be set in accordance with the principle of lowest cost, taking into account all the cheapest generation facilities that are obliged by legislation to participate in the auction for the service of the tertiary active power reserve;

☐ for producers who are not required to prepare the regulatory accounting system, the price caps for the service of the tertiary active power reserve or isolated operation of the electricity system shall be set on the basis of the results of the last auction organised by the transmission system operator prior to the setting of prices, adjusting the results by 5% in the first year and applying the annual inflation rate forecast by the Ministry of Finance and the efficiency indicator, which is 1%, to the adjustment of said prices in all subsequent years.

☐ If a producer has not participated in an auction for the service ensuring the tertiary active power reserve, the price cap for the service of the tertiary active power reserve shall be set for such a producer for the first time on the basis of the weighted average of the prices of the service of the tertiary active power reserve provided by producers who are not required to prepare the regulatory accounting system, adjusting said weighted average by 5%.

In accordance with the amended Methodology for the Pricing of Electricity, Reserve Capacity and Services Ensuring the Isolated Operation of the Electricity System, the NERC set the price caps for the secondary emergency active power reserve, tertiary active power reserve, prevention and liquidation of accidents, malfunctions, and the service of isolated operation of the electricity system and/or prevention or liquidation of major accidents in the electricity system.

Taking into account that AB “Ignitis gamyba” has significant influence in the power reserve market, in 2019, the 2020 price caps for the services provided by this undertaking were set: these included the price caps for the secondary emergency active power reserve, tertiary active power reserve, services of the prevention and liquidation of accidents, malfunctions.

Also, taking into account the Rules for Market Research, the Results of the Electricity Reserve Power Service Market Research (approved by Resolution of the NERC No O3E-41 of 8 February 2019), it was regulated that, in the case wherein, prior to the beginning of the auction for the service of the tertiary active power reserve, the electricity transmission system operator announces that additional capacities of the electricity producers capable of providing the service of isolated operation will be ordered, and the prices of the service of isolated operation would not be regulated in accordance with the procedure established in relevant legislation or, in accordance with the procedure established in relevant legislation, the prices of the service of isolated operation would be based on the full coverage of the costs of the service of isolated operation, and the capacities of all producers capable of providing the services of the tertiary active power reserve and isolated operation are required for the provision of said services, the entities AB “ORLEN Lietuva”, AB “Panevėžio energija” and UAB “Kauno termofikacijos elektrinė”, due to the lack of efficient competition, have the opportunity to set unfounded (disproportionately high) prices in the market of the tertiary active power reserve service, given that the entities AB “ORLEN Lietuva”, AB “Panevėžio energija” and UAB “Kauno termofikacijos elektrinė” are considered to be persons of significant influence in the tertiary active power reserve service, the price caps for the tertiary active power reserve service were set for said undertakings for 2020.

In accordance with the LE, the prices of producers providing system services of isolated operation of the electricity system and/or prevention or liquidation of major accidents in the electricity system are not regulated, except for cases when:

1) the transmission system operator receives an offer to provide the services of isolated operation of the electricity system and/or prevention or liquidation of major accidents in the electricity system from one producer only or from several producers who are connected persons, or

2) the electricity generation capacities of all producers capable of providing the tertiary active capacity reserve and the services of isolated operation of the electricity system and/or prevention or liquidation of major accidents in the electricity system are required to ensure the operation of the electricity system, and

3) when the transmission system operator informs the producer and the NERC that the producer must provide the services of isolated operation of the electricity system and/or prevention or liquidation of major accidents in the electricity system with the help of the electricity generation facility specified by the transmission system operator.

In view of this, in 2019, the NERC established the 2020 price caps for the service of isolated operation of the electricity system and/or prevention or liquidation of major accidents in the electricity system for AB “Ignitis gamyba”, UAB “Kauno termofikacijos elektrinė”, AB “Panevėžio energija”, AB “ORLEN Lietuva” and AB “Achema”.

Taking into account the price caps for the services ensuring reserve power, the demand of isolated operation of the electricity system and/or prevention or liquidation of major accidents in the electricity system, as well as the amount of services forecast by the transmission system operator

for 2020, in 2020, the price of system services was set at 0.785 c/kWh (said price includes the costs of the purchase of the services ensuring primary, secondary, tertiary active power reserve, the costs of the provision of the services of reactive power and voltage management, as well as of prevention and liquidation of accidents, malfunctions, including the demand of the service of isolated operation of the electricity system and/or prevention or liquidation of major accidents in the electricity system).

The price cap for distribution services at medium voltage of AB "Energijos skirstymo operatorius" for 2020 is 1.076 (0.214 c/kWh or 24.8% higher than in 2019), in low-voltage networks – 2.092 c/kWh (0.221 c/kWh or 11.8% higher than in 2019). The change in the price caps was mainly due to the increased costs of electricity acquisition, one-off compensations for land servitudes granted when constructing electricity lines as approved by the Government of the Republic of Lithuania, and the costs of registration and administration of zones of protection. The price cap for the service of electricity distribution in medium-voltage networks was also influenced by a lower volume of the recovery of excess profit received in the previous period. The income of the DSO AB "Energijos skirstymo operatorius" generated from the activities of electricity distribution was reduced by EUR 1.603 million in 2020, taking into account the return on investment received by the undertaking during the period of 2012-2015 due to the electricity transport reliability indicators exceeding the minimum level set by the NERC. Also, the income of the DSO AB "Energijos skirstymo operatorius" generated from the activities of electricity distribution was adjusted by taking into account an additional sum of EUR 3.574 million: the Supreme Administrative Court of Lithuania acknowledged that in 2015, the NERC had to establish a new regulatory period and new price caps for the distribution service in medium-voltage and low-voltage networks.

In 2018, the NERC approved the recast of the Methodology for the Pricing of SPI in the Electricity Sector. The major change is that all additional costs related to the provision of SPI (costs of administration, borrowing, etc.) are divided equally between those services for which the need of SPI funds is projected, and a separate price is henceforth set for each SPI (the final price of SPI is calculated as the sum of separate service prices).

This amendment will allow the major electricity consumers, who consume more than 1 GWh of electricity per year, to calculate the recoverable share (85%) of the paid SPI sum used to support the production of renewable energy sources.

In 2020, almost all SPI funds are used to support and promote local production (including balancing and centralised RES trade) from renewable energy sources (EUR 91.016 million). In addition, EUR 15.545 million of SPI funds are planned to be repaid in accordance with the provisions of the LE that entered into force on 1 January 2019: consumers meeting the requirements set out in Article 74^1(3) of the LE are entitled, in accordance with the procedure established by the Government, to recover 85% of the share of the price of the services provided in the public interest, which is established by the NERC and related to the generation of electricity using renewable energy sources, for the amount of electricity consumed by the consumer in excess of 1 GWh during the previous calendar year by 1 July of each year.

The total SPI budget amounts to EUR 106.869 million (EUR 108.968 million in 2019). The main reason for the SPI budget planned for 2020 that is lower than that of 2019 is the establishment of the lower projected market price. The SPI price for all persons set by the NERC in 2019 amounted to 0.683 c/kWh excluding VAT. As of 2019, there is no difference between the SPI price for producers

(combined heat and power plants) using the produced electricity for personal needs and the SPI price for all other consumers.

In 2020, the public price of electricity for household consumers purchasing electricity from medium-voltage networks is equal to 8.951 c/kWh (excluding VAT) and is 1.191 c/kWh (15.35%) higher than in 2019, for the consumers purchasing electricity from low-voltage networks, it is equal to 11.826 c/kWh (excluding VAT) and is 1.509 c/kWh (14.63%) higher than in 2019.

Electricity prices, their application, comparison with the prices applied in other countries and other related information is published on the NERC website www.vert.lt. The prices and tariff plans of the DSO AB "Energijos skirstymo operatorius" are published on the website www.eso.lt, distributed in customer service centres of AB "Energijos skirstymo operatorius", the consumers are also individually informed about new prices and tariff plans via the self-service website, while those who have submitted their contact details are informed by SMS or e-mail. In addition, AB "Energijos skirstymo operatorius" informs its customers about the applied tariff plans and conditions for their application via the customer service telephone number 1852. The public electricity prices and tariffs of UAB "Ignitis", as well as the procedure of their application, are published on the website www.ignitis.lt, leaflets with said prices are distributed in the customer service centres of UAB "Ignitis", the consumers are also individually informed about new prices and tariff plans via the self-service website, while those who have submitted their contact details are informed by SMS or e-mail. In addition, UAB "Ignitis" informs its customers about the applied tariff plans and conditions for their application via the customer service telephone number 1802.

More data on the issues of market opening and efficiency is available in the CEER database.

- Article 59(1)(o) of Directive (EU) 2019/944: Prices for household consumers

Household consumers, like commercial consumers, have the right to choose an independent electricity supplier and purchase electricity on the market or under bilateral contracts. Household consumers who have not chosen an independent electricity supplier, as well as vulnerable consumers, are supplied electricity at the public electricity price by the public supplier operating in the territory specified in the licence.

Compared to the previous year, the average annual consumption per household consumer increased from 1800 kWh to 1844 kWh.

As of 1 October 2018, UAB "Lietuvos energijos tiekimas" has taken over the performance of the activities of public supply from AB "Energijos skirstymo operatorius". In 2019, said undertaking changed its name to UAB "Ignitis". UAB "Ignitis" is carrying out both the activities of public electricity supply and the activities of independent electricity supply. In 2019, the undertaking supplied 99.99% of the total amount of electricity consumed by household consumers, of which 94.4% were supplied at the public electricity price. In 2019, as in 2018, the share of the public supply of electricity in the retail market remained stable – about one third of the total consumption.

In accordance with the provisions of the LE, the electricity consumers whose equipment is connected to the electricity networks managed by the TSO receive guaranteed electricity supply provided by the DSO serving more than 100 000 consumers, while the electricity consumers whose equipment is connected to the electricity networks managed by the DSO receive guaranteed

electricity supply provided by the DSO. In 2019, 50189 consumers used the services of the guaranteed supplier (52192 consumers in 2018).

In accordance with the approved Methodology for the Setting of Price Caps for Electricity Transmission, Distribution and Public Supply Services and the Public Supply, while implementing the LRAIC model, the 2020 price caps for the service of transmission and distribution were calculated in 2019 (see table).

Table 3. *Price caps for the services of electricity transmission and distribution in 2015-2020 (c/kWh)*

Name of a regulated service	Provider of a regulated service	Price cap for a regulated service (c/kWh)					Price cap for a regulated service in 2020 (c/kWh)	Change compared to 2019, %
		2015	2016	2017	2018	2019		
Electricity transmission	AB "Litgrid"	0,538	0,691	0,672	0,619	0,658	0,814	23,7
Electricity distribution in medium-voltage networks	AB "Energijos skirstymo operatorius"	1,178	1,000	0,830	0,798	0,862	1,076	24,8
Electricity distribution in low-voltage networks	AB "Energijos skirstymo operatorius"	1,550	1,766	1,655	1,716	1,871	2,092	11,8

Source: NERC.

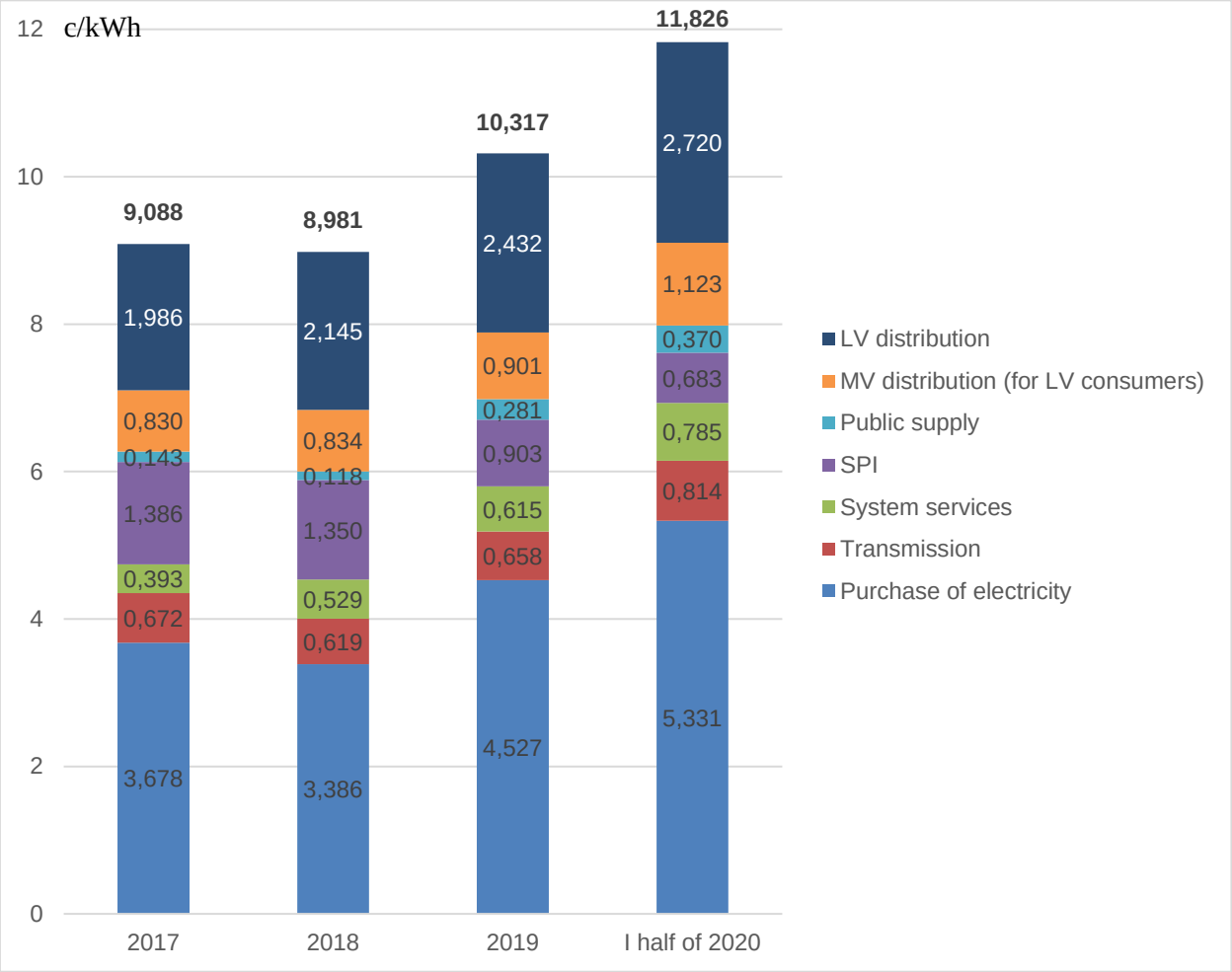
Public price cap for the supply of electricity: UAB "Ignitis" sells electricity to consumers paying in accordance with the public tariffs, thus the NERC, when calculating the public price cap for the supply of electricity, assessed the amount of energy sold. In view of this, the NERC set the price cap for the service of the public supply of electricity at 0.370 c/kWh for 2020. Compared to 2019 (0.281 c/kWh), it is higher by 0.089 c/kWh. This was caused mainly by the changes in the legislation in 2019 related to the calculation of the demand of working capital attributable to the activities of public supply, the assessment of the difference in operational costs and additional operational costs, and the decrease in the amount of electricity planned to be distributed.

Household consumers pay for electricity in accordance with the public tariffs established by the NERC. For the final consumer, the price of electricity consists of:

☐ the purchase price;
☐ the price of services provided in the public interest;
☐ the price of system services;
☐ the price of transmission service;
☐ the price of distribution service in medium-voltage and low-voltage networks;
☐ the supply price.

Having established all the components of the price of electricity, in 2019, the NERC approved the 2020 public price of electricity for household consumers purchasing electricity from medium-voltage networks – 8.951 c/kWh (excluding VAT) or 1.191 c/kWh (15.35%) higher than in 2019, for household consumers purchasing electricity from low-voltage networks – 11.826 c/kWh (excluding VAT) or 1.509 c/kWh (14,63%) higher than in 2019. The public price cap for electricity in medium-voltage and low-voltage networks increases by about 15%. This change was mainly due to the projected higher purchase price of electricity and the changes in other components of the public price cap.

Fig. 16. Average electricity price in 2017-first half of 2020 (c/kWh excluding VAT)



Source: NERC.

In 2019, the NERC approved the price of access to interconnection lines (hereinafter referred to as "AIL") applied in 2020, which amounts to EUR 5.87/MWh, i.e. is 2.8% higher than that of 2019 (EUR 5.71/MWh). Relevant information about the price of AIL is published on the NERC website www.vert.lt (in English) under the heading "Regarding price of the service of access to interconnection lines" [9].

No later than by 30 November of the current calendar year, the NERC calculates, approves and publishes on its website the fees for the connection of consumer equipment and the maximum design prices for the relevant year. By Resolution No O3E-803 of 28 November 2019, the NERC approved the new fees for the connection to the distribution networks of AB "Energijos skirstymo operatorius" (valid from 1 January 2020). The fee for design works is made separate: the consumer can choose whether the design of connection works will be prepared by the operator, who will be paid for the prepared design accordingly (design fee), or whether the design will be prepared by the consumer thyself, who would receive compensation for the design prepared at this own expense (maximum countervailable design price). Therefore, when calculating the fee for the installation of 1 kW of power, the costs of design preparation will not be included. This will allow the consumers to clearly see the structure of the connection price.

[9] https://www.vert.lt/en/Pages/regarding-price-of-the-service-of-access-to-interconnection-lines.aspx

The fees for the connection of electrical equipment to electricity networks (100%) calculated and approved by the NERC, which are applicable from 1 January 2020, are provided in the tables below for the following consumer groups:

Group I – consumers whose permissible power of connected electrical equipment or increased permissible power of electrical equipment (in such cases wherein the electrical equipment is connected to the electricity network under general (uniform) connection conditions, a single design and a single contract – the total authorised power) is less than 50 kW, and whose equipment does not require the installation, replacement or reconstruction of the operator's electricity facilities (0.4 kV and/or 10 kV cable and/or overhead lines, transformer substations, distribution stations and/or transformers, cable distribution cabinets) in order to be connected, and it is not necessary to prepare the design for the connection of the consumer's electrical equipment to the electricity networks, or it is necessary to prepare such design, but, in accordance with Item 14 of the Description of Procedure for Connecting the Electrical Equipment of Electricity Producers and Consumers to Electricity Networks, it is prepared and coordinated by the consumers;

Group II – consumers whose permissible power of connected electrical equipment or increased permissible power of electrical equipment (in such cases wherein the electrical equipment is connected to the electricity network under general (uniform) connection conditions, a single design and a single contract – the total authorised power) is less than 100 kW (excluding the consumers of Group I);

Group III – consumers whose permissible power of connected electrical equipment or increased permissible power of electrical equipment (in such cases wherein the electrical equipment is connected to the electricity network under general (uniform) connection conditions, a single design and a single contract – the total authorised power) ranges between 100 and 500 kW (inclusive).

Table 4. *Fees for the construction of 1 m of electricity network and the installation or enhancement of 1 kW of permissible power (100%*), design preparation fee (when the design is prepared by the operator) and the maximum countervailable design price, EUR excluding VAT*

Consumer group	Fee for the installation or enhancement of 1 kW of permissible electrical equipment power (EUR excluding VAT)			Fee for the construction of 1 m of electricity network (EUR excluding VAT)			Design preparation fee, EUR (VAT excluded)			Maximum countervailable design price, EUR (excluding VAT)		
	Valid from 1/4/2019	**Valid from 1/1/2020**	***Change, %***	Valid from 1/4/2019	**Valid from 1/4/2019**	***Change,%***	Valid from 1/4/2019	**Valid from 1/1/2020**	***Change, %***	Valid from 1/4/2019	**Valid from 1/1/2020**	***Change, %***
I	20.87	17.19	*—17.62*	—		—	—		—	—	—	—
II	115.75	135.69	*+ 17.23*	31.55	34.93	*+ 10.71*	742.76	696.48	*—6.23*	742.76	696.48	*—6.23*

III	62.65	85.34	*+ 36.21*	24.05	34.93	*+ 63.74*	742.76	1013.29	*+ 36.42*	742.76	1013.29	*+ 36.42*
Consumers whose connected or increased power exceeds 500 kW	—	paid on the basis of the actual price of works	—	—	paid on the basis of the actual price of works		742.76	paid on the basis of the actual price of works		742.76	1060.00	*+ 42.71*
Consumers whose connected or increased power is no less than 1 MW	—	paid on the basis of the actual price of works	—	—	paid on the basis of the actual price of works		742.76	paid on the basis of the actual price of works		742.76	2801.24	*+ 277.14*

** The NERC approves the connection fees corresponding to 100%, from which specific fees applicable to household and non-household consumers and corresponding to 20% and 40% of the general fee are calculated.*

Source: NERC.

For Group I, the fee for the installation or enhancement of 1 kW of permissible power decreased by 17.62%, while for Groups II and III, the fee increased: for Group II – by 17.23%, for Group III – by 36.21%.

The connection fee for the constructed 1 m of electricity network was not calculated for Group I, as the connection of the consumers attributable to this group does not require the construction of electricity network, the fee for Group II increased by 10.71% and the fee for Group III – by 63.74%. The increase is due to a smaller number of metres of the constructed electricity network, reduced distance (geometric) per user, an increase in the quantities of certain works (tile surface restoration, green lawn restoration, etc.).

The design preparation fee decreased by 6.23% for consumers of Group II, while for consumers of Group III, the design preparation fee increased by 36.42%. For consumers whose permissible power is above 500 kW but does not exceed 1 MW, the design preparation fee increased by 42.71%, while for consumers whose permissible power is above 1 MW – by 277.14%. Such a significant increase in the design preparation fee for consumers whose permissible power is above 1 MW was due to the fact that the design price set for consumers with an permissible power of over 1 MW, which has been valid from 1 April 2019, was identical to the price set for the consumers of other groups (EUR 742.76), since in 2018, only 1 project was prepared for 1 MW consumers and the scope of this data is considered to be too small for an objective setting of fees, while in 2020, the pricing was already based on the actual costs of the works carried out.

Table 5. *Fees for the connection of the equipment of electricity consumers, design preparation fee (when the design is prepared by the operator) and the maximum countervailable design cost (when the design is prepared by the consumer) for household and socially vulnerable* consumers*

Consumer group	Fee for the installation or enhancement of 1 kW of permissible power of electrical equipment (EUR excluding VAT)			Fee for the construction of 1 m of electricity network (EUR excluding VAT)			Design preparation fee, EUR (excluding VAT)			Maximum countervailable design price, EUR (excluding VAT)		
	Valid from 1/4/2019	Valid from 1/1/2020	*Change, %*	Valid from 1/4/2019	Valid from 1/1/2020	*Change, %*	Valid from 1/4/2019	Valid from 1/1/2020	*Change, %*	Valid from 1/4/2019	Valid from 1/1/2020	*Change, %*
I	4.17	3.44	*—17.62*	—		—	—	—	—	—	—	—
II	23.15	27.14	*+ 17.23*	6.31	6.99	*+ 10.71*	148.55	139.30	*—6.23*	594.21	557.19	*—6.23*
III	12.53	17.07	*+ 36.21*	4.81	7.88	*+ 63.74*	148.55	202.66	*+ 36.42*	594.21	810.63	*+ 36.42*
Consumers above 500 kW	—	—	—	—	—	—	—	—	—	594.21	848.0	*+ 42.71*

* specified in the list approved by the Government or an institution authorised by the Government

Source: NERC.

In accordance with the provisions of the LE, when connecting the electrical equipment of household and socially vulnerable consumers to the network, 20% of the above calculated fees is paid, when connecting non-household consumers, 40% of the above calculated fees is paid, when connecting consumers with a permissible power of more than 1 MW (and who undertake not to reduce this power for 10 years), 10% of the actual connection costs is paid. In accordance with the Methodology for the Setting of Fees for the Connection of Electrical Equipment to Electricity Networks, the maximum countervailable design price for household and socially vulnerable consumers corresponds to 80% of the actual costs incurred by the distribution system operator in the previous calendar year when preparing one design unit.

- Article 59(1)(o) of Directive (EU) 2019/944: Pre-payment system

The pre-payment system is applied to the following services provided by the largest DSO:

- Disconnection-connection upon request of the client;
- Disconnection-connection after payment of debt;
- Services of resistivity measurement;
- Services of smart metering implementation;
- Other services.

The pre-payment system of consumers purchasing electricity from the public electricity supplier applies to the services listed in the table below.

Table 6. *Services of the public electricity supplier that are subject to pre-payment system*

Service group	Explanation of the service/comments
Remuneration due for bailiff's actions	Applicable to clients who have been made subject to debt recovery and bailiff's actions have been performed.
Remuneration due for notarial actions	Applicable to clients who have been made subject to debt recovery.
Advance payment for the electricity consumed	Applicable at the request of the client when the client wishes to pay for electricity prior to the submission of the current bill and indicates the amount in kWh. Most commonly used by budgetary institutions at the end of a calendar year.
Fine for failure to comply with contractual obligations	The service has never been provided.

Legal action administration fee (lawyer's services, commission fee for payment order and confirmation of stamp duty order, other expenses)	Applicable to clients whose debt has been handed over to the court, judicial debt recovery has been carried out.
For interest awarded by the court	Cases where the court awards additional interest.
Stamp duty	Applicable to clients whose debt has been handed over to the court.

- Article 59(1)(o) of Directive (EU) 2019/944: Dynamic price contracts

No dynamic price contracts were concluded in 2019. For consumers with smart meters, the DSO AB "Energijos skirstymo operatorius" and UAB "Ignitis" offer the electricity tariff plan under the title "Smart", in which the following time intervals are applied: the energy component of night, morning, day, and the energy components of evening. The time intervals of Saturdays, Sundays and public holidays are broken down into the relevant time intervals of energy components of Night and Day.

- Article 59(1)(o) of Directive (EU) 2019/944: Use of smart meters

By the end of 2019, 44178 smart meters had been installed in Lithuania. Over the course of 2019, 3002 smart meters were installed for household consumers.

In September 2019, having assessed in detail the project for the implementation of smart electricity metering in Lithuania in 2020-2023 submitted by the DSO AB "Energijos skirstymo operatorius", the NERC adopted the decision to coordinate it.

In 2019, the DSO AB "Energijos skirstymo operatorius" initiated the procurement of smart metering infrastructure. The procurement is planned to be completed by the end of 2020 when the contract for the acquisition of about 1.2 million smart meters, communication infrastructure and IT systems will be signed.

The DSO AB "Energijos skirstymo operatorius" plans to start installing smart electricity metering devices in the I half of 2021 (100% for commercial consumers and 54% for household consumers who consume more than 1000 kWh/year). The NERC will perform remote monitoring of the implementation of the project, i.e. the NERC instructed AB "Energijos skirstymo operatorius" to develop a monitoring system by 31 December 2021 and to obtain approval of the NERC for this system . In 2022 and 2023 (no later than by 1 July), AB "Energijos skirstymo operatorius" will have to submit reports on the implementation of the project, as well as supporting documents, to the NERC in order to ascertain that the benefits created to correspond to the financial and economic indicators of the investment projects coordinated by the NERC. In subsequent periods, said reports will be submitted twice during the regulatory period.

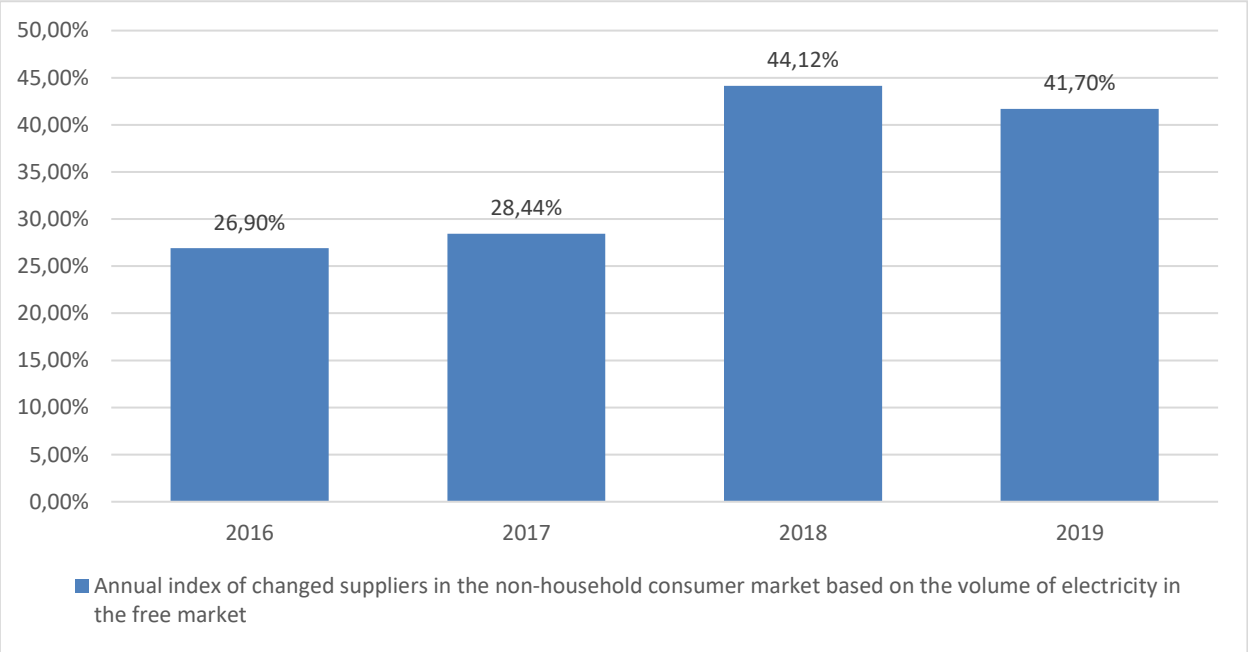
- Article 59(1)(o) of Directive (EU) 2019/944: Electricity supplier change index

Although, as indicated above, household consumers, like commercial consumers, also have the right to choose an independent electricity supplier and purchase electricity on the market or under bilateral contracts, it has been observed that household consumers are not inclined to change suppliers (from 2016 to 2019, the external annual index of changed suppliers in the household consumer market based on measurement metering points was equal to zero). Also, during this

period, there were no changes in the household consumer market of a supplier supplying electricity at a regulated public electricity supply price with a supplier supplying electricity at a market price and vice versa.

The figure below shows the annual index of changed suppliers in the non-household consumer market based on the volume of electricity. In 2019, the annual index of changed suppliers in the non-household consumer market based on the volume of electricity in the free market amounted to 41.70%. In 2019, compared to 2018, the annual index of changed suppliers in the non-household consumer market based on the volume of electricity in the free market decreased slightly.

Fig. 17. Annual index of changed suppliers in the non-household consumer market based on the volume of electricity in the free market in 2016-2019, %



Source: NERC.

○ Article 59(1)(o) of Directive (EU) 2019/944: Charges for the services of technical maintenance

The NERC assesses the costs of repair, technical maintenance and operation, staff, administrative and other costs of electricity transmission operator and the main DSO (AB “Litgrid” and AB “Energijos skirstymo operatorius”), small DSOs (AB “Achema”, AB “Akmenės cementas”, AB “Lifosa”, UAB “Dainavos elektra”) according to annual reports on regulated activities. Economically justified technical maintenance costs for electricity transmission activities and electricity distribution activities are included in the setting the price cap of the TSO transmission service and the price cap of the DSOs distribution services via medium-voltage and low-voltage networks.

○ Article 59(1)(o) of Directive (EU) 2019/944: Link between the price of electricity for household consumers and the wholesale electricity price

In accordance with the Methodology for the Setting of Price of Electricity Transmission, Distribution and Public Supply Services and of Their Public Price Caps approved by the NERC, one of the components of the public electricity price is the electricity purchase price, which consists of the

forecast electricity market price determined by the NERC in accordance with the approved Methodology for the Setting of the Forecast Electricity Market Price and Reference Price, as well as other costs related to the purchase of electricity, such as electricity exchange taxes, costs of electricity balancing, and correction of the share of forecast and actual electricity purchase costs.

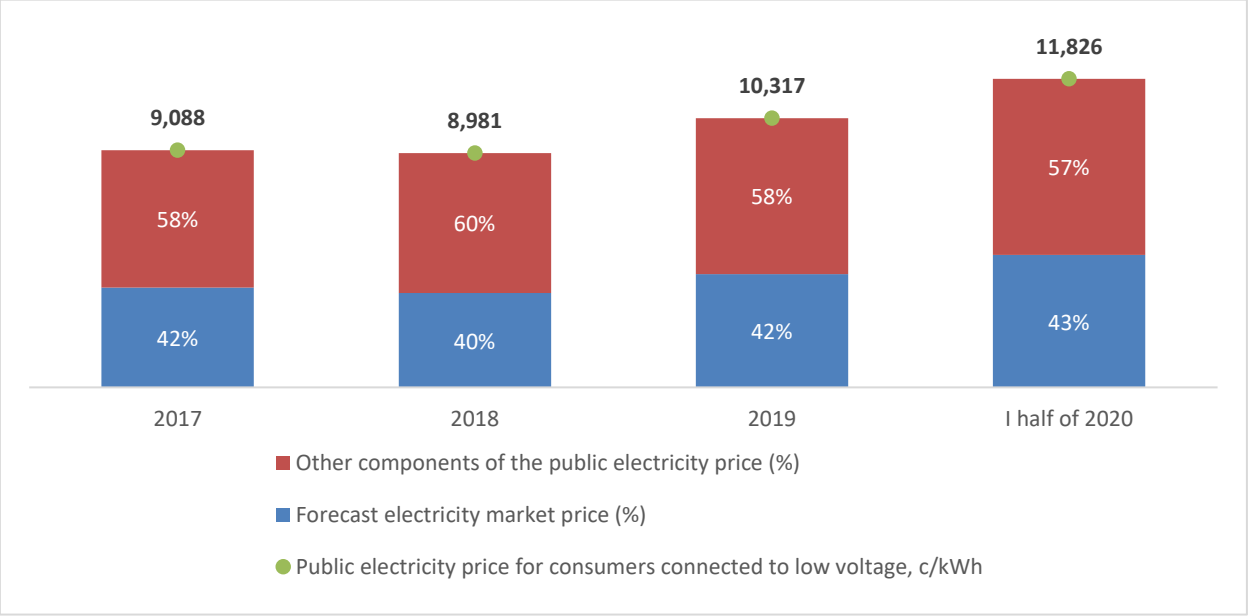
It should be noted that, in accordance with the Methodology for the Setting of the Forecast Electricity Market Price and Reference Price, the NERC sets the forecast electricity market price for the coming calendar year or recalculates it for the current calendar year as a weighted average after assessing the following:

1. Electricity prices and quantities traded on the electricity exchange in the territory of Lithuania during the day-ahead trading session without assessing the quantities traded in the manner specified in Item 3 of the aforementioned methodology at Central European Time for the last 12 calendar months ending on 31 August of the current calendar year or no later than two months prior to the application of the recalculated price if the forecast electricity market price is recalculated for the current calendar year.

2. Electricity prices and quantities traded on the wholesale electricity market under direct bilateral contracts concluded alongside the electricity exchange between Lithuanian producers and suppliers for the last 12 calendar months ending on 31 August of the current calendar year or no later than two months prior to the application of the recalculated price if the forecast electricity market price is recalculated for the current calendar year.

3. Electricity prices and quantities traded under auxiliary instrument trade on the energy resource exchange and on the basis of a bilateral contract in the territory of Lithuania for the last 12 calendar months ending on 31 August of the current calendar year or no later than two months prior to the application of the recalculated price if the forecast electricity market price is recalculated for the current calendar year.

Fig. 18. Share (%) of the electricity market price within the public electricity price cap in 2017-first half of 2020



Source: NERC.

The forecast electricity market price within the public electricity purchase price, which applies to household electricity consumers, accounts for more than 40% of the total public electricity price applied to consumers connected to low-voltage networks.

- Article 59(1)(o) of Directive (EU) 2019/944: Distortion or restriction of competition

Article 8(9)(15) of the Law on Energy establishes that the NERC monitors whether there are any occurrences of contractual practice that restricts competition, including exclusivity clauses whose application may prevent large non-household consumers from entering into contracts with more than one supplier at the same time or restrict their ability to do so.

The procedures of the Competition Council regarding submission of information about distortions or restrictions of the electricity market, including provision of appropriate information, as well as submission of investigations into relevant cases within the market are carried out in accordance with the procedure established by the legal acts. The NERC conducts market research in order to ensure effective competition within the electricity sector, as well as to prevent market participants from applying excessive prices or using price pressure due to the lack of effective competition, thus causing harm to market participants. It should be noted that no such cases were recorded in 2019.

- Articles 59(1)(s) and 5(1) of Directive (EU) 2019/944: Competitive prices

In accordance with the provisions of the Law on Energy, at least once every 5 years, the NERC publishes recommendations relating to compliance of prices for the services within the energy sector with transparency, non-discrimination and other requirements laid down in legislation, and submits them to the Competition Council of the Republic of Lithuania. The NERC approved said recommendations by Resolution No O3-373 of 19 June 2015 “Regarding the Approval of the 2015 Recommendations Relating to Compliance of Prices for the Services Within the Energy Sector with Transparency, Non-discrimination and Other Requirements Laid Down in Legislation”. The recommendations are published on the NERC website: https://www.vert.lt/Puslapiai/statine/komisijos-nutarimu-sarasas.aspx.

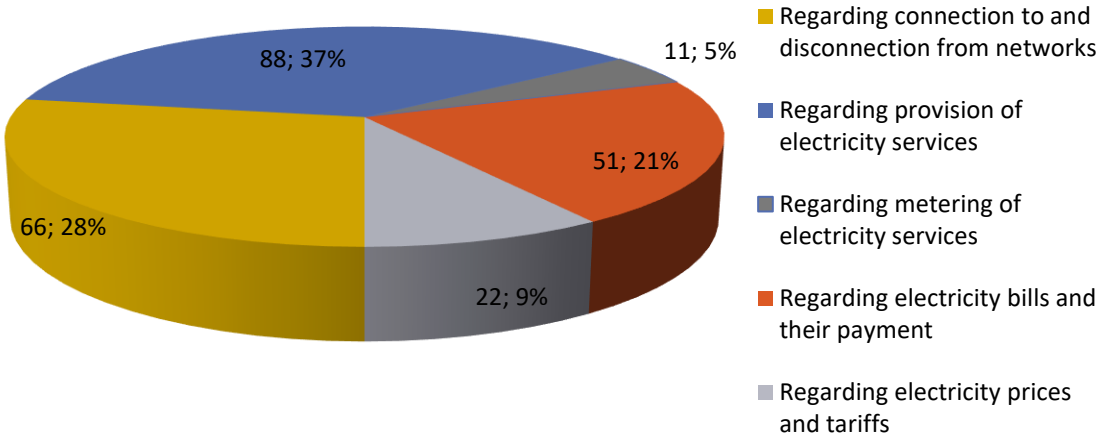
More information on electricity prices and competition in the retail market is provided in the chapter “Market opening and competition”.

- **Consumer protection and examination of applications**

- Article 59(1)(o) of Directive (EU) 2019/944: Household consumer complaints

In 2019, the NERC received 200 applications regarding the electricity sector. It should be noted that a single application often raises several issues (e.g. bills and applied prices or bills and metering), so the number of received applications is lower than the total number of raised issues according to their nature.

Fig. 19. Distribution (%) of applications within the electricity sector received in 2019 according to the nature of the application

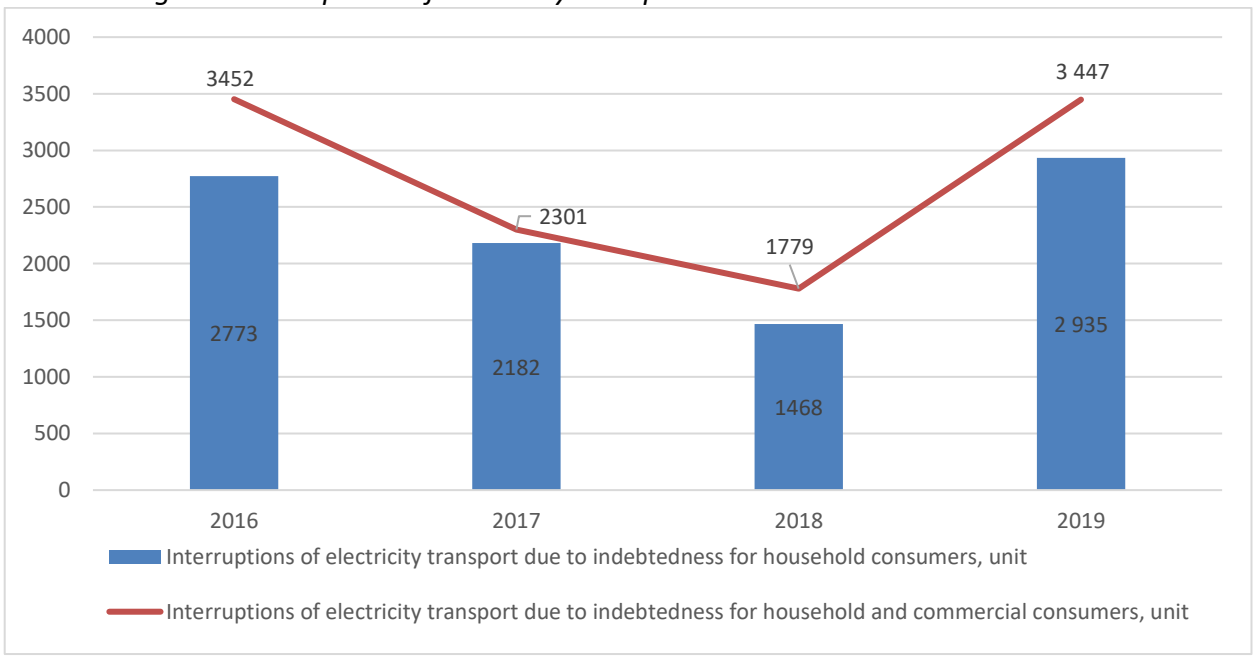


Source: NERC.

○ Article 59(1)(o) of Directive (EU) 2019/944: Disconnection of consumers from the electricity network

The average number of working days from the date of the notification regarding the payment of the bill and the disconnection in the case of failure to pay the bill is 60 working days.

Fig. 20. Interruptions of electricity transport due to indebtedness in 2016-2019



Source: NERC.

In total, 3447 units (of which 2935 units for household customers, 512 units for business customers) of interruptions of electricity transport were carried out due to indebtedness in 2019.

○ Article 59(1)(p) of Directive (EU) 2019/944: Contractual practice that restricts competition

In 2019, contractual practice that restricts competition was not identified.

- Articles 5(2) and 59(1)(s) of Directive (EU) 2019/944: Protection of vulnerable consumers and consumers experiencing energy poverty

Measures for the protection of vulnerable consumers are provided for in the LE and the Description of the Procedure for the Application of Additional Guarantees for Socially Vulnerable Electricity Consumers approved by Resolution of the Government of the Republic of Lithuania No 527 of 27 May 2015.

Under the LE, household consumers, including vulnerable consumers, have the right to:

1) unilaterally terminate, free of charge, the electricity transport service contract and/or electricity sales contract upon notifying the network operator and/or supplier in writing no later than 3 weeks prior to the planned contract termination date;

2) conclude electricity sales contracts of indefinite duration with the public supplier in cases wherein the household consumer does not choose an independent electricity supplier or the independent supplier of their choice fails to fulfil the assumed obligations and the household consumer intends to purchase electricity from the public supplier, as well as an electricity sales contract of indefinite duration with an independent supplier and an electricity transport service contract with the distribution network operator.

The LE also provides for additional measures for the protection of the rights and legitimate interests of vulnerable consumers, i.e. the supply and/or transport of electricity may not be restricted and/or interrupted for vulnerable consumers when they fail to pay for the supplied electricity within the set time limit, do not pay or pay in part for the electricity transport service or other related services, provided that the debt owed by said vulnerable consumers to the distribution network operator or supplier is or was no larger than 3 basic social benefits.

In case vulnerable consumers fail to pay for the supplied electricity within the set time limit, do not pay or pay in part for the electricity transport service or other related services, the supply and/or transport of electricity may not be interrupted on Fridays, Saturdays, Sundays, public holidays and days preceding public holidays, or when the average daily air temperature is lower than -15°C or higher than +30°C, except in certain cases when electricity transport is temporarily interrupted through no fault of the network user and when electricity transport is interrupted through the fault of the network user. In such cases, the supply to the consumer may be interrupted on the day following the end of the circumstances set out in this item if said vulnerable consumer has been notified about the interruption in accordance with the procedure laid down in the Rules for the Supply and Use of Electricity and other implementing legislation of said law.

Vulnerable consumers have the right to pay the distribution system operator or supplier by the last day of the month following the calendar month during which electricity has been transported and/or supplied to the consumer or other related services have been provided (except in cases wherein, at the request of the vulnerable consumer, longer time limits for payment have been agreed on).

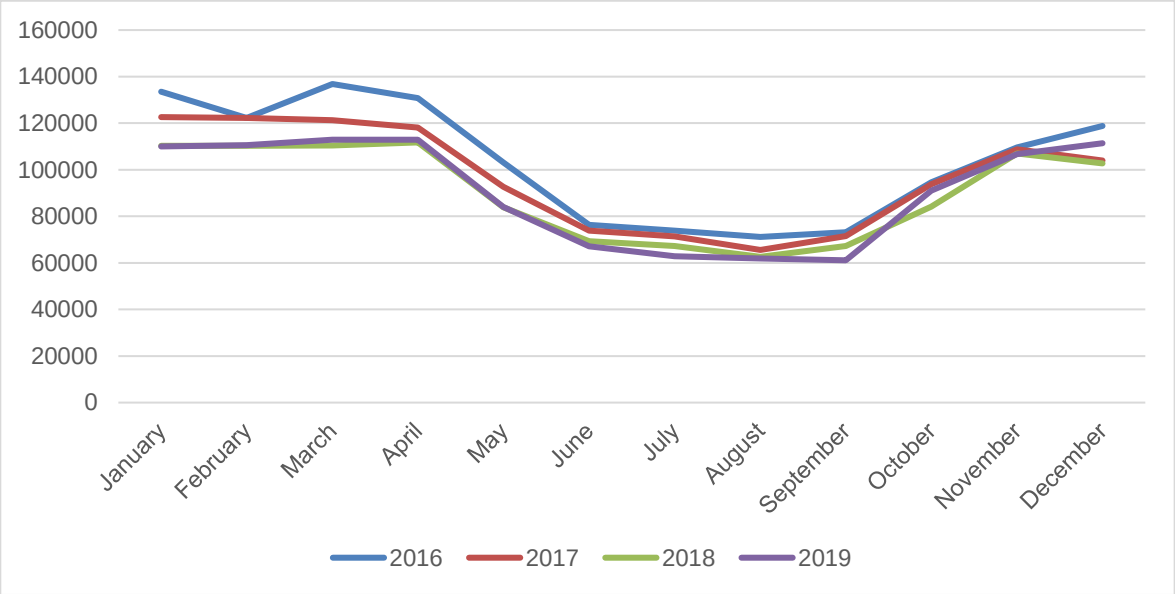
When carrying out the connection of electrical equipment of vulnerable consumers to the electricity networks managed by the distribution network operator, where the connection fee exceeds EUR 600, a share of 60% of the connection fee is paid within 10 calendar days from the signing of the connection

service contract by the consumer, while the remaining share of the fee is paid within 10 calendar days from the end of the contract works. The provision of the connection service commences once the vulnerable consumer pays the first share of the connection service fee. The distribution network operator informs the vulnerable consumer about the end of the works provided for in the work contract and provides the documents necessary for the payment in accordance with the procedure laid down in the connection service contract.

Also, if vulnerable consumers fail to pay for the supplied electricity within the set time limit, do not pay or pay in part for the electricity transport service or other related services, interest on late payment is not calculated for the 3 months following the date on which the time limit has been exceeded.

In the Description of the Procedure for the Application of Additional Guarantees for Socially Vulnerable Electricity Consumers approved by the Government of the Republic of Lithuania, it is established that if a vulnerable consumer wishes to receive a paper payment document, the distribution network operator or public supplier may not require the consumer to cover the costs of submitting the paper payment document to the consumer.

Fig. 21. Number of socially vulnerable consumers in 2016-2019



Source: NERC.

○ Article 5(3), (4) and Article 59(1)(s) of Directive (EU) 2019/944: Intervention by setting electricity prices for vulnerable household consumers

According to the provisions of the LE, the public electricity supplier supplies electricity to vulnerable consumers at the public electricity price. This price is regulated by the State. More information on the prices of the public supply of electricity applied to vulnerable consumers is provided in the chapter “Prices for household consumers”.

○ Article 59(1)(t) of Directive (EU) 2019/944: Consumers consumption data

In accordance with the provisions of the LE, consumers have the right to acquaint themselves with the electricity consumption data, including the amount of consumed electricity, as well as, after

entering into a clear agreement, to allow any supplier to use their metering data free of charge, to which the consumer is also entitled to free of charge.

The network operator is responsible for the organisation of measurement and metering of the electricity transported via the electricity networks managed by them. The amount of electricity consumed by the consumers connected to the distribution networks and purchasing electricity from public or independent suppliers, which is to be established by the network operators on the basis of meter readings, is recognised by the transmission system operator as the actual amount of consumed electricity that must be purchased by the public or independent supplier.

After the end of the calendar month, no later than within 4 (four) working days, the distribution network operator must provide the supplier with the available data on the amounts of electricity received from the distribution network and/or transmitted to the distribution network by the network users who are located in the territory indicated in the operating licence of the distribution network operator and who have concluded electricity purchase and/or sales contracts with said supplier.

If the electricity meter is not connected to the automated data reading system of the DSO, commercial users may:

•Declare their electricity consumption data on the operator's self-service website;

- The amount of consumed electricity may be calculated on the basis of the annual average of electricity consumption if the consumer does not provide the actual readings within the time limit stipulated in the contract.

If the electricity meter is connected to the automated data reading system of the DSO, commercial users can see their electricity consumption data on the operator's self-service website, there is no need for the consumer to declare the data themselves. Customers of the main supplier UAB "Ignitis" can declare their electricity readings on the self-service website and pay for the services online or in cash, via the customer service phone number, e-mail.

o Articles 59(1)(y) and 14 of Directive (EU) 2019/944: Availability of a comparison tool for the offers of suppliers

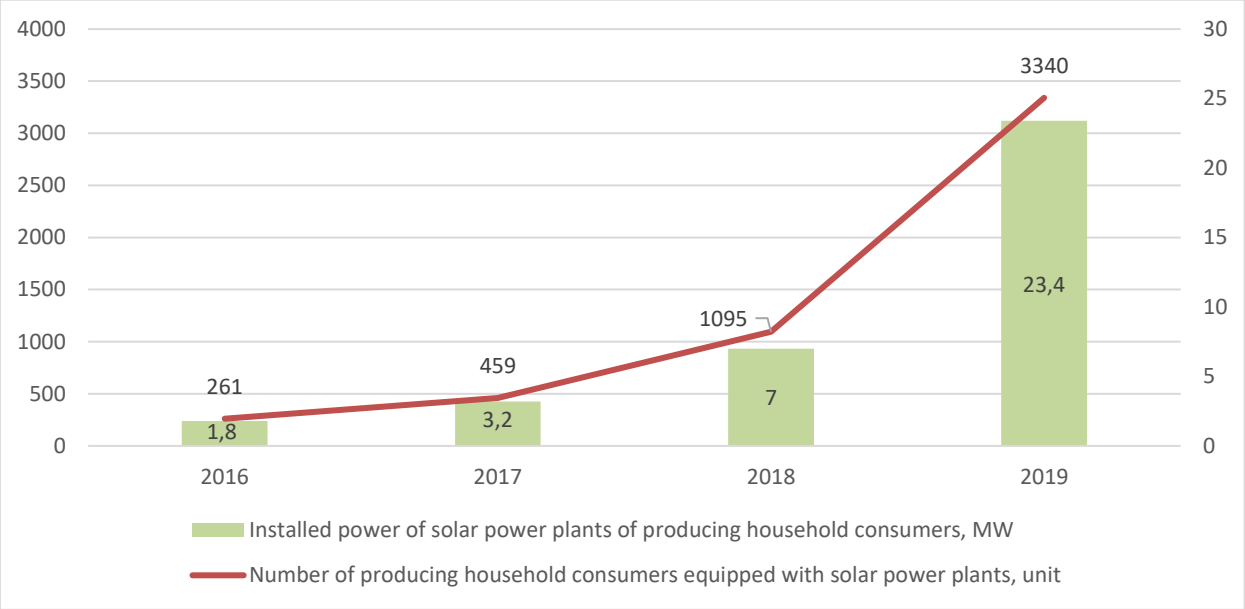
In 2019, there was no available comparison tool for the offers of suppliers aimed at household consumers and micro-enterprises.

o Article 59(1)(z) of Directive (EU) 2019/944: Obstacles and restrictions regarding the consumption of self-produced electricity and the development of citizens' energy communities

The law amending Articles 1, 2, 3, 4, 5, 6, 11, 13, 14, 16, 17, 20, 20^1, 22, 25, 28, 29, 35, 37, 38, 39, 46, 48, 49, 55, 58, 59, 60, 61, 62, 63, 63^1, 64 and the annex of the Law on Energy from Renewable Sources No XI-1375 of the Republic of Lithuania, repealing Article 11^1 and supplementing the Law by Article 20^2, which has established the Conditions and General Principles for the Activities of Renewable Energy Communities, has been adopted (valid from 31/5/2020). In accordance with the provisions of said law, a renewable energy community acquires the right to sell the energy produced in the energy generation equipment managed by the right of ownership or any other right to its

members at a price specified in the renewable electricity sales contract, which may be equal to zero, while members of the renewable energy community acquire the right to use this electricity for personal purposes and household needs.

Fig. 22. Number and installed power of producing household consumers, which have installed solar power plants



Source: NERC.

In 2019, compared to 2018, the number of producing household consumers, which have installed solar power plants tripled, while in 2019, the installed power of said power plants increased by 3.3 times compared to 2018, and by 13 times compared to 2016.

4. GAS MARKET

4.1. Network regulation

- Network and LNG tariffs for connection and access

○ Report on the relevant new tariff regulation provisions: Article 41(1)(a) and (6)(a) of Directive 2009/73/EC

Setting of upper income limit

In 2019, an amendment to the LNG entered into force establishing that a upper income limit for the natural gas services shall be set for a period of five years. The NERC revised the pricing methodologies accordingly and eliminated the setting of price caps for the newly established periods of price regulation. The upper income limit is set for a period of 5 years and may be adjusted once a year. The NERC approves the specific transmission, distribution and LNG regasification prices once a year after verifying that they do not discriminate against separate consumer groups and do not exceed the set upper income limit.

In Lithuania, the natural gas prices are regulated by setting upper income limit for a period of five years. When setting upper income limit and prices of regulated services, the following is taken into account:

1. The volume of costs, including return on investment (margin of supply activities), of regulated activities as determined and actually attributed to the relevant business units and services (products) by the NERC during the previous regulatory period.

2. The quantities of the relevant services (products) actually provided during the previous regulatory period.

3. In the case of commencement of new regulated activities, the reasonableness of the forecasted volume of costs and the forecasted quantities of services (products).

4. The data of benchmarking, which is made publicly available in advance on the NERC website, of comparable or analogous natural gas undertakings of Lithuania and/or countries of the European Union with a good practical example.

5. The performance indicators of a specific undertaking during the previous regulatory period.

6. Significant events that will take place after the previous regulatory period, planned changes in the undertaking's activities during the next regulatory period, including the implementation of investments coordinated with the NERC, which will have an impact on the volume of costs, including return on investment, and the quantity of provided services (products).

7. The reasonable volume of the costs established during the verification of the reasonableness (necessity) of the last costs of regulated services performed by the NERC.

8. Reasonable significant changes that have a significant impact on the undertaking's activities, volume of costs and structure.

Transmission activities

The transmission activities in Lithuania are carried out by 1 transmission system operator – AB "Amber Grid". As of 2015, the price cap/upper income limit for transmission activities is determined and adjusted for a capacity unit and the pricing model of entry and exit points is applied, with price caps being set and adjusted at the entry and exit points of the transmission system:

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

1.1. At the interconnection point of the Lithuanian transmission system and the connection of the LNG terminal in Klaipėda (hereinafter referred to as "the LNGT entry point").

1.2. At the interconnection point of the Lithuanian transmission system and the Latvian natural gas transmission system: the natural gas transmitted to the Lithuanian natural gas transmission system via said point is metered at the Kiemėnai Gas Metering Station (hereinafter referred to as "the Kiemėnai entry point").

1.3. At the interconnection point of the Lithuanian transmission system and the Belarusian natural gas transmission system: the natural gas transmitted to the Lithuanian natural gas transmission system via said point is metered at the Kotlovka Gas Metering Station (hereinafter referred to as "the Kotlovka entry point").

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

2.1. At the external exit points:

2.1.1. At the interconnection point of the Lithuanian transmission system and the Latvian natural gas transmission system: the natural gas transmitted from the Lithuanian natural gas transmission system via said point is metered at the Kiemėnai Gas Metering Station (hereinafter referred to as "the Kiemėnai exit point").

2.1.2. At the interconnection point of the Lithuanian transmission system and the natural gas transmission system of the Kaliningrad region of the Russian Federation: the natural gas transmitted from the Lithuanian natural gas transmission system via said point is metered at the Šakiai Gas Metering Station (hereinafter referred to as "the Šakiai exit point").

3. At the internal exit point – at the interconnection points of the Lithuanian transmission system and the Lithuanian natural gas distribution systems, as well as the Lithuanian consumer systems, which are connected directly to the Lithuanian natural gas transmission system, corresponding to one exit point for all users of the transmission system in the country.

Taking into account the Tariff Network Code, the Law No XIII-1782 amending Articles 2, 5, 7, 9, 20, 21, 25, 31, 37, 38, 39, 45, 46, 47 and the annex of the LNG No VII-1973 of the Republic of Lithuania and supplementing said law by Section 7-1 (hereinafter referred to as "the Law"), the NERC amended the **Methodology for the Setting of Income and Prices for the State-regulated Natural Gas Transmission Activities:**

- taking into account the provisions of the Law and the application of the principles of the "postage stamp" methodology, which provides for the division of the income level between entry-exit points in accordance with the established entry-exit ratio, it is planned to set/adjust the upper-income limits for each year of the regulatory period, eliminating the setting/adjustment of price caps;

- in accordance with the provisions of the Law and the Tariff Network Code, it is planned to consolidate the possibility of intersystem compensation for the natural gas TSOs;

- the criteria for the assessment of technological costs of the natural gas TSO have been clarified.

The NERC set the 2020 income level of transmission activities for AB "Amber Grid" at EUR 36,073.93 thousand, i.e. 17.87% lower than the level set for 2019 (EUR 43,922.96 thousand), the decrease in the 2020 upper income limit or income level is mainly due to the return on investment exceeded in 2014-2018 – EUR 9,359.33 thousand.

Table 7. *Change in the upper income level of the transmission service of AB "Amber Grid" in 2019-2020*

Income level, EUR thousand	**2019**	**2020**	**Change, %**
AB "Amber Grid"	43,922.96	36,073.93	17.87

Source: NERC.

The NERC, having verified that the prices of the natural gas transmission services submitted by AB "Amber Grid" do not discriminate against separate consumer groups and do not exceed the set upper income limit for 2020 (EUR 36,073.93 thousand) approved **the transmission service prices at each entry and exit point.**

Table 8. *Prices of long-term natural gas transmission services in 2019-2020, EUR/MWh/day/year*

		2019	2020	Change, % / (times)
At entry points	Kotlovka GMS	43.46	142.77 35.96**	3.28 times
	Kiemėnai GMS	43.46	142.77	3.28 times
	Klaipėda GMS	9.56**	35.69*	3.73 times
At exit points	At the internal exit point	308.25	190.67	—38.1
	Kiemėnai GMS	152.95	102.27	—33.0
	Šakiai GMS	48.06	53.54	11.4

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

*** At the entry point of Kotlovka GMS, a capacity discount of 74.8% (on average) is applied with restrictions on transporting gas to a third country.*

Source: NERC.

At the entry point of Klaipėda GMS (LNG terminal), as well as at the points of entry from the infrastructure designed in order to eliminate exclusion of the gas transmission systems of the Member States, and at the points of exit to such infrastructure, a transmission price discount may be applied in order to enhance the security of energy supply and to promote competitiveness of the natural gas market. In view of this, in 2020, the NERC approved the 75% discount offered by AB "Amber Grid" and applied to the entry point of Klaipėda GMS, and provided for the compensation of the share of revenue not collected due to the application of the discount at the exit point of Kiemėnai GMS and the internal natural gas transmission system exit points.

In order to ensure competition for the import of natural gas from different sources, promote competition between natural gas suppliers and avoid creating additional market barriers for the use of the gas of the LNG terminal, as well as taking into account the decisions concerning the Finnish, Estonian and Latvian (FINESTLAT) natural gas transmission price at the entry points of the common FINESTLAT price zone, the NERC set the proportion of the allocation of transmission service revenues between entry and exit points, applicable to the core network, at 73.3/26.7. The change in the above proportion resulted in significant changes in the prices of the natural gas transmission services (>3 times) at all entry points of the transmission system (in 2019, the proportion of the allocation of transmission service revenues between entry and exit points set at 20/80 was applied).

Also, in accordance with the provisions of the Tariff Network Code and the conclusions of ACER, the NERC applies a capacity discount of 74.8% at the entry point of Kotlovka GMS in 2020, with restrictions on transmitting gas to a third country (via the exit point of Šakiai GMS, without the possibility of delivering gas to other points and/or selling at the virtual natural gas trading point (natural gas exchange)).

In view of the long-term and short-term forecasted contracted capacity, consumption capacity and the quantities at the entry and exit points of the transmission system, the calculated natural gas

transmission prices do not exceed the income level set by the NERC for 2020, do not discriminate against transmission system users and ensure the absence of cross-subsidisation.

The average price per capacity unit in 2020 at the internal point of the Lithuanian transmission system amounts to EUR 190.67/(MWh/day/year), i.e. decreases by 38.1%.

Distribution activities

In 2019, 4 distribution system operators (DSOs) were engaged in the activities of natural gas distribution. In 2019, the NERC adjusted the upper income limit for AB "Energijos skirstymo operatorius" and AB agrofirm "Josvainiai". For UAB "Intergas", the NERC extended the regulatory period for one year and adjusted the price cap. For UAB "Fortum Heat Lietuva", the upper income limit for the regulatory period of 5 years were set.

Table 9. *Dynamics of distribution upper income limit in the natural gas sector, EUR thousand, 2019-2020*

Income level, EUR thousand	**2019**	**2020**	**Change, %**
AB "Energijos skirstymo operatorius"	36465.031	36965.477	1.37
AB agrofirm "Josvainiai"	50.369	54.084	7.38
UAB "Fortum Heat Lietuva"	145.712	132.566	—9.02

Source: NERC.

Table 10. *Dynamics of price caps for UAB "Intergas", EUR per MWh, 2019-2020.*

Entity	From 1/1/2019	From 1/1/2020	Change, %
UAB "Intergas", distribution	10.54	5.18	—50.85

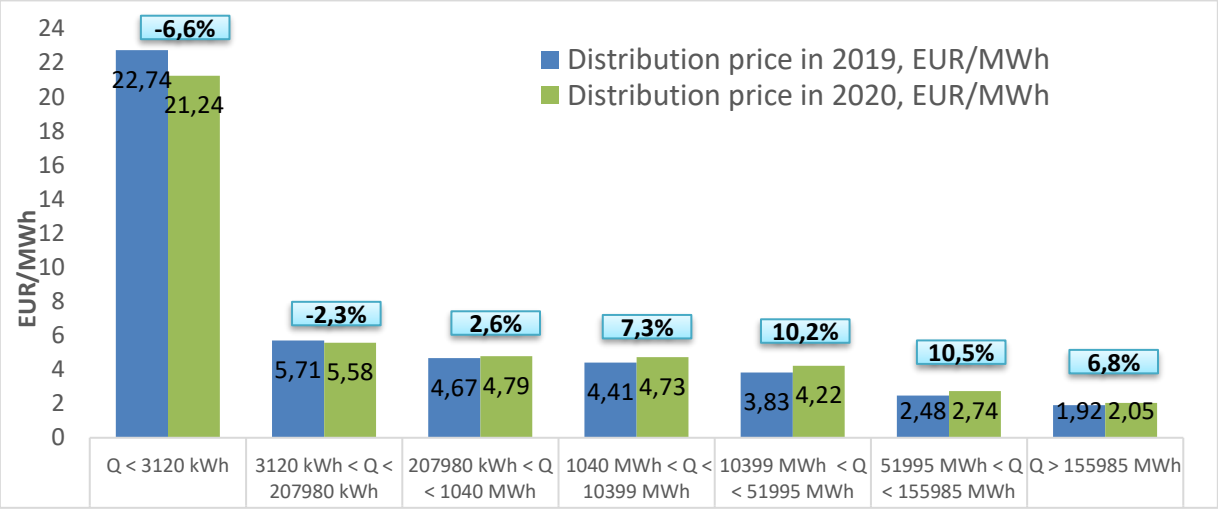
Source: NERC.

Having analysed the actual data of AB "Energijos skirstymo operatorius" for 2019 and taking into account the submitted forecast data, the NERC set the upper income limit for the natural gas distribution activities for 2020 at EUR 36 965 476. Compared to 2019, it increases by 1.37%. The upper income limit increases mainly due to higher return on investment.

The average natural gas distribution price – EUR 5.1/MWh – increases by 4.08% compared to 2019 (EUR 4.9 per MWh[10]). Specific natural gas distribution prices are differentiated amongst individual consumer groups according to the amount of gas consumed.

[10]In 2019, UAB "Energijos skirstymo operatorius" refunded an additional sum of discrepancy from authorised revenue to the consumers, which amounted to EUR 3 158 799, thus the average natural gas price in 2019 was lower than the price cap set by the NERC.

Fig. 23. Prices of natural gas distribution services of AB "Energijos skirstymo operatorius", EUR per MWh, excluding VAT



Source: NERC

The change in the prices was determined mainly by the quantities of distributed natural gas. According to the data of AB "Energijos skirstymo operatorius", in 2020, 7 253 812 MWh of natural gas will be distributed, i.e. 2.5% less than the amount forecast for 2019 (7 443 000 MWh). However, the amount of natural gas distributed to consumers of Groups I and II increases, leading to a slight decrease in the price of natural gas applied to them.

Liquefied Natural Gas Terminal (hereinafter referred to as "the LNGT")

Following the adoption of the amendments to the Law on the Liquefied Natural Gas Terminal by the Parliament of the Republic of Lithuania, the **Methodology for the Setting of State-regulated Prices Within the Natural Gas Sector** was supplemented by the calculation of the upper income limit for the LNG regasification service, providing for the possibility of a bank loan granted for the purpose of financing part of the costs of the rent of the floating LNG storage facility in the period from 2019 to 2024, including among the costs the payment of the refinance loan over a period of 2025-2044, as well as the payment of interest, the bank guarantee issued to the owner of a floating LNG storage facility the bank guarantee meant to ensure the granting of the State guarantee over the period of 2019-2044. The changes in the calculation of the costs of the LNG regasification service after the redemption of the floating LNG storage facility were also established and the assessment of the cost-effectiveness of the activities was clarified.

Also, by a separate decision, the possibility of adjusting the additional component of security of supply alongside the natural gas transmission price (hereinafter referred to as 'the Security Component") twice a year was consolidated.

In 2019, the NERC set the upper income limit for the LNG regasification activities for the regulatory period of 2020-2024: the upper income limit set for the LNG regasification activities in 2020 (EUR 36 287 300) decreases by EUR 30 268 thousand compared to 2018, i.e. by 45.48%. The main reason for the decrease in the upper income limit for the LNG regasification activities is the decision to distribute the costs of the rent of the LNG storage vessel-facility over the period of 2025-2044. The decrease in the income level was also influenced by the lower rate of return on investment set by AB "Klaipėdos Nafta", operating costs, depreciation costs and the decreasing value of regulated assets.

Pricing of specific LNG regasification and congestion services

The LNG regasification price consists of a fixed part and variable part: the fixed part is calculated per set consumption capacity unit of users of the transmission system (EUR/(MWh/day/year)), the variable part is calculated per unit of the quantity of LNG planned to be regasified (Eur/MWh).

The LNGT operator determines the variable part of the LNG regasification price by taking into account the development of the regional natural gas market, the possibilities of ensuring diversified natural gas supply to consumers of natural gas of the Republic of Lithuania under conditions of effective market competition, and by applying the principle of benchmarking based on the data of the regasification service price of other LNG terminals.

The NERC approved **the fixed part of the LNG regasification price – EUR 194.31/(MWh/day/year) – and the variable part of the price – EUR 0.35/MWh,** compared to 2018, the fixed part of the price decreases by 50.2%, while the variable part increases by 2.7 times. The decrease of the fixed part of the price is determined by the measures of reducing the LNG Security Component by distributing the costs of the rent of the vessel-facility until 2044. The increase in the variable part of the price is determined by the increase in the prices of transmission services at the entry points of the transmission system. Consequently, the fixed part of the price decreases, as the revenue from the variable part reduces the revenue level when calculating the price of the fixed part. The calculated fixed part of the LNG regasification price is included in the Security Component.

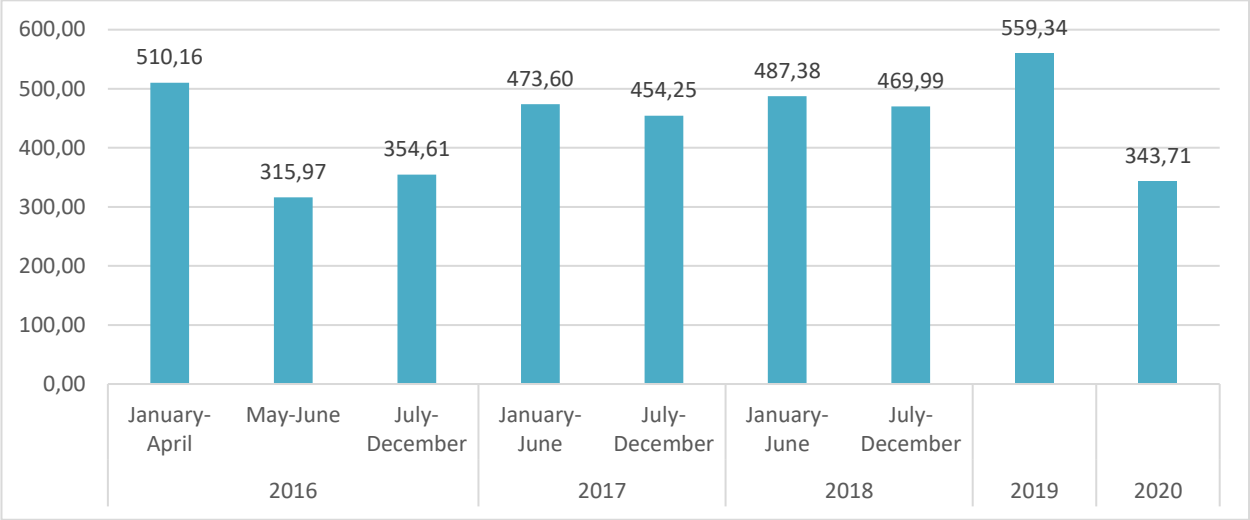
The NERC also set the price of the LNG congestion service for 2020 – EUR 1.11/MWh excluding VAT, i.e. 2.6% lower than the 2019 price (EUR 1.14/MWh excluding VAT).

Additional component for security of supply to the natural gas transmission price

In accordance with the procedure established by the NERC, the costs of the installation of the LNGT, its infrastructure and interconnection, which cannot be financed from other sources available to the undertaking implementing the LNGT project, as well as all fixed costs of the operation of the LNGT, its infrastructure and interconnection, which are not included amongst other state-regulated prices, and reasonable costs of the supply of necessary volume of the LNG terminal are included in the Security Component.

The Security Component has been calculated as the sum of the fixed part of the LNG regasification price, reasonable costs of the supply of necessary volume of the LNGT and the costs of the administration of LNGT funds per one consumption capacity unit.

Fig. 24. Additional component for security of supply to the transmission price



Source: NERC.

Consumer connection fees

The network connection prices for household consumers of natural gas are set by the NERC. Each year, no later than two months prior to the entry into force of new fees, the distribution system operator submits a request to the NERC regarding the approval of fees and data required for the calculation of the fees. The connection fee for household consumers consists of a fee applied to the consumer irrespective of the connection distance, and a fee applicable for each meter of the gas pipeline required to be constructed. For non-household consumers, the network connection fee is calculated individually each time in accordance with the methodology established by the NERC. The connection fee is equal to the costs incurred by the operator and exceeding the incurred economically justified costs.

The NERC renewed the connection fees that have been valid up until now for household consumers of Group I of AB "Energijos skirstymo operatorius" who consume up to 300 m³ of gas per year. Having analysed the data submitted by AB "Energijos skirstymo operatorius" on the connection of the systems of household consumers of Groups II and III who consume more than 300 m³ per year, the NERC approved the 2020 **fee of AB "Energijos skirstymo operatorius" of EUR 586.99/unit applied to the consumer irrespective of the connection distance and the fee of EUR 27.85/m applicable for each meter of the gas pipeline required to be constructed** for household consumers of Groups II and III. Compared to 2019, the fees for the connection of the systems of new household consumers to the natural gas networks applied by AB "Energijos skirstymo operatorius" increase by 2.6 and 2 times respectively. The main reasons for the increase of the fees are decreasing consumption of natural gas per consumer, increasing investments per kilometre, increasing investments per consumer and increasing gas pipeline length per consumer.

Table 11. *Changes in the fees applied by AB "Energijos skirstymo operatorius" for the connection of the systems of new household consumers who will consume more than 300 m³ of gas per year to the natural gas networks in 2009-2020*

Indicator	Fee irrespective of distance, EUR	Fee per metre of constructed gas pipeline, EUR/m
Connection fee during 1 January 2017 — 1 May 2020	228.12	13.67

Connection fee from 1 May 2020	586.99	27.85

Source: NERC.

In 2020, the NERC approved the fees applied by the natural gas distribution system operators AB "Energijos skirstymo operatorius", AB agrofirm "Josvainiai", UAB "Fortum Heat Lietuva" and UAB "SG dujos" for the connection of the systems of new household consumers to the natural gas networks. It was planned that the said fees will enter into force on 1 May 2020.

The NERC approved the fees applied by AB agrofirm "Josvainiai" and UAB "SG dujos" for the connection of the systems of new household consumers to the natural gas networks by applying the fees of the natural gas distribution system operator AB "Energijos skirstymo operatorius", which holds the largest market share.

For household consumers of Group I of UAB "Fortum Heat Lietuva", the NERC renewed the connection fees that have been valid up until now. Having analysed the data submitted by UAB "Fortum Heat Lietuva" on the connection of the systems of household consumers of natural gas of Groups II and III, the NERC approved the fee of UAB "Fortum Heat Lietuva" of EUR 597.50/unit applied to the consumer irrespective of the connection distance and the fee of EUR 26.14/m applicable for each meter of the gas pipeline required to be constructed for household consumers of Groups II and III. Compared to 2019, the fees of UAB "Fortum Heat Lietuva" for the connection of the systems of household consumers to the natural gas networks increase by 2.08 and 1.78 times respectively. The main reasons for the increase of the fees are the decrease in the average annual consumption of household consumers and the increase in the length of gas pipeline per user.

- Article 41(1)(s) and (n) of Directive 2009/73/EC

Storage of natural gas

Currently, there are no persons in Lithuania performing the activities of a natural gas storage operator. Also, operators do not provide linepack services and other ancillary services.

At the moment, system users use Inčiukalnis Underground Natural Gas Storage Facility located in the Republic of Latvia. The Latvian TSO and the storage operator JSC "Conexus Baltic Grid" allocate the capacity of the gas storage facility in the Republic of Latvia in accordance with the submitted applications.

In accordance with Article 47(1) and (2) of the LNG, in order to ensure reliable supply of natural gas in the Republic of Lithuania, natural gas suppliers must, while non-household consumers can, build up natural gas storage, which may be used only in accordance with the procedure laid down by the Government or an institution authorised by the Government. Natural gas supply undertakings and non-household consumers build up natural gas storage by entering into contracts with natural gas storage undertakings registered, operating and having storage facilities in any Member State connected to the Republic of Lithuania via a natural gas transmission system. In accordance with Article 46(5) of the LNG, the costs of the security of uninterrupted natural gas supply incurred by household consumers are included in the calculation of the natural gas supply price as a separate component of the supply price. Non-household consumers cover the costs of the security of uninterrupted natural gas supply from their own funds in accordance with the contracts. The NERC monitors the manner in which the supply undertakings build up and safekeep the natural gas storage, while said undertakings provide the relevant information to the NERC on a yearly basis in

the report on its activities and the ensuring of security. In its storage facility, UAB "Ignitis" stores the volume of natural gas necessary in order to supply vulnerable consumers with natural gas for a period of time established by the State, and the volume of gas necessary for non-household consumers who have signed contracts regarding uninterrupted supply of natural gas. On 1 September 2019, 396.2 GWh of gas was stored for household consumers (vulnerable consumers of Groups I and II). For non-household consumers, in accordance with contracts regarding uninterrupted supply of natural gas, about 21.3 GWh of gas was stored in 2019.

- Balancing

○ Article 41(6)(b) of Directive 2009/73/EC

The balancing regime is carried out in accordance with the provisions of the European Commission Regulation (EU) No 312/2014, which establishes the Network Code on Gas Balancing of Transmission Networks. Accordingly, most of the provisions that are not applied directly are implemented in accordance with the legislation prepared by the TSOs[11], DSOs[12], and approved by the NERC. Said legislation lays down rules for the exchange of information, the pricing of imbalance charge, the setting of neutrality charge and other aspects of the balancing regime[13]. The NERC performs the monitoring of the implementation of the latter regulation on a continuous basis. Cooperation regarding the harmonisation of the balancing regime is also carried out at regional level in order to harmonise the rules between the Baltic States and Finland as much as possible.

- Cross-border issues

The transmission system of AB "Amber Grid" is currently connected to the natural gas transmission systems of the Republic of Latvia, the Republic of Belarus and the Kaliningrad region of the Russian Federation, the distribution systems of Klaipėda LNGT and the Lithuanian DSOs. Gas from the Russian Federation is transported to Lithuania via the Kotlovka Gas Metering Station (hereinafter referred to as the "GMS"), moreover, this point is also used for the transmission of gas through the territory of the Republic of Lithuania to the Kaliningrad region. The Šakiai GMS is used 100% for the transmission of natural gas to the Kaliningrad region, while the connection between Lithuania and Latvia (Kiemėnai GMS) is used not only for the purposes of security of supply in order to avoid exclusive use of Inčiukalnis Underground Natural Gas Storage Facility located in Latvia, but also for the transmission of the quantities of commercial gas to Latvia or Estonia. At the entry and exit points of the transmission system managed by AB "Amber Grid", technical capacity remained unchanged during 2018 and 2019. Technical capacity and its use at the points of the transmission system are shown in Table 12.

Table 12. *Technical capacity and its use at cross-border points*

[11] Rules for the Use of the Natural Gas Transmission System of AB "Amber Grid", coordinated by Resolution No O3E-785 of 28 November 2019 of the NERC (https://www.e-tar.lt/portal/lt/legalAct/13e188d011d711ea9d279ea27696ab7b/asr)
Rules for the Balancing of the Natural Gas Transmission System of AB "Amber Grid", coordinated by Resolution No O3E-263 of 24 August 2018 of the NCC (https://www.e-tar.lt/portal/lt/legalAct/435af730a79911e8acb39f2e6db7935b)
[12]Rules for the Use of the Natural Gas Distribution System of AB "Energijos skirstymo operatorius", coordinated by Resolution No O3E-792 of 28 November 2019 of the NERC (https://www.e-tar.lt/portal/lt/legalAct/ec27e5e011d711ea9d279ea27696ab7b)
[13] Methodology for the Setting of Income and Prices for the State-regulated Natural Gas Transmission Activities, approved by Resolution No O3E-314 of 5 October 2018 of the NCC (https://www.e-tar.lt/portal/lt/legalAct/2fd91460c89811e8bf37fd1541d65f38)

Gas metering station	Technical capacity, MWh/day	Maximum capacity use in 2019, MWh/day	Maximum capacity use, %
Kotlovka	325.433	246.891	75.87
Kiemėnai:			
to Latvia	67.600	59312	87.74
to Lithuania	65.100	40.409	62.07
Šakiai (to Kaliningrad)	114.200	111.132	97.31
Klaipėda (to Lithuania)	122.350	108.297	88.51

Source: AB "Amber Grid".

In 2019, the PSOs transported 55.521 GWh of natural gas, of which 29.519 GWh (53.17%) were supplied to Lithuanian and EU consumers, and 26.002 GWh (46.83%) were transported to the Kaliningrad Region of Russia. In total, the amount of natural gas transported in 2019 was 5.8% higher than the amount transported in 2018.

In 2019, 28.46 TWh of natural gas was imported into Lithuania, 65.35% of this quantity was regasified by the Klaipėda LNGT, the remaining quantity (almost 34.65%) was imported via the points of Kotlovka and Kiemėnai.

Since 2015, the NERC has been participating in the international work group of the Baltic region RGMCG and assisting in the development of the natural gas market of the three Baltic States and Finland, the aim of which is to establish rules for the functioning of a single natural gas market, including common pricing principles.

The NERC coordinated the amendments to the regulation of UAB "GET Baltic" trading on the natural gas exchange, which shall ensure **greater liquidity of the natural gas exchange of the Baltic States in the trading platforms of Lithuania, Latvia, Estonia and Finland starting from** 2020. The key amendments to the regulation include the regulation of the operation of trading platforms in Finland and the common trading platform of Latvia and Estonia, as well as the changes in the procedure regarding the implicit capacity allocation period and the lengthening of the trading session of the product of the intra-day.

- Access to cross-border infrastructure, including allocation and congestion management: Articles 41(6)(c) and 41(9) and (10) of Directive 2009/73/EC

Capacity allocation and congestion management

Capacity allocation and congestion management are carried out in accordance with Commission Regulation (EU) 2017/459 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013 (CAM NC), and the requirements of European Commission decision amending Annex I to Regulation (EC) No 715/2009 of the European Parliament and the Council on conditions for access to the natural gas transmission networks (CMP NC). Accordingly, the majority of the provisions of said regulations that are not applied directly are implemented in accordance with the legislation prepared by the TSOs[14], the

[14] Rules for the Use of the Natural Gas Transmission System of AB "Amber Grid", coordinated by Resolution No O3E-785 of 28 November 2019 of the NERC (https://www.e-tar.lt/portal/lt/legalAct/13e188d011d711ea9d279ea27696ab7b/asr)

DSOs[15] , and the LNGT operator[16], and approved by the NERC. These methodologies describe the characteristics of the offered products, procedure for their booking and allocation.

In order to harmonise the principles of access to the natural gas transmission system applied in Lithuania with those applied in the Latvian and Estonian gas market zone, the NERC has **coordinated the Rules for the Use of the Natural Gas Transmission System of AB "Amber Grid"** — the amendments came into force in January 2020:

- the possibility of allocating the intraday capacity immediately after the deadline for the approval of volume applications by means of implicit capacity allocation (ICA) and without applying the limit of 30 GWh/day has been established (this procedure also applies in the Latvian and Estonian gas market zone);

- the process of the submission of applications regarding the volume at the system point of the entry from LNGT has been clarified;

- it has been established how the volume of natural gas shall be allocated to system users in cases where there is no contract concluded between adjacent transmission system operators and/or with system users that provides for a technical balancing account.

It should be noted that there are no capacity auctions applied in Lithuania, however, the implicit capacity allocation method (ICA) is applied at the interconnection point of Lithuania and Latvia.

Regional pricing

Following the adoption of the amendments to the LNG by the Parliament of the Republic of Lithuania, the NERC has been obliged to ensure that the pricing model of the natural gas transmission services, the procedure for intersystem compensation of transmission system operators, if applicable, and the prices of gas transmission services applicable at regional level provide economic benefits for domestic consumers. The decision on the accession of Lithuania to the regional market zone will be adopted by the Government upon assessment of the conclusions submitted by the Ministry of Energy and the NERC regarding the economic benefit of such a decision to domestic consumers.

With a view to creating a common regional natural gas market of the Baltic States and Finland, in 2018, the NERC approved the new Methodology for the Setting of Income and Prices for the State-regulated Natural Gas Transmission Activities, which consolidates the "postage stamp" principle for the calculation of natural gas transmission prices. The "postage stamp" methodology provides for the distribution of income levels between entry and exit points in accordance with the established entry-exit ratio, and, in a standard case, results in uniform tariffs of the entry and exit points of the natural gas transmission system. The possibility of applying a discount at the entry point of the LNGT has also been established in order to increase competition between sources of import of natural gas.

[15] Rules for the Use of the Natural Gas Distribution System of AB "Energijos skirstymo operatorius", coordinated by Resolution No O3E-792 of 28 November 2019 of the NERC (https://www.e-tar.lt/portal/lt/legalAct/ec27e5e011d711ea9d279ea27696ab7b)

[16] Rules for the Use of the Liquefied Natural Gas Terminal of AB "Klaipėdos nafta", coordinated by Resolution No O3E-536 of 28 November 2017 of the NCC (https://www.e-tar.lt/portal/lt/legalAct/5cced7b0a95311e9964cdd77475976b0)

The decision on the application of the "postage stamp" methodology was adopted following a detailed analysis with a view to establishing the best methodology for the determination of tariffs of natural gas transmission services to be applied in the Baltic and Finnish natural gas transmission entry-exit system.

It should be noted that on 13 September 2019, the heads of the energy regulators of the Baltic States and Finland held a meeting in Vilnius, the purpose of which was to discuss the progress and further steps towards the creation of a common regional natural gas market. The discussions focused on the preconditions for Lithuania to join the regional gas market. During the meeting, scenarios regarding the accession to the natural gas market encompassing the three countries (Finland, Estonia, Latvia – FINESTLAT) both in the short term, i.e. starting from 2020, and in the long term, i.e. starting from 2022, were discussed.

With a view to the integration of the 4 countries and in cooperation with representatives of the European Commission, the roadmap for the further actions of the work group was additionally prepared and coordinated. In accordance with the roadmap, the representatives of the work group must assess the benefits to be created by the market integration. The assessment of benefits will be carried out with the assisstance of independent consultants. It should be noted that the possibilities of creating a common balancing zone, the recovery of the costs of regional infrastructure, the harmonisation of the requirements of construction permits and issues regarding biogas regulation will also be assessed.

Taking into account the fact that no decision has been adopted on the creation of a common zone of transmission service prices of Lithuania and the FINESTLAT countries (Finland, Estonia, and Latvia) from 2020, in 2020, the prices of the natural gas transmission services were calculated on the basis of the following principles: the Lithuanian transmission system is considered to be a separate price zone, and the entry-exit split for the core transmission network at the entry-exit points (as an input parameter) amounts to 73.3%/26.7%.

- Article 41(11) of Directive 2009/73/EC

Handling of complaints and disputes

The NERC handles, by out-of-court means, the disputes arising between energy undertakings regarding the activities or inactivity of energy undertakings in the supply, distribution, transmission, storage of energy, the non-assignment of the right to use networks and systems to energy undertakings, interconnection, the balancing of the supply flows of energy and energy sources, the application of prices and tariffs. Said disputes are handled in accordance with the rules for the settlement of disputes between energy undertakings approved by the NERC. Moreover, energy undertakings have the right, in accordance with the provisions of the LNG and the Law on Conciliatory Mediation in Civil Disputes of the Republic of Lithuania, to refer to the NERC with a request for mediation and/or peaceful settlement in order for the dispute over this or other relations regulated by the legislation on energy matters to be settled amicably. The NERC establishes its own rules for conciliatory mediation.

In May 2020, the NERC settled the dispute regarding payment for the natural gas transmission service during the repair period between AB "Ignitis gamyba" (system user) and AB "Amber Grid" (transmission system operator). The NERC rejected the application of AB "Ignitis gamyba" regarding

the dispute between the applicant and AB “Amber Grid” concerning the provision of and payment for the natural gas transmission service. AB “Ignitis gamyba” indicated that although AB “Amber Grid” did not provide the applicant with the natural gas transmission service during the period of repair of the main pipeline of AB “Amber Grid”, it did not agree to reduce the bills issued to the applicant for the service not provided during the repair period, as well as refused to repay the Security Component funds paid for the repair period. The NERC decided that the request of AB “Ignitis gamyba” is unfounded and indicated that the Rules for the Use of the Natural Gas Transmission System of AB “Amber Grid” establish that in cases wherein repair works and works related to the connection of other gas systems are necessary, transmission services may be restricted or interrupted.

Having assessed the provisions of the contract concluded between the applicant and AB “Amber Grid”, the Rules for the Use of the Natural Gas Transmission System of AB “Amber Grid” and other legislation, the NERC found that the applicant could not be exempted from the payment of the fee for the regular annual transmission capacity and consumption capacity even in the case of transmission capacity limitations due to ongoing repairs. The NERC also stated that the Security Component is paid regardless of whether the uninterrupted provision of the transmission services was ensured and/or capacity limitation existed, taking into account the annual level of natural gas consumption capacity declared by the applicant. Limitation of transmission capacity due to the actions of the transmission system operator does not impact the need for the maximum natural gas consumption capacity; accordingly, the Applicant must contribute to the financing of the LNGT as provided for in the Law on the Liquefied Natural Gas Terminal of the Republic of Lithuania.

- Article 41(1)(c) of Directive 2009/73/EC

Cross-border agreements

Taking into account the fact that no decision has been adopted on the creation of a common zone of transmission service prices of Lithuania and the FINESTLAT countries (Finland, Estonia and Latvia) from 2020, in 2020, the Lithuanian transmission system is considered to be a separate price zone. However, in order to efficiently develop the regional gas market of the Baltic-Finnish countries, the entry point prices set for 2020 were harmonised with the other countries of the FINESTLAT price zone (the common price zone of Estonia, Latvia and Finland), i.e. the entry price is the same at all entry points of the Baltic-Finnish region. As of 1 January 2020, FINESTLAT is functioning as a common natural gas price zone. It should be noted that the work group for the development of the Baltic-Finnish natural gas region is making every effort to facilitate agreement on a common natural gas market of the 4 countries. To achieve this goal, the work group for the development of a common region was joined by the representatives of the European Commission, who will coordinate said process of integration of the natural gas market and share their insights, experience over the course of the development of a common natural gas market.

- Article 41(1)(g) of Directive 2009/73/EC

Coordination of investments

The NERC coordinates investment projects related to the construction of new energy facilities, rebuilding, modernisation, reconstruction of existing energy facilities or development of energy facilities currently operating, etc. The Law on Energy provides for an obligation of the NERC to assess

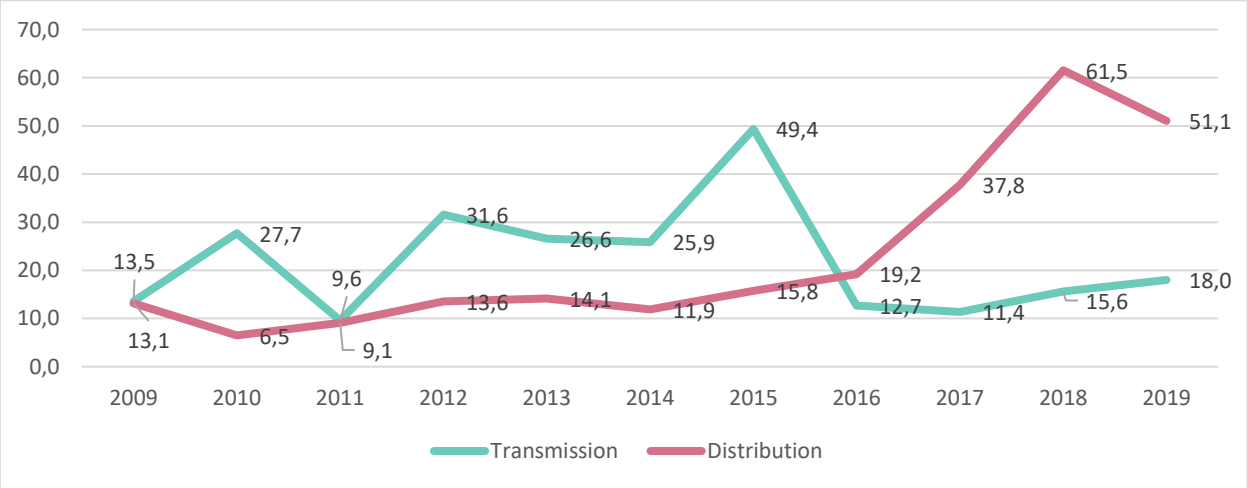
the reasonableness of investments. If investments are not coordinated with the NERC, they cannot be recognised as reasonable and are not included in the prices of regulated services.

Each year, the regulated entities operating in the natural gas sector submit to the NERC a common list of the investments, the value of each of which does not exceed EUR 2 million or the value of which accounts for less than 5% of the sum of all planned annual investments and less than EUR 0.15 million (investments of higher value are coordinated separately, taking into account economic efficiency, recoverability and impact on prices of regulated services), while the NERC coordinates said investments. At the same time, the NERC also ensures the control of the investments made in previous periods, taking into account the actual implementation sum and other changes.

Every two years, by 1 July of each year, the natural gas transmission and distribution system operators draw up and submit to the NERC a ten-year development plan including a specific list of investment projects based on the current and expected supply and demand, as well as on the requirements meant to ensure security and reliability of supply. The plan is submitted to the NERC following consultation with the stakeholders if legislation provides for such mandatory consultation. When assessing the plan, the NERC examines whether the plan takes all investment needs into account, whether it meets the requirements established in legislation and whether it is compatible with the ten-year network development plan of the European Union. If doubts arise as to the compatibility with the network development plan of the European Union, the NERC consults ACER.

The sum of investments in the natural gas sector coordinated by the NERC amounts to EUR 20.375 million in 2019. The sum of investments in the natural gas sector – transmission, distribution and LNG regasification – that have been actually implemented amounts to EUR 69 million in 2019.

Fig. 25. Investments in the natural gas sector in 2009-2019, EUR million.



Source: NERC.

- Implementation of network codes and guidelines

○ Network Code on Capacity Allocation Mechanisms

In order to harmonise the principles of access to the natural gas transmission system applied in Lithuania with those applied in the Latvian and Estonian gas market zone, the NERC coordinated the Rules for Access to the Natural Gas Transmission System of AB “Amber Grid” – the amendments came into force in January 2020:

- the possibility of allocating the intraday capacity immediately after the deadline for the approval of volume applications by means of implicit capacity allocation and without applying the limit of 30 GWh/day has been established (this procedure also applies in the Latvian and Estonian gas market zone);

- the signing of the transmission service contract by means of an e-signature has been consolidated, thus creating the conditions for more flexible use of the services of the Lithuanian natural gas transmission system;

- the process of the submission of applications regarding the volume at the system point of the entry from LNGT has been clarified, i.e. system users requesting gas transmission at the system point of the entry from LNGT during the agreed period must notify the LNGT operator of the gas flow expected to enter the system in advance;

- it has been established how the volume of natural gas shall be allocated to system users in cases where there is no contract concluded between adjacent transmission system operators and/or with system users that provides for a technical balancing account.

o Balancing Network Code

In 2019, the NERC cooperated consistently with the TSOs in order to ensure proper implementation of the provisions of the European Commission Regulation (EU) No 312/2014 establishing a Network Code on Gas Balancing of Transmission Networks. Accordingly, the NERC submitted comments to the TSOs regarding the performance of market actions at the end of the gas day and the issue of natural gas transmission from a third country to a third country. According to the assessment of the NERC, the provisions of the latter regulation establish that the initial daily imbalance quantity can only be adjusted until the end of the balancing period and the quantity allocated for the previous balancing period (gas day) cannot be adjusted when performing the trade of natural gas retrospectively (*ex post*). Network users may not adjust the quantities of natural gas allocated to them after the balancing period when performing trade, including the trade of natural gas under bilateral sales contracts, trade on the exchange, use of bilateral natural gas market derivatives, and derivatives granted on the exchange, etc. The performance of such actions reduces the liquidity of the exchange when using short-term standardised products, as part of the quantity is transferred to a different market.

o Network Code on System Interoperability and Data Exchange

The NERC, in cooperation with the national regulatory authority of Latvia, assessed the interconnection agreement concluded between the transmission system operators concerned, which implements the provisions of the European Commission Regulation (EU) 2015/703 establishing a Network Code on Interoperability and Data Exchange Rules, and submitted their observations in a joint letter.

o Tariff Network Code

The Tariff Network Code defines the requirements for the methodology for the natural gas transmission reference price, publication of information, and public consultation in accordance with Articles 26 and 28 of the Tariff Network Code.

The Tariff Network Code establishes the following key obligations:

— to publish the information relating to the setting of natural gas transmission tariffs each year;

— to carry out a public consultation on the reference price methodology every 5 years (for each regulatory period);

— to carry out a public consultation on the discounts applied at the system points of the natural gas transmission entry-exit, multipliers, and seasonal factors each year.

On 5 March 2019, the NERC, in compliance with the requirements of the Tariff Network Code regarding the application of the reference price methodology, its publication and consultation, published a document for public consultation on the methodology for the pricing of the services provided by the Lithuanian natural gas transmission system operator AB “Amber Grid”. Taking into account Article 27(2) of the Tariff Network Code, ACER published a conclusion on the public consultation document prepared by the NERC, which defines the principles of the pricing of the services provided by the Lithuanian natural gas transmission system operator AB “Amber Grid”.

In view of the conclusions published by ACER and having verified that the prices of the natural gas transmission services provided by AB “Amber Grid” do not discriminate against separate consumer groups and do not exceed the upper income limit set for 2020 — EUR 36,073.93 thousand, the NERC approved the prices of the natural gas transmission services, which have been valid from 1 January 2020.

With a view to setting the prices for the natural gas transmission services for 2021 and taking into account the fact that the basic principles of the pricing of the natural gas transmission services have not changed, in 2020, the NERC submitted a draft document for public consultation regarding the multipliers, seasonal factors and discounts applicable to the 2021 tariff period within the price structure of the services provided by the Lithuanian natural gas transmission system operator AB “Amber Grid”, interested parties could submit comments and proposals until 31 March 2020 (inclusive).

NERC is obliged to submit the mentioned document for public consultation by the Tariff Network Code. Prior to each tariff period, the national regulatory authority shall conduct a consultation with the national regulatory authorities of all directly connected Member States whose gas transmission systems are connected to the gas transmission system of the mentioned country and the relevant stakeholders on the following:

• the level of multipliers;

• the level of seasonal factors (if applicable);

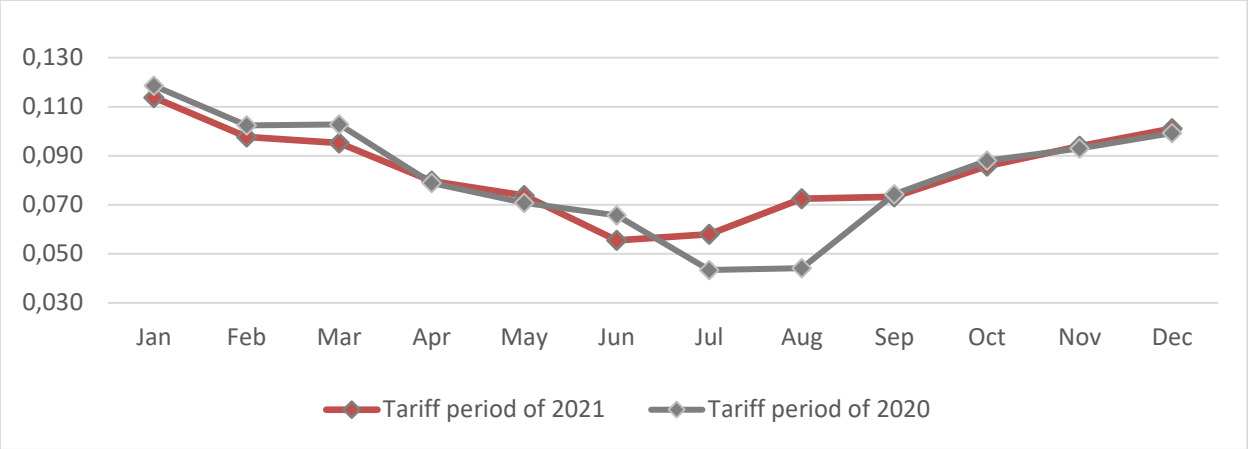
• price discounts at the points of entry from the liquefied natural gas (LNG) storage facilities (installations/terminal) (if applicable);

• price discounts at the points of entry from the infrastructure developed in order to eliminate the exclusion of the gas transmission systems of the Member States and at the points of exit to such infrastructure (currently not relevant to the entry-exit system of Lithuania);

• price discounts for interruptible capacity products.

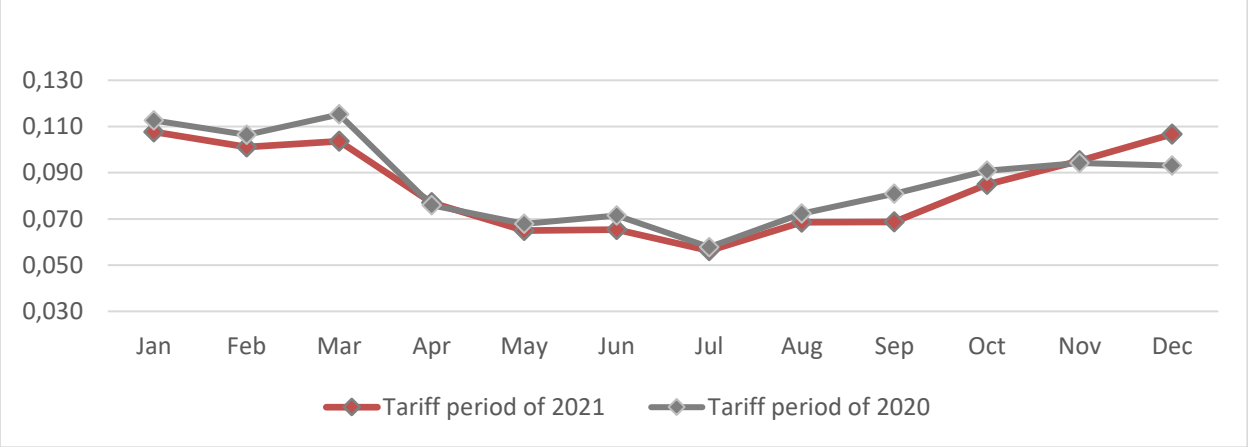
A key proposal in the draft: maintain in 2021 the above pricing aspects applied during the current (2020) tariff period, with the exception of seasonal coefficients at the internal point and the Šakiai exit point. Changes in seasonal coefficients were due to the changing natural gas flow forecasts (see Figures provided below):

Fig. 26. Usage indicators (ratio distribution between monthly and annual gas flow) at the internal exit point in 2020-2021, sub-units



Source: NERC.

Fig. 27. Usage indicators (ratio distribution between monthly and annual gas flow) at the Šakiai exit point in 2020-2021, sub-units



Source: NERC.

After assessing the comments on multipliers , seasonal factors and discounts applied for 2021 received during the public consultation that took place in 2020, and verifying that the prices of the natural gas transmission services provided by AB "Amber Grid" do not discriminate against separate consumer groups and do not exceed the upper income limit set for 2021 – EUR 42,377.44 thousand, the NERC approved the prices of the natural gas transmission services, which will be valid from 1 January 2021.

The average transmission service price for the needs of Lithuanian consumers in 2021 (assessing long-term and short-term services), compared to the average price applied in 2020, will increase by 14.8% — up to EUR 1.40/MWh.

At Klaipėda Gas Metering Station (GMS), i.e. at the LNGT entry point, the capacity fee of EUR 35.69/(MWh/day/year) was set in 2021. In order to promote the competitiveness of the natural gas market, a discount of 75% is applied at the Klaipėda point (LNGT) in 2021.

In order to efficiently develop the regional gas market of the Baltic-Finnish countries, the entry point prices were harmonised with the other countries of the FINESTLAT price zone (the common price zone of Estonia, Latvia, and Finland), i.e. the entry price is the same for all entry points (the entry-exit split for the core transmission network applied in 2021 amounts to 62.95 %./37.05 %, in 2020 – 73.3%/26,7%).

Table 13. *Prices of long-term natural gas capacity transmission services (EUR excluding VAT)*

	Kotlovka GMS	**Kiemėnai GMS**	**Klaipėda GMS**	**At the internal exit point**		**Kiemėnai GMS**	**Šakiai GMS**
				For the group below 10.4 TWh	**For the group above 10.4 TWh**		
Price for annual reserved capacity (EUR/(MWh/day/year)	142.77 (35.96)*	142.77	35.69	92.00	92.00	162.32	44.12
Change in the price for annual reserved capacity, compared to 2020 (%/times)	0	0	0	60.7	60.7	82.9	12.0
Price for the volume of sold gas (Eur/MWh)	—	—	—	0.86	0.08	0.06	0.06
Change in the price for volume, compared to 2020 (%)	—	—	—	16.2	0	0	0
Price for consumption capacity (EUR/(MWh/day/year)	—	—	—	55.55	7.23	—	—
Change in the price for consumption capacity, compared to 2020 (%)	—	—	—	10.4	10	—	—

**applied to restricted capacity products of natural gas transmission when transporting gas to a third country via the exit point of Šakiai GMS.*

Source: NERC.

System users can reserve not only long-term capacity (for a year), but also short-term capacity – for a quarter, month, or even day.

Table 14. *Key technical indicators of the natural gas network*

Indicators		**2016**	**2017**	**2018**	**2019**
Country's maximum consumption (TWh/day)		0.355	0.355	0.405	0.405
Capacity of the gas pipeline entry points (TWh/year)		187.2	187.2	187.2	187.2

Capacity of the gas pipeline exit points (TWh/year)		64.53	64.53	66.35	66.36
Maximum technical gasification capacity, m^3/day		10.244.300	10.244.300	10.244.300	10.244.300
Total volume of LNG containers, m^3		170000	170000	170000	170000
Number of TSOs		1	1	1	1
TSO network (km)		2115	2115	2115	2115
Number of DSOs		5	5	5	4
DSO network (km)		8772	8914	9106	9574

Source: NERC.

4.2. Promotion of competition and functioning of the market

4.2.1. Wholesale market

- Monitoring of the price level, the level of transparency, the level of market opening and competition, as well as efficiency

- Article 41(1)(i), (j), (k), (l) and (u) of Directive 2009/73/EC

In accordance with the provisions of the LNG, the NERC continuously monitors and controls the compliance of entities operating in the natural gas sector with the requirements of transparency, non-discrimination and competition in the natural gas sector established in the LNG and other legislation, their compliance with the conditions and requirements for licensed activities or activities regulated with the help of permits, the protection, and defense of consumer rights and legitimate interests, including the reliability of the information provided to consumers. Entities operating in the wholesale natural gas market must make publicly available the information provided for in separate legislation. In accordance with the approved description of the information to be made publicly available, the NERC publishes the list of the information published by the entities of the natural gas sector[17] (hereinafter referred to as "the List") on the NERC website. In accordance with the aforementioned description, the NERC also annually checks the manner in which the information contained in the List is made publicly available by the entities. Having identified deficiencies in the published information, the NERC draws up recommendations related to compliance of the prices of the services within the energy sector with the requirements of transparency, non-discrimination and other requirements set out in legislation. In accordance with the provisions of the Law on Energy, these recommendations are published at least once every 5 years and submitted to the Competition Council of the Republic of Lithuania.

In order to carry out the monitoring of the market, the NERC, in accordance with the approved Rules for the Provision of Information of the Undertakings of Energy, Drinking Water Supply and Waste Water Treatment, Surface Waste Water Treatment, collects information from regulated entities. On the basis of the information submitted by said entities, in order to enhance the awareness of market participants and ensure that the market participants have access to reliable information, the NERC

[17]https://www.regula.lt/dujos/Puslapiai/gamtiniu-duju-sektoriaus-ukio-subjektu-viesai-skelbiamos-informacijos-sarasas-.aspx

regularly draws up half-yearly reports on the monitoring of the natural gas market, annual development reviews, and publishes them on the NERC website[18].

The monitoring of trade in the natural gas market is carried out by analysing the behaviour of market participants, i.e. conditions of entering into transactions, including submission of orders to trade, explanations of market participants, and other circumstances, in order to ensure that wholesale electricity markets are not abused. As part of their implementation of REMIT, the NERC and ACER **carried out continuous monitoring of the wholesale electricity and natural gas markets,** analysis of information published on platforms for the disclosure of publicly unavailable information[19] in the Lithuanian trade zone (in the gas and electricity sector, there were 16 incorrectly/inaccurately published urgent market messages (UMM)).

In 2019, the NERC also **carried out registration of market participants** (7 market participants were registered), assessment of bilateral contracts on wholesale energy products and their compliance with the requirements of REMIT, monitoring of orders submitted on the exchanges and transactions concluded by market participants.

After carrying out an inspection of the natural gas market participants – UAB "Geros dujos" and UAB "Arontera" – the NERC found that UAB "Geros dujos", while performing sales transactions on the Lithuanian natural gas exchange, violated the provisions of REMIT regarding market manipulation. The NERC established that in the first half of 2017, UAB "Geros dujos" entered into sales transactions on the natural gas exchange only in the last days of the month, due to which:

- it secured the minimum exchange product price for the relevant day (artificial price) published by the exchange operator;
- at least 6 consumers received a false signal regarding the price of exchange products;
- as a result of said transactions, the company received more than EUR 5 thousand in additional revenue.

This is the first violation of this kind established on the Lithuanian natural gas market.

In order to create the preconditions for the development of effective competition within the natural gas markets and prevent the abuse of significant influence of persons within the natural gas markets, the NERC conducts market research in accordance with the Rules for Market Research. Accordingly, the NERC regularly publishes market research reports on its website and updates said reports, with the exception of information that is considered confidential, and publishes and updates the final decisions on the market research results or parts thereof without confidential information. It was noted that no market research was carried out in 2019.

In the area of ensuring security of supply of natural gas, the NERC monitors the main terms and conditions of natural gas supply contracts regarding the ensuring of the reliability of the supply of natural gas between natural gas supply undertakings and consumers. To that end, supply undertakings provide information to the NERC on the main terms and conditions of concluded natural gas supply contracts on a yearly basis, while the NERC has the right to require natural gas

[18] Http://www.vert.lt/dujos/Puslapiai/duju-rinkos-apzvalga/rinkos-stebesena.aspx
[19] Https://umm.nordpoolgroup.com/#/messages?publicationDate=lastweek&eventDate=nextyear
https://umm.getbaltic.com/public-umm

undertakings to revise said contracts in such a way that they comply with the requirements laid down in the LNG and other legislation. If the natural gas undertaking fails to comply with this requirement, the NERC has the right, in defense of the public interest, to apply to the courts for the amendment of the contract. A contractual practice that restricts competition was not identified in 2019.

Participants and structure of the wholesale market

In 2019, 21.682 GWh of natural gas was sold and/or consumed in the wholesale natural gas market[20], i.e. 16.90% more than in 2018 when 18.548 GWh of natural gas was sold and/or consumed.

Table 15. *Structure of the wholesale natural gas supply market in 2014-2019, GWh*

Structure of the wholesale natural gas supply market	2014	2015	2016	2017	2018	2019
Under bilateral contracts in Lithuania	21.548	23.711	18.329	18.856	17.463	18.824
On the exchange* (of the buyer)	1.134	652	299	376	943	2.711
Total	**22.682**	**24.363**	**18.628**	**19.232**	**18.406**	**21.535**
Change compared to 2019, GWh	—1.147	—2.828	2.907	2.303	—3.129	—
Change compared to 2019, %	—5.06	—11.61	15.60	11.97	17.00	—

** Natural gas exchange transactions are assessed if the buyer's trading platform is located in Lithuania.*
Source: NERC.

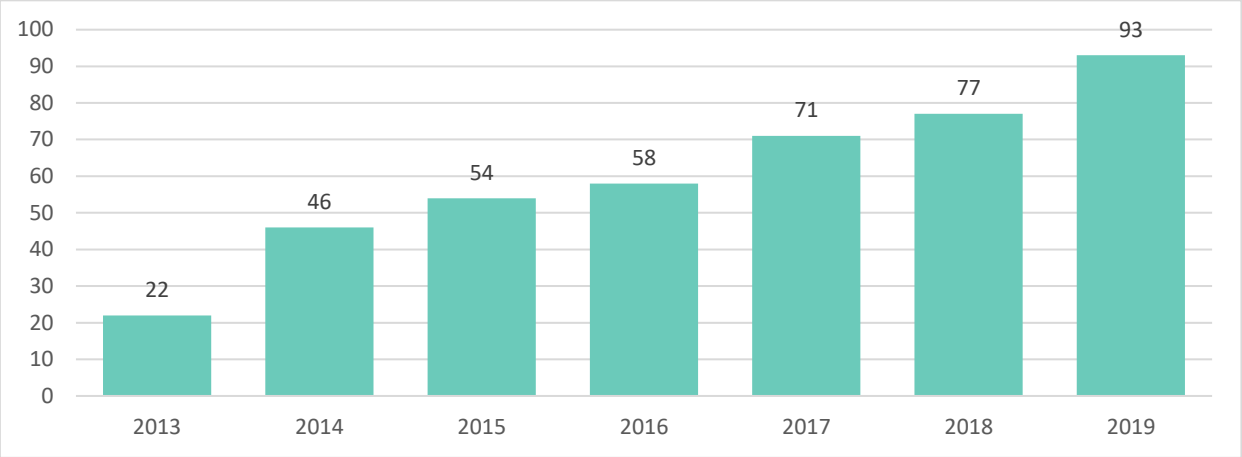
In 2019, the largest market share in the wholesale natural gas supply market under bilateral agreements was held by AB "Achema", whose market share accounted for 89% and, compared to 2018, the market share held by said undertaking increased by 14.5%. In 2019, compared to 2018, the market share of UAB "Ignitis" increased by 3.2%.

Trade on natural gas exchanges

In 2019, 93 exchange participants were registered on the natural gas exchange "Get Baltic", while on the Lithuanian natural gas exchange platform, 70 participants were registered.

[20]Including natural gas supply contracts for final consumers with a natural gas consumption capacity that exceeds the threshold set out in the second subparagraph of Article 2(1)(5) of REMIT (600 GWh). There are currently 16 such persons operating in the market.

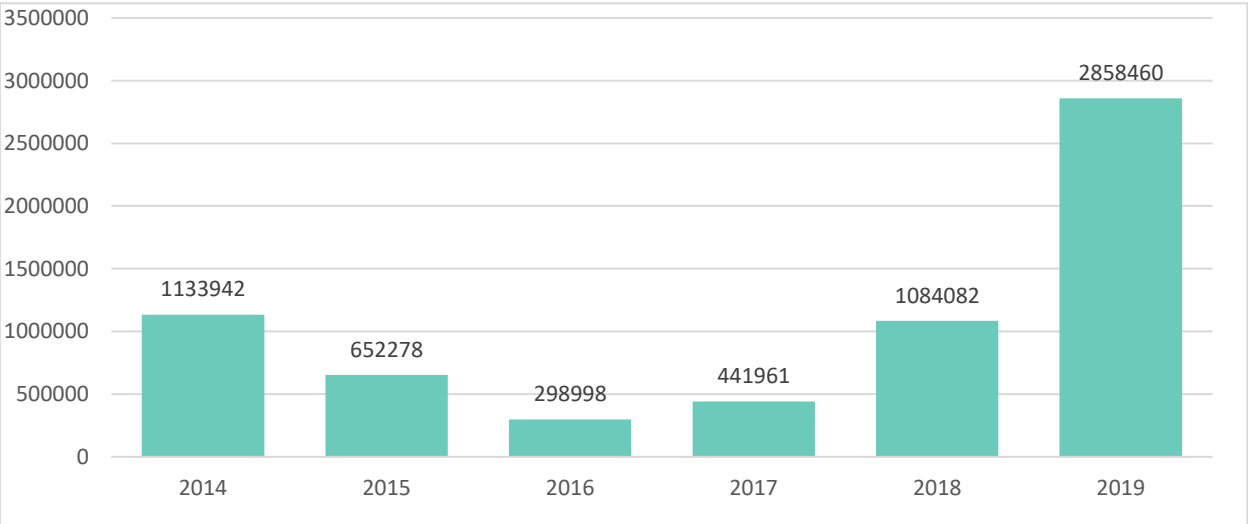
Fig. 28. Number of participants of the natural gas exchange in 2014-2019



Source: NERC.

On 1 January 2020, the regional gas exchange "GET Baltic", which operates in the Lithuanian, Latvian and Estonian markets, successfully started its activities in Finland, thus becoming a single regional trading platform for the gas markets of the Baltic States and Finland. In 2019, 2 858 460 MWh of natural gas was traded on the natural gas exchange of UAB "GET Baltic". Compared to the period of 2018, the volume of natural gas sold on the natural gas exchange of UAB "GET Baltic" was 163.68% higher than in 2019.

Fig. 29. Volume of natural gas sold on the natural gas exchange in 2014-2019, MWh



Source: NERC.

In 2019, the average natural gas price on the exchange of UAB "GET Baltic" was EUR 19.03/MWh[21], or 11.67% lower than in 2018 when it amounted to EUR 21.55/MWh. In 2019, the turnover of exchange trade amounted to EUR 54.4 million[22], i.e. it was 132.9% higher than in 2018.

Detailed information on the wholesale natural gas supply market is provided in the 2019 review of the energy and drinking water supply, as well as waste water treatment, sectors prepared the NERC.

[21]The sales price which does not include the natural gas transportation price is assessed.
[22] The sales sum which does not include the natural gas transportation price is assessed.

Table 16. *Indicators of the wholesale natural gas market*

	2016	2017	2018	2019
Natural gas production	—	—	—	—
Number of active wholesale market participants	9	8	11	9
Share of biogas in the natural gas network	—	—	—	—
Natural gas demand, GWh*	18.628	19.232	18.406	21.535
Gas demand of energy producers	NA	NA	NA	NA
Imports, GWh	24.222	27.374	23.451	28.464
Exports, GWh	368	2.599	2.308	5.990
Main source of imports and its share, %	Gas pipeline 60.32	LNGT 54,84	Gas pipeline 62.35	LNGT 65,35
Number of natural gas supply sources	2	2	2	2
Market share of the three largest wholesalers, %	97.8	98.8	95.1	98.2
Number of active wholesale market participants	9	8	11	9
Volume of natural gas traded on the spot market of natural gas, GWh	299	442	1084	2438
Volume of natural gas traded on the futures natural gas market, GWh	—	—	—	420
Total volume traded on the natural gas exchange, GWh	299	442	1084	2858
Average spot price of natural gas, EUR/MWh	18,07	17,47	22,87	18,18

*under bilateral contracts and natural gas exchange transactions when the buyer's trading platform is located in Lithuania

** includes the following products: previous-day, within-day, day-ahead, nearest-day-ahead products.

Source: NERC.

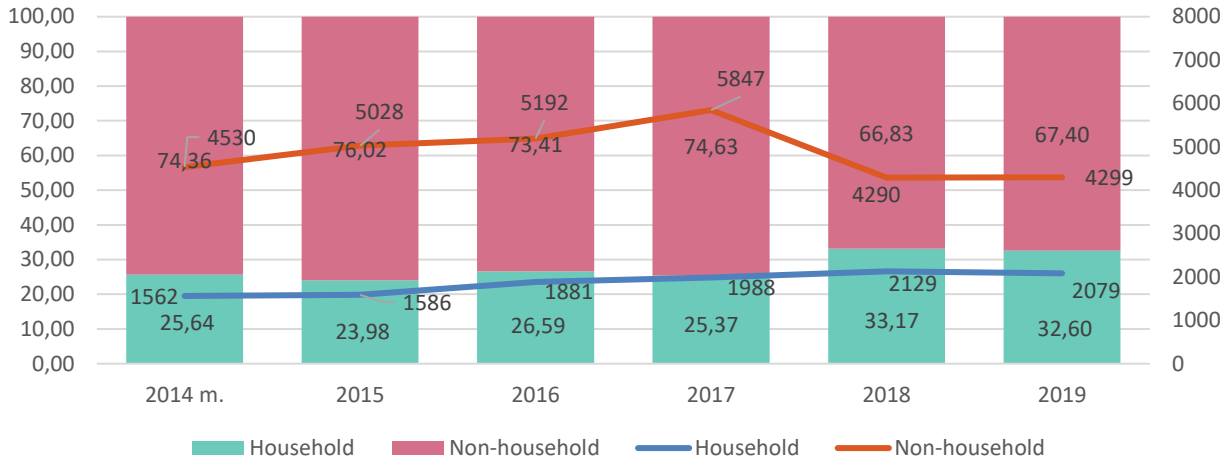
4.2.2. Retail market

○ Monitoring of the price level, the level of transparency, the level and effectiveness of market opening and competition

Statistics of the retail natural gas market are provided by assessing natural gas supply undertakings, market participants (natural or legal persons) who conclude natural gas supply contracts with final consumers[23].

[23]Excluding natural gas supply contracts for final consumers with a natural gas consumption capacity that exceeds the threshold set out in the second subparagraph of Article 2(1)(5) of REMIT (600 GWh).

Fig. 30. Market structure by volumes of natural gas purchased in 2014-2019, GWh and %



Source: NERC.

In 2019, there were 603 thousand natural gas consumers in Lithuania, of which 595.3 thousand were household consumers and 7.7 thousand were non-household consumers. In 2018, there were 587.6 thousand household consumers and 7.4 thousand non-household consumers.

Household consumers, who, in terms of the number of consumers, account for 98.72% of the whole retail consumer market, consumed only 35.69% of the natural gas supplied in the retail natural gas supply market. Non-household consumers purchased 64.31% of the volume of natural gas supplied in the retail natural gas supply market, although, as consumers, their number was extremely small compared to the number of household consumers, i.e. only 1.28%.

Household consumer segment

In 2019, 4 companies supplied gas to household consumers in the retail market. In 2019, household consumers consumed 2079 GWh of natural gas, i.e. 2.33% less than in 2018. Household customers paid EUR 85.2 million for natural gas, i.e. 11.50% more than in 2018. The increase in revenue was due to the increased natural gas tariffs, which were 12-18% higher in 2019 when compared to 2018. UAB “Lietuvos energijos tiekimas”, which changed its name to UAB “Ignitis” as of September 2019, remains the main supplier of natural gas to household consumers: in 2019, the market share of this undertaking accounted for 99.89% of all sales to household consumers.

Tariffs for household consumers

Natural gas tariffs for household consumers are recalculated twice a year. The natural gas tariff for household customers consists of a fixed part payable on a monthly basis irrespective of the volume of natural gas consumed, and a variable part, which is paid for the volume of natural gas consumed. In the middle of the year, only the variable part of the tariff is recalculated.

The following is included in the natural gas tariff **for household customers:**

• forecast natural gas price;

• the price of supply service;

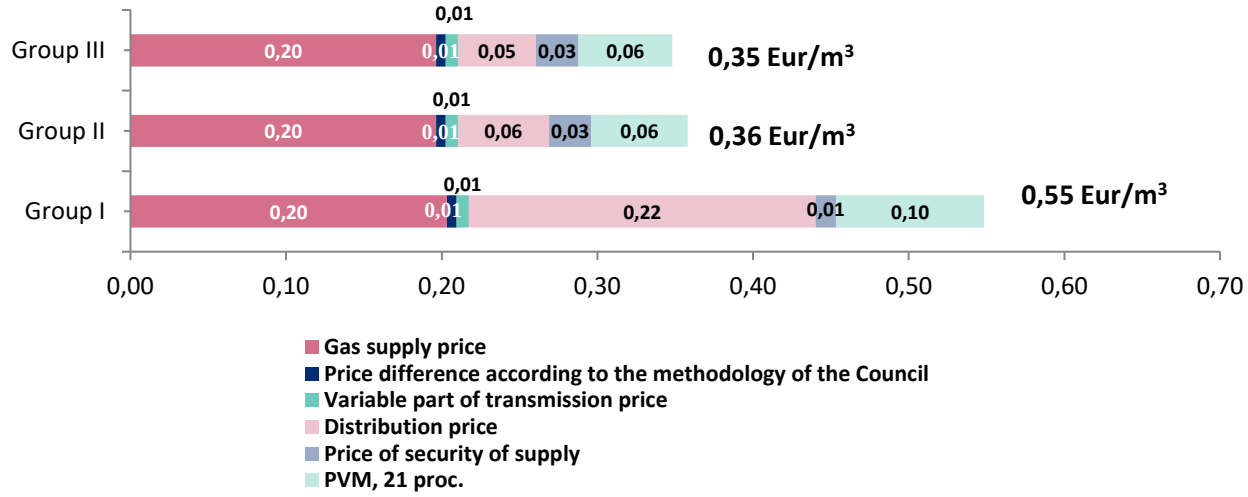
- the price of security of supply;
- transmission price (after assessing the Security Component);
- distribution price;
- the difference between the natural gas (product) prices forecast during the previous tariff validity period and the actual prices.

Table 17. *Natural gas tariffs for household consumers (EUR including VAT/m³)*

Undertaking	Group	Second half of 2019		First half of 2020.		Change, EUR	
		Fixed part of the tariff	Variable part of the tariff	Fixed part of the tariff	Variable part of the tariff	Fixed part of the tariff	Variable part of the tariff
UAB "Ignitis"	Group I	0.56	0.66	0.56	0.55	0.00	—0.11
	Group II	3.99	0.46	3.99	0.36	0.00	—0.10
	Group III	3.99	0.45	3.99	0.35	0.00	—0.10
UAB "Fortum Heat Lietuva"	Group II	4.31	0.56	3.94	0.43	—0.37	—0.13
AB agrofirm "Josvainiai"	Group I	0.63	0.51	0.63	0.30	0.00	—0.21
	Group II	3.99	0.44	3.99	0.22	0.00	—0.22
UAB "Intergas"	Group I	1.45	0.53	1.45	0.46	0.00	—0.07
	Group II	1.45	0.47	1.45	0.40	0.00	—0.07

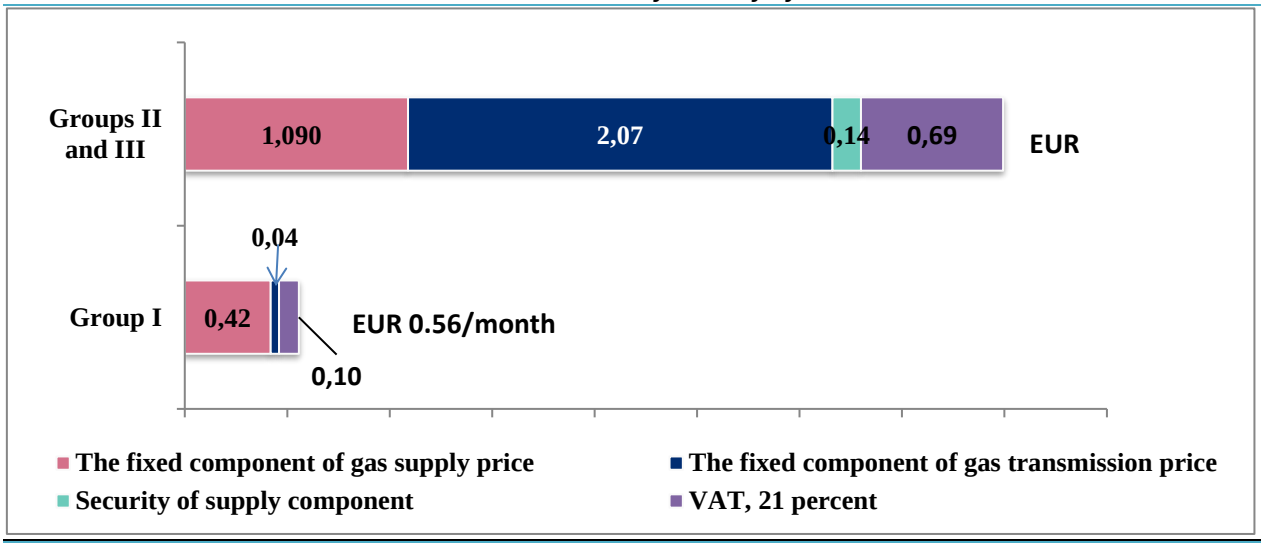
Source: NERC.

Fig. 31. Structure of the variable part of the natural gas tariff of UAB "Ignitis" for household consumers in the first half of 2020



Source: NERC.

Fig. 32. Structure of the fixed part of the natural gas tariff of UAB "Ignitis" for household consumers in the first half of 2020



Source: NERC.

A fixed monthly fee is paid to maintain the functionality of the gas system and to reserve power (securing of capacity) in the main pipelines, thus ensuring that each consumer can receive a high-quality service at any time. The fixed fee also includes costs of metering and the conclusion of contracts (supply price).

Competition and market: Retail market

Table 18. *Retail market indicators (household consumers)*

Retail market indicators (household)	2016	2017	2018	2019
Natural gas consumption, GWh	1879	1986	2127	2079
Number of users	566200	575314	587570	595253
Number of registered suppliers	4	4	4	4
Number of active suppliers	4	4	4	4
Market share of the three largest suppliers in terms of the number of measuring instruments	99.96	100	100	99.98
Number of suppliers with a market share of more than 5%	1	1	1	1
Number of suppliers with more than 5% of the market consumers	1	1	1	1
Share of consumers who have changed their supplier (allocated gas volume), %		0.09	0	0
Share of consumers who have changed their supplier (in terms of the number of measuring instruments), %		0.459	0	0
Duration of the change of a supplier established in legal acts	3 weeks	3 weeks	3 weeks	3 weeks
Average duration of the change of a supplier	NA	NA	NA	NA
Number of consumers paying in accordance with the regulated tariff	566200	575314	587570	595253
HHI by sales	9972	9981	9979	9978

HHI by the number of measuring instruments	9899	9992	9992	9991
Number of interruptions due to unpaid bills	0	0	0	3
Average price for a consumer consuming 9000 kWh per year, EUR/year	353	383	379	442

Source: NERC.

Table 19. *Retail market indicators (non-household consumers)*

Retail market indicators (non-household)	**2016**	**2017**	**2018**	**2019**
Natural gas consumption, GWh	5192	5847	4290	4299
Number of users	6959	7168	7380	7732
Number of registered suppliers		40	33	23
Number of active suppliers		16	15	16
Market share of the three largest suppliers in terms of the number of measuring instruments	98.37	99.33	92.41	94.94
Number of suppliers with a market share of more than 5%	2	2	2	3
Number of suppliers with more than 5% of the market consumers	1	1	1	1
Share of consumers who have changed their supplier (allocated gas volume), %		0.219	6.76	10.68
Share of consumers who have changed their supplier (in terms of the number of measuring instruments), %		0.434	1.96	1.96
Duration of the change of a supplier established in legal acts	3 weeks	3 weeks	3 weeks	3 weeks
Average duration of the change of a supplier	—	—	—	—
Number of consumers paying in accordance with the regulated tariff	0	0	0	0
HHI by sales	7004	6958	6752	5897
HHI by the number of measuring instruments	9634	9666	9480	9183

Source: NERC.

Monitoring of the retail natural gas market, Article 41(1)(i), (j), (k), (l) and (u) of Directive 2009/73/EC

See Chapter 4.2.1.

- Consumer protection and dispute resolution

- Compliance with Annex I (Article 41(1)(o) of Directive 2009/73/EC)

In accordance with Article 4(3) of the Law on Energy, the NERC, while performing the functions of regulation, supervision and control of energy activities, ensures, within its remit, the implementation of state policy in the field of protection of consumer rights within the energy sector.

Safeguards to protect consumers are provided for in Article 57 of the LNG. Consumers have the right to:

1) conclude a contract with a freely chosen natural gas supply undertaking, indicating the data identifying the supplier and its address, the services provided, the level of the quality of the offered services and the initial connection period, the types of technical maintenance services offered, the means to obtain up-to-date information on all applicable tariffs and payments for technical maintenance, the period of validity of the contract, the conditions for renewal and termination of the provision of the services and the renewal and termination of the contract, as well as whether the right to terminate the contract without penalty is provided for, compensation and refund if the quality of the services does not correspond to the level indicated in the contract, including inaccurate and late bills, a method for initiating out-of-court dispute settlement procedures, information on consumer rights and handling of complaints. All the information referred to in this Item is published on the website of the natural gas undertaking. All conditions must be fair and made available to consumers in advance, prior to the conclusion or approval of the contract.

2) obtain clear information from the supplier on the applied prices, tariffs and standard conditions related to the possibility of using the services provided by the natural gas undertakings, as well as use thereof. Suppliers must inform their customers about the increase in prices and other charges in a direct, transparent, clear manner and no later than one typical billing period prior to the entry into force of higher prices and other charges. Suppliers must also inform consumers in a direct, transparent and clear manner of their intention to change the terms of the contract and the resulting right of consumers to terminate the contract, as well as the right to object to the changes of the terms of the existing contract. Household consumers have the right to terminate the contracts unilaterally and without charge at any time under the conditions established in Article 6.390(1) of the Civil Code of the Republic of Lithuania;

3) obtain all necessary information from the NERC and the State Consumer Rights Protection Authority regarding their rights, methods of dispute settlement and existing legislation regulating the natural gas sector;

4) choose from several payment methods whose application must not result in discrimination against consumers. The general payment conditions must be fair and transparent, defined in a clear and understandable manner, they must not prevent the consumer from exercising their rights. The use of unfair or misleading sales methods are prohibited;

5) change their supplier free of charge. Said change must be implemented by the natural gas undertakings within three weeks of the submission of the request to change the supplier;

6) make use of the procedures for the handling of consumer complaints. All consumers have the right to require the natural gas undertaking to provide high-quality services and to deal with complaints in an appropriate, fair and expeditious manner in accordance with the approved procedure for handling such complaints, and, where necessary, to refer to the Consumer Rights Protection Authority or the NERC;

7) be informed, following their connection to the natural gas system, of their right to be supplied with natural gas of an established quality at reasonable prices, as provided for in existing national legislation;

8) obtain their consumption data and, following a clear agreement, allow any registered supply undertaking to use their meter readings free of charge. The party responsible for processing the data is obliged to provide said data to the undertaking. The NERC establishes the format of the data and the procedure according to which access to the data is granted to suppliers and consumers. No additional charge is imposed on the consumer for this service;

9) obtain, at no additional charge and at least twice per calendar year or, at the request of the consumer, once every quarter, bills, and relevant information on actual natural gas consumption and natural gas prices, thus enabling the consumer to regulate their natural gas consumption. This requirement may be waived for consumers who use gas only for the preparation of food;

10) in the event of the change of the natural gas supplier, receive the last bill no later than within six weeks from the change of the supplier.

- Ensuring access to consumer data (Article 41(1)(q), Item (h) of Annex I of Directive 2009/73/EC)

In 2019, compared to 2018, the conditions for the access to consumer data remained basically unchanged. In accordance with the legal regulation, natural gas consumers must be provided with adequate and sufficient conditions for the access to information and data on actual energy consumption, payments for the amount of energy supplied to them and/or services related to energy supply. Adequate and sufficient means of access are considered to consist of the submission of an invoice to the consumer or electronic access to the consumer's payment data, or other reasonable means. Electricity and gas consumers receive services and customer service in one place and on the same self-service website www.manogile.lt.

- Article 41(11), (4)(e) of Directive 2009/73/EC

A consumer who believes that the energy undertaking, while performing energy activities, has violated their rights or legitimate interests related to a consumer contract must first of all address the energy undertaking in writing and indicate their requirements. The energy undertaking must examine the customer's application and provide a reasoned reply thereto no later than within 30 days of the receipt of the application. If the energy undertaking refuses to satisfy the requirements of the consumer or satisfies them in part, the response must contain information on an institution for the out-of-court settlement of consumer disputes or any other entity competent to settle the dispute.

Disputes arising between consumers and energy undertakings regarding the use of energy facilities, installations and metering instruments, interruption, termination or restriction of energy supply, the provision of services of energy saving, regarding the activities or inactivity of energy undertakings in the supply, distribution, transmission, storage of energy, regarding connection, payment for the energy consumed or services, the application of state-regulated prices and/or tariffs, regarding the balancing of the supply flows of energy and energy sources, as well as other

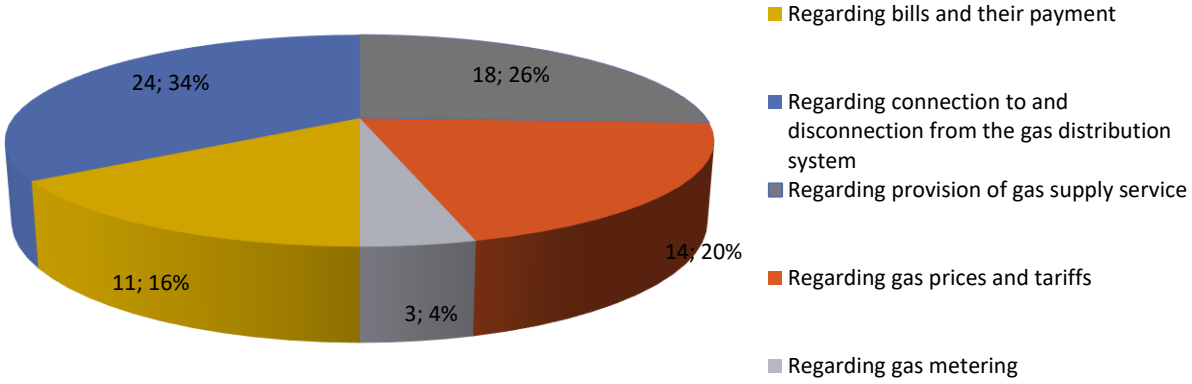
disputes arising between consumers and energy undertakings within the energy sector, are handled by the NERC by out-of-court means.

Upon examining the dispute out of court and adopting a decision to satisfy the customer's requirements or to satisfy the customer's requirements in part, the NERC must decide on the obligation of the energy undertaking to refund or compensate the expenses incurred by the consumer, as well as the conditions for such refund or compensation.

The decisions of the NERC adopted after the examination of disputes between consumers and energy undertakings come into force and become mandatory if, within 30 days of the adoption of the decision on the dispute by the NERC, none of the parties to the dispute bring proceedings before a court of general jurisdiction in accordance with the procedure established in the Code of Civil Procedure of the Republic of Lithuania, requesting for the dispute to be examined on its merits. Referral to a court of general jurisdiction after the adoption of the decision on the dispute by the NERC is not considered to be an appeal against the mentioned decision. Upon entry into force, the decision of the NERC becomes an enforceable title. If this decision is not executed, it may be enforced in accordance with the procedure established in the Code of Civil Procedure.

In 2019, the NERC received and examined 62 applications. The distribution of received applications according to the nature of the application is shown in the figure below.

Fig. 33. Distribution (%) of applications within the gas sector received in 2019 according to the nature of the application



Source: NERC.

Table 20. *Consumer protection indicators*

Consumer indicators	2016	2017	2018	2019
Number of household consumers	566200	575314	587570	595253
Number of consumers to whom guaranteed supply is provided	2683	2683	17	15
Number of calendar days established in legislation between the notice regarding the payment of a bill and disconnection	15	15	15	15
Number of consumers disconnected due to unpaid bills	0	0	0	3
Number of consumers subject to energy poverty	N/A	N/A	N/A	N/A

Number of consumers paying according to the social tariff	N/A	N/A	N/A	N/A

Source: NERC.

4.3. Security of supply

- Article 41(1)(t)

The NERC is not responsible for establishing or implementing the necessary temporary safeguards measures required in the event of a sudden crisis in the energy market or in the event of a threat to the physical protection or safety of persons, or to the security of equipment or installations or to the security of integrity of the system.

Gas supply and consumption

After the construction of the LNGT in Klaipėda in 2015, natural gas supply became diversified and the country is no longer dependent on a single gas supplier. Therefore, the requirement established in Article 5(1) of Regulation (EU) No 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 is satisfied, namely that in the event of a disruption in the operation of one largest gas infrastructure, the technical capacity of the remaining infrastructure, as determined by the N-1 formula, must be sufficient to cover the whole gas demand on a day of exceptionally high gas demand, which, according to statistical probability, occurs once in 20 years.

Also, if necessary, gas can be transferred to Lithuania from Latvia via the Kiemėnai GMS, and the supply from Poland is also planned from 2022 after the construction of the gas pipeline interconnection between Poland and Lithuania (hereinafter referred to as the "GIPL"). At the end of 2019, contract work of the GIPL started. GIPL is a natural gas infrastructure that will connect the natural gas transmission systems of Poland and Lithuania and, at the same time, the Baltic States and Finland with the system of the European Union (EU). Natural gas will be able to flow in both directions via the interconnection. It is planned that the interconnection between Poland and Lithuania will be constructed by the end of 2021. More information can be found on the website of the Ministry of Energy: https://enmin.lrv.lt/lt/veiklos-sritys-3/gamtines-dujos/duju-tiekimo-saugumas.

Article 47 of the LNG provides that natural gas suppliers must build up natural gas storage, which may be used only in accordance with the procedure laid down by the Government or an institution authorised by the Government. In implementing said provision, UAB "Ignitis" stores about 393.84 GWh of natural gas in the underground natural gas storage facility in Latvia in order to ensure security of natural gas supply.

- Article 41(1)(h)

Quality of services

The LNG provides for the obligation of the NERC to establish indicators for the quality, including reliability, of services of natural gas undertakings, and the procedure for assessing them. In accordance with the Description of the Indicators of Reliability and Quality of Services Provided by Natural Gas Undertakings, the Procedure for Their Assessment approved by the NERC, the minimum

quality levels for each natural gas undertaking are set individually, for a specific price regulation period.

The main indicators of the quality of uninterrupted natural gas supply are as follows:

• system average interruption duration index (SAIDI) per consumer;

• system average interruption frequency index (SAIFI) per system user during the reference period.

The SAIDI and SAIFI indicators are differentiated according to the reasons for the interruption.
The minimum levels of quality of the services are set individually for each natural gas undertaking, for a specific price regulation period. The NERC assesses the compliance of the undertaking with said indicators on an annual basis.

In September 2019, the NERC found that the actual indicators of the quality of activities of AB "Amber Grid", UAB "Intergas", UAB "Fortum Heat Lietuva", AB agrofirm "Josvainiai" meet the minimum quality levels set for a particular gas undertaking. Three actual indicators of the quality of activities of AB "Energijos skirstymo operatorius", i.e. the percentage of on-time arrival of the emergency services, the percentage of responses to a new customer's request for connection sent in due time and the percentage of new customers not connected in due time through the fault of the operator, do not meet the minimum quality levels set for a particular gas undertaking. Other actual indicators of the quality of activities of AB "Energijos skirstymo operatorius" meet the minimum quality levels set for the gas undertaking. In September 2019, the NERC set the minimum quality levels for UAB "Fortum Heat Lietuva" and UAB "Intergas" for the new five-year regulatory period.

- Monitoring of the balance of supply and demand

Demand and supply of natural gas

Every two years, after having consulted all the relevant stakeholders and taking into account the existing and forecast supply and demand, the transmission system operator draws up and submits to the NERC a ten-year network development plan in accordance with the procedure established by the NERC. The network development plan shall contain efficient measures in order to guarantee the adequacy of the system and the security of supply.. The NERC monitors and evaluates the implementation of the ten-year network development plan, and publishes the results obtained. In 2018, the NERC approved the ten-year (2018-2027) network development plan of the natural gas transmission system operator. Every year, the transmission and distribution system operators also submit to the NERC reports on the undertaking's annual activities and ensuring of security, specifying the volumes of gas planned to be transmitted, distributed and transported in transit through the territory of the Republic of Lithuania to the system users during the current year and the following two years. The transmission operator provides summarised information on the use of the relevant points of the transmission system, indicating in percentage the maximum capacity utilisation per month for the reference period, compared to the technical capacity of the relevant points. The maximum capacity utilisation of the relevant points of the transmission system in 2019 is shown in Table 12.

Taking into account the impact of the projects of biofuel and municipal waste incineration CHP plants planned to be installed by consumers, the volume of consumed gas is expected to decrease

to 20.8 TWh in 2021. About 26 TWh of gas is expected to be transmitted to the Kaliningrad region in the future.

- Measures to cover peak demand or shortage of suppliers

By setting the transmission price, AB “Amber Grid” encourages system users to plan their required capacity more accurately and uniformly. The overall distribution of the revenues of all points between capacity fees and volume fees is 90% and 10% respectively. Unused (free) capacity is offered on the market with the possibility of concluding interruptible capacity contracts. Following the conclusion of a natural gas transmission or distribution service contract, the system user is able to reserve (adjust) capacity on a weekly and/or daily basis. The system user can make a capacity reservation (adjustment of reservation) in the electronic space (online) or in writing in accordance with the terms of the contract. When capacity is reserved for a relevant period, the system user must have the volume of gas purchased. Supply arrangements must be coordinated with the supply undertaking in accordance with the terms and conditions of the sales contract.

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

- system users who have concluded uninterrupted supply contracts with a supply undertaking have gas storage stocked in Inčiukalnis Underground Storage Facility;

- in natural gas transmission contracts concluded with system users connected directly to the transmission system, priorities of the supply and transportation of natural gas are established and the sequence of restriction and phase-out of gas supply in the event of an emergency or disruption in the gas supply is specified;

- supply undertakings must follow the instructions of the TSOs and DSOs in the event of an emergency or disruption in the gas supply, as stipulated in the National Natural Gas Supply Emergency Management Plan.

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