



2017 Annual Report of the Public Utilities Commission of the Republic of Latvia on the National Energy Sector, Prepared for the European Commission

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I Foreword

The Public Utilities Commission's (hereinafter – Regulator) report provides an overview of the regulatory developments of the electricity and natural gas sectors in Latvia in 2017. Regulatory activities covered various tasks, mainly stemming from continued implementation of the European Union directives or regulations, both in electricity and natural gas sectors.

In 2017, the opening of the natural gas market was the most important development in the energy sector. The legislative acts and tariff decisions approved by the Regulator provided the basis for many new traders to simultaneously launch their operations in the market, while end-users were given the opportunity to choose the most appropriate and most advantageous market offer. Reduced transmission tariffs at the entry – exit points on the border of Latvia facilitated the inflow of natural gas into the natural gas supply system of Latvia and facilitated the use of the Incukalns underground gas storage.

In 2017, the Regulator paid a particular attention to wholesale and retail trade in order to prevent potential market abuse and manipulation of wholesale electricity prices and natural gas market, also in the supervision of the energy market operator, and in the cooperation with Baltic and Nordic national regulatory authorities (hereinafter – NRAs) to monitor power exchanges and all the necessary steps to implement a common European Union (EU) wide electricity market. Proceeding Latvia's integration into the common European Union electricity market, the Regulator continued the implementation of the European Commission's network codes to establish a unified, coordinated and appropriate single day-ahead and intraday market coupling, where the important role for the Regulator is to supervise the nominated electricity market operator (hereinafter – NEMO) in Latvia and to adopt respective rules and methodologies developed by the EU NEMOs and transmission system operators.

Last year, the new differentiated tariffs of the electricity transmission system services approved by the Regulator entered into force; the costs included in the tariffs are 3% lower compared to the previously approved tariffs. Taking into account the electricity distribution system tariff structure approved in 2016, electricity users continued to reduce their connection capacities, which in the future will make it possible to optimize investments and costs in the entire electricity distribution system.

In 2017, the Baltic region NRAs of Lithuania, Latvia, Estonia and Finland continued work towards the creation of a regional Baltic – Finnish natural gas market to increase liquidity and competition in the Baltic – Finnish region.

Rolands Irklis

Chair

Public Utilities Commission of Latvia

II The basic organizational structure and competences of the regulatory authority

The Regulator was established and operates according to the Law on Regulators of Public Utilities. The goal of this law is to ensure the possibility of receiving continuous, safe and qualitative public utilities, whose tariffs (prices) conform to economically substantiated costs, as well as to promote development and economically substantiated competition in regulated sectors.

The Regulator regulates the provision of public utilities as a commercial activity in the following sectors: energy (electricity, natural gas and thermal energy), electronic communications, postal services, municipal waste management and water management.

According to the Law on Regulators of Public Utilities, the Regulator is an institutionally and functionally independent regulatory authority. In September 2016, the OECD finished work on the report "Improvement of the Operational Results of the Public Utilities Commission of Latvia" and provided recommendations for future activities of the Regulator. The OECD report contains recommendations for strengthening the Regulator's financial independence and stability and options to improve the existing regulation of the regulated sectors. In 2017, the Regulator was working on the implementation of these recommendations in cooperation with the Ministry of Economics. The Regulator independently performs the functions delegated by the Law on Regulators of Public Utilities and, within the scope of its competence, takes decisions independently and issues administrative acts binding upon specific providers and users of public utilities. The Regulator's decisions may be declared unlawful and repealed only by the court.

The main functions of the Regulator are:

- protect the interests of customers and promote the development of providers of public utilities;
- determine the methodologies for the calculation of tariffs;
- determine the tariffs;
- license and register the providers of public utilities;
- examine disputes;
- promote competition in the regulated sectors;
- supervise compliance of the public utilities with the Law on Regulators of Public Utilities, special regulatory enactments of the regulated sectors, conditions of the licence or conditions of general authorisations, as well as various requirements related to quality, technical regulations and standards;
- provide public information about its activities and operations of public service providers.

According to Regulations of the Cabinet of Ministers on types of regulated public utilities in the energy sector (electricity and natural gas), the Regulator regulates:

- the generation of electricity in power plants if the installed electric capacity is more than one megawatt;
- the generation of electricity in cogeneration mode if the total installed electric capacity of cogeneration power plant is more than one megawatt;
- electricity transmission if the voltage is 110 kilovolts and higher;
- electricity distribution if the voltage is higher than one kilovolt and does not exceed 110 kilovolts;
- the trade of electricity to any energy user if the total trading amount exceeds 4,000 megawatt hours per year;
- the transmission of natural gas through pipelines;
- the storage of natural gas intended for sale in containers or storage sites;
- the distribution of natural gas;
- the trade of natural gas to any energy users, except the trade of natural gas in gas filling compression stations for vehicles;
- liquefying of natural gas or receiving, unloading, storage and regasification for further delivery to the natural gas transmission system.

The Regulator consists of a Board composed of a Chairperson and four members appointed by the parliament for five years and an executive body subordinated to the Board. The Board takes decisions on behalf of the Regulator and approves administrative acts which are binding for specific public service providers and customers. The executive body operates under the oversight of the Regulator's Board, and it serves both as a secretariat and as the provider of expert services. The executive body prepares issues and documents for examination at the Board meetings, enacts approved decisions and oversees the implementation of those decisions.

The Electricity Market Law and the Energy Law establish effective, proportionate and dissuasive financial sanctions in the electricity and natural gas sector, namely, the Regulator has the right to apply financial sanctions up to 10% of the annual turnover of the regulated service provider and the owner of the electricity/natural gas transmission system in case of failure to comply with their obligations under the relevant national and European Union legal acts. Regulations of the Cabinet of Ministers set out a detailed procedure on how the Regulator must calculate the amount of fines.

As regards tariff calculation in the electricity and natural gas sector, methodologies for the calculation of storage, transmission and distribution system service tariffs have been elaborated based on the Electricity Market Law, Energy Law and the Law on Regulators of Public Utilities, and by taking into consideration regulations related to the supply and trade of electricity and natural gas, as well as other legal acts which are in force in Latvia. The main principles set out in these methodologies are the following:

- the regulated utility must clearly and unambiguously reflect the cost of each regulated service, including only those assets and activities which are related to the regulated services. The regulated utility must apply the cost allocation model according to basic

- principles and specifications that have been approved by the Regulator. The cost allocation model must be comprehensive and is approved by the Regulator.
- the regulatory asset base and the rate of return on capital must be used in determining capital costs. The rate of return on capital is the weighted average return rate from the rate of return that applies to equity and long-term interest rates on borrowed capital, as defined by the Regulator. The rate of return on capital is calculated for a specified proportion between equity and borrowed capital. The Regulator annually sets the rate of return on capital for each sector, the rate is applied if a new tariff proposal is submitted.
 - tariffs must correspond to economically justified costs. When setting the tariff, the Regulator must perform analysis and assessment of costs and profits.

According to the existing procedure, providers of public services submit substantiated tariff proposals. The Regulator must approve or reject the proposal within 120 days. The time when public utilities prepare the requested additional information does not count towards these 120 days. The Regulator's decisions can only be challenged in court.

A service provider may submit a request to the Regulator to receive a permit to set the tariff by itself. In this case, the provider shall publish the tariffs in the official Gazette of the Government of Latvia not later than within two months prior to the entry into force of the new tariffs and shall inform the Regulator. The service provider shall submit to the Regulator a substantiation for the new tariffs and information regarding the actual costs, forecasted data regarding the new tariffs, and other documents that substantiate the need for the new tariffs. The Regulator shall, within 21 days, evaluate the conformity of the submitted tariffs to legal acts and the economic substantiation of tariffs, as well. If the Regulator has not taken a decision regarding the non-conformity of the submitted tariffs to legal acts or has not rejected the economic substantiation, the tariffs shall come into force on the date specified by the service provider.

The Regulator has the rights to initiate a tariff review if significant changes affecting income or costs of service provision are observed or might be predicted. In this case, the Regulator requests the service provider to submit a new substantiated tariff proposal.

III Major developments over the last year in the electricity and natural gas markets

International cooperation is essential to ensure that the energy market functions and develops properly. Regional cooperation on specific cross-border issues is a foundation for successful implementation of the European Union legal norms at European level. In 2017, the Regulator constantly participated in forums, conferences and workshops at international level.

In order to facilitate fully functioning and interconnected internal Baltic Electricity Market development and as there are Network Codes (hereinafter – NC) that require regulatory authorities to approve the terms and conditions or methodologies developed by Transmission

System Operators (hereinafter – TSO) or nominated electricity market operators (NEMO) needed for market coupling, in October 2017 NRAs of the Baltic Capacity Calculation Region (hereinafter – Baltic CCR) – Estonian Competition Authority, the Regulator, National Commission for Energy Control and Prices of Lithuania, Energy Regulatory Office of Poland, Swedish Energy Markets Inspectorate and Energy Authority of Finland which have competence to approve any proposals within the Baltic CCR, signed the Memorandum of Understanding (MoU). Main goals of the MoU are to give practical effect to the implementation of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (hereinafter – CACM) and any other NC that contains requirements for approval of proposals in the Baltic CCR and to settle the arrangements and principles for coordination and cooperation of NRAs when assessing and approving proposals and to facilitate agreement being reached between NRAs. Within this framework, the Regulator participated in the Baltic CCR NRAs' decision-making regarding proposals on the methodologies under the CACM and Commission Regulation (EU) 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation (hereinafter – FCA).

The Baltic Electricity and Gas Market Forums (takes place twice in a year) are the main platform where Regulators from the Baltic countries, Poland and the Nordic countries, three Baltic TSOs, NEMOs, ACER, Finnish and Lithuanian gas exchange representatives, as well as traders and representatives from the ministries raised issues concerning NC implementation, technical and economic challenges in regional energy market, implementation of REMIT Regulation, as well as coordination and assessment of cross-border investments or the projects of common interest and other topics that contribute to the development of the regional and EU wide energy market.

As regards the electricity sector, in 2017, the Regulator continued the evaluation of JSC "Augstsrieguma tīkls" differentiated electricity transmission system tariffs (submitted on 17 October 2016) and approved the tariffs which had a positive impact on the decrease of end user costs. The tariffs entered into force from June 1, 2017.

The Regional Gas Market Coordination Group (hereinafter – RGMCG) is heading towards the implementation of the Regional Gas Market Development Plan. The objective of the Regional Gas Market Development Plan which was successfully developed by the RGMCG and endorsed by the Baltic Council of Ministers' Committee of Senior Energy Officials is to facilitate the creation of an effectively functioning common regional natural gas market (single entry-exit system, common principles of the traders' registration, proposal for the implementation of the implicit capacity allocation model) in the Baltic States and Finland. In this regard, regular regional working meetings with Lithuanian, Estonian and Finnish regulators, ministries and TSOs have been organized.

Natural gas market has been opened since April 3, 2017. To provide all the conditions necessary for the functioning of a free market, the Regulator had to provide new regulations for the traders' registration, access to the natural gas network, setting of system services tariffs, natural gas price calculation for captive consumers, TSO certification and distribution system operator's

(hereinafter – DSO) independence requirements. According to the Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC, the DSO should be legally unbundled from the natural gas trader. At the end of the November 2017, the largest natural gas trader – the previous monopolist JSC “Latvijas Gāze” was divided into two merchants – in the reorganization process a new merchant – JSC “Gasō” was created. According to the carried-out reorganisation, JSC “Gasō” is a completely separated subsidiary of the JSC “Latvijas Gāze”. On December 7, 2017, the Regulator issued a licence for natural gas distribution to the JSC “Gasō”. On December 28, 2017, the Regulator received the report of the JSC “Gasō” on the independence of the natural gas DSO.

IV The electricity market

1.1. Network regulation

1.1.1. Unbundling

The state-owned company JSC “Latvenergo” dominates in the field of electricity supply in Latvia, controlling more than 87% of installed capacity for the generation of electricity in Latvia.

In February 2014, JSC “Latvenergo” established a subsidiary company JSC “Enerģijas publiskais tirgotājs” and from April 1, 2014, the subsidiary company provides functions of the public trader. In accordance with the amendments to the Electricity Market Law, the public trader has the obligation to buy electricity from cogeneration power plants, renewable power plants and pay a guaranteed fee for the installed capacity to plants that have obtained the right to sell the produced electricity within the mandatory procurement.

The functions of the electricity transmission system operator (hereafter – TSO) are carried out by the independent system operator JSC “Augstsrieguma tīkls”. From January 30, 2013 JSC “Augstsrieguma tīkls” rents the network assets from JSC “Latvijas elektriskie tīkli” – the subsidiary company of JSC “Latvenergo” which was established as the transmission system owner and the Regulator has verified that JSC “Latvijas elektriskie tīkli” has an adequate level of necessary independence from the JSC “Latvenergo”. On January 30, 2013, the Regulator certified JSC “Augstsrieguma tīkls” as an independent transmission system operator under a condition that no later than January 31, 2015 JSC “Augstsrieguma tīkls” has to perform the maintenance of fixed assets of the transmission system itself or has to conclude an agreement for performance of specific works with such a company which is neither directly nor indirectly associated with activities of electricity generation, trade and distribution.

JSC “Augstsrieguma tīkls” has to submit a report annually regarding the compliance of the transmission system operator with the certification requirements. After the receipt of the report, the Regulator took a decision in November 2017 stating that JSC “Augstsrieguma tīkls” complies

with the certification requirements with condition – the Regulator had detected that one member of the supervisory board was a public official of the Ministry of Economics – the owner of the largest electricity trader, the Regulator imposed a legal obligation according to which till February 1, 2018 JSC "Augstsrieguma tīkls" should ensure full compliance with the independence requirements.

On September 6, 2017, the Regulator approved the national ten-year transmission system development plan (national TYNDP) for 2018 - 2027. In the decision, the Regulator also stated that the national TYNDP complies with the Community-wide TYNDP.

The dominant electricity DSO JSC "Sadales tīkls" launched its operations as a separate entity within the holding company JSC "Latvenergo" on July 1, 2007. JSC "Sadales tīkls" is unbundled from the vertically integrated undertaking's production and supply affiliates. On October 1, 2011, JSC "Latvenergo" invested all distribution network assets previously owned by JSC "Latvenergo" in JSC "Sadales tīkls".

The Electricity Market Law obliges the TSO and DSOs to publish separate balance sheets. Regarding the setting of rules on the compilation of unbundled accounts, the Regulator approves cost allocation methodologies and implements the right to ensure a compliance audit that is conducted by an independent auditor.

The Regulator must confirm annually that the biggest electricity DSO JSC "Sadales tīkls" has fulfilled the necessary conditions to ensure the independence requirements for the DSO in accordance with the regulations on the requirements for ensuring the independence of the DSO.

On July 6, 2017, the Regulator approved that JSC "Sadales tīkls" fulfills the requirements of the independence of an electricity DSO – it is a separate company and is unbundled from the activities of production, transmission and trade of electricity, thus confirming that board members of the electricity DSO are not engaged in the structures of the vertically integrated electricity undertaking JSC "Latvenergo" and have the right to take decisions independently from JSC "Latvenergo" regarding the distribution system assets. The DSO ensures equal access to the electricity distribution system.

Each year the electricity system owner JSC "Latvijas elektriskie tīkli" has to submit a report regarding the ability of the electricity system owner to co-operate with the transmission system operator JSC "Augstsrieguma tīkls". The report includes information how the electricity system owner performs its obligations set by law according to Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC. On June 29, 2017, the Regulator took an annual decision on the independence of JSC "Latvijas elektriskie tīkli". The electricity transmission system owner is separated from the activities of production, transmission and trade of electricity, the board members of the transmission system owner are not engaged in the structures of a vertically

integrated electricity undertaking JSC "Latvenergo", the transmission system owner utilizes only such services, provided by a vertically integrated electricity undertaking, which ensure the confidentiality of commercial information, and the electricity transmission system owner has the right to take decisions independently, without interference by JSC "Latvenergo". The electricity transmission system owner elaborated a compliance program and published a report on the performed measures to ensure its independence.

As mentioned above, the legislator has provided for sanctions which the Regulator can impose against companies which fail to comply with management, account unbundling or other requirements.

1.1.2. Technical functioning

1.1.2.1. Balancing

The Electricity Market Law states that the TSO is responsible for power balance in the system, as well as for providing balancing services at the transmission network level. A market participant has the right to become a balancing service provider by entering into a balancing contract with a TSO.

The TSO has developed balancing and settlement procedures which are set out in the national Network Code.

On June 26, 2013, the Regulator approved the national Network Code, which entered into the force from July 3, 2013. The national Network Code includes procedures for the system management and utilisation, the activities of market participants, except final customers. In accordance with the national Network Code, the system operators shall perform calculations of balancing openly and without discrimination with respect to all recipients of a balancing service. The customers and producers, who are market participants, and DSOs, have the duty to pay for the balancing service the scope of which is determined on the basis of the data of the transmission and distribution operators. The TSO shall ensure the compliance with the procedures specified in the national Network Code. The Regulator may task the TSO to elaborate amendments to the national Network Code and determine a time period for the elaboration and submission thereof to the Regulator.

The Electricity Market Law sets out guidelines in terms of how the balancing arrangements among customers, producers and system operators should be provided. Customers and producers that are market participants, along with distribution networks, will have to conclude a balancing service agreement with the system operators of the network that they are connected to.

The TSO is responsible for the operational reliability of the power system. For this purpose, the TSO has an open supply agreement and maintains operating reserves. Furthermore, those customers, large electricity producers and distribution networks which are directly connected to

the transmission grid obtain balancing services directly from the TSO after concluding the relevant agreement. The concept of a balancing group has also been set out in law. The idea is that customers have the right to delegate a supplier to settle imbalances with the system operator. In such a case, the supplier concludes a balancing service agreement with the system operator, and it may carry out the netting of imbalances among customers and producers.

The balancing model at the distribution level does not differ from the one at the transmission level. Customers and producers directly connected to the distribution grid have to buy the balancing service from the respective DSO, or they may delegate this task to their supplier. The trader's price for end users may also include the balance energy costs, if the trader has an agreement on balancing the end user.

According to the Electricity Market Law, administration of imbalance settlements is the responsibility of the TSO. The balance settlement is provided on an hourly basis.

The TSO publishes balance energy purchase and selling prices on an hourly basis and customer costs for balancing energy are calculated in accordance with balance energy calculation methodology published on the TSO web page.

In 2015, the Baltic TSOs started a balance management harmonization study to carry out an in-depth analysis on a harmonised balance management model most suitable for the Baltic balance system. The study, titled "Baltic's balance management model study and harmonization plan towards EU energy markets model", was prepared in close collaboration with all three Baltic TSOs (Elering, JSC "Augstsrieguma tīkls" and Litgrid) and delved into different balance model aspects, describing possible alternatives such as the number of balance portfolios, the cost structure for covering balance service, and different pricing methodologies for imbalance energy etc. In 2017, based on the conclusions of the study, the Latvian TSO in cooperation with other Baltic TSOs have developed Balancing Market Rules and Imbalance Settlement Rules which include the imbalance pricing rules, thus complying with the Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing and facilitating equal opportunities to all Baltic balancing market participants. The joint approach to the imbalance responsibility implemented from January 1, 2018 when the Common Baltic Balancing Market starts operating is as follows:

- The total imbalance of each Baltic state is the responsibility of the respective TSO;
- The imbalance part in the Estonian, Latvian and Lithuanian electric power systems that can be eliminated (compensated for) within the total Baltic imbalance region is referred to as the netted imbalance. The Baltic TSOs mutually buy and sell the netted imbalance for the applicable imbalance price;
- The imbalance part that cannot be eliminated (compensated for) within the total Baltic imbalance region is referred to as the non-netted imbalance. The Baltic TSOs jointly buy

and sell the non-netted imbalance to the open balancing service provider – AB INTER RAO Lietuva at a predetermined price.

1.1.2.2. Quality of service and supply

On October 4, 2011, the Cabinet of Ministers approved the Rules on Public Power Supply Network Voltage Requirements that define quality requirements. The rules entered into force on January 1, 2012. Rules prescribe the mandatory applicable standard that applies to the public power supply network voltage, which is the European Standard EN50160. Standard EN50160 defines, describes and specifies the main characteristics of the voltage at a network user's supply terminals in public low voltage, medium and high voltage alternating current electricity networks under normal operating conditions.

In 2017, the average amount of time needed for repairs in the distribution network for the final customers was 1.38 hours per one interruption. There were 25 interruptions in the transmission network with an average duration of 0.83 hours. Planned system average interruptions duration (SAIDI) in the distribution network for 2017 was 143 minutes, unplanned (including all events) – 117 minutes and planned system average interruptions frequency index (SAIFI) per customer for 2017 was 0.64, unplanned (including all events) – 2.14.

The operations of public service providers are regularly inspected on the basis of the Regulator's decisions. In 2017, 69 objects of electricity supply companies were inspected in order to examine their operations and compliance with license requirements or general authorisation conditions. The objects of the companies were inspected according to the schedule and taking into regard the necessity to ascertain the operation of the companies in accordance with legislation. In addition, the Regulator carried out electricity supply quality measurements in 61 objects according to the European Standard EN 50160 requirements. Some inspections were also conducted at facilities following the complaints that had been received.

On November 2, 2017, the Regulator initiated an administrative (infringement) process against the electricity DSO – JSC "Sadales tīkls" in order to evaluate, whether JSC "Sadales tīkls" fulfils the legal requirements laid down in the "Regulations regarding system connection for electricity producers". According to the information the Regulator had, not in every system connection building process JSC "Sadales tīkls" fulfilled all the duties that are stipulated by law – in many cases there were problems with documents, not in all cases the DSO checked whether the electricity producer switched to the system the same generation facility that was tested before, etc. The investigation of the initiated case will continue in the year 2018.

1.1.3. Network tariffs for connection and access

The Regulator approves electricity transmission and distribution tariffs. Within the framework of the tariff assessment process of the electricity transmission system service, the Regulator has an obligation to assess the justification of the costs of the electricity TSO, thus balancing the interests

of public service users and service providers and protecting the interests of the electricity TSO in matters related to the provision of the relevant services. On April 6, 2017, the Regulator approved JSC "Augstsrieguma tīkls" electricity transmission system tariffs which entered into force from June 1, 2017. Approved transmission system tariffs have a positive impact on the decrease of end user costs. The Regulator allowed JSC "Augstsrieguma tīkls" to use congestion-management revenues till 2019 to ensure the stability of transmission tariffs and without an impact on the end user costs.

As regards the national electricity sector, in 2017, due to the changes in the structure of the tariffs of the electricity distribution system services, electricity users are incentivised to decrease the connection capacities as a result of evaluation of requested power capacity if not all the capacity is being used efficiently. That incentivises not only the electricity users to choose more appropriate capacities and avoid overpaying for inefficiently burdened infrastructure, but also positively impact the distribution system allowing the distribution system operator to reassess and reduce the investment needed for distribution system development. In one-year period after tariff structure was changed, more than 20 thousand consumers reviewed capacities, which has resulted in to capacity reduction more than 6% in total. Therefore, the system has become more efficient and released capacities might be allocated to new customers.

On August 24, 2017, the Regulator approved the rate of return on capital in the electricity distribution and transmission system. For year 2018, the rate was set at 4.44%, which is 0.01 percentage points higher than for year 2017, when it was at a historically lowest level. The approved rate of return on capital relates to the electricity TSO – JSC "Augstsrieguma tīkls" and authorised DSOs. When evaluating TSO and DSOs tariffs, the Regulator, by checking the justification of the costs included in the costs of tariffs, may propose a review of tariffs in response to changes in factors which influence tariffs, including profitability.

According to the Eurostat data for 2017, electricity tariffs for household users in Latvia were about 20% lower and for industrial users about 15% higher than in the EU countries.

1.1.4. Cross-border issues

1.1.4.1. Management and allocation of interconnection capacity and congestion management mechanisms

In 2017, the Regulator continued the work on the implementation of CACM, FCA and other NC requirements.

Taking into account the outcome of the Energy Regulators' Forum (hereinafter – ERF) electronic procedure on the approval of the all TSOs' proposals in accordance with CACM, on May 11, 2017, the Regulator approved the common grid model methodology and on June 8, 2017, the day-ahead firmness deadline. On October 26, 2017, the Regulator approved all TSOs' Proposal for

Amendment in accordance with Article 9(13) of CACM on the Determination of Capacity Calculation Regions (CCR) necessary due to the changes in the Channel CCR.

In accordance with Article 30 of the FCA, the task on the evaluation of respective bidding zone hedging instruments and implementation of transmission rights is delegated to the national NRAs. Regulator acknowledged that such electricity trading risk hedging instruments are available in a bidding zone of Latvia: NASDAQ Electricity derivatives and long-term transmission rights (hereinafter – LTTR) on the Estonian-Latvian border (direction to Latvia as a Financial Transmission Rights-option). On May 11, 2017, the Regulator in cooperation with Baltic and Nordic NRAs adopted coordinated decisions:

- not to issue LTTR on the Latvian-Lithuanian bidding zone border;
- the Latvian TSO in cooperation with the Lithuanian TSO must ensure that other long-term cross-zonal hedging products are made available on the Latvian-Lithuanian bidding zone border to ensure the operation of wholesale electricity markets;
- to acknowledge that there is no need to issue LTTR on the Estonian-Latvian bidding zone border towards Estonia.

Besides that, after a positive outcome of the ERF electronic procedure on all TSOs' proposals in accordance with FCA, on October 12, 2017, the Regulator approved the Single Allocation Platform (hereinafter – SAP) methodology and the SAP cost sharing methodology, on November 11, 2017, the generation and load data provision methodology and on November 16, 2017, the generation and load data provision methodology. Following and based on the ACER decision of October 2, 2017 on the approval of all TSOs' proposal for harmonised allocation rules (HAR) for long-term transmission rights, on October 18, 2017, the Regulator approved regional requirements of HAR – Regional and Bidding Zone Border Specific Annex for the Baltic CCR.

Regarding implementation of Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (hereinafter – RfG NC) the Regulator, as well as the Estonian and Lithuanian NRAs assessed one application from manufacturer for emerging technology classification and on May 11, 2017, the Regulator's Board adopted a decision in which it stated that the current application complies with Article 66(2) of RfG NC.

Power exchange "Nord Pool" (hereinafter – NP) ensures allocation of the capacity for the market participants on the basis of information provided by the Baltic TSOs and according to the Rules. NP ensures implicit auctions between the Baltic countries. As stipulated in Article 37.³ of the Electricity Market Law, the transactions of market participants, which exceed borders of one bidding area and include the physical transmission of electricity, must only be performed in the power exchange.

The launch of NordBalt interconnection between Sweden and Lithuania and LitPol Link interconnection between Lithuania and Poland in 2016 has changed the direction of transmission flows, increasing the load on the Latvia-Lithuania border towards Lithuania, Latvia-Estonia border towards Estonia, with a corresponding decrease on the Estonia-Latvia border towards Latvia. In 2017, the Baltic countries had a congestion at the Estonian and Latvian interconnection for 29% of the total time of the year on average. The average price of electricity in Latvia for consumers has decreased by 8.6% from 48.84 EUR/MWh in 2014 to 44.65 EUR/MWh in 2017.

The Net Transfer Capacity (NTC) between the Estonian and Latvian systems will continue to be distributed by NP for allocation. At the same time, PTR limited (300 MW on annual, 50-100 MW on quarterly and 100-150 MW on a monthly basis) is sold at an auction with the obligation to sell them back to the TSOs. For the repurchased capacity, the TSOs will pay to the holders of PTR limited a fee equivalent to the price difference of the NP Estonian and Latvian price area in the corresponding period. The PTR limited auctions are organized by JSC "Augstsprieguma tīkls".

The total amount of Latvia's interconnection capacity in 2017 was 2,080 MW for export and 1,600 MW for import. In 2017, the total amount of incoming energy was 4,828 TWh, outgoing energy was 3,795 TWh, and the amount of transit was 3,202 TWh.

1.1.4.2. Investment plans and projects of common interest

On September 6, 2017, the Regulator approved the national ten-year transmission system development plan (national TYNDP) for 2018 - 2027. In the decision, the Regulator also stated that the national TYNDP complies with the Community-wide TYNDP.

Pursuant to Regulation No 347/2013, the Projects of Common Interest No.4.4.1 "Internal Line between Ventspils, Tume and Imanta (LV)" (hereinafter – Project 4.4.1) and No.4.2.1 "Interconnection between Kilingi–Nõmme (EE) and Riga CHP 2 substation (LV)" (hereinafter – Project 4.2.1), the Project 4.2.2 "Internal Line between Harku and Sindi (EE)" (hereinafter – Project 4.2.2), and the Project 4.2.3 "Internal line between Riga CHP 2 and Riga HPP (LV)" (hereinafter – Project 4.2.3) (hereinafter altogether referred to as Projects 4.2) and No. 4.8.1 "Interconnection between Tartu (EE) and Valmiera (LV)" (hereinafter – Project 4.8.1), and the Project 4.8.3 "Interconnection Tsirguliina (EE) and Valmiera (LV)" (hereinafter – Project 4.8.3), are part of the priority electricity corridor of the Baltic Energy Market Interconnection Plan in electricity, specified in Annex I.4 of Regulation 347/2013: interconnections between Member States in the Baltic region and reinforcing internal grid infrastructures accordingly, to end isolation of the Baltic States and to foster market integration *inter alia* by working towards the integration of renewable energy in the region.

Pursuant to Article 3(4) of Regulation No 347/2013, the European Commission adopted the Commission delegated Regulation (EU) No 2018/540 of November 23, 2017 amending Regulation (EU) No 347/2013 of the European Parliament and of the Council on guidelines for trans-European

energy infrastructure as regards the Union list of projects of common interest (hereinafter – EC Regulation 2018/540). The European Commission approved the third list of PCIs including the Project 4.4.1, Projects 4.2, Project 4.8.1 and Project 4.8.3. The inclusion of the Project 4.4.1, Projects 4.2, Project 4.8.1 and Project 4.8.3 in the third PCI list demonstrates their compliance with the PCI criteria set out in Article 4 of Regulation No 347/2013.

Pursuant to Article 16 of Regulation (EC) No 714/2009, accrued revenues resulting from congestion management will be invested to increase the capacity of the Latvian – Estonian interconnection, namely, to implement the Project 4.2.1 and Project 4.2.3.

Under the second 2016 Connecting Europe Facility (hereafter – CEF) call, Project 4.2.3 was selected for receiving financial assistance under CEF-Energy as of February 17, 2017. Maximum EU financial assistance for Project 4.2.3 is EUR 9,990,000.

1.2. Promoting Competition

The electricity market was opened on July 1, 2007, when all customers became eligible to choose a supplier of electricity. There are several companies in Latvia which sell electricity to market participants. The biggest traders are JSC "Latvenergo", "Enefit" Ltd, "Inter RAO Latvia" Ltd, "AJ Power" Ltd and "Geton Energy" Ltd.

JSC "Latvenergo" owns the biggest electricity DSO - JSC "Sadales tīkls". In addition, there are 10 local distribution companies, serving less than 100,000 electricity customers.

1.2.1. Description of the wholesale market

In 2017, 48 companies were registered as traders of electricity and 31 of them actively operate as intermediaries in the supply of electricity customers. Electricity generation in Latvia is almost entirely carried out by JSC "Latvenergo" producing approximately 78% of the total consumed electricity. The other electricity producers are too small to offer significant volumes of energy for potential customers.

In Latvia, 13 traders were trading electricity in NP during 2017 and 100% of the total electricity consumed in Latvia was traded through NP.

In 2017, the total annual consumption, including losses and self-consumption was 7,278 GWh and the amount of installed available generation capacity was 2,840 MW. Latvia produced 7,489 GWh of electricity, imported 4,074 GWh from the Nordic countries, and exported 4,136 GWh. 424 power plants are currently operating; of these, 147 are small hydroelectric power plants that generate electricity. They have a total capacity of 27 megawatts (MW). There are 4 hydroelectric power plants, with capacity more than 1 MW. They have a total capacity of 1,537 MW. Latvia has 37 wind power plants with a total capacity of 77 MW, and 204 co-generation stations, with a total installed capacity of 1,299 MW (including natural gas, biomass and biogas power plants). For the

first-time export exceeded import, which was mainly due to significantly higher amount of water in the river Daugava.

JSC "Latvenergo" produces about 78% of the total generation volume in the country and is the only company in Latvia that has a share of more than 5% of the installed available capacity.

The share of the three largest producers was 80%.

In 2017, 7,250 GWh of electricity were bought and 7,132 GWh were sold in the Nord Pool's Elspot market.

There were no acquisitions or mergers in the electricity industry in Latvia in 2017.

1.2.2. Description of the retail market

In 2017, electricity supply companies supplied 7,2 GWh to their customers (Regulator's data). Most of household customers consume a comparatively small volume of electricity (less than 200 kWh per month).

At the end of the reporting year, there were 135 companies registered in the electricity producers' register – 96 for co-generation plants, 37 for wind power plants, and two for hydroelectric power plants. In 2017, the Regulator registered seven new electricity traders. At the end of the reporting year, 48 companies were registered in the electricity traders' register and 11 licences were issued for the distribution of electricity (four of them were issued again due to expiration and two of them were changed due to the clarification of the licence zone) and one licence for the transmission of electricity.

In 2017, the total Latvian electricity consumption was 7,201 GWh. The Latvian electricity consumption structure in 2017 was as follows:

- households – 1,647 GWh or 23%;
- non-household users – 5,554 GWh or 77%.

In 2017, 100% of total electricity was traded in the electricity market at contract prices in accordance with bilateral agreements and 62% of that electricity was traded by the dominant trader in the market - JSC "Latvenergo", and the remaining 38% - by other traders. During the year, 4% of all households and 20% of all non-household users changed electricity trader. Serving customers and billing is traders' responsibility, therefore internal policies for setting a market offer are taken into consideration. However, the regulation states that a universal offer must be included in the product portfolio for all traders willing to supply households. A universal offer is defined as one which comes with a fixed electricity price for a period of 12 months and does not contain any restrictions on early termination of the contract (no penalty for customer).

Nevertheless, products with a fixed price for different time periods and products with a variable stock price are offered in the market.

1.3. Security of supply

The total electricity consumption including losses and self-consumption in 2017 amounted to 7,450 GWh. Peak load in 2017 was 1,231 MW. Forecasts for the peak loads in years 2018 - 2019 are as follows:

- 2018 – 1,356 MW;
- 2019 – 1,381 MW.

The currently available generation capacity amounts to 2,840 MW.

According to the ENTSO-E TYNDP 2016 and national TYNDP, approved by the Regulator, the Estonia-Latvia 3rd interconnection should be commissioned in 2020 to increase cross-border transmission capacity and security of supply and will create a possibility for the market participants to access a larger market area and compete in the common European electricity market.

Each year, the TSO shall prepare annual evaluation report and shall assess the security of supply of electricity and the production capacity for a 10-year period.

There are 11 DSOs, and their license conditions state that they must supply all customers with electricity and connect new customers in their licensed zones of operations. JSC "Sadales tīkls" was the biggest DSO in Latvia in 2017 covering around 99% of the whole territory of Latvia.

The total capacity of the transmission network is currently 8,963 MVA, which is seven times more than the peak load in 2017. This ensures a continuous supply of electricity.

V The natural gas market

In the natural gas sector, Directive 2009/73/EC of the European Parliament and of the Council of July 13, 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC (hereinafter – Gas Directive) granted to Latvia the right to derogate from the articles that define the requirements for the unbundling of natural gas transmission systems and transmission system operators. The derogation expired with the natural gas market opening on April 3, 2017.

Considering the Regulator's obligations stipulated in the Energy Law regarding natural gas market opening, till March 2017 work was done on the development of related regulations before the opening of the natural gas market on April 3, 2017. The Regulator approved the methodology for calculation of the natural gas distribution, storage service tariffs, and the methodology for calculation of natural gas prices for captive consumers. The Rules of Use of the Natural Gas

Transmission System and Rules of Use of the Incukalns Underground Gas Storage Facility were approved in 2017 as well.

As regards system operators' status, it is important to mention that the ownership unbundling of the single natural gas transmission and storage system operator is deemed complete when this operator fulfils all the certification requirements specified in the Energy Law. An operator must be certified before it is approved and designated as a transmission system operator. The Regulator was obliged to determine which documents and information are to be submitted by the single natural gas transmission and storage system operator or the transmission system operator to certify compliance with certain certification requirements. On February 16, 2017, the Regulations on the Certification of the Single Natural Gas Transmission and Storage System Operator and the Natural Gas Transmission System Operator were adopted. The regulations prescribe which documents and information shall be submitted by the single natural gas transmission and storage system operator and the natural gas transmission system operator to the Regulator to confirm the compliance of the system operator with the certification requirements specified in the Energy Law, the procedure by which the system operator provides the Regulator information about circumstances that could affect the compliance of the system operator with the certification requirements and the procedure by which the Regulator evaluates and provides an opinion on the circumstances and the impact of planned transactions of the system operator on the compliance of the system operator with the certification requirements.

According to the legal regulation of the Energy Law, if a natural gas DSO is vertically integrated in the energy supply company, this operator is a separate corporation with an independent legal personality and separated from the activities of natural gas production, transmission, storage, and LNG service provision and trading, and this in communication and in establishing its brand ensures that its identity is separate from the identity of the trading structure of the vertically integrated natural gas supplier. On January 26, 2017, the Regulations on the requirements for the independence of the natural gas distribution system operator were adopted.

As in 2017, the NRAs of Lithuania, Latvia, Estonia and Finland continued work towards creation of the regional Finnish – Baltic natural gas market, on September 7, 2017, the aforementioned NRAs signed the Partnership agreement, the purpose of which was to organize a joint procurement requesting tenderers to prepare a tender on the project on pricing model for the natural gas entry-exit system in the common Baltic-Finnish region. The aim of the project is to assess which methodology - postage stamp, capacity weighted distance or matrix, would serve as the most suitable option for the common Baltic-Finnish natural gas market. The impact of pricing models on natural gas market volume, welfare and utilization of Incukalns underground gas storage (hereinafter – Incukalns UGS) and Klaipeda LNG terminal would be carried out, as well as the simplicity, economic efficiency and facilitation of competition of the pricing model would be analysed.

2.1. Network regulation

2.1.1. Unbundling

Since April 3, 2017 natural gas users have the right to freely choose a natural gas trader; households have a right to choose to become a market player or receive gas at a regulated price. The unbundling of distribution system operators has been completed by 1 January 2018. The legislator considered the most effective solution was the full ownership unbundling of the single natural gas transmission and storage system operator from the energy production, distribution and trading activities. The unbundling of the single natural gas transmission and storage system operator has been completed by 31 December 2017.

JSC "Latvijas Gāze" was split up into two independent companies: JSC "Conexus Baltic Grid" providing transmission & storage services and JSC "Latvijas Gāze" providing trading & distribution services) with the same ownership structure in December 2016. On January 5, 2017, the JSC "Conexus Baltic Grid" was granted a license for natural gas transmission and a license for natural gas storage.

Another step in the unbundling process was the separation of the DSO and the trading company; in the beginning of November 2017 the natural gas trader JSC "Latvijas Gāze" was divided into two merchants – in the reorganization process the new merchant – JSC "Gasō" was created. According to the reorganisation carried out, JSC "Gasō" is the subsidiary of the JSC "Latvijas Gāze". On December 7, 2017, the Regulator issued a distribution system licence to the JSC "Gasō". On December 28, 2017, the Regulator received the report of the DSO on the independence of the system operator. Currently JSC "Gasō" is the only natural gas DSO in Latvia; the licence area includes all territory of Latvia and it serves more than 400 thousand customers.

2.1.2. Technical functioning

2.1.2.1. Balancing

According to the Energy Law, balancing of the natural gas supply system must be ensured by the natural gas TSO. The balancing responsibilities of system users and the procedure for the calculation of the daily imbalance charge by the TSO is determined in the Regulations of Use of the Natural Gas Transmission System. According to the Regulations, the TSO performs the technical balancing of the transmission system if required pursuant to the Commission Regulation (EU) No 312/2014 of 26 March 2014 establishing a Network Code on Gas Balancing of Transmission Networks. The TSO is maintaining a balancing portfolio system. After the conclusion of a balancing agreement, the TSO creates the system user's balancing portfolio.

The balancing period is a gas day and the balancing area is the TSO's natural gas transmission license area. The TSO calculates the gas day imbalance amount for the system user's balancing

portfolio as a difference between the injected quantity of natural gas into the transmission system and withdrawn quantity of natural gas.

When determining the imbalance charge, it is considered that the TSO sells to the system user the missing natural gas, if the imbalance quantity is negative, and purchases from the system user the spare natural gas, if the imbalance quantity is positive, thus ensuring the balance of the system user's injected quantity of natural gas into the transmission system and withdrawn quantity. For the calculation of the imbalance charge, the TSO calculates the natural gas purchase price for each gas day in accordance with the average weighted natural gas price, at which the TSO has purchased the gas from the natural gas traders selected via a public procurement procedure to provide the technical balancing of the transmission system, plus a 5% correction. The TSO calculates the natural gas sale price for each gas day in accordance with the average weighted natural gas price, at which the TSO has sold the gas to the natural gas traders selected by the public procurement procedure to ensure the technical balancing of the transmission system, minus a 5% correction. If the TSO has not purchased natural gas to provide the technical balancing of the transmission system on the gas day, the purchase price must be determined by advantageous sequence, plus a 5% correction. If the TSO has not sold natural gas to ensure the technical balancing of the transmission system on the gas day, the sale price shall be determined by the merit order, minus a 5% correction.

2.1.2.2. The quality of service and supply

The operations of public service providers are regularly inspected on the basis of the Regulator's decision. In 2017, 16 facilities of the natural gas supply company JSC "Latvijas Gāze" and DSO – JSC "Gas" were inspected in order to examine the company's operations and compliance with license requirements or general authorisation conditions. The facilities of the JSC "Latvijas Gāze" and JSC "Gas" were inspected according to the schedule and taking into regard the necessity to ascertain the operation of the companies in accordance with legislation.

In 2017, the average amount of time needed for repairs in the distribution network for final customers was 6.4 hours per one interruption. The planned system average interruptions duration (SAIDI) in the distribution network for 2017 was 30 minutes, unplanned – 1.39 minutes and planned system average interruptions frequency index (SAIFI) per customer for 2017 was 0.29, unplanned – 0.00362.

2.1.3. Network tariffs for connection and access

The Regulator is responsible for the preparation and approval of calculation methodologies for natural gas transmission, storage, distribution system service tariffs and natural gas price for captive consumers and approval of the corresponding tariffs. According to the Energy Law, captive consumers are households - they have a right to choose to become a market participant or receive gas at a regulated price.

Due to the opening of natural gas market, the new methodologies for the calculation of natural gas transmission, distribution and storage system service tariffs were approved.

Under the current tariff setting regime, natural gas system operators can make investments in the security of supply by improving transmission and distribution networks and storage facilities, as well as to earn a reasonable profit for its shareholders.

New tariffs for the natural gas transmission service were approved on May 30, 2017. These tariffs are based on the concept of an entry-exit system (zone), introduced by the Regulation No 347/2013 of the European Parliament and of the Council and it provides that the costs of transmission of natural gas no longer are directly linked to one particular route. These new principles of tariff setting for the natural gas transmission system service provide that the natural gas transmission system service is a capacity reservation service and the capacity of the entry and exit points can be reserved separately, thus allowing natural gas suppliers to provide natural gas from any entry point.

The tariffs are set equal for all cross-border entry and exit points (part of the transmission system connected with Estonian, Lithuanian and Russian transmission systems), but for the tariffs for an entry point from the Incukalns UGS and an exit point to the Incukalns UGS a discount of 50% is applied.

According to the Methodology for the Calculation of the Tariffs on the Natural Gas Transmission Service, the tariff cycle is one year. Therefore, a new tariff proposal was submitted to the Regulator on December 22, 2017 and the evaluation process continued in 2018. In this context, it should be noted that the natural gas TSO – JSC “Conexus Baltic Grid” submitted a request to the Regulator to allow to set its own transmission system service tariffs. On July 13, 2017, the Regulator took a decision not to allow the JSC “Conexus Baltic Grid” to set transmission system tariffs by itself. The Regulator decided, that there is no justification to give to the natural gas TSO such exclusive rights because the natural gas market was recently opened, so there were a lot of unknown obstacles that might have arisen. The aim of such a simplified tariff setting process is to ensure the opportunity to set the tariffs in a very short period of time, but at an early stage of market functioning, a direct involvement of the Regulator is very important in order to ensure that new tariffs will be justified and cost-based.

For the storage service tariffs, the proposal was submitted by the system operator JSC “Conexus Baltic Grid” on November 22, 2017 with request to the Regulator to allow to set its own storage service tariffs. The evaluation process of the storage service tariff proposal continued in 2018.

On August 24, 2017, the Regulator set a rate of return on capital for the natural gas transmission, distribution and storage system operator at 4.70%. The rate of return on capital was calculated in accordance with the relevant service tariff calculation methodologies. The new fixed rate of

return on capital will be applied when drafting a tariff proposal which is scheduled to be in force in 2018.

2.1.4. Cross-border issues

Pursuant to Regulation No 347/2013, the PCI No.8.2.1 "Enhancement of Latvia — Lithuania interconnection" (hereafter – Project 8.2.1), 8.2.2 "Enhancement of Estonia — Latvia interconnection" (hereafter – Project 8.2.2) and PCI No.8.2.4 "Modernization and Expansion of Incukalns Underground Gas Storage" (hereafter – Project 8.2.4) are part of the priority gas corridor of the Baltic Energy Market Interconnection Plan in gas, specified in Annex I.8 of Regulation 347/2013: gas infrastructure to end the isolation of the three Baltic States and Finland and their dependency on a single supplier, to reinforce internal grid infrastructures accordingly, and to increase diversification and security of supplies in the Baltic Sea region.

Pursuant to Article 3(4) of Regulation No 347/2013, on November 23, 2017, the European Commission adopted the EC Regulation 2018/540 with the third list of PCIs including the Project 8.2.1, 8.2.2 and Project 8.2.4. The inclusion of the Project 8.2.1, 8.2.2 and Project 8.2.4 in the third PCI list demonstrates their compliance with the PCI criteria set out in Article 4 of Regulation No 347/2013.

Under the second 2016 Connecting Europe Facility (hereafter – CEF) call, Project 8.2.4 was selected for receiving financial assistance under CEF-Energy as of February 17, 2017 for the study Incukalns UGS – Study of Increased Flexibility and Use As Strategic Gas Storage. Maximum EU financial assistance for Project 8.2.4 is EUR 150,000.

2.2. Promoting Competition

2.2.1. Description of the wholesale market

On April 3, 2017, the natural gas market in Latvia was opened. All natural gas users have the right to freely choose a natural gas trader. In 2017, 35 companies were registered as natural gas traders, of which 7 were active in 2017. In 2017, 14,072 GWh of natural gas were imported by the incumbent JSC "Latvijas Gāze" and five new traders (AJ Power Gas, Enefit, IMLITEX LATVIJA, Lietuvos Duju Tiekimas, Scener). In the first three months of 2017, the Latvian natural gas market was still in the state of a monopoly, hence 5,667 GWh amount of import may not be attributed to the free market structure.

Latvia's natural gas supply system pipeline networks have three international connections; the capacity of the existing interconnections is as follows:

- cross-border connection with Russia – up to 192 GWh/day;
- cross-border connection with Estonia – up to 79 GWh/day;
- cross-border connection with Lithuania – up to 67 GWh/day.

The cross-border connections with Russia and Lithuania provide the ability to supply natural gas in both directions – to Latvia's natural gas supply system and from it, thereby ensuring the security of supply of natural gas in Latvia. The cross-border connection with Estonia provides the ability to supply natural gas from Latvia.

Natural gas is supplied to Latvia along a Latvian-Russian pipeline only during the warm period of the year (April-September), and it is accumulated in the Incukalns UGS facility. During the colder part of the year, natural gas from the underground facility is delivered to Latvian consumers, as well as supplied to Estonia, Lithuania and back to Russia, if needed. In 2017, about 1,493 GWh of natural gas was supplied to other countries.

The natural gas transmission system was designed for annual consumption of up to 45,248 GWh in Latvia – almost three times more than the total consumption in 2017. In 2017, there were no overload capacities in Latvia, thus the TSO did not need to use any actions or methods that focus on congestion management.

Until April 3, 2017, the users of the natural gas distribution system who procure natural gas for personal use outside the territorial area of the licence of JSC "Latvijas Gāze", have the right to use the natural gas distribution system for self-supply in accordance with a bilateral arrangement between the user concerned and the JSC "Latvijas Gāze", which should have provisions for a separate settlement of payments for using the distribution system services.

2.2.2. Description of the retail market

In 2017, 35 companies were registered in natural gas traders' register.

In 2017, the total Latvian natural gas consumption was 12,984 GWh. The Latvian natural gas consumption structure in 2017 was as follows:

- households – 1,436 GWh or 11%;
- non-household users – 11,548 GWh or 89%.

In 2017, there were 407,300 natural gas customers. The number of customers has slightly decreased compared to 2016 when there were 442,800 customers due to the switching to other energy resources.

2.3. Security of supply

Security of supply measures were implemented in accordance with the requirements of the Regulation (EU) No 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC and are being implemented in accordance with the requirements of Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010 –

the Ministry of Economics of the Republic of Latvia is the competent authority with regards to the mentioned Regulations.

The infrastructure standard N-1 for Latvia is 220.67%.

In 2017, there have been no periods when the natural gas demand was not fully covered. Since the actual consumption of natural gas is approximately 14,705 GWh per annum, due to the capacity of the pipeline system, which is designed for 33,936 – 45,248 GWh annual consumption and the availability of the Incukalns UGS, all the natural gas consumers were supplied without supply interruptions.

Considering the close correlation of the measures for mitigation of natural gas supply risk listed in the risk assessment and those included in the investment program of the natural gas and storage system operator, the preventive measures mainly are based on the investment program of the mentioned system operators.

JSC "Conexus Baltic Grid", taking into consideration the obligations of the natural gas TSO set out in the Energy Law, namely, to ensure safety of the transmission system, its efficient and economically reasonable operation, as well as long-term capability to ensure transmission of natural gas according to demand, launched an auction on ensuring availability of natural gas at the transmission system entry point at the interconnection of transmission system with Incukalns UGS. On July 19, 2017 the following auction results were approved:

- from the ending of injection season until 31st of October 2017, the guaranteed amount assured with obligations – 687,722 MWh, the highest guarantee obligation price – 0.680 EUR/MWh;
- from the ending of injection season until 30th of November 2017, the guaranteed amount assured with obligations – 1,150,000 MWh, the highest guarantee obligation price – 0.850 EUR/MWh;
- from the ending of injection season until 31st of December 2017, the guaranteed amount assured with obligations – 1,037,334 MWh, the highest guarantee obligation price – 1.300 EUR/MWh;
- from the ending of injection season until 31st of January 2018, the guaranteed amount assured with obligations – 1,150,000 MWh, the highest guarantee obligation price – 1.550 EUR/MWh;
- from the ending of injection season until 28th of February 2018, the guaranteed amount assured with obligations – 3,450,000 MWh, the highest guarantee obligation price – 2.640 EUR/MWh.

The total amount of natural gas with guarantee obligation – 7,845,056 MWh.

VI Consumer protection and dispute settlement in electricity and natural gas

National legal acts and legal acts of the European Union related to the energy sector provide legal basis for the Regulator's competence to oversee the process of market development, ensuring transparent market information and equal rules for all the market participants.

In 2017, 90 complaints of public utilities users were received and reviewed in the energy sector (66 about electricity and 24 about gas). Complaints on electricity supply mostly were related to the registration of the amount of electricity consumed and the resultant bills (56%), electricity tariffs (8%), installation of a new connection and supply of electricity (15%) and other issues (21%). In the natural gas supply sector, most complaints concerned issues of the registration of the amount of natural gas consumed and resultant bills (37%), natural gas supply (21%), natural gas tariffs (17%) and other issues (25%).

3.1. Public service issues

The Public Service Obligations are imposed on service providers by law. These are specifically defined in secondary legislation and in license terms. Given that, most provisions are imposed by the legislation.

The Public Service Obligations requirements are defined in several laws, particularly in the Energy Law, the Electricity Market Law and the Law on Regulators of Public Utilities. Additionally, the Regulator has also passed a number of important legislative measures (i.e. adopted amendments) to ensure promotion of best practices in regulated sectors.

In the electricity sector, a DSO has an obligation to connect every customer in the licensed area while complying with the regulations on the connection to the grid, set by the Regulator. According to the above-mentioned regulations, the connection charge (the cost of construction) for the 0.4 KV voltage connections must be shared by the customer and the DSO, where:

- the customer pays 60% and the DSO 40%, if the DSO has less than 100,000 users;
- the customer pays 50% and the DSO 50%, if the DSO has more than 100,000 users.

Other customers and generators are obliged to cover 100% of the connection costs.

Laws have defined several tasks for a public trader, as well as for the Regulator issuing licenses:

- According to the law, all licensed system operators must, in accordance with their licensing terms, ensure safe, continuous and stable delivery of electricity, thermal energy, natural gas or other types of energy and fuel to existing and potential customers, doing so at an economically justified level of quantity and quality and in conformity with environmental protection requirements.

- The system operator has a permanent obligation to ensure for system users and applicants' access to energy transmission or distribution systems or natural gas storage sites if such access is compatible with appropriate technical regulations and safety requirements.

The obligation to purchase electricity that is produced in an effective cogeneration regime or electricity is produced from renewable energy resources is imposed on the public trader of electricity. The Electricity Market Law specifies that producers can obtain the right to sell electricity to the public trader and the public trader has the obligation to buy it, as long as the producer satisfies requirements that have been defined in the Regulation of the Cabinet of Ministers regarding Electricity Production from Renewable Energy Resources and Price Calculation, adopted on March 16, 2010.

On March 10, 2009, the Cabinet of Ministers adopted the Regulations Regarding Electricity Production and Price Determination upon Production of Electricity in Cogeneration, covering particular criteria and requirements which regulate mandatory procurement. This regulation contains provisions on the operating regime, the security of the supply, the efficiency, and the formula for determining the price of electricity.

The Regulator approves the renewable energy fee and cogeneration fee that should be paid by all the electricity customers proportionally to their consumption. In 2017, the amount of the electricity produced from renewable energy resources reached 73% of net production, including hydropower plants with installed capacity more than 5 MW. More than half of the electricity was produced by hydro stations, which was feasible due to significantly higher amount of water in the river Daugava.

In accordance with the Electricity Market Law, on November 23, 2017, the Regulator adopted a new Methodology how to calculate the mandatory fee (based on the mandatory procurement from power plants that produce electricity from the renewable energy resources and in effective cogeneration regime, in the form of feed-in tariffs or capacity payment) that should be allocated to all consumers. The Methodology envisages that part of the costs was fixed and linked to the consumers capacity payments and other part is proportional to the consumed electricity.

3.2. Protection of vulnerable customers

In accordance with the Electricity Market Law, electricity supply to vulnerable costumers from January 1 till December 31, 2017 was ensured by JSC "Latvenergo". The electricity price is set in the Electricity Market Law. On July 12, 2016, the Cabinet of Ministers approved detailed rules about electricity supply and distribution to vulnerable customers. These rules entered into force on August 1, 2016 and provide that vulnerable customers are poor or low-income families (persons), large families or families which care for disabled children or persons with the first disability group. Due to changes in the mandatory procurement settlement scheme the rules about

electricity supply and distribution to vulnerable customers were amended on December 19, 2017, providing there is no increase in the final electricity price for vulnerable customers.

3.3. Labelling the primary energy source

Producers which conform to criteria may receive guarantees of origin in terms of the produced electricity, in accordance with specified procedures prescribed by the Cabinet of Ministers. An institution authorised by the government issues the guarantee of origin. On November 22, 2011, the Cabinet of Ministers approved the rules for obtaining guarantees of origin for electricity produced from renewable energy sources. These rules were applicable until June 8, 2016, when the amendments to the Electricity Market Law entered into force. According to these amendments the Cabinet of Ministers approved new regulations on February 14, 2017.

3.4. Customer protection issues

According to the Law on Regulators of Public Utilities, the Regulator is obliged to deal with customer complaints. In simpler cases, where an agreement between the parties involved in the dispute is achievable, the Regulator provides oral or written consultations or delivers an opinion. In more complicated cases, the dispute resolution procedure is applicable.

In 2017, 66 applications were submitted to the Regulator about the actions of the public service provider in the electricity sector. Two complaints were justified and 14 were not related to the Regulator's competence. A dispute resolution procedure was applied in one case in the electricity sector, which was rejected.

In 2017, 24 applications were submitted to the Regulator about the actions of the public service provider in the natural gas sector. Three were not related to the Regulator's competence. Dispute resolution procedure was applied in three cases, one application was upheld, and two claims were rejected.

When replying to complainants, the Regulator makes sure that service providers provide thorough and transparent information to customers about applicable prices and tariffs, as well as apply equal terms and conditions, when it comes to the accessibility and use of electricity and natural gas services.

It can be concluded that the Regulator ensures transparent, simple and free-of-charge procedures for dealing with customer complaints. Such procedures make it possible to settle disputes fairly and promptly, providing for a system of reimbursement or compensation where necessary.

3.5. Regulation of final customer prices

In the electricity sector, the Regulator sets only network tariffs, supply prices are set by bilateral agreements. Both electricity produced and electricity consumed in Latvia are being sold and

bought in a power exchange. The supply price is a subject of agreement and the price can be fixed or variable (tied to the spot price).

In accordance with the Energy Law all users of natural gas are free to choose their supplier. All users, except households, are market participants. A household is a captive user unless it has not used the option to become a market participant. There is one public trader in the territory of Latvia, which supplies all captive users at regulated tariffs. According to legislation, the obligation to provide natural gas trading services to captive users is given to the natural gas trader with the largest number of household users. Currently, the public trader is JSC "Latvijas Gāze".

In accordance with the prevailing legal framework, the Regulator sets tariffs for captive consumers in the natural gas supply sector in accordance with the methodologies approved by the Regulator.

The Methodology for the calculation of natural gas price for captive consumers provides for a transitional period - until the time when the natural gas price laid down in the methodology come into force ,the natural gas price which is determined depending on the amount of the natural gas consumption per year by the captive consumer includes the component of the system services which is determined by summing up the component of the transmission system service and the component of the natural gas storage service, and the trade service tariff for the relevant amount of the natural gas consumption per year approved by the Regulator Decision No.247 of 24 July 2008, as well as the natural gas acquisition price determined according to the principles set in the methodology. The public trader, in addition to the natural gas price, must apply a charge for the natural gas distribution system service in conformity with the differentiated tariffs for the natural gas distribution system service in force.

3.6. Activities of the Regulator in ensuring transparency of terms and conditions of supply contracts

A very important duty is to ensure the transparency of terms and conditions when it comes to supply contracts. The Cabinet of Ministers has issued a regulation in which general rules on trade and supply of electricity, including main provisions and conditions of electricity supply contracts, are set out. In this regard, national legislation in the electricity sector has not changed since January 21, 2014, when the Cabinet of Ministers adopted the before mentioned rules.

In the gas sector, the Cabinet regulation No.78 "Regulations on trade and use of natural gas" of February 7, 2017 sets the main provisions and conditions of natural gas supply contracts, as well as stipulates general rules for the supply of gas.

The Regulator supervises the content of the contracts to prevent discrimination of energy users' or non-transparent requirements.