KONKURENTSIAMET

ELECTRICITY and GAS MARKETS in ESTONIA 2019-2020

REPORT

TALLINN 2021

TABLE OF CONTENT

Foreword

Dear readers,

We are pleased to present the overview of the functioning of electricity and gas markets in Estonia in the years 2019-2020. It is a speech pattern to start with the words that 2020 was a special year. It is likely to be a catchphrase of the year in the annual reports of many organisations and authorities. Nevertheless, the pandemic, as some of the major events, has to be pointed out. Regardless of all the negative consequences also a positive moment has to be emphasized – despite of the complicated situation in the spring and late fall of 2020 our energy system overcame all the challenges. There were no outages and the supply of energy as a vital service was always available to the consumers. We express our deepest gratitude to the enterprises who were up the task and managed to maintain the supply of energy.

Setting out of the EU's climate neutrality objective has to be outlined a very significant event. It is a very ambitious goal – to become carbon neutral by 2050. For the EU the ambition is important also from the point of view of security of energy supply. While being some of the largest and wealthiest economies, we are in a sharp dependence on the import of energy. Besides the achievement of climate neutrality this is also a very important goal for the future of our planet.

In the achievement of the climate neutrality it is very important keep in mind free competition, which is one of the basic principles of the EU functioning. Both the production of renewable energy and the security of supply of the system have to be achieved through free competition and both the application of capacity mechanism and renewable energy subsidies are justified only in the case if these goals cannot be achieved through free competition. A good example herewith is ensuring the security of electricity supply – a separate chapter is dedicated to this in the present report. In the previous years the security of supply calculation was based on the principle where the controllable capacities were summarised and then it was analysed whether it is enough to cover the peak load. The green energy package, which was introduced in 2019, provides an updated approach. The basic principle is ensuring the security of supply through free competition and integration of energy systems. The EU legislation provides very precise guideline when to apply a capacity auction while the primary task is to ensure free competition. As the framework of the capacity mechanism provides for a public aid, a Member State shall thoroughly weigh whether a deviation from free competition and application of the capacity mechanism is really justified. As it was said above, a very important issue is the strengthening of cross-country connections. Looking into the future it is getting ever more important to consider the coincidence factor. By logics it is likely that somewhere in Europe the Sun is shining or it is windy and thereby it becomes possible to transport also the energy produced from renewable resources in the system.

We would also like to stress the commencement of operation of the common Finnish-Estonian-Latvian gas transmission region. We are a kind of a reference project for the rest of EU where gas is flowing from one Member State to another without extra network charges. This is an example of application the free movement of goods – some of the EU basic principles. We hope that the hurdles in the construction of compressor stations will be resolved and already in the coming months the system should be able to function at full capacity.

With wishes for pleasant reading,

Märt Ots

Director General of the Estonian Competition Authority

1. Main developments in electricity and gas markets in 2019

1.1 Developments in electricity market

Wholesale and retail markets of electrical energy

The annual electricity production in the Estonian electricity system in 2019 was 6 447 GWh (net production quantity), while the physical import was 5 616 GWh (for comparison: trade imports were 4 733 GWh) and physical export was 3 417 GWh (for comparison: the trade exports were 2 499 GWh). Therewith, compared to the previous year the trade import has increased by 66% and export decreased by 48%. The Estonian domestic consumption of electrical energy was 8 646 GWh, including transmission network losses (7 833 GWh without transmission network losses, i.e. the energy transmitted by the transmission network for domestic consumption). The consumption behaviour of both businesses and people is well characterised by the relationship between the gross domestic product (GDP) and the consumption of electricity (Figure 1). If more goods and services are produced and bought then also the consumption of electricity is growing and contrary, together with the decrease in the purchase power it decreases as well. The import was in excess of the Estonian domestic production and for the first time in decades Estonia has transformed from an electricity producing state to an electricity importing state. From this point of view 2019 was a landmark year and such trend is likely to continue. The reason is that the Estonian oil shale based production capacities have significantly decreased and continue to decrease, and due to the increased CO_2 prices are not any more competitive in the market. This causes significantly increased need for imports and decrease in exports.

Table 1. Electricity system and wholesale market indicators, comparison of 2018 and 2019.
(Source: Inquiry by the Competition Authority)

Indicator	2018	2019	Change %
Production, GWh	10583	6447	-39%
Consumption (without transmission network losses), GWh	7980	7833	-2%
Physical import, GWh	3484	5616	61%
Trade import, GWh	2857	4733	66%
Physical export, GWh	5350	3417	-36%
Trade export, GWh	4775	2499	-48%
Transmission network losses, GWh	737	813	10%

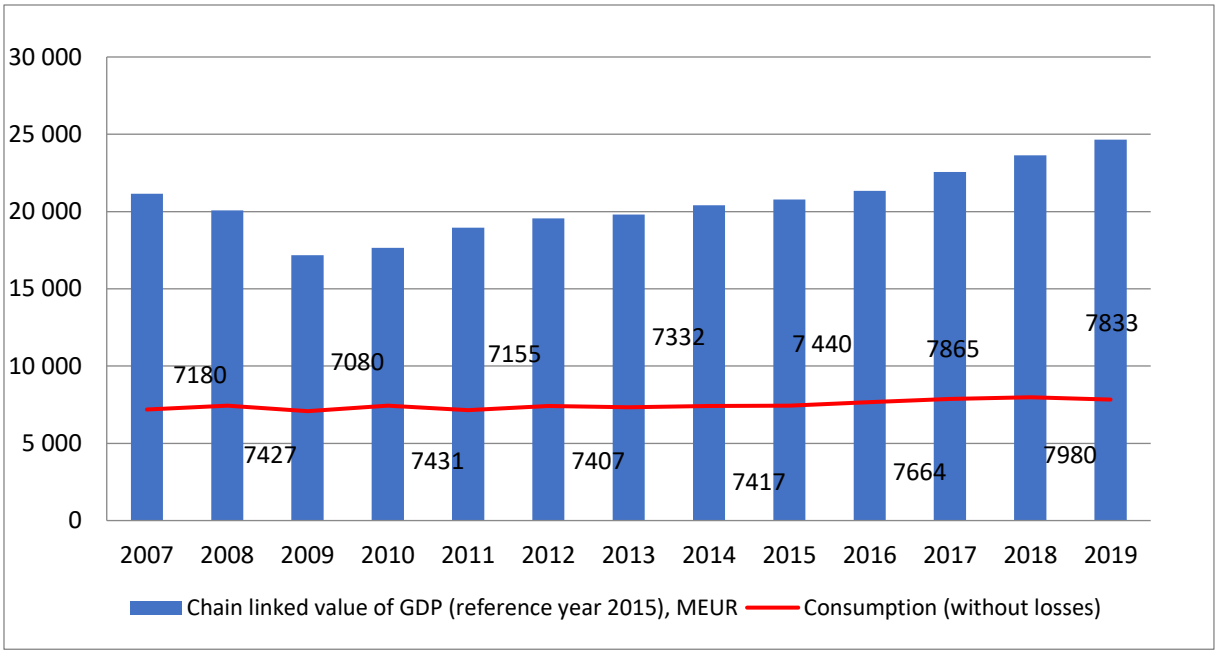

Figure 1. Relationship between electricity consumption and GDP. Source: Statistics Estonia and Elering AS

Electricity price in the Estonian price area of Nord Pool (NP) in 2019 averaged out at 45,86 €/MWh, which is 2,6% lower than in 2018. An average 2019 household price including network charge, excise tax and renewable energy charge (without VAT) was 14, 64 €cent/kWh.

In greater detail the progress in the electricity market in 2019 is described in chapter 2 of this report.

Electricity networks

Estonia has the single transmission network service provider Elering AS, who is also the system operator (TSO). The number of distribution network service providing undertakings is 33. There are 5 406 km of transmission (110-330 kV) lines belonging to the TSO and in total almost 65 700 km of low and medium voltage lines belonging to the distribution operators. The distribution network undertaking with the biggest sales volume accounted by final consumption is Elektrilevi OÜ with 86,3%.

In 2018 the Competition Authority approved new network service prices for Elektrilevi OÜ, which entered into force on 1 January 2019. An annual average transmission tariff in 2019 was 1,05 €cent/kWh, while the distribution tariff was 5,85 €cent/kWh (both without VAT).

More closely the issues of electricity networks' regulation are dealt with in chapter 2.1.

Cross-border issues in electricity sector

The cross-border electricity trade and electricity system organisation issues are regulated by several regulations of the European Commission, which are directly applicable to EU Member States. The regulations determine, which issues are dealt with in national legislation, which are dealt with regionally and which are dealt with EU-wide, and the approaches are pooled in various methodologies prescribed by the regulations.

The electricity trade and capacity allocation rules are regulated by the Commission Regulation (EU) 2015/1222 enacted on 24 July 2015 establishing a guideline for capacity allocation and congestion management (hereinafter CACM). Pursuant to Article 20(2) of Regulation 2015/1222 all TSOs in each

capacity calculation region shall submit a proposal for a common coordinated capacity calculation methodology within the respective region no later than 10 months after the approval of the proposal for a capacity calculation region. By the decision of The European Union Agency for the Cooperation of Energy Regulators (hereinafter ACER), the Baltic capacity calculation region comprises Estonia, Latvia, Lithuania, Finland, Sweden and Poland. Within the framework of respective capacity calculation region various regional issues are dealt with, which derive also from other directly applicable regulations of the European Commission.

The CACM regulation is supplemented by the European Commission Regulation (EU) 2016/1719 of 26 October 2016 establishing a guideline on forward market capacity allocation (hereinafter FCA), Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (hereinafter SOGL), and Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity system balancing and which treats of reserves and imbalance settlement issues (hereinafter EBGL).

As a new regulation on 5 June 2019 the European Commission enacted Regulation (EU) 2019/943 on the internal market for electricity (hereinafter the European Electricity Regulation, or Electricity Regulation). The regulation supplements both CACM, EBGL and SOGL principles and introduces new approaches and requirements, such as, for example, the implementation of demand response[1], fostering of citizen energy communities, determination of energy price compensation mechanism for energy systems, elaboration of reliability standard and better regulation for the use of capacity mechanisms.

The cross-border issues of electricity networks, which are derived from regulations, are dealt with in chapter 2.1.5, which also gives an overview of the regulations-based methodologies introduced in 2019.

Security of electricity supply

The topic of the security of electricity supply has been supplemented with the development of a reliability standard and the determination of the price of energy not served. Besides, the clarification of the need for capacity mechanisms, elaboration of the design of the mechanisms and more efficient regulation of implementation, as provided for by the Regulation (EU) No 2019/943 of the European Parliament and of the Council.

In greater detail the security of supply overview and the interpretation of the reliability standard is presented in chapter 2.3.

1.2 Main changes in electricity related legislation

There were no amendments to the Electricity Market Act in 2019. It is planned to make major legal amendments in the end of 2020, in order to overtake the provisions of Directive (EU) 2019/944 of the European Parliament and of the Council regarding the common norms of the internal market for electricity. In 2020 the Competition Authority made a proposal to the Ministry of Economic Affairs and Communications to amend the regulation that regulates duration of interruptions and compensation:

[1] Pursuant to Directive (EU) 2019/ 944 'demand response' means the change of electricity load by final customers from their normal or current consumption patterns in response to market signals, including in response to time-variable electricity prices or incentive payments, or in response to the acceptance of the final customer's bid to sell demand reduction or increase at a price in an organised market as defined Article 2(4) of Commission Implementing Regulation (EU) No 1348/2014 (17), whether alone or through aggregation;

"Quality Requirements for Network Services and the Conditions for Reducing Network Charges in case of Breaches of Those Requirements".

As regards the support for renewables it is important to mention that the support scheme set out by law for the production facilities with the capacity of below 50 MW will terminate on 31 December 2020.

1.3 Developments in natural gas market

Wholesale and retail market of natural gas

Major changes in the wholesale market of natural gas took place in 2020 when the common Estonia-Latvia balance zone and the common Estonia-Finland tariff zone started operation. In addition, Balticconnector, that interconnects the Estonian and Finnish markets, became operational.

In greater detail the characteristic numerical indicator for 2019 are presented in chapter 3.2, dedicated to the wholesale and retail markets.

Security of supply of natural gas

In 2018 there were no developments in connection with the security of natural gas supply. The supply of gas volumes which satisfies the demand is fulfilled in Estonia also in the coming years. The key questions of the Estonian gas market development are infrastructure investments from the regional point of view - regional liquefied natural gas (LNG) terminal and the construction of Estonia-Finland connection (*Balticconnector*), which became operational in 2020, although, has not yet achieved its full capacity, the planned connection between Lithuania and Poland (GIPL) that is to be finalised by the beginning of 2022, increasing of transmission capacity in Karksi and Kiemenai connection points that are to be commissioned in 2024. In addition, security of supply is influenced by attracting new suppliers into the market, activation of the wholesale market and suspension of the falling gas consumption trend.

In greater detail the natural gas security of supply issues are dealt with in point 4.3.

1.4. Main changes in natural gas related legislation

The Natural Gas Act was not amended in 2019.

2. Functioning and regulation of electricity market

2.1. Regulation of electricity network

2.1.1 Ownership unbundling

In the second half of 2013 the Competition Authority conducted an assessment of compliance of Elering AS, as the transmission network undertaking upon its application or, the so-called certification

process. In the assessment the Competition Authority followed in addition to the provisions of the Electricity Market Act also the requirements provided for in Regulation (EC) No 714/2009 of the European Parliament and of the Council (that treats of the network access conditions in the cross-border electricity trade). The Authority confirmed the compliance of the undertaking to the requirement by its decision made in December 2013.

A distribution network undertaking shall form a separate business entity if the number of customers exceeds 100 000 and shall not operate in other area of activity than the provision of network service. Respective requirement applies only to the distribution network Elektrilevi OÜ that belongs to the Eesti Energia AS group, while other distribution network undertakings have less than 100 000 customers.

If a distribution network operator has less than 100 000 customers, he is obliged to separate in his accounts the following activities:

- provision of network service
- sale of electricity
- ancillary activities

Also, all distribution network operators, regardless of their size, shall keep their accounts on the same principles, as separate undertakings operating in the same area of activity would have been required to keep. Therefore, a distribution network operator that is not required to form a separate business entity is obliged to keep its accounts similarly to a business entity and shall submit in its accounts separately the balance sheet, profit and loss account, management report and other reports provided for in the Accounting Act both for network services, electricity sales and ancillary activities. Respective information shall be submitted in their annual report and made public. The auditor shall give its evaluation on the separation of the fields of activity.

Ensuring of equal treatment

In open electricity market the issue of equal treatment of market participants has become very important as the electricity network and its regulation will remain in the status of monopoly. Thus, all customers of the network undertaking shall be able to use the electricity network in the same manner and the network operator shall ensure equal possibilities for selling electricity to all traders.

In connection with the new electricity market regulation introduced in 2019 in the European Union, both in the form of the directly applicable Regulation and the Directive, adopted into national legislation, opens up the possibilities for customers in the market even more through facilitating ever deeper involvement of customers, offering flexible solutions directly for various markets, among others also reserves for network undertakings, participating in energy communities, fostering growth of distributed production and use of energy storage facilities. The turn of Europe towards green energy and the development of technology, resulting in higher involvement of final customers in electricity markets and growth of distributed production, but also in more complicated aspects of system control, means, that the role of distribution network undertakings is increasing and getting nearer to that of transmission network – local sytem control is becoming ever more important. Herewith, ensuring equal treatment of market participants by the distribution network undertakings is of key importance, in order to promote optimal management and development of the network, facilitate market development, implementation of new technologies and obtain the biggest socio-economic benefits from the new approaches.

According to the Electricity Market Act all distribution network operators are obliged to prepare an action plan with the measures for equal treatment of other electricity undertakings and customers, including the duties of employees in the implementation of these measures. Separate provisions apply to the system operator (who is also the transmission network undertaking).

The system operator is obliged to follow the principles of equal treatment of the market participants in order to achieve best economic results for the whole system within the framework of existing technical and security of supply requirements and other legal requirements. The Act emphasises that, for example, in the preparation of the standard terms and conditions of balance contracts and in the formation of balancing energy price the system operator shall be guided by the principles of equal treatment and transparency. In addition, all network undertakings shall observe the principles of equal treatment and transparency in establishing the technical conditions for connection to the network and the charge for changing of consumption and production conditions (the conditions of connection). The criteria for the establishing of network charges shall base on the principles of transparency and equal treatment.

Equal treatment in Elektrilevi OÜ

Elektrilevi OÜ supplements and updates its equal treatment report annually. The report can be examined on the network undertaking's web site https://www.elektrilevi.ee/vordse-kohtlemise-pohimotted

Elektrilevi OÜ is not allowed to produce and sell electricity, as the number of consumers connected to its network is higher than 100 000. That is why Elektrilevi OÜ shall designate a seller, which has authorisation for providing universal service (section 76^1 (2) of the Electricity Market Act). For the provision of universal service and in case of interruption of the open supply chain Elektrilevi OÜ has designated Eesti Energia AS, in the capacity of selling of electricity. Eesti Energia AS belongs to the same group and represents Elektrilevi OÜ also in the conclusion, amendment and termination of the network contracts. Elektrilevi OÜ uses Eesti Energia AS services in the performing of certain functions like the settlement of customer payments, debt management, call centre and others. However, Elektrilevi OÜ neither concludes electricity sales contracts nor resolves other electricity sale issues.

Equal access to the metering point data and to the measurement information is ensured by the means of the data exchange platform (DEP) which was created on the basis of section 42^1 of the Electricity Market Act. Elektrilevi OÜ transmits to the DEP the data stipulated by legal acts in order to ensure the acquisition of information by the market participants in time and on equal basis.

From the aspect of equal treatment of market participants transparent communication of available surplus connection opportunities and non-discriminant treatment of applications is extremely important. Article 31 of Directive (EU) 2019/944 of the European Parliament and of the Council sets out that, the distribution system operator shall not discriminate between system users or classes of system users, particularly in favour of its related undertakings, as well as the distribution system operator shall provide system users with the information they need for efficient access to, including use of, the system.

As a positive development Elektrilevi OÜ provides information, similarly to the transmission system operator Elering AS, on the size of available resources (free capacity for connection) at the regional substations on its interactive map application (https://www.elektrilevi.ee/vabad-voimsused). Such approach improves the transparency of access to the network and enables network users to obtain

necessary information more easily. Herewith, the network operator has to take care that the presented information is always sufficiently updated.

In connection with the new electricity market regulation introduced in 2019 in the European Union, where concerned directive sets out limitations on the distribution networks to have charging infrastructure for electrically driven vehicles, to have storage equipment and provides certain rules to procure services and goods on market basis and in a transparent manner. However, market participants have raised questions on safeguarding equal treatment by Elektrilevi OÜ, as the biggest distribution network operator in Estonia. In relation to that the Competition Authority conducts a deeper analysis in 2021 in to investigate the issues of independence of Elektrilevi OÜ, as well as ensuring equal treatment of market participants.

2.1.2 Technical functioning

The Estonian electricity system belongs to the large synchronously operating joint system BRELL, comprising the neighbouring countries Latvia and Russia, connected with Estonia through the alternating current lines. They, in turn, are connected to their neighbours Lithuania and Belarus. With Russia Estonia is connected through three 330 kV lines (two lines go from Narva to St. Petersburg and Kingissepp, and one line from Tartu to Pskov). With the Latvian electricity system Estonia is connected through two 330 kV lines (one between Tartu and Valmiera, the other one between Tsirguliina and Valmiera). With Finland Estonia is connected through two direct current cables (EstLink 1 and EstLink 2).

The total length of the transmission lines (110-330 kV) that belong to the transmission network undertaking is 5 406 km, while the length of the low and medium voltage distribution networks is in total 65 700 km.

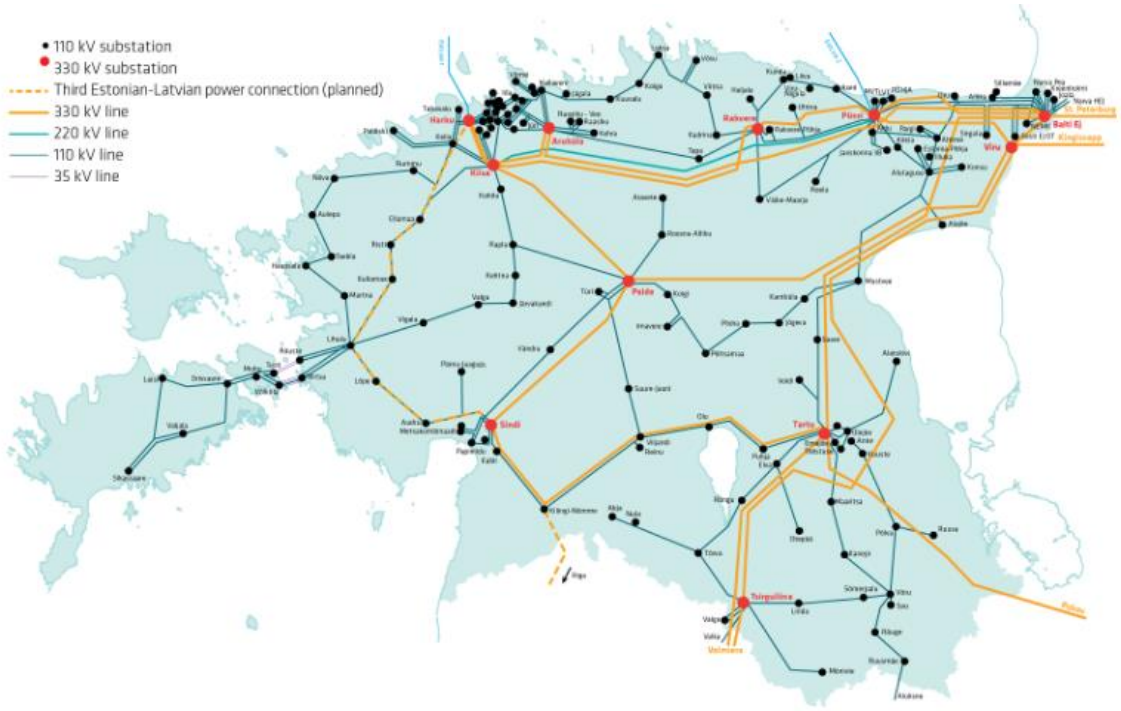

Figure 2. Map of Estonian electricity system. Source: Elering AS

In Estonia the transmission network undertaking, as well as the system operator (TSO), is Elering AS. The number of distribution network operators in 2019 was 33. The largest distribution network undertaking is Elektrilevi OÜ, with the 2019 annual sales volume of 6 961 GWh and its market share on the basis of sale volume was 86,3%; followed by VKG Elektrivõrgud OÜ with the annual sale volume of 250,8 GWh and the market share of 3,11 %; and Imatra Elekter AS with 228,4 GWh sale volume and 2,83% market share. The annual sale of the rest 31 distribution undertakings was 622 GWh in total, resulting in the market share of 7,7%.

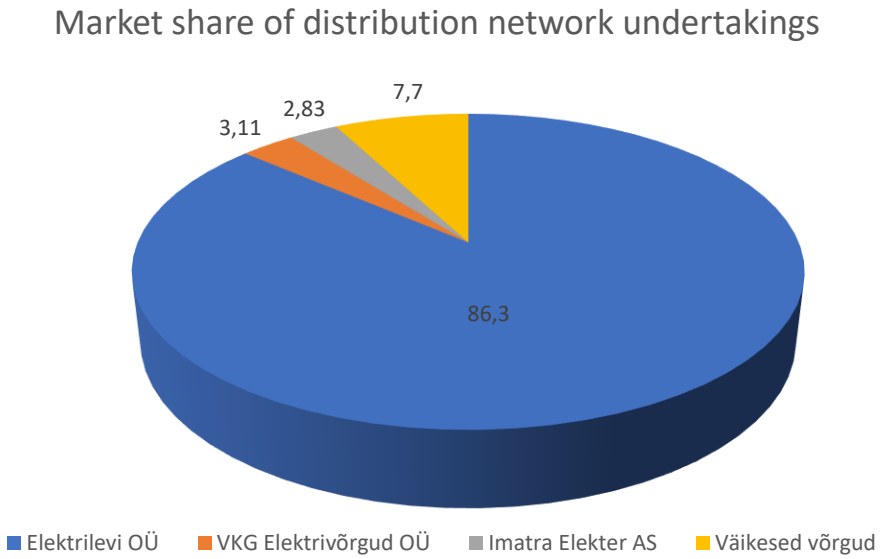

Figure 3. Percentage of market share of distribution networks in 2019

Table 2. Indicators of technical functioning (source: inquiry of the Competition Authority)

Indicator	2018	2019
Peak consumption, MW	1544 (28.02.2018)	1549 (22.01.2019)
Number of transmission network undertakings	1	1
Length of the transmission network (km)	5 202	5 406
Number of distribution network undertakings	33	33
Length of the distribution network (km)	65 700	65 700

2.1.3 Quality of electricity supply

Quality of supply requirements arise from the Electricity Market Act. According to the Act the requirements are established by the Minister of Economic Affairs and Communications. Following of the requirements is obligatory and in case of violation penalties are provided for. The quality of supply requirements contain requirements for customer service and acceptable duration of supply interruptions, separately for those caused by faults and those caused by planned activities. The Competition Authority monitors undertaking's performance in the fulfilment of the quality requirements, adequacy of keeping records on quality indicators and initiates misdemeanour proceedings in event of violation. Disclosure of relevant quality indicators on the web site is obligatory for all undertakings.

The customer service quality requirements determine the maximum acceptable time, during which certain operational procedures have to be accomplished. As regards network service quality both supply interruptions caused by faults (not planned) and planned outages are regulated. Supply disruptions lasting less than 3 minutes are not considered interruptions. According to the quality requirements the time limits (maximum acceptable durations) are set out, during which customers shall be re-supplied. The time limits are distinguished for summer and winter period (Table 3).

Table 3. Network service quality requirements

	Summer period from April to September	**Winter period from October to March**
Transmission network		
Acceptable duration of an interruption caused by faults	2 hours */ 120 hours **/ 3 days from the end of event ***	
Acceptable annual accumulated interruption duration	150 hours	
Distribution network		
Acceptable duration of a planned interruption	12 hours / 3 days from the end of event ***	16 hours / 3 days from the end of event ***
Acceptable duration of a planned interruption	10 hours	8 hours
Acceptable annual accumulated interruption duration by faults	70 hours* / 150 hours**	
Acceptable annual accumulated planned interruption duration	64 hours	

Notes:

* Power is supplied through two or more 110 kV transformers or lines

** Power is supplied through a single 110 kV transformer or a line

*** If the interruption was caused by an event that it was objectively impossible for the network operator to forestall or prevent (such as a natural calamity, winds or ice build-up exceeding the design standards of the lines, military hostilities), the interruption must be eliminated within 3 days following the end of the event.

If undertakings fail to comply with the acceptable time limits specified in Table 3 they are obliged to pay monetary compensation to customers in the form of reduced network charges. The rates and the procedure for the calculation of reduced network charge is established in Section 7 of the Regulation "Quality Requirements for Network Services and the Conditions for Reducing Network Charges in case of Breaches of Those Requirements".

The Competition Authority has developed a specific form for reporting. It is mandatory for undertakings to fill out and to disclose it. Therewith, they are required to disclose how many times and in how many grid connection points they failed to comply with the established quality requirements. Undertakings shall also submit data on how many times they failed to fulfil the service quality requirements.

Data on the network quality are published on the Competition Authority's web site https://www.konkurentsiamet.ee/et/elekter-maagaas/elekter/jarelevalve. The Authority takes these into account in the process of price proceedings.

An overview of compliance to the quality norms in 2019 is concentrated in Table 4. 2,4 % of all interruptions caused by faults in the distribution networks did not comply with the quality norms. The same indicator for the transmission network was 2,9 %, although it was caused by a single interruption event.

Table 4. Compliance to quality norms of network service in 2019. Source: inquiry of Competition Authority.

Interruptions	Maximal time			TOTAL distribution networks			Elering AS, transmission network		
	Transmission network	Distribution network		Total	not in compliance with VKN	in compliance with VKN	Total	not in compliance with VKN	in compliance with VKN
		1 April - 30 Sept	1 Oct - 31 March						
Number of fault caused interruptions caused by force major (e.g. natural disaster) VKN § 4 (3)	3 days from the end of event			109 606	11 211	98 395	0	0	0
Number of fault caused interruptions VKN § 4 (4;5) (excluding interruptions referred to in sections 1.1 and (4[1]))	2 hours, if fed through two transformers or lines	12 hours	16 hours	1 108 903	26 945	1 081 958	34	1	33
	during 120 hours (if fed through one transformer or line)	during 120 hours (if fed through one 110 kV transformer or line)		0	0	0			
Number of consumption points, where total annual duration of fault caused interrruptions exceeded the norm VKN § 4 (6, 6[1])	150 hours	70 hours (up to 150 hours, if fed through one 110 kV transformer or line)			5 279			0	
Number of planned interruptions	up to 10 hours in the period 1 Apr-30 Sept; 8 hours in the period 1 Oct - 31 March	10 hours	8 hours	310 205	640	309 565	19	1	18
Number of consumption points, where total annual duration of planned interrruptions exceeded the norm VKN § 4 (8)	64 hours	64 hours			463			2	

Several major power outages (electricity supply interruptions), that influenced a large number of customers, took place in 2019 in Estonia.

On 9 January 2019 a power outage took place in Saaremaa island, in Kuressaare town and its surroundings, in the network operated by Elektrilevi OÜ. The number of consumers the power outage influenced was close to 14 000 and the interruption in supply lasted for 13 hours and 59 minutes (in larger extent for 3 hours and 53 minutes). In the result of supervisory proceeding the Competition Authority found that it could have been prevented, although Elektrilevi did not breach the network service quality requirements in relation to interruptions set out in the Regulation No 42 "Quality Requirements for Network Services and the Conditions for Reducing Network Charges in case of Breaches of Those Requirements". The interruption was caused by a negligence of an Elektrilevi OÜ own employee and by its contractual partner in the following of the work procedures prescribed in the instruction manual "Safety Instructions for Operation of Electrical Appliances". That is why the Competition Authority forwarded the materials of the proceedings to the Consumer Protection and Technical Regulatory Authority for further proceedings.

Another large-scale power outage took place in Ida-Viru County, in the network of Elering AS. On 10 May 2019 an electricity supply interruption that started from an emergency in the Balti substation influenced customers in Narva, Narva-Jõesuu and Sillamäe and surroundings, and lasted for 2 hours and 36 minutes (for electricity consumers for 3 hour and 15 minutes). The reason was simultaneous occurrence of two different faults and their combination caused a large extent electricity supply interruption resulting in the failure of two 330 kV transmission lines. The Competition Authority conducted supervisory proceedings in the course of which it was revealed that Elering AS did not breach the quality requirements for network connections and considering the governing conditions, the actions of Elering AS during the removal of the fault were operative. However, the interruption could have been prevented, if prior to the events there were carried out more thorough inspection of all the functions of the protective relaying. In addition, the Competition Authority recommended to consider installation of video cameras in bigger substations and larger number of dispatch personnel shifts for the whole electricity system, in order to ensure operative control of the system at any point of time.

The third extensive power outage took place in Võru and its surroundings. On 27 October 2019 Võru substation, belonging to Elering AS, I and II bus sections and connected equipment switched off. The same way several other substations switched off: the Soo 110 kV substation, Ruusmäe 110 kV substation, Rõuge 110 kV substation and the Sõmerpalu-Võru (L143A) line power breaker at Sõmerpalu 110 kV substation. The switching off was caused by the breakage of the roof of the Võru substation's control building and the roof's fixation constructions due to heavy wind. The roof's cladding together with thermal insulation together with the roof's elements and materials fell on the substation equipment. At the same time faults occurred also in the network of Elektrilevi OÜ, caused by trees fallen to the overhead lines due to stormy winds. In the course of supervisory proceedings the Competition Authority adjudged that both Elering AS and Elektrilevi OÜ breached the requirements for the event of network connection interruption set out in the Regulation No 42 "Quality Requirements for Network Services and the Conditions for Reducing Network Charges in case of Breaches of Those Requirements" of the minister of economic affairs and communications of 06 April 2005. As a consequence, both were required to pay compensation to their customers.

In connection with the power outage in Võru and its surroundings and conducted proceedings in the first half of 2020 the Competition Authority also recognised some aspects in the regulation "Quality Requirements for Network Services and the Conditions for Reducing Network Charges in case of

Breaches of Those Requirements"[2], which in the opinion of the Authority need to be updated. In the evaluation of the Authority the Regulation does not ensure sufficient compensation to the customers in the event of breach of the quality requirements and as well, does not provide sufficient stimuli the network operators to ensure fulfilment of the quality norms, as those rates were established back in 2005. Thus, the Competition Authority found in the result of supervisory proceedings that the rates of reduction of network charges in the event of breach of the quality norms that were established and set out in respective regulation in 2005, need to be updated. Therewith, also the principles of acceptable duration of interruptions and the way of calculation of reduction in the network charges in the event of breach of the quality norms should be revised.

In connection with this the Competition Authority submitted proposals for updating of the Regulation to the Ministry of Economic Affairs and Communications and the Ministry of Justice.

(https://www.konkurentsiamet.ee/et/uudised/konkurentsiamet-teeb-ettepaneku-elektrikatkestuste-huvitamise-susteemi-muutmiseks).

The supervisory proceedings of the Competition Authority can be observed on the Authority's web site: https://www.konkurentsiamet.ee/et/elekter-maagaas/elekter/jarelevalve .

Time taken by the transmission system operator to make new grid connections and repairs of cross-border network connections

Connection to the power network is regulated by the Grid Code established by Regulation No 184 of the Government of the Republic on the basis of section 42(2) of the Electricity Market Act. In order to connect to the transmission network a connectee shall submit to Elering AS a connection application. On the basis of the application an offer for a connection contract shall be issued within 90 days. If the customer wants to connect in an area where the network transfer capacity is not sufficient and the customer does not accept the connection offer together with the cost of construction and strengthening of the network, the network undertaking shall notify the customer and the Competition Authority in 30 days from the reception of the connection application from the customer, that a connection in the specific network area is impossible. If the data presented in a connection application are insufficient or do not comply with the requirements, then the network undertaking shall notify the customer about this in 10 business days from the reception of the application and the customer has 15 days to bring its application into compliance with the requirements. In order to connect a connectee's electrical appliance to the network or to amend the consumption or production conditions the network undertaking shall conclude a connection contract with the connectee.

For the functioning of electricity market, it is necessary that the market participants have timely information on the capacity of the power connections and possible connection disruptions. The transmission network undertaking is obliged to disclose the information on cross-border transmission capacity and limitations on the transmission capacity in connection with planned outages and repair works. Table 5 below presents the data submitted by Elering AS on the time spent for the creation of interconnections between networks and repairs in the years 2016-2019.

Table 5. Timing of creating and repairing connections between networks by Elering AS

[2] Regulation No 42 of the Ministry of Economic Affairs and Communications of 6 April 2005, RT I, 21.10.2016.5. Available in: https://www.riigiteataja.ee/akt/121102016005

Line	Interruption duration (hours) 2016	Interruption duration (hours) 2017	Interruption duration (hours) 2018	Interruption duration (hours) 2019
L301 Tartu – Valmiera	159,45	227,09	33,5	257,00
L354 Tsirguliina – Valmiera	49,91	106	447,38	797,00
L358 Tartu – Pihkva	328,75	3312,18	388,32	566,00
L373 Eesti PP – Kingissepp	732,25	86,08	284,62	135,00
L374 Balti PP - Leningradskaja	1302,73	355,02	325,33	120,00
L677 Tsirguliina – Valka	226	1134,28	523,40	579,00
L683 Ruusmäe – Aluksne	575,85	203,02	237,80	71,00
LN3	0	7,01	0,00	0,00
Total	**3374,95**	**5430,68**	**2240,35**	**2525,00**
Incl. ordered by neighbouring systems	2862,22	5038,22	1697,6	1305,00
Estlink 1	123	133	643	139
Estlink 2	376	14	136	218

The interruptions in the network interconnections in 2016 took place during 3 374,95 hours, while in 2017 it was during 5 430,68 hours, in 2018 during 2 240,35 hours and in 2019 during 2 525,00 hours. Interruptions in the grid are primarily caused by faults (old and worn out lines, occurred storms), as well as due to the repair and maintenance works.

2.1.4 Renewable energy

The amendments to the Electricity Market Act, enforced on 9 July 2018, changed the principles of the support scheme for electricity produced from a renewable energy source and in an efficient co-generation process. The support paid so far for each generated energy unit for new renewable energy producers was abandoned and replaced with auction based support system. The objective was to make the support scheme less burdensome for consumers by linking the payment of support with the objective of producing electricity from renewable sources committed to by the state and getting support through the winning of a tender in the form of reverse auction. An exemption for small producers was added – the support is paid to the producers with electrical capacity of higher than 50 kW and lower than 1 MW, aiming at increasing an annual production of electricity by the users of such production facilities by 5 GWh in the years 2019-2021.

In 2019 the first reverse auction for electricity production from renewable energy source was carried out, the deadline for bid submission was 18 March 2020. The aim of the reverse auction is to get to the market additional 5 GWh/year of electricity produced from renewable sources using production facilities with the capacity in-between 50 kW and 1 MW. The process of the second reverse auction is ongoing with the deadline for bids' submission of 14 September 2020.

In 2020 the support scheme for the production facilities with the capacity below 50 kW was also terminated. This means that it was possible to apply for support until the end of 2020. Those production facilities, which will qualify for the support during this year, will get support during the next 12 years, but beginning from 2021 the facilities with the capacity below 50 kW cannot apply for support any more.

Thus, in spite of transition to the auction system and termination of the direct support scheme, some producers will still get support according to the old scheme during up to 12 years. Therefore, the complete termination of the scheme of direct support is continuing as yet.

In Estonia the renewable energy support comes from consumers who pay each month for the electricity network service, to which the fee for renewable energy is added according to the quantity of consumed electricity. Consumers have paid for the renewable energy since 2007, when the Electricity Market Act was amended and the support for renewable energy producers was established. While in 2007 the renewable energy support paid by consumers was 1,39 €/MWh, then in 2020 it was altogether 11,3 €/MWh. Thus, during this period the consumer-paid renewable energy support has increased more than 7 times.

Looking at the contribution by consumers to the renewable energy on the basis of 2019 data, the share of renewable energy on electricity bill is 7 %. This shows that the fee affects the formation of consumer bill formation (see Figure 4). Since the fee is charged from consumers on the basis of the volume of consumed network service, therefore, the higher the consumption, the higher the payment for renewable energy.

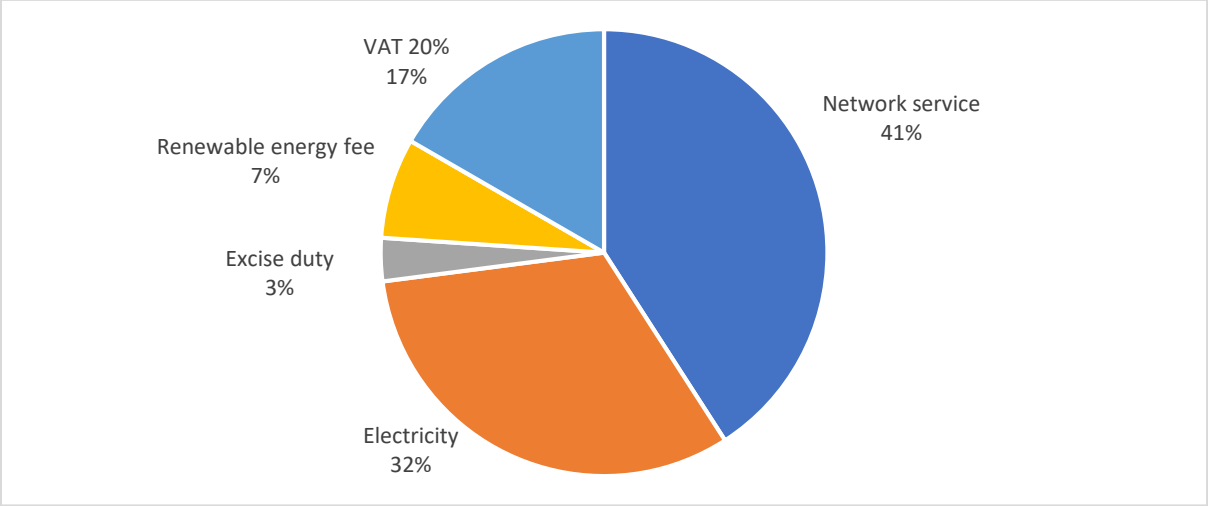

Figure 4. Share of renewable energy fee in electricity price for consumers

Let us take a simplified example – if the sum of electricity bill (incl. electricity, network service, fee for renewable energy, excise duty on electricity and value added tax) for a consumer is 25 euro per month, then on the basis of 2019 data it can be said that the fee for renewable energy is about 1,75 euro per month.

2.1.5 Access to the network and network service price regulation

According to the Electricity Market Act uniform price regulation is applied to all network undertakings regardless of their size. In 2019 in Estonia there was one transmission network undertaking and the number of distribution undertakings was 33.

The Competition Authority approves separately the following network charges and methodologies:

- network charges (for transmission and for using of a network connection);
- ancillary services provided by network operator (e.g. replacement of main protective fuse or sealing of meters at the customer and some other services);

- the methodology for the calculation of a charge for connecting to the network;
- the methodology of the pricing of balancing energy.

The prices for balance energy and the charges for transit of electricity are not subjects to approval, but the Competition Authority is obliged to monitor the justification of the prices. That means *ex-post* regulation is applied to these charges.

Although Article 18(3) of Regulation (EC) No 2099/943 allows charging producers for the transmission, so far Estonia has not applied this possibility.

The approval of prices takes place upon application by the undertakings. The latter means that undertakings have permanent opportunity to submit an application for the approval of network charges. New network charges shall be approved in case if an undertaking finds that the operating cost, capital cost and the justified return that were used in the approval do not provide the price that meets the provisions of section 71 of the Electricity Market Act. According to necessity the Competition Authority has the right to verify whether the valid network service price is in compliance with the provisions of the Electricity Market Act. In order to give to the network undertaking a possibility to set long-term goals, to plan its work and to fulfil its legal obligations, the Competition Authority applies the revision of an undertaking's investments in the process of price approval.

The Competition Authority has prepared and published on its web site the "Standard Methodology for Calculating of Electricity Network Charges" and the "Manual to Calculate Weighted Average Cost of Capital".

Pursuant to the European regulatory framework the regulation of the network service prices of the transmission network undertaking has some differences. As the transmission network undertakings incur additional costs and revenues as the result of hosting cross-border transit flows of electricity the so-called compensation fund has been established between the EU transmission network undertakings of the EU Member States (ITC fund). All transmission system operators contribute to the ITC fund and from the fund the costs of all transmission operators participating in the transit of electricity are compensated for. Amongst other things Article 4(3) of the Regulation No 838/2010 sets out that when setting the charges for the access to the network the payments to and receipts from the ITC fund shall be taken into account[3]. Since execution of the Regulation is mandatory to Estonia, in the approval of network charges the Competition Authority takes into account the costs incurring from the ITC fund.

In the regulation of the network service prices of the transmission network undertaking the revenues resulting from the cross-border interconnection congestion management has also been taken into account.

Network charges of Elektrilevi OÜ

On 1 October 2018 the Competition Authority approved the network charges (fees) of the undertaking that took effect on 1 January 2019.

Imatra Elekter AS network charges

On 30 July 2019 the Competition Authority approved the network charges (fees) of the undertaking that increased by 4,2% on average.

[3] *Inter-Transmission System Operator Compensation Mechanism*, often abbreviated as *ITC*..

Charges for connecting to electricity network

Connection to the electricity network is regulated by the Grid Code established by Regulation No 184 of the Government of the Republic on the basis of section 42(2) of the Electricity Market Act. Chapter 5 of the Grid Code sets out the requirements for connecting of a customer's electrical appliance to the distribution network of a network undertaking. For connecting to the transmission network a connection application must be submitted to Elering AS and based on the application, during 90 days an offer for connection is issued. A distribution network undertaking shall issue a connection offer during 30 days from the reception of the application or from performing an action necessary for the transmission network undertaking.

The connection offer shall contain the location of the metering point of the customer's electrical appliance, the charge for connecting and the grounds of its calculation, the conditions for connecting to the network and the conditions for amending or cancelling of the connection contract. The charge (fee) for connecting to the transmission network is determined on the basis of the cost pursuant to the principles outlined in the Grid Code. In the calculation of the fee for connecting to the network the justified cost which incurs in making the connection is considered. The charge includes the necessary and justified cost for connecting the new consumption load or for the amending existing consumption conditions, including the cost of construction of new electrical installations or re-construction of existing ones. It shall be explained herewith that the charge for connecting to the distribution network is calculated according to the methodology approved by the Competition Authority. For the preparation of the methodology the Competition Authority has published the "*Guidelines for preparation of methodologies for approval the charge for network connection and amendment of consumption or production conditions"*.

On 30 May 2019 the Competition Authority approved the standard terms and conditions for connecting to the transmission network of Elering AS and on 30 June 2019 the methodology for calculating of the connection fee and the charge (fee) for changing of consumption and production conditions of Elering AS. On 19 July 2019 the Competition Authority approved the new standard terms and conditions for connecting to the network of Elektrilevi OÜ.

2.1.6 Balance services

The Electricity Market Act and the Grid Code lay down the regulation of balance responsibility in detail. According to these Acts every market participant is responsible for its balance. The transmission network is responsible for the balance of the whole system and several balance providers may act in the market. In order to balance the system, the transmission network buys or sells balancing energy. The methodology for calculation of the price for balance energy and standard terms and conditions for electricity balance agreements are to be approved by the Competition Authority *ex ante*. In the formation of the balance energy price the transmission network is obliged to buy or sell balance energy at the most favourable price possible.

From 1 January 2017 all consumption points are equipped with remote reading devices and the whole metering process is organised on the *on-line* principle. The measured supplies that are necessary for imbalance settlement are collected from the metering points and forwarded to the Data Store (*in Est. ANDMELADU*) by all network undertakings that operate in Estonia.

From 1 January 2018 in the electricity systems of Estonia, Latvia and Lithuania a coordinated balance management is applied. These three systems are viewed as a common balance area and one of the

Baltic TSOs is responsible for the balancing of the summarised balance. The objective of the coordinated balance area is to improve cost efficiency of the electricity system management, particularly, to reduce the imbalance off the Baltic system.

According to the principles of electricity market functioning a market participant shall ensure that the amount of electricity supplied to the network and/or purchased by the market participant in each trading period is equal to the amount of electricity acquired from the network and/or sold by the market participant. For the balance of small consumers their distribution network operator is responsible for. The biggest balance service provider is Eesti Energia AS. Besides, seven other balance providers are active:

- Alexela Energia AS
- Axpo Nordic AS
- Eesti Energia AS
- Elektrum Eesti OÜ
- Fortum Eesti AS
- INTER RAO Eesti OÜ
- Nordic Power Management OÜ
- Scener OÜ

In 2019 the following balance service related standard terms and conditions and methodologies were proceeded:

Standard terms and conditions of electricity balance agreement

In 2018 Elering AS submitted to the Competition Agency for approval standard terms and conditions of electricity balance agreement. The Agency approved the terms and conditions on 27 February 2019 by its decision no 7-10/2019-001. The standard terms and conditions can be found on the web site of Elering:
https://elering.ee/sites/default/files/attachments/Elering_elektrienergia%20bilansilepingu%20t%C3%BC%C3%BCptingimused_05.2019.pdf

Standard terms and conditions for electricity regulation agreement

In 2018 Elering submitted to the Competition Agency for approval standard terms and conditions of agreements for the provision of regulation services. The Agency approved the terms and conditions on 21 May 2019 by its decision no 7-26/2019-008. The terms and conditions can be found on the Elering's web site:
https://elering.ee/sites/default/files/attachments/Elering%20elektrienergia%20reguleerimislepingu%20t%C3%BC%C3%BCptingimused.pdf

Methodology for calculating of balancing energy price

In the end of 2018 Elering submitted to the Competition Agency for approval also a new methodology for calculating of the price of balancing energy. The Authority approved the methodology on 30 December 2019 by its decision no 7-10/2019-013 with the date of enforcement from 1 January 2021. The methodology has been challenged in the court, but no verdict has been made so far. The

unified methodology for calculating of the price of balancing service can be found on the web site of Elering AS:
https://elering.ee/sites/default/files/2020-06/Bilansiteenuse%20hinna%20arvutamise%20%C3%BChtne%20metoodika_2020.pdf

Balancing of electricity system or, the balancing rules

On 26 August 2019 Elering AS submitted to the Competition Authority for approval the rules for ensuring balance in the electricity system or, the balancing rules, which lay down the principles of hourly regulation of the system. The Competition Authority approved the rules on 31 December 2019 by its decision no 7-10/2019-014 and it can be found on the web site of Elering ASD

https://elering.ee/sites/default/files/2020-01/Elektris%C3%BCsteemi%20bilansi%20tagamise%20ehk%20tasakaalustamise%20eeskirjad.pdf

2.1.7 Cross-border issues

With neighbouring countries Estonia has power connections with Russia, Latvia and Finland. The map of the Estonian electricity system is presented in Figure 5. The map of the power systems of the Baltic countries and north-western part of Russia is given in Figure 2 above. It should be clarified yet that Finland is part of the Nordic power system Nordel, which is not synchronised with the Russian and the Baltic countries' electricity systems' interconnection BRELL, where Estonia belongs to.

Figure 5. Map of electricity systems of Baltic countries and north-western part of Russia. Source: Elering AS

Estonia has three 330 kV overhead AC connections (500-650 MW) with Russia and two 330 kV overhead lines (500-900 MW) with Latvia and two DC connections with Finland (350 MW and 650 MW). Depending on network repair works and ambient air temperature variations the transfer capacity between Estonia and Latvia may decrease. The maximum power which can be imported and exported depends on the one hand from the technical transmission capacity of the lines and on the other hand from the stability margin determined in the operational regime calculations. The one which is lower determines the final limitation.

Regulation derived from European Union Network Codes and its application

CACM Regulation[4]
The methodologies regarding rules for transmission capacity calculation and allocation derive from the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline for capacity allocation and congestion management.

The following regional methodologies and decisions, which derive from CACM Regulation and were under discussion in 2019:

1. Baltic capacity calculation region common methodology for coordinated redispatching and countertrading, pursuant to Article 35(1) of the CACM Regulation:
On 20 March 2018 the regulatory authorities of the Baltic capacity calculation region received from the TSOs a proposal for redispatching and countertrading methodology (CRC methodology). On 17 January 2019 the regulators of the Baltic capacity calculation region endorsed the methodology.
The methodology is published at:
https://elering.ee/sites/default/files/attachments/Balti%20CCR%20koormuste%20koordineeritud%20%C3%BCmberjaotamise%20ja%20vahetuskauba%20tegemise%20metoodika.pdf

2. Redispatching and countertrading cost sharing methodology of the Baltic capacity calculation region (CRC CS methodology), pursuant to Article 74(1) of the CACM Regulation.
On 20 December 2018 the regulators of the Baltic capacity calculation region received a proposal for common coordinated cost sharing methodology.
On 17 June 2019 the regulators of the Baltic capacity calculation affirmed the methodology. The methodology is published at:
https://elering.ee/sites/default/files/attachments/13122018_MCRCCS__Article_74_re-draft_final.pdf

3. Proposal for cross-zonal capacity allocation and other arrangements (MNA proposal), Articles 45 and 57 of the CACM Regulation.
On 30 November 2017 Elering submitted to the Competition Authority for approval a proposal for cross-zonal capacity allocation and other arrangements. On 19 April 2018 the regulators of the Baltic capacity calculation region endorsed the methodology. The methodology provided for the implementation of the Multi power exchange principles (hereinafter the MNA project) in the region in January 2019. On 21 December 2018 the TSO's of the Baltic capacity calculation region submitted respective proposal for the methodology amending, in which they asked to prolong the deadline for the MNA project from January 2019 to June 2019.

[4] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015R1222

On 15 January 2019 the regulators of the Baltic capacity calculation region affirm the change of methodology by which the planned finalisation of the MNA project was shifted to June 2019.
The methodology is published at:
https://elering.ee/sites/default/files/attachments/Balti%20MNA%20parandatud%20ettepanek%20122018.pdf

On 12 June 2019 the Baltic TSO's submitted to the regulators again an amended MNA proposal by which it was informed that EPEX SPOT SE is not planning to join the Baltic electricity market during 2019 and that is why it is not possible to implement the MNA project by the earlier planned deadline. On 4 June 2019 Elering submitted to the Competition Authority a supplement to the amended MNA in which it was clarified that the cooperation agreement to be signed between the TSOs and power exchanges will be published on the TSOs' web site and respective agreement will fix the deadline for the MNA project. On 8 July 2019 the Competition Authority approved the supplement to the amended MNA proposal.
The methodology is published at:
https://elering.ee/sites/default/files/attachments/Baltic%20MNA%20proposal%20amended%20V2%20Jul2019.pdf.

4. The mechanism of common day-ahead market and the allocation of regional costs of common intraday market (XBID LIP 13), Article 80(4) of the CACM Regulation.
On 26 June 2019 the regulators of the Baltic capacity calculation region received a proposal for the mechanism of common day-ahead market and the allocation of regional costs of the common intraday market (XBID LIP 13 proposal).
On 13 May 2020 the regulators of the Baltic capacity calculation region endorsed the XBID LIP 13 proposal.

5. Approval of European Market Coupling Operator AS (EMCO, current name Nord Pool European Market Coupling Operator AS), pursuant to Article 4 of the CACM Regulation.
On 11 June EMCO submitted to the Competition Authority an application with the wish to designate himself as he NEMO in the day-ahead and intraday market in Estonia. The Competition Authority together with other regulatory Authorities of the Baltic countries evaluated the compliance of the application the requirements and found that EMCO fulfils the requirements set out in Articles 6(1) (a, b, c, d, e, f, g and j) and Article 6(2) of the CACM Regulation. On 11 December 2019 the Competition Authority designated EMCO as the NEMO in the day-ahead and intraday market in Estonia.

European-wide methodologies, which derive from CACM Regulation and were under discussion in 2019:

1. Methodology for pricing intraday cross-zonal capacity (IDCZCP) in accordance with Article 55(1) of the CACM Regulation.
On 14 August 2017 Elering AS submitted to the Competition Authority a proposal for approval. As the national regulatory authorities failed to reach agreement on the proposed methodology, it was sent to the ACER for decision making. On 24 January 2019 the ACER made decision No 01/2019.

2. Methodology for calculating scheduled exchanges resulting from single day-ahead coupling, according to Article 43(1) of the CACM Regulation (DA SEC Proposal)
On 28 February 2018 Elering AS submitted to the Competition Authority a proposal for approval of the mythology for calculating scheduled exchanges resulting from the market mechanism of single day-ahead coupling. On 14 February 2019 the Competition Authority approved the methodology proposal.
The methodology is published at:

https://elering.ee/sites/default/files/attachments/Metoodika%20j%C3%A4rgmise%20p%C3%A4eva%20graafikuj%C3%A4rgsete%20vahetuste%20arvutamiseks%20DA%20SchExc.pdf

3.Methodology for calculating scheduled exchanges resulting from single intraday coupling, according to Article 56(1) of the CACM Regulation (ID SEC Proposal)
On 28 February 2018 Elering AS submitted to the Competition Authority a proposal for approval of the mythology for calculating scheduled exchanges resulting from the market mechanism of single intraday coupling. On 13 March 2019 the Competition Authority approved the methodology proposal.
The methodology is published at:
https://elering.ee/sites/default/files/attachments/ID%20Scheduled%20Exchanges%20Calc%20Methodology_for_amendments%20resubmission_clean.pdf

FCA Regulation[5]
The methodologies concerning cross-zonal capacity allocation in the forward market derive from the Regulation (EU) No 2016/1719 of 26 September 2016 establishing a guideline on forward capacity allocation.

European methodologies and decisions, which derive from FCA Regulation and were under discussion in 2019:

1. Methodology for sharing congestion income from forward capacity allocation according to Article 57(1) of FCA regulation (CID FCA proposal)
On 1 June 2018 Elering AS submitted to the Competition Authority a proposal for approval of the methodology for sharing congestion income from forward capacity allocation. On 14 June 2019 the Competition Authority approved the methodology proposal.
The methodology is published at:
https://elering.ee/sites/default/files/attachments/FCA-CID%20Methodology_forSubmission.pdf

Regional methodologies and decisions, which derive from FCA Regulation and were under discussion in 2019:

2. Methodology for splitting long-term cross-zonal capacity in the forward market according to Article 16 of FCA regulation (LT CS Proposal)
On 15 July 2019 Elering AS submitted to the Competition Authority a proposal for approval of the methodology for splitting long-term cross-zonal capacity. The proposal was submitted only to the Estonian and Latvian regulatory authorities. On 2 January 2019 the Competition Authority approved the methodology proposal.
The methodology is published at:
https://elering.ee/sites/default/files/2020-03/Baltic_CCR_LTCCM_SPL.pdf

3. Capacity calculation methodology according to Article 10(1) of the FCA Regulation (LT CCM Proposal)
On 15 July2019 Elering AS to the Competition Authority a proposal for approval for the long-term capacity calculation methodology.
On 12 December 2019 the Competition Authority send a letter to Elering AS for amending the methology proposal. On 18 March 2020 Elering AS submitted to the Competition Authority a proposal for amended methodology. As the national regulatory authorities of the relevant region failed to reach agreement on the proposed methodology, it was sent to the ACER for decision making on 18 May 2020. On 17 November2020 the ACER made decision No 27/2020 and it is published at:

[5] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2016.259.01.0042.01.ENG

https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2027-2020%20on%20Baltic%20LT%20CCM.pdf

SOGL Regulation[6]

The methodologies related to guidelines for operation of the electricity transmission system derive from the Regulation (EU) No 2017/1485 of 2 August 2017, establishing a guideline on electricity transmission system operation.

European-wide methodologies and decisions, which derive from SOGL Regulation and were under discussion in 2019:

1. The methodology related to organisational requirements, roles and the quality of data exchange in compliance with Article 40(6) of the SOGL Regulation (KORRR).
On 29 March 2018 Elering AS submitted to the Competition Authority a proposal for approval of the KORRR methodology, which treats of mainly organisational requirements, tasks and obligations in connection with data exchange. On 17 January 2019 the Competition Authority approved the methodology.
The methodology is available at:
https://eepublicdownloads.entsoe.eu/clean-documents/Network%20codes%20documents/Implementation/sys/1.a.180227_KORRR_final.pdf

2. The proposal for a methodology for coordinating operational security analysis (CSA) in compliance with Article 75(1) of the SOGL Regulation.
On 30 July 2018 Elering AS submitted to the Competition Authority a proposal for a methodology for coordinating operational security analysis. As the national regulatory authorities failed to reach agreement on the proposed methodology, it was forwarded to the ACER for decision making on 12 December 2018. On 19 June 2019 the ACER made decision No 07/2019 and it is published at:
https://elering.ee/sites/default/files/attachments/Annex%20I%20-%20ACER%20Decision%20on%20CSAM.pdf

3. Methodology for assessing the relevance of assets for outage coordination(RAOC) in compliance of Article 84(1) of the SOGL Regulation.

On 30 July 2018 Elering AS submitted to the Competition Authority a proposal for a methodology for assessing the relevance of assets for outage coordination. As the national regulatory authorities failed to reach agreement on the proposed methodology, it was forwarded to the ACER for decision making on 21 December 2018. On 19 June 2019 the ACER made decision No 08/2019 and it is published at:
https://elering.ee/sites/default/files/attachments/Annex%20I%20-%20ACER%20Decision%20on%20RAOCM.pdf

Regional methodologies and decisions, which derive from SOGL Regulation and were under discussion in 2019:

4. Proposal for provisions for regional operational security coordination of each capacity calculation region and arrangement of coordination in compliance with Article 76 of the SOGL Regulation (ROSK Proposal). On 19 December 2019 Elering AS submitted to the Competition Authority a proposal for approval of the methodology. On 14 October 2020 the regulators of the Baltic capacity calculation

[6] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R1485

region endorsed the methodology proposal. The methodology is awaiting publishing at the web site of Elering AS.

EBGL Regulation[7]

The guidelines on electricity system balancing derive from the Commission Regulation (EU) No 2017/2195 of 23 November 2017 (EBGL Regulation).

European-wide methodologies and decisions, which derive from EBGL Regulation and were under discussion in 2019:

1. On 20 December 2018 Elering AS submitted to the Competition Authority a proposal for approval of a methodology on the basis of Articles 20, 21, 30 (sections 1 and 3), and 50(1), 29(3) and 52(2) of the EBGL Regulation.

a) Methodology proposal on Article 20 of the EBGL contains common requirements and principles for implementation of European-wide platform for the exchange of balancing energy from frequency restoration reserves with manual activation (mFRR IF Proposal).
b) Methodology proposal on Article 21 of the EBGL contains common requirements and principles for implementation of European-wide platform for the exchange of balancing energy from frequency restoration reserves with automatic activation (aFRR IF Proposal).
c) Methodology proposal on Article 30(1,3) of the EBGL contains common pricing requirements and principles for implementation of European-wide platform for frequency restoration reserves (PP Proposal).

In the proceedings of above methodology proposals the national regulatory authorities failed to reach agreement and the proposals were forwarded to the ACER for decision making. On 24 January 2020 the ACER made decisions on all three proposals respectively No No 03/2020, 02/2020 and 01/2020. The decisions are published at:
https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Pages/Individual-decision.aspx#

a) Methodology proposal on Article 50(1) of the EBGL contains balance settlement rules applicable to intended exchanges of energy as a result of frequency restoration reserves and imbalance netting.
b) Methodology proposal on Article 29(3) of the EBGL contains defining the purposes for the activation of frequency restauration reserves (APP proposal).
c) Methodology proposal on Article 52(2) of the EBGL contains balance settlement harmonisation rules for balance providers (ISH proposal).

In the proceedings of above methodology proposals the national regulatory authorities failed to reach agreement and on 14 January 2020 they forwarded to the ACER for decision making. On 15 July 2020 the ACER made decisions on all three proposals respectively No No 17/2020, 16/2020 and 18/2020.
The decisions and methodologies (as appendices) are published at:
https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Pages/Individual-decision.aspx#

2. Proposal for the implementation of a European platform for the imbalance netting process in compliance with Article 22 of the EBGL Regulation (INIF proposal)
On 22 November 2018 Elering AS submitted to the Competition Authority a proposal for approval.
On 28 December 2019 the national regulatory authorities forwarded the proposal to the ACER for approval as they failed to reach agreement on the proposal.
On 24 June 2020 the ACER approved the methodology proposal. The methodology is available at:

[7] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R2195

https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C12/ACER%20Decision%20on%20INIF%20Annex%20I.pdf

Regional methodologies and decisions, which derive from EBGL Regulation and were under discussion in 2019:

3. On 11 June 2019 Elering AS submitted to the Competition Authority for approval a proposal for the methodology developed by the TSOs belonging to the synchronous area for common balance settlement rules applicable to all unintended exchanges of energy in compliance with Article 51(1) of the EBGL Regulation. On 15 April 2020 the Competition Authority approved the methodology proposal.

4. On 20 June 2019 Elering AS submitted to the Competition Authority for approval a proposal for the methodology developed by the TSOs belonging to the asynchronous area for common balance settlement rules applicable to all unintended exchanges of energy in compliance with Article 51(2) of the EBGL Regulation. On 27 January 2020 the Competition Authority approved the methodology proposal.

5. On 20 June 2019 Elering AS submitted to the Competition Authority a proposal for approval of the methodology developed by the asynchronously connected TSOs belonging to the synchronous region for common balance settlement rules applicable to all intended exchanges of energy asynchronously connected TSOs intentionally exchanging energy between synchronous areas TSOs for common balance settlement rules applicable to intended exchanges of energy, in compliance with Article 50(4) of the EBGL Regulation. On 29 May 2020 the Competition Authority approved the methodology proposal.

6. Methodology for a market-based allocation process of cross-zonal capacity for the exchange of capacity, in compliance with Article 41(1) od the EBGL Regulation (MB-CZCA proposal)
On 18 December 2019 Elering AS submitted to the Competition Authority a proposal for approval of the methodology.
On 18 June 2020 the regulatory authorities of the region submitted to the TSOs a request to amend the methodology.
On 28 August 2020 Elering AS submitted to the Competition Authority a proposal for approval of the amended methodology.
On 30 October 2020 the regulatory authorities of the region submitted to the TSOs the second request to amend the methodology.
The process of the methodology approval process is ongoing.

ER NC Regulation[8]
The methodologies concerning restoration of emergency of the electricity network derive from the Commission Regulation(EU) No 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration (ER NC).

The following official approaches derive from ER NC:

1) Proposal for rules concerning the suspension and restoration of market activities, on the basis of Articles 36(1) and 39(1) of the ER NC Regulation

On 31 January 2019 Elering AS submitted to the Competition Authority a proposal for approval of the methodology for the rules concerning the suspension and restoration of market activities, and for the rules for imbalance settlement and settlement of balancing capacity and balancing energy which shall be applicable for imbalance settlement periods during which the market activities were suspended.

[8] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R2196

On 17 September 2020 the Competition Authority approved the methodology proposal concerning rules for suspension and restoration of market activities.
The document is published at:
https://elering.ee/sites/default/files/2020-09/Turup%C3%B5histe%20tegevuste%20peatamise%20ja%20taastamise%20eeskirjad_2020_08_27.pdf

2) Design of the system defence plan – Article 11, design of the restoration plan – Article 23, the classification of significant grid users (SGU) on the basis of the designs of the system defence and restoration plans, as well as on the basis of the terms and conditions to act as defence service provider and as restoration service provider, based on Article 4(4).
On 1 October 2020 Elering AS send to the Competition Authority a letter in which presented designs of the system defence and restoration plans and the approach concerning the terms and conditions to act as defence service provider and as restoration service provider.
On 29 May 2020 the Competition Authority gave assessment that the design of system defence and restoration plans submitted by Elering AS comply with the requirements established in Articles 11 and 23 of the ER NC Regulation.
By its 1 June 2020 decision the Competition Authority approved the classification of high priority significant grid users of the Estonian electricity system.
The list of significant grid users of the Estonian electricity system is published at:
https://elering.ee/sites/default/files/public/elekter/elektris%C3%BCsteem/Oluliste%20v%C3%B5rgukasutajate%20nimekiri.pdf. By the decision it was also approved the standpoint given by Elering AS in the design of the Estonian electricity system defence plan that there are no high priority significant grid users in the Estonian electricity system. In the same decision the Competition Authority gave assessment that there is no need to establish terms and conditions to act as defence service provider and as restoration service provider, as respective principles are covered under Section 40(5) of the Electricity Market Act.

Table 6. Methodologies that were under discussion in 2019 on the basis of directly applicable EU regulation

	CACM - Commission Regulation (EU) 2015/1222					
	Methodology	**Article**	**Submitted by TSO**	**Affirmed by NRA**	**ACER decision**	**Can be ound**
European-wide	ID CZCP	55(1)	14.08.2017	-	24.01.2019	https://elering.ee/sites/default/files/attachments/P%C3%A4evasisese%20v%C3%B5imsuse%20hinna%20m%C3%A4%C3%A4ramise%20metoodika%20%28IDCZCP%29.pdf
	DA SEC proposal	43(1)	28.02.2018	14.02.2019	-	https://elering.ee/sites/default/files/attachments/Metoodika%20j%C3%A4rgmise%20p%C3%A4eva%20graafikuj%C3%A4rgsete%20vahetuste%20arvutamiseks%20DA%20SchExc.pdf
	ID SEC proposal	56(1)	28.02.2018	13.03.2019	-	https://elering.ee/sites/default/files/attachments/ID%20Scheduled%20Exchanges%20Calc%20Methodology_for_amendments%20resubmission_clean.pdf
Regional	Baltic CCR TSO CRC proposal	35(1)	20.03.2018	17.01.2019	-	https://elering.ee/sites/default/files/attachments/Balti%20CCR%20koormuste%20koordineeritud%20%C3%BCmberjaotamise%20ja%20vahetuskauba%20tegemise%20metoodika.pdf
	Baltic CCR TSO CRC CS proposal	74(1)	20.12.2018	17.06.2019	-	https://elering.ee/sites/default/files/attachments/13122018_MCRCCS__Article_74_re-draft_final.pdf
	Amendment proposal for MNA proposal	45 and 57	21.12.2018	15.01.2019	-	https://elering.ee/sites/default/files/attachments/Balti%20MNA%20parandatud%20ettepanek%2020122018.pdf
	2nd amendment proposal for MNA proposal	45 and 57	12.06.2019	08.07.2019	-	https://elering.ee/sites/default/files/attachments/Baltic%20MNA%20proposal%20amended%20V2%20Jul2019.pdf.
	XBID LIP 13 proposal for cost allocation	80(4)	26.06.2019	13.05.2020	-	Awaiting publication on Elering AS web site
National	Approval of the designated European Market Coupling Operator AS	4	Submitted by EMCO on 11.06.2019	11.12.2019	-	-

	FCA - Komisjoni Määrus (EL) 2016/1719					
	Methodology	**Article**	**Submitted by TSO**	**Affirmed by NRA**	**ACER decision**	**Can be ound**
European-wide	CID-FCA proposal	57(1)	01.06.2018	14.06.2019	-	https://elering.ee/sites/default/files/attachments/FCA-CID%20Methodology_forSubmission.pdf
	Addition to HAR proposal	51	03.09.2019	-	29.10.2019	https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2014-2019%20on%20the%20TSOs%20proposal%20for%20HAR%20amendment.pdf
Regional	LT CS proposal	16	15.07.2019	02.01.2020	-	https://elering.ee/sites/default/files/2020-03/Baltic_CCR_LTCCM_SPL.pdf
	LT CCM proposal	10(1)	15.07.2019	18.05.2020 to ACER	17.11.2020	https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2027-2020%20on%20Baltic%20LT%20CCM.pdf
	SOGL - Commission Regulation (EU) 2017/1485					
	Methodology	**Article**	**Submitted by TSO**	**Affirmed by NRA**	**ACER decision**	**Can be ound**
European-wide	KORRR proposal	40(6)	29.03.2018	17.01.2019		https://eepublicdownloads.entsoe.eu/clean-documents/Network%20codes%20documents/Implementation/sys/1.a.180227_KORRR_final.pdf
	CSA proposal	75(1)	30.07.2018	21.12.2018 to ACER	19.06.2019	https://elering.ee/sites/default/files/attachments/Annex%20I%20-%20ACER%20Decision%20on%20CSAM.pdf
	RAOC proposal	84(1)	30.07.2018	21.12.2018 to ACER	19.06.2019	https://elering.ee/sites/default/files/attachments/Annex%20I%20-%20ACER%20Decision%20on%20RAOCM.pdf
Regional	ROSC proposal	76	19.12.2019	14.10.2020	-	Awaiting publication on Elering AS web site

	ER NC - Commission Regulation (EU) 2017/2196					
	Methodology	**Artikkel**	**Esitatud TSO poolt**	**NRA otsus või hinnang**	**ACER decision**	**Can be found**
National	Proposal of rules for suspension and restoration of market activities	36(1) and 39(1)	31.01.2019	17.09.2020	-	https://elering.ee/sites/default/files/2020-09/Turup%C3%B5histe%20tegevuste%20peatamise%20ja%20taastamise%20eeskirjad_2020_08_27.pdf
	System defence plan	11	01.10.2019	29.05.2020	-	will not be published
	Classification of SGU based on system defence and restoration plan	11(4c) and 23(4c)	01.10.2019	01.06.2020	-	https://elering.ee/sites/default/files/public/elekter/elektris%C3%BCsteem/Oluliste%20v%C3%B5rgukasutajate%20nimekiri.pdf. O
	Restoration plan	23	01.10.2019	29.05.2020	-	will not be published
	Terms and conditions to act as provider of defence and restoration service	4(4)	01.10.2019	01.06.2020	-	Not separately, the principles are covered under section 40(5) of the Electricity market act

	EBGL - Commission Regulation (EU) 2017/2195					
	Methodology	**Article**	**Submitted by TSO**	**Affirmed by NRA**	**ACER decision**	**Can be ound**
European-wide	mFRR IF proposal	20	20.12.2018	23.07.2019 to ACER	24.01.2020	https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C4/ACER%20Decision%20on%20the%20Implementation%20framework%20for%20mFRR%20Platform%20-%20Annex%20I.pdf
	aFRR IF proposal	21	20.12.2018	23.07.2019 to ACER	24.01.2020	https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C3/ACER%20Decision%20on%20the%20Implementation%20framework%20for%20aFRR%20Platform%20-%20Annex%20I.pdf
	IN IF proposal	22(1)	22.11.2018	28.12.2019 to ACER	24.06.2020	https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C12/ACER%20Decision%20on%20INIF%20Annex%20I.pdf
	Proposal of standard products	25(2)	17.12.2019	Submitted directly to ACER	17.06.2020	https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C10/ACER%20Decision%20SPBC%20Annex%20I.pdf
	Proposal of pricing principles (PP)	30(1,3)	20.12.2018	23.07.2019 ACERisse	24.01.2020	https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C2/ACER%20Decision%20on%20the%20Methodology%20for%20pricing%20balancing%20energy%20-%20Annex%20I.pdf

	EBGL (continued)					
European-wide	Proposal for reserve replacement settlement principles	50(1)	20.12.2018	14.01.2020 to ACER	15.07.2020	https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C14/ACER%20Decision%2017-2020%20on%20balancing%20SP%20-%20Annex%20I.pdf
	Proposal of activation principles (APP)	29(3)	20.12.2018	14.01.2020 to ACER	15.07.2020	https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C13/ACER%20Decision%2016-2020%20on%20balancing%20APP-%20Annex%20I.pdf
	Proposal of methodology for imbalance settlement harmonisation principles (ISH)	52(2)	20.12.2018	14.01.2020 to ACER	15.07.2020	https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C15/ACER%20Decision%2018-2020%20on%20balancing%20ISHP%20-%20Annex%20I.pdf
	Proposal for co-optimised cross-zonal capacity allocation (CO-CZCA)	40(1)	17.12.2019	Submitted directly to ACER	17.06.2020	https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Annexes%20to%20the%20DECISION%20OF%20THE%20AGENCY%20FOR%20THE%20C11/ACER%20Decision%20on%20CO%20CZCA%20-Annex%20I.pdf

	EBGL (continued 2)					
Regional	Proposal for developing of common balance settlement rules for unintended exchanges of energy (SRUE) by the TSOs of a synchronous area	51(1)	11.06.2019	15.04.2020		Awaiting publication on Elering AS web site
	Proposal for settlement rules of unintended exchanges of energy	51(2)	20.06.2019	27.01.2020		Awaiting publication on Elering AS web site
	Proposal for settlement rules of intended exchanges of energy	50(4)	20.06.2019	29.05.2020		Awaiting publication on Elering AS web site
	Proposal for CCR methodology for market-based cross-zonal capacity allocation	41(1)	18.12.2019	no decision yet		
	IME (Internal Market Electricity) -Commission Regulation (EU)					
	Methodology	**Article**	**Submitted by TSO**	**Affirmed by NRA**	**ACER decision**	**Can be ound**
European-wide	Review of bidding zones and approval of alternative structures	14(5)	03.10.2019	07.07.2020 sent to ACER	24.11.2020	https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions%20Annexes/ACER%20Decision%20No%2029-2020_Annexes/ACER%20Decision%2029-2020%20on%20the%20BZR%20-%20Annex%20I%20_%20%20BZR%20methodology.pdf

Disclosure of data on electricity system

The cross-border transmission capacity data calculated by the system operators and limitations set on the system, their causes and impact on the electricity system, as well as disruptions shall be published according to Regulation (EU) No 1227/2011 of 25 October 2011 of the European Parliament and of the Council on wholesale energy market integrity and transparency (REMIT Regulation) sets the requirement to publish market information soonest possible, in a transparent and unambiguous manner. The data on the electricity system of the Baltic and Nordic countries regarding transmission capacities are disclosed by the TSOs on the basis of the REMIT Regulations in the form of urgent market messages (UMM) on the market administrator Nord Pool web site, in the portal of urgent market messages: https://umm.nordpoolgroup.com/#/messages?publicationDate=all&eventDate=all.

Besides the REMIT Regulation the publication of electricity system data is regulated also by the Regulation (EU) No 543/2013 of 14 June 2013 of the European Commission on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council. On the basis of respective regulation the electricity system related data are published on the pan-European transparency platform, which can be found at: https://transparency.entsoe.eu/

Pursuant to Article 50 of Regulation No 2019/943 "Provision of information" Elering AS has published on its web site (http://www.elering.ee) the rules for allocation of aforesaid available capacity and the agreements. The web site also presents information on available transmission capacity, utilised total capacity, demand and production, presenting both the actual data and either annual, monthly, weekly and/or daily estimates pursuant to the Guidelines. The web site includes a separate data disclosure application, where the information is visually observable and easily downloadable. The information is published to the market participants simultaneously, transparently, in a user friendly manner and in an easily downloadable format.

Use of congestion income in the period from 1 January 2019 to 31 December 2020

Pursuant to Article 19(6) of Regulation (EC) No 2019/943 the following objectives shall have priority with the respect to the allocation of any revenues resulting from the allocation of cross-zonal capacity:

a) guaranteeing the actual availability of the allocated capacity including firmness compensation; or

b) maintaining or increasing cross-zonal capacities through optimisation of the usage of existing interconnectors by means of coordinated remedial actions, where applicable, or covering costs resulting from network investments that are relevant to reduce interconnector congestion.

In the period from 1 January 2019 to 31 December 2019 Elering AS earned congestion income in the total of 13,79 MEUR. Out of this 12,94 MEUR was used pursuant to Article 19(2) of Regulation (EC) No 2019/943 for guaranteeing the actual availability of the allocated capacity (so-called counter-trade) and 1,08 MEUR was used to cover the cost of administrating the European central platform established to carry out long-term forward market (FTR) auctions, 11,51 MEUR was used for the third Estonia-Latvia network connection, 0,06 MEUR for synchronising with Continental Europe and other investments (Kiisa emergency reserve power plant, EstLink1 and alike - 0,2 MEUR). The residual revenues of 0,85 MEUR were placed pursuant to Article 19(3) of the same Regulation on a separate internal account line until such a time as it can be spent for the purposes set out in Article 19(2).

2.1.8 Projects of common interest

Projects of common interest belong to the sphere of the European public interest, which have cross-border impact and which contribute to the development of the joint European energy system, boost competition and help to improve energy security in Europe. The administration and permit granting procedures are carried out on the basis of Regulation (EU) No 347/2013 via consultations and involving all interest groups concerned. Projects can compete to be listed as the projects of common interest every year under certain categories. The projects approved and adopted in the list later have the right to apply for funding from the European Connecting Europe Facility (CEF).
In the electricity sector the listed projects of common interest both infrastructure projects and projects of implementation of smart grids. Table 7 presents an overview of the electricity sector projects of common interest in which Estonia is involved.

Table 7. Projects of common interest in electricity sector

	Project name	Project no	Application to Competition Authority	Issue of decision	Assumable deadline for finalising
1	Estonia-Latvia third interconnection	4.2	31.10.2013	30.04.2014 decisions no 7.1-19/14.016and no 7.1-19/14.017	2020
2	Hydro-pumped electricity storage power plant	4.6			
3	Integration and synchronisation of the Baltic States' electricity system with the networks of continental Europe	4.8	31.05.2018; 08.11.2019	10.09.2018 decision no 7-10/2018-018; 08.05.2020 decision no 7-10/2020-002	2025
4	Data Bridge (Estonia, Latvia, Lithuania, Denmark, Finland, France)	10.8			
5	Cross-border flexibility project (Estonia, Finland)	10.9			

The hydro-pumped energy storage power plant is entitled to apply for financing of studies. The disconnection of the Baltic electricity systems from the Russian electricity system and integration with the electricity system of the European Union is a strategic objective and priority of the EU energy policy. Synchronisation of the electricity systems of the Baltic countries with the Continental Europe networks takes place stepwise. In the first phase necessary electricity lines will be reconstructed.
On 8 November 2019 the Baltic TSOs together with the Polish TSO submitted to the energy regulators of the Baltic countries and Poland an application for financing of the second phase and for allocation of cross-border costs. On 27 April 2020 the energy regulators of the Baltic countries and Poland concluded an agreement which gave endorsement of the second phase of project of synchronisation of the electricity systems of the Baltic countries with network of Central Europe. On the basis of the agreement the investments of the second phase in the amount 1,2 billion euros was endorsed with part for Estonia of 110,6 MEUR. The Competition Authority made official decision on 8 May 2020.
The objective of the Data Bridge project is to create common European data communication platform, which enables to integrate data of various kind (smart metering data, operative data of the network,

market data), in order to elaborate solutions for the EU, which give scale effect and which can be implemented in a wide-scale.

The objective of the cross-border flexibility project is to support integration of renewable energy sources and improve security of energy supply in Estonia, Finland and Ahvenamaa, through providing distributed production based cross-border flexibility service.

2.2 Competition and functioning of market

2.2.1 Wholesale market of electricity

In April 2010 the Nordic countries' power exchange NP started operations in Estonia. The electricity market was then opened by 28,4%. On 1 January 2013 the market opened for all, meaning that all electricity consumers which have a valid network contract may choose suitable electricity supplier and a price package for themselves.

In order to adequately evaluate the activity of electricity producers and wholesale traders it is appropriate to consider their market share in the regional wholesale market together with other Baltic electricity market regulators. Due to the EstLink 1 and the EstLink 2 interconnections between Estonia and Finland, as well as the NordBalt interconnection between Lithuania and Sweden the electricity system of the Baltic countries is integrated with Finland and Sweden. Through these the Estonian and the whole Baltic electricity system is integrated with the Nordic countries power exchange NP.

In 2019 6 448 GWh of electricity was produced (net production) in Estonia. Compared to 2018 the production decreased 39,1 %. First of all, the decline in production was caused by the fallen production of electricity from non-renewable, i.e. fossil sources, where production fell by half. In 2019 5 616 GWh of electricity was imported to Estonia, compared to 2018. The increase in import was 61,2 %. The domestic consumption of electricity in 2019 was 7 833 GWh, compared to 2018 it is 1,8% less. The export of electricity from Estonia in 2019 was 417 GWh, which means decrease of 36,1% compared to 2018. The network losses in the Estonian electricity system in 2019 were 814 GWh, which is 10,4 % more than in 2018. Table 8 presents the changes in the Estonian energy balance in 2018 and 2019. The annual comparison shows that in 2019 for the first time Estonia turned from the electricity exporting country to an importing country.

Table 8. Electrical energy balance in GWh. Source: Elering AS

Electricity balance in GWh	2018	2019	Change, %
Net generation	10 583	6 448	-39,1
Import	3 484	5 616	61,2
Consumption	7 980	7833	-1,8
Losses	737	814	10,4
Export	5 350	3 417	-36,1

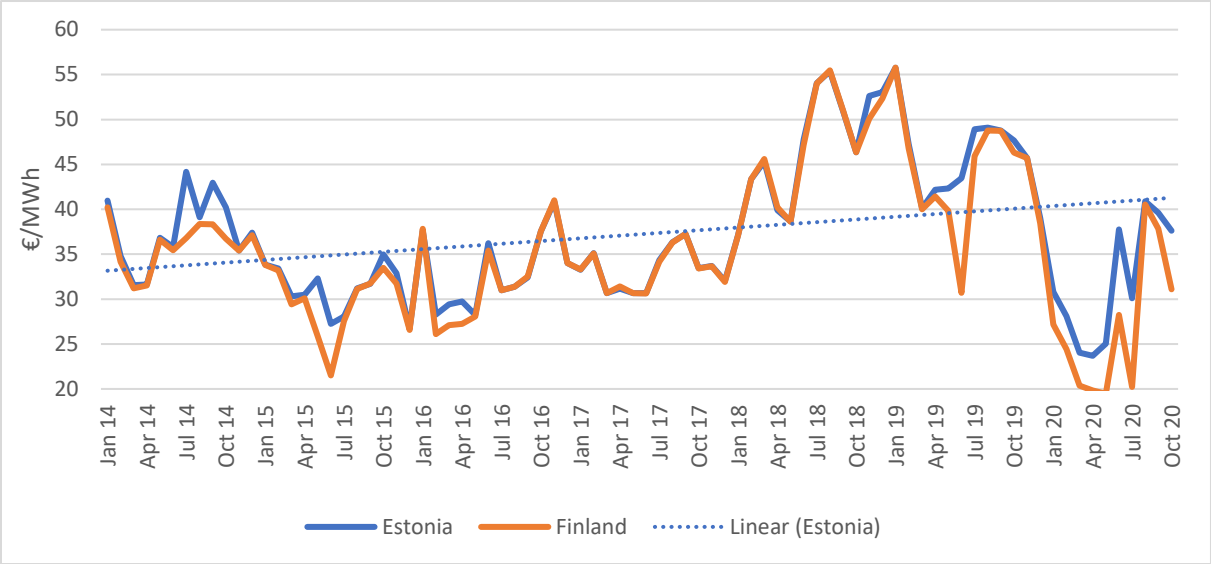

Figure 6. Comparison of NP Estonia and NP Finland price area average price (€/MWh) since January 2014 Source: Nord Pool

It appears from Figure 6 that the Estonian and Finnish electricity prices are quite similar after the commissioning of EstLink 2 in December 2013. The differences in the Estonian and Finnish electricity prices in most cases are caused by the interruptions in EstLink 1 and EstLink 2, when the transmission capacity between Estonia has decreased. In 2019 Estlink 1 was out of operation due to emergencies and repairs for 139 hours, while EstLink 2 was out of operation for 218 hours.

The figure shows a slightly decreasing trend of electricity price in 2019. The trend is visible in the day-ahead (Elspot) market prices within the whole Nord Pool electricity market, which is well illustrated by Table 9. In the Estonian price area the market price in 2019 has been 2,6 % lower than in 2018, at the same time being 3,97 % higher than in the Finnish price area, but 0,92 % lower than in the Latvian price area.

Table 9. Comparison of prices in day-ahead market (Source: Nord Pool)

Price area	Average price 2018, €/MWh	Average price 2019, €/MWh	Change, %	Maximum price 2019, €/MWh	Minimum price 2019, €/MWh
NP System	29,41	38,94	**-13,0**	84,97	2,31
NP Finland	33,19	44,04	**-6,3**	199,98	0,12
NP Estonia	33,20	45,86	**-2,6**	200,03	0,12
NP Latvia	34,68	46,28	**-7,8**	200,03	0,12
NP Lithuania	35,13	46,12	**-8,4**	200,03	0,12

For comparison purpose Figure 6 presents NP Estonia price area electricity prices in 2015-2019.

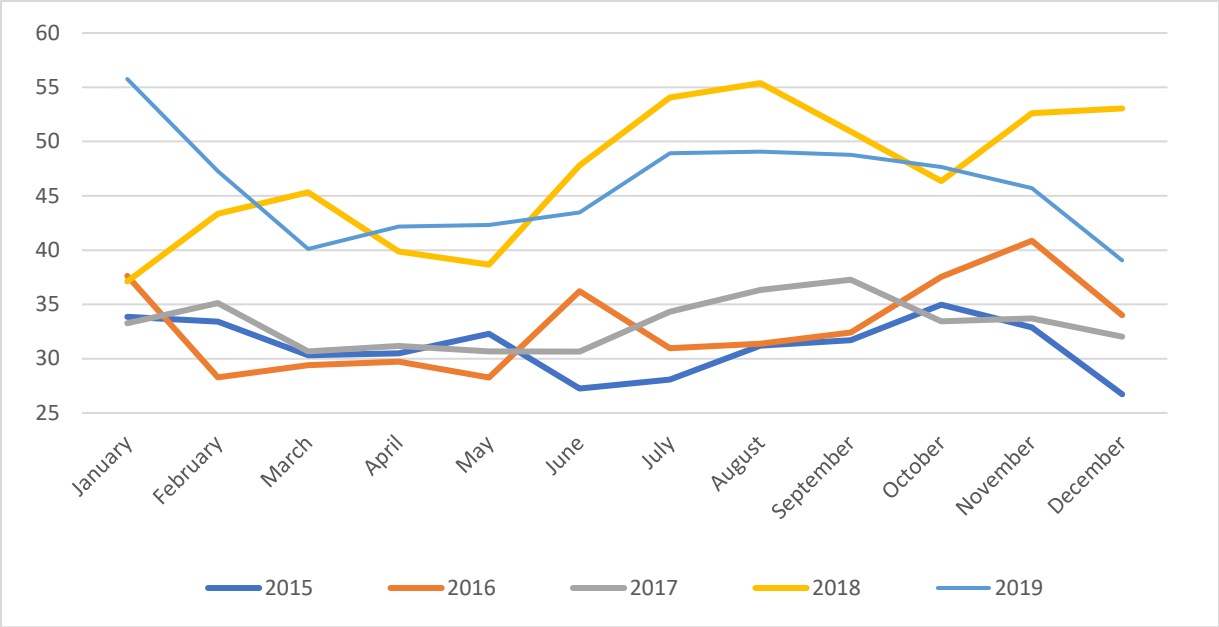

Figure 7. Average electricity prices of NP Estonia price area (€/MWh) in 2015-2019.
Source: Nord Pool

In the NP Estonia price area in these years the prices have been volatile. The highest monthly price was in January 2019, 55,76 €/MWh while the lowest price was in December 2015, being 26,72 €/MWh.

Table 10. Traded quantities in NP Estonia price area in day-ahead (Elspot) market.
Source: Nord Pool

Traded quantities in NP Estonia price area	Unit	2018	2019	Change, %
Day-ahead (Elspot) sold electricity quantity in NPS Estonia price area	TWh	9,55	5,20	-45,5
Day-ahead (Elspot) bought electricity quantity in NPS Estonia price area	TWh	7,58	7,41	-2,2

It appears from Table 10 that in the day-ahead (Elspot) market sold electricity quantities in 2019 were in total 5,20 TWh, which 45,5 % less compared to the 2018 sold quantity and the bought electricity quantities totalled 7,41 TWh, which is 2,2 % less than bought in 2018.

Table 11. Traded quantities in NP Estonia price area in intraday (Elbas) market.
Source: Nord Pool

Traded quantities in NP Estonia price area	Unit	2018	2019	Change, %
Intraday (Elbas) sold electricity quantity in NPS Estonia price area	GWh	108	119	10,2
Intraday (Elbas) bought electricity quantity in NPS Estonia price area	GWh	161	143	-11,2

It appears from Table 11 that in the intraday (Elbas) market sold electricity quantities in 2019 were in total 119 GWh, which is 10,2 % more than the 2018 volume and the bought electricity quantities totalled 143 GWh, which is 21,1% less than in 2018.

Table 12 illustrates the total traded quantities in the NP Estonian price area. As the quantities traded in the Elbas market are multiple times smaller than that in the Elspot market then, conclusively, the quantity sold in the market declined drastically due to the lower domestic production and the quantity bought from the market also slightly decreased.

Table 12. Total traded quantities in NP Estonian price area. Source: Nord Pool

Total traded quantities in NP Estonia price area	Unit	2018	2019	Change, %
Total sold electricity quantity in NP Estonia price area	TWh	9,65	5,32	-44,9
Total bought electricity quantity in NP Estonia price area	TWh	7,74	7,56	-2,4

For better functioning of electricity market in the end of 2013 the high voltage direct current electricity connection EstLink 2 between Estonia and Finland was commissioned. In addition, in 2016 the connection between Lithuania and Sweden NordBalt and LitPol Link between Lithuania and Poland were commissioned. Stronger interconnections with Nordic countries ensure tighter competition between producers, more transparent prices for consumers and preconditions for a functioning electricity market. It is important to emphasize that functioning, transparency strong competition is ensured by the uniform organisation of the Baltic countries' electricity market.

The main import to the Estonian price area in 2019 came from the Finnish direction interconnections, the market flow in this direction took place in 85 % of the time and the basic export went to the Latvian direction, where the market flow in this direction comprised 66 % of the time. The Elspot market flow directions are illustrated in Table 13.

Table 13. Cross-border day-ahead market flow distributions in 2019. Source: Nord Pool

Direction	Day-ahead market flow in the direction, h	Day-ahead market flow in the direction, %
EE->FI	1027	11,7%
FI->EE	7441	84,9%
EE->LV	5780	66,0%
LV->EE	2185	24,9%

So-called bottle-necks, where there were a shortage of transmission capacity in a given direction, occurred most often in the Finland-Estonia direction – in 11,9 % of the time. In this interconnection 45,3 % of the capacity given for trading to the whole day-ahead market was utilised. To a lesser extent bottle-necks occurred also in other trading directions. Table 15 illustrates the extent of bottle-necks occurrence hours and the utilisation of capacity given to the market throughout the year 2019. For comparison purpose Table 14 presents the same data for 2018. It can be seen from the tables that the direction of the biggest bottle-neck has changed compared to 2018. While in 1918 as well as in the previous years the biggest bottle-neck direction has been Estonia-Latvia, then in 2019 that direction was Finland-Estonia.

Table 14. Utilisation of capacity given to market and shortage in 2018. Source: Nord Pool

2018

Direction	Bottle-neck hours after intraday trading	Share of bottle-neck hours %	Average trading flow in Elspot market, MWh	Utilisation of capacity given to Elspot market
EE->FI	125	1,4%	93,3	9,60%
FI->EE	325	3,7%	270,1	27,60%
EE->LV	2246	25,6%	424,6	55,40%
LV->EE	21	0,5%	22,7	3,20%

Table 15. Utilisation of capacity given to market and shortage in 2019. Source: Nord Pool

2019				
Direction	Bottle-neck hours after intraday trading	Share of bottle-neck hours %	Average trading flow in Elspot market, MWh	Utilisation of capacity given to Elspot market
EE->FI	11	0,1%	28,4	2,9%
FI->EE	1045	11,9%	452	45,3%
EE->LV	381	4,3%	228,5	28,6%
LV->EE	141	1,6%	57,1	7,8%

Tables 16 and 17 illustrate the transmission capacity limitations in 2018 and 2019 given to the Elspot market. In 2018 the transmission capacity has been limited slightly more than in 2019 in most directions.

Table 16. Limitations of capacity given to market in 2019

2019				2019 vs 2018
Direction	Average capacity given Elspot market (NTC D-1), MW	Maximum installed capacity based on Nord Pool data*, MW	Average extent of transmission capacity limitations for day-ahead market (Elspot)	Change of capacity given to market in average in 2019 compared to 2018
EE->FI	998	1016	1,8%	2,1%
FI->EE	988	1016	2,8%	0,7%
EE->LV	800	1000	20,0%	4,3%
LV->EE	734	879	16,5%	3,1%

*The maximum installed capacity figure has been used, which does not take into account limitations due to air temperature

Table 17. Limitations of capacity given to market in 2018

2018			
Direction	Average capacity given Elspot market (NTC D-1), MW	Maximum installed capacity based on Nord Pool data *, MW	Average extent of transmission capacity limitations for day-ahead market (Elspot)
EE->FI	977	1016	3,8%
FI->EE	981	1016	3,4%
EE->LV	766	1000	23,4%

LV->EE	711	879	19,1%

The Nord Pool power exchange administrator and the system operator Elering AS have disclosed on their web sites the information on generation installations and transmission capacities (incl. interruptions) and data on all price areas in the Nord Pool system. The data are easily findable and downloadable. Transparency of the market is ensured particularly with the organisation of the market uniformly with the neighbouring countries.

In the estimation of the Competition Authority comprehensive changes have taken place in the Estonian electricity market in connection with the opening of markets and the commencement of power exchange operations in the Baltic countries. This is well illustrated with the active import and export between the neighbouring countries. The Estonian wholesale market is transparent, in 2019 85 % of the produced electricity was traded on the power exchange (in 2018 the same value was 93 %) and out of the consumption 91,8% was traded via the power exchange (in 2017 the same value was 91,3%).

As of the end of 2019 there were 8 balance providers in Estonia, in addition also Elering AS has registered as a balance provider to buy network losses and to sell electricity from the testings of the emergency reserve power plant. Competition between balance providers is characterised on Figures 8 and 9. Eesti Energia AS has the biggest market share of 60,9 % by the consumption portfolios. By the production portfolios Eesti Energia AS also possesses the biggest share of 81,6 %.

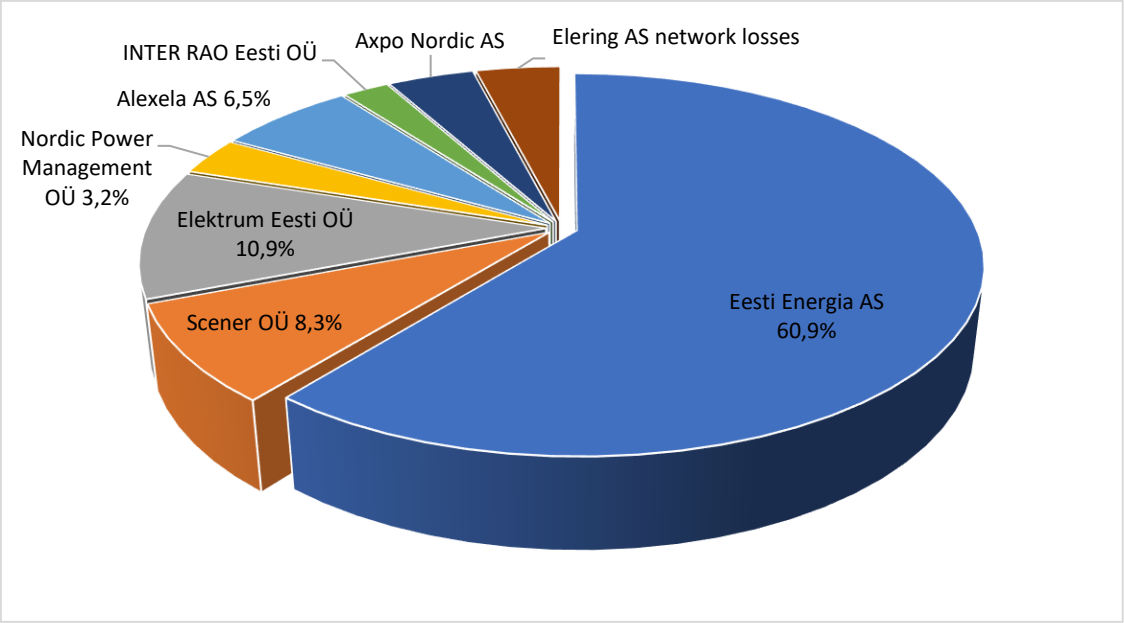

Figure 8. Consumption based distribution of market shares between balance providers in 2019

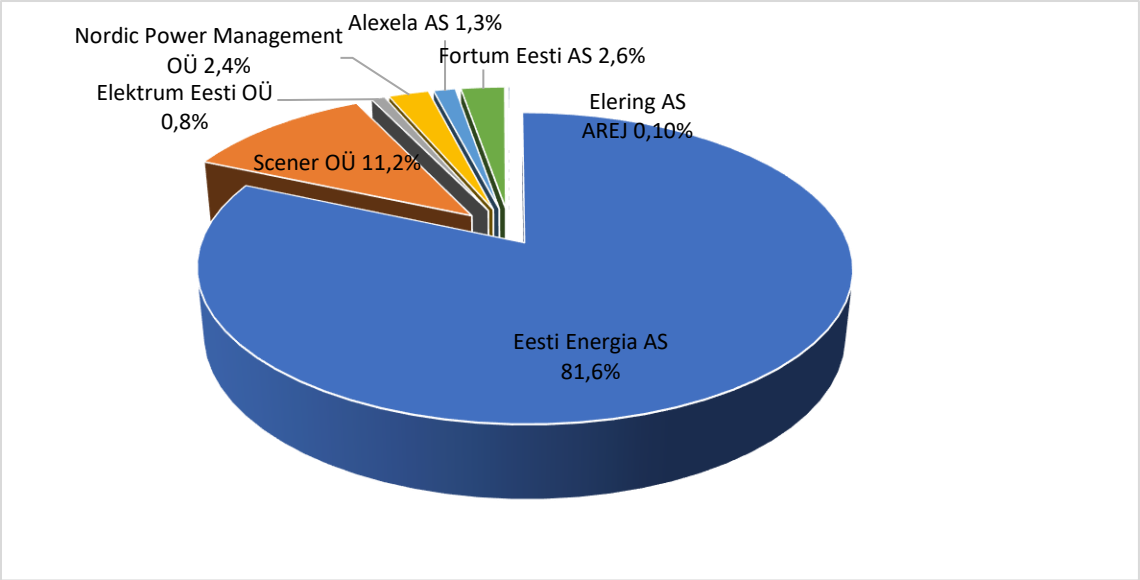

Figure 9. Production based distribution of market shares between balance providers in 2019

The Competition Authority is in a position that competition in the Estonian wholesale market is generally good, the market shares are distributed both throughout production and consumption between several balance providers. The Estonian electricity system is not overloaded. During most of the time prices in Estonia and in Finland have been the same, although an overload has increased compared to 2017, however, remaining at a low level, mainly caused by a longer period outage of Estlink 1 interconnection in November. There are more overload situations between Estonia and Latvia, but a new cross-border additional line here is under construction and this should resolve the overload problem in this cross section in the future. Generally, it is a very well-functioning and integrated electricity market region with active cross-border electricity trading.

Table 18. Retail market indicators (Source: Inquiry of Competition Authority)

Electricity sale indicators	2018	2019
Production of electricity GWh	10 583	6 447
Consumption (with losses) GWh	8 401	8 646
Import volume GWh	3 485	5 616
Export volume GWh	5 350	3 417
Market share biggest electricity producers (CR3)	89	84
HHI of electricity producers	n/a	6860
No of active balance providers in the wholesale market	8	8
Intra-day trading (buying/sales) GWh	160/106	143/119
Day-ahead trading (buying/sales) GWh	7577/9548	7413/5204
Average spot price of electricity €/MWh	47,07	45,85
Production quantity by energy sources GWh		
• non-renewable energy sources	8917,70	4477,00
• renewable energy sources	1665,50	1969,94
• wind energy	590,60	691,66
• hydro energy	n/a	21,68
• solar energy	13,00	54,10
• gas energy	n/a	301,59

• co-generation plants	2398,00	1162,39
Total installed capacity	13584,8 GWh	8678,36 GWh

2.2.2 Retail market of electricity

In 2013 the electricity market in Estonia was completely opened. This means that all consumers, which have a valid network contract, can choose a suitable electricity trader. The undertaking with the biggest share in the retail market is Eesti Energia AS.

Table 19. General data on retail market (inquiry of Competition Authority).

Retail market indicators (household consumers)	2018	2019
Consumption of electricity GWh	1741	1720
Number of electricity customers	699 239	703 586
Number of registered electricity suppliers	53	57
Number of active electricity suppliers	25	25
Market share of three biggest sellers by metering points (%)	87	86
Number of retail sellers with the market share of > 5%	4	4
Number of retail sellers with the share of clients > 5%	3	3
Rate of switch	2	2
HHI by sales	4382	4468
HHI by metering points	5494	5745
Retail market indicators (non-household consumers)	**2018**	**2019**
Consumption of electricity GWh	6591	6105
Number of electricity customers	25 172	27 009
Number of registered electricity suppliers	53	57
Number of active electricity suppliers	42	42
Market share of three biggest sellers by metering points (%)	89	90
Number of retail sellers with the market share of > 5%	4	4
Number of retail sellers with the share of clients > 5%	1	1
Rate of switch	9	6
HHI by sales	2628	2311
HHI by metering points	6551	6934

The indicators of the retail market are similar to those of 2018. In 2019 2 % of household customers and 6 % of businesses switched their seller of electricity. 80 % of consumers have eneterd into electricity contracts, while 20 % are using universal service, i.e. they have no valid electricity contract.

The change of electricity trader in Estonia is simple and can accomplished in 1-2 months, depending on the date of signing of the new contract, as the switch can be done in the turn of calendar month. However, some discontent from the traders' side is observable towards the existing system of the change of trader, where the former seller is informed about the leave of a client and there appears an option, so-to-say to buy customer back before the actual switch has taken place. Respective approach may lead to a practice, where a reasonable price is offered to client only as kind of an offline buy back option - when the client is more active and attempts to switch the trader. At the same time for the less active clients, who are often also less aware, more expensive price solutions are offered. Such an

approach, where the price does not depend on the package, but rather on the offer made to an individual consumer, is lowering the level of transparency in the market.

Comparison portals and the price of electricity for household consumers

In order to promote more equal treatment of customers and their awareness the Competition Authority recommends consumers to compare various price solutions by the means of comparison portals.

The portals relating to the comparison of electricity prices are: https://vordle.ee/et and https://energiaturg.ee/

Unfortunately, not all sellers of electricity and gas forward their package prices to the comparison portal - Eesti Gaas AS and Eesti Gaas AS does not do that. In order to have functional transparent electricity and gas markets on equal bases the Authority has suggested both Eesti Energia AS and Eesti Gaas AS to disclose the electricity and gas packages price lists at least in one price comparison portal and made also respective public appeal to both:
https://www.konkurentsiamet.ee/et/uudised/konkurentsiamet-soovitab-eesti-energial-ja-eesti-gaasil-hinnad-hinnavordlusportaalides

According to Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 Member States shall ensure that at least household customers, and microenterprises with an expected yearly consumption of below 100 000 kWh, have access, free of charge, to at least one electricity price comparison facility. According to the Directive Member States shall ensure that at least one tool covers the offers of all traders in the entire market. Although the directive shall be adopted in national law by 31 December 2020 at the latest, the Competition Authority is in opinion that biggest energy traders in the market shall follow the guideline already today.

Table 20. Electricity price for household customers in 2019(on the basis of the base tariff)**.**

Price components	Unit	Consumer
Network service (base tariff)	€cent/kWh	5,85
Electricity price without network service	€cent/kWh	4,86
Excise duty on electricity	€cent/kWh	0,447
Support for renewable energy	€cent/kWh	1,04
Final customer price without VAT	€cent/kWh	12,197
VAT 20%	€cent/kWh	2,44
Final customer price with VAT	**€cent/kWh**	**14,64**

Notes: For the basis for electricity price an average 2019 price in the Nord Pool Estonian price area is take + an average margin of 0,270 €cent/kWh. The basis for network service the Elektrilevi OÜ price package named "Võrk 2" is taken.

Conclusively it can be said that the competition situation in the Estonian retail market is satisfactory. Although the biggest electricity trader Eesti Energia AS possesses over 50% of the market (52 % as of the end of 2018), but extremely important is the smooth process of changing the trader. Changing of the trader can be done electronically within few minutes. A concern is that existing system of the switch of electricity seller bases on a solution which enables to buy the former client back and this reduces the transparency of the retail market. Also, a disadvantage is that not all electricity traders have disclosed information on their price packages in the comparison portals. Concerning fostering the situation with completion it can be pointed out that the sale of electricity in Estonia is free, no separate authorisation is required. Starting a business in the field of electricity trading in such a simple manner also helps to develop competition.

Consumer protection and resolution of disputes
The Competition Authority is in the opinion that electricity consumers are well protected and the obligations of market participants are precisely prescribed. Sufficient information is available to consumers both related to the standard terms and conditions of contracts and the switch of trader. Also, the Competition Authority has sufficient possibilities to perform supervision over the market.

2.2.3 Customer contracts

In the evaluation of the Competition Authority the field of customer contracts is well-regulated and customer interests are sufficiently protected. Pursuant to the Electricity Market Act standard terms and conditions of contacts for the provision of network services, for connecting to the network and for universal service are subject to approval by the Competition Authority. In the approval of standard conditions the Competition Authority follows the principle of proportionality of contract conditions, aiming at balance of rights and obligations of both undertakings and customers. An important criterion in the approval of standard terms and conditions is also their compliance with the Law of Obligations Act.

Network contracts shall be made in writing, electricity contracts may be made by oral agreement, if both parties agree to do so. Network contract shall include the following information:

- the name, registration number in the Commercial Register, address and other contact details of the network operator;
- a description of the services;
- the principal parameters of the quality of the services provided or a reference to a document which is accessible and which sets out such parameters;
- the time of initial connection to the network pursuant to a connection contract entered into for connection to the network or for amendment of the consumption or generation conditions;
- a description of the maintenance services provided;
- the manner of obtaining relevant information concerning the charges payable on the basis of the contract;
- in the case that the delivery of an invoice submitted on the basis of a contract is delayed, or where an incorrect invoice is submitted due to an error of the network operator, or in the case of an advance payment by the consumer, information concerning the way in which the consumer may obtain a refund, set-off or compensation in the manner of a payment or any other manner;
- if the quality of services provided on the basis of a network do not conform to the terms and conditions of the contract, information concerning the way in which the consumer may obtain a refund or compensation in the manner of a payment or any other manner;
- at least two different payment options in the case of charges payable under a contract;
- information concerning the procedure for dealing with complaints;
- the term of the contract.

The following data shall be presented in an electricity contract:

- the name, registration number in the Commercial Register, address and other contact details of the seller;
- main parameters of the electrical energy;
- the manner of obtaining relevant information concerning the charges payable on the basis of the contract;
- in the case that the delivery of an invoice submitted on the basis of a contract is delayed, or where an incorrect invoice is submitted due to an error of the network operator, or in the

case of an advance payment by the consumer, information concerning the way in which the consumer may obtain a refund, set-off or compensation in the manner of a payment or any other manner;
- at least two different payment options in the case of charges payable under a contract;
- information concerning the procedure for dealing with complaints;
- the term of the contract.

A network contract or an electricity contract may be made for an unspecified term or for a specified term. As a rule, contracts for an unspecified term are concluded. The network operator may amend the conditions of contract only if such amendments are objectively justified and necessary in order to take into account a change in the circumstances and provided the amendments have been approved by the Competition Authority. A network operator shall give notice of the cancellation of a network contract at least 30 days in advance. The notice shall set out the grounds for cancellation of the contract and the date of termination of the contract.

An electricity contract which is made for an unspecified term shall terminate upon termination of the network contract entered into in respect of the network connection through which electricity was sold on the basis of the electricity contract. An electricity contract may be entered into by a market participant who holds a valid network contract in respect of the metering point of his place of consumption.

A network operator may cancel a network contract and disconnect the place of consumption from the network if the network connection has been interrupted due to a breach of the network contract and the interruption has lasted at least 180 consecutive days and the customer has failed, during that period, to eliminate the circumstances which served as grounds for the interruption. Similarly, or if the customer has materially breached the obligations arising from the network contract and has failed to remedy the breach within a reasonable period of time granted by the network operator, in view of which the network operator cannot reasonably be expected to continue performing the contract. A network operator is entitled to cancel a network contract also due to failure to pay an amount payable according to the contract.

A network operator shall give a notice of the cancellation of a network contract at least 30 days in advance. The notice shall set out the grounds for cancellation of the contract and the date of termination of the contract.

A seller shall be entitled to cancel an electricity contract if the consumer has materially breached obligations arising from the contract and has not remedied the breach within a reasonable period of time granted by the seller, or if the consumer has used electricity illegally or has intentionally or due to gross negligence damaged the seals or verification marks placed on the metering devices.

A consumer shall be notified of the cancellation of an electricity contract at least 30 days in advance. The notice shall state the grounds for cancellation of the contract and the date of termination of the contract.

A supplier may cancel an electricity contract before the agreed due date, if the place of consumption stipulated in the contract has been the subject of a transfer of property and there is no legal basis for the consumer to use that place.

2.2.4 Customer information

Network undertakings are obliged to maintain a web site and disclose on it the following information:

- principles of the calculation of connection charges;
- data reflecting efficiency, quality and profitability of the network activity;
- charges for network services;
- standard conditions for the provision of network service;
- standard conditions for the provision of universal service.

The network charges shall be disclosed at least 90 days prior to their entry into force. In addition to web site the tariffs have to be published also in at least one daily national newspaper. The standard terms and conditions for provision of network services and for the selling of electricity shall be disclosed at least 30 days prior to their entry into force.
All electricity sellers shall submit an invoice for the electricity consumed to the customer once a month, unless agreed otherwise with the customer. The following information shall be presented together with the invoice:

- the distribution of energy sources which were used for the generation of electricity by the producer or which were purchased from the producer during the financial year preceding the period of the sale;
- the proportion of electricity purchased from a power exchange in the financial year preceding the period of the sale;
- a reference to a website which sets out information concerning the environmental impact caused by emissions of CO2 and SO2, the oil shale ash that must be deposited, and radioactive waste, which were released in the course of producing the electricity supplied by the seller during the financial year preceding the period of the sale;
- information concerning the customer's rights and the options for resolution of disputes;
- starting 1 April, the volume of electricity which was supplied in the previous calendar year and whose origin was certified by means of guarantees of origin;
- the volume of supplied electricity whose origin is not certified by means of guarantees of origin, using the residual mix value published by the transmission network operator.

In the case of a change of seller, the seller presents its final invoice to the customer within six weeks as of the termination of the contract for the sale of electricity. If, after the final invoice has been submitted, a fault of the metering system is discovered or the submitted data differs from the actual consumption, the consumer's metering data are rectified on the information exchange platform and the seller presents an invoice to rectify the final invoice. No additional fee is allowed to charge for presenting the invoice.

2.2.5 Ensuring of access to customer data

Access to the consumer data is ensured through a digital environment – the data exchange platform (Data Store), which was developed by the system operator Elering AS. Via the Data Store information exchange on the electricity market takes place in order to change the open supplier, transmit the metering data and fulfilling the legal obligations imposed on the market participants (consumer, network undertaking, seller) and ensuring their rights.

The Data Store integrates data of all the contracts related to the sale of electricity and network services, as well as the metering data in electricity consumption. A customer has the right to get the following information by means the Data Store:

- name of the network undertaking with whom the consumer has entered into network contract and validity period of the contract;

- name of the seller with whom the consumer has entered into open supply contract for a connection point(s) and validity period of the contract;
- name of the network undertaking or the seller, who holds activity licence, designated by the network undertaking for the provision of universal service;
- electricity quantities measured at consumer related metering points, with the possibility to observe historical consumption data;
- names of those sellers to whom the consumer has given the authorisation to see its consumption data and who have inquired for the data.

2.2.6 Definition of vulnerable customer and interruption of electricity supply

Interruption of electricity supply is regulated in very detail. In the evaluation of the Competition Authority the protection of socially vulnerable customers in possible case of failure to pay in time is sufficient. A network operator may interrupt the connection of a customer to the network if the customer has failed to pay the amount payable on the basis of the contract entered into with the network operator or seller or, has in another manner materially breached an obligation arising from the contract. Before interrupting of a network connection a notice concerning the planned interruption of the network connection shall be sent to the customer. The notice shall set out the grounds for interrupting the network connection and the planned time of the interruption. The network connection of a customer may be interrupted after at least 15 days have passed since the notice was sent and if, during that period, the customer has failed to eliminate the circumstances which were the grounds for interruption of the network connection and has not notified the network operator or seller, as appropriate, thereof.

If a network connection is interrupted on the grounds that a customer, who is a natural person, has failed to pay an amount payable according to the contract due to the temporary insolvency of the customer because of his or her serious illness or unemployment, the customer may notify the network operator or seller thereof in writing. Evidence of those circumstances shall be annexed to the notice. On receiving the notice and the evidence, a network operator may interrupt the network connection of a customer, who is a natural person, after at least 30 days have passed since the notice was sent and if, during that period, the customer has failed to eliminate the circumstances which were the grounds for interruption of the network connection and has not notified the network operator or seller, as appropriate, thereof.

If a network connection is interrupted on the grounds that the amount due has not been paid, the connection may be interrupted during the period from 1 October to 30 April in a building or a part thereof which is residential space, used as a permanent residence and heated in full or primarily by electricity only when at least 90 days have passed since the notice and if, during that period, the customer fails to remove the circumstances which were the grounds for the interruption and has not notified the network operator or seller, as appropriate, thereof. A network operator may also limit the capacity of the network connection of a customer, if a customer has failed to pay for the consumed electricity in due time. The customer shall be notified of such limitation at least 15 days in advance.

A network operator may promptly interrupt the network connection of a customer if the customer increases, without authorisation, the limited capacity, uses electricity or network service without authorisation, uses electrical installations which do not meet technical requirements, are dangerous or interfere with the operation of the network as a whole or prejudice security of supply.

2.2.7 Regulation of universal service

Universal service is intended for household consumers, apartment associations, communities of apartment owners and such commercial consumers (small consumers) whose electrical installation is connected to the network by using low voltage and through a main fuse rating of up to 63 A, in the case if they do not choose any electricity seller for themselves. Universal service shall ensure a price for consumers, which corresponds to the market price and avoids earning of unreasonably high income.

Universal service is the selling of electricity to household or small consumers by the network operator or by the seller designated by him on the basis of the standard conditions for universal service approved by the Competition Authority. The price for universal service is formed according to the market or power exchange price, to which justified cost and reasonable profit may be added by the seller. The Competition Authority is obliged to verify justification of the latter. The seller is required to publish the basis for price formation together with the calculation by the ninth day of the following month.

In 2019 80% of electricity consumers bought electricity on contractual basis. Thus, the users of universal service constituted 20% of all customers. Although, as a rule, the price of universal service is higher than services offered in free market, the percentage of universal service users have been more or less the same from year to year.

2.2.8 Smart metering systems

The Grid Code lays down requirements for metering and provides that from 1 January 2017 all consumers shall have remote reading devices (including households). The Grid Code also prescribes that from 1 January 2013 a remote reading device shall enable at least once every 24 hours to forward to the network operator through the data communication network the measurement data registered during each trading period and ensure access of a person agreed between the market participant and the network operator to above said measurement data.
The remote reading devices have been installed to 9,2 % of household customers.

Article 53(1) of the Regulation (EU) No 2017/2195 sets out the imbalance settlement period shall switch over to 15 minutes at the latest by the year 2025. This assumes that the market price as well hast to switch over from the current 1 hour periods to 15 minute periods. In longer perspectives the also provides for replacement or updating the remote reading devices to 15-minute time intervals. The national vision in this question is under development.

2.2.9 Resolution of disputes

The Competition Authority has the right to get necessary information from a market participant and from state and local municipal authorities, right to enter their territory, premises and facilities for the purpose of on-site inspection, examine the documents necessary for supervisory activities and other information and circumstances and make extracts, transcripts and copies thereof. The Authority can also inspect the price formation practices applied by market dominant producers or sellers. The regulator can establish development obligation for an undertaking through the conditions of activity licence. For example, an obligation to invest in the electricity network can be imposed if the operator's

former performance has not secured the supply of electricity to customers in accordance with requirements.

All market participants have the right to refer to the Competition Authority as to an extra-judicial body. A market participant may file a written complaint with the Authority against an action or an omission of another market participant, which is in conflict with the Electricity Market Act or legislation enacted on its basis. The Authority reviews the complaint and makes a decision thereon within 30 days as of the receipt of the complaint. If the Authority requests information necessary for resolving the complaint, the passage of the term shall be suspended, but not for longer than 60 days. The Authority's decisions can be challenged with an administrative court in 30 days since receiving of the decision.

In 2019 the number of consumer references to the Competition Authority was 57 (both complaints and inquiries), in order to establish violation of law by electricity undertakings or to get other electricity market related information. The consumer references were caused by questions related to problems with both connecting to the grid and amending conditions of consumption and connection (price and conditions), as well as billing and interruptions of network connection.

2.2.10 Numerical indicators of consumer protection

Table 21. Numerical indicators of consumer protection (Source: Elering AS and inquiry of Competition Authority)

Customer indicators (household consumers of electricity)	2018	2019
Number of household customers	699 239	703 586
Number of household customers using universal service	143 321	147 471
Quantity of universal service (MWh/year)	695 029	440 328
Actual number of business days between billing and disconnecting of customer in case of failure to pay the bill	35	44
Number of customer disconnections due to failure to pay the bill	2024	2309

2.3 Security of electricity supply

2.3.1 Security of supply and reliability standard

Under ensuring security of supply a situation is considered in which the needs of the system are covered. This means that the system's load demand and a requirement for reserves are covered with the production of the system and the importing ability in accordance with the requirements of reliability standard. Ensuring security of supply is assessed on annual basis. Herewith, compared to previous years, the definition of ensuring security of supply has changed. Article 25 of Regulation No 2019/943 of the European Parliament and of the Council, which entered into force in 2019, establishes the requirement that prior to application of the mechanisms of reserve capacity a Member State shall establish a reliability standard as an indicator. Only in the event of risk of violation of the given level it is possible to implement additional capacity mechanisms. The reliability standard shall follow the European common methodology referred to in Article 23(6) of the Regulation.

So far Estonia has considered under ensuring security of supply a principle that the system needs at all times must be 100 % covered with controllable capacity[9]. Herewith the European countries have established already in the previous years reliability standard, which does not necessarily provide for 100 % coverage. This is because form the socio-economical point of view it is often not reasonable to require 100 % reliability level of security of supply in the electricity system at all times, due to increased flexibility of consumption and considerable increase in the share of renewable energy, which is essentially uncontrollable. The need to establish a reliability standard and to use it as an indicator first of all comes from the basic grounds of the European energy policy, which is the direction towards climate neutrality by the year 2050. This means that in the future the security of supply shall be ensured without CO_2 emissions, which makes gas, coal and oil shale fuel based generation capacity ever less available to the energy systems and raises the need for storage facilities, implementation of demand side management technology and broader use of renewable energy. This in turn increases the uncertainty in national production/consumption balances. However, it should be considered that the European electricity system operates in a single market and thus, there is not that much sense to analyse complete production/consumption balance by Member States, but rather in total for the whole Europe, and considering also sufficient connections between countries and in relation to renewable energy the coincidence factors can be used. The European Union has undertaken a clear direction that the security of supply has to be achieved in the conditions of free competition and minimal usage of additional national capacity mechanisms (also strategic reserves). That is why the European common approach has been developed to calculate the reliability standard – the security of supply indicator, of Member States, according to the methodology [10], established by Article 23 of the European Electricity Regulation, affirmed by the decision of ACER[11] of 2 October 2020. The reliability standard is an indicator, in order to evaluate, whether Member State needs to create an additional capacity mechanism to ensure the security of supply. As it is a state aid, a permission of the European Commission has to be applied for, to create respective capacity mechanism. In granting permission the European Commission will assess the security of supply of the Member State first of all keeping in mind the results of the annual European resource adequacy assessment and its compliance with national security of supply standard. The European resource adequacy assessment in conducted by ENTSO on the basis of the mythology[12] outlined in Article 23(3) of the European Electricity Regulation. Thus, the establishment of the reliability standard on the basis of common methodology ensures that Member States cannot carelessly erect additional reserve capacities, which are not really needed and which can essentially hamper free competition in the common electricity market and thereby, in longer perspective, can even worsen the security of supply or to increase its price considerably.

Reliability standard

The reliability standard is a security of supply indicator the task of which is to define how many possible hours with consumption limitations (does not mean limitation of consumption completely, but, for example, hours, during which there is a necessity to limit consumption by at least few per cent) and in

[9] Controllable capacity is, for example, the capacity produced with gas turbines or oil shale units, whose necessary output volume and production time can be predetermined

[10] http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions%20Annexes/ACER%20Decision%20No%2023-2020_Annexes/ACER%20Decision%2023-2020%20on%20VOLL%20CONE%20RS%20-%20Annex%20I.pdf

[11] https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions/ACER%20Decision%2023-2020%20on%20VOLL%20CONE%20RS.pdf

[12] https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Individual%20decisions%20Annexes/ACER%20Decision%20No%2024-2020_Annexes/ACER%20Decision%2024-2020%20on%20ERAA%20-%20Annex%20I.pdf

which total volume during a year it is reasonable from social and economic point of view without causing excessive costs to society and to economy due to energy not served. In order to find respective indicator, it is necessary to conduct an analysis using the methodology set out by Article 23(6) of the European Electricity Regulation.

Due to the adoption of the 2019 Electricity Regulation also in Estonia in the end of 2019 / beginning of 2020 at the order of Elering AS and in cooperation with the Ministry of Economic Affairs and Communications (hereinafter MoEAC) an assessment was conducted in order to find an optimal security of supply level and reliability standard for Estonia with an assistance by a foreign consultant. In the result of the assessment and on the basis of Article 25(2) of the Regulation the Competition Authority submitted to the MoEAC a proposal on the reliability standard. The Ministry forwarded the proposal to the Government of the Republic for affirmation. For the time being the process is ongoing, thus, in the context of this report, we are talking about the proposal and not yet about an affirmed standard.

Is important to note that a situation where the security of supply is not 100 % covered but at a lower level as proposed by the standard does not automatically mean a system blackout, but a limitation of consumption in the system in necessary volume. A blackout in the system may occur in an event of large security of supply deficit and in coincidence of bad circumstances, which is a very extreme condition and risk of it is low. However, according the Regulation (EU) No 2017/1485 a limitation of consumption in the system over 50 % is also to be considered a system blackout.

According to Article 25 of the 2019 Regulation a reliability standard consists of components like *expected energy not served*, or EENS and *loss of load expectation*, or LOLE, and the calculation of standard is based on the following components: *value of lost load*, or VOLL and *cost of new entry,* or CONE.

The values of VOLL and CONE hall be re-calculated after every five years and this causes re-assessment of the reliability standard also in five-years intervals.

Pursuant to Article 11 of the European Electricity Regulation VOLL is defined by a decision of national regulatory authority (the Competition Authority in Estonia), relaying on the methodology outlined in Article 23(6) of the Regulation. According to the decision no 7-26/2020-007 [13] of the Competition Authority of 3 July 2020 the *value of lost load*, or VOLL, on the territory of Estonia is 7287 €/MWh.

In order to find VOLL it is necessary to determine the prices, which various sectors (industry, service and private sector) consider their value of electricity not served. This value is in principle the loss caused by one not supplied MWh of electricity or, the maximum price what consumers are willing to pay for MWh in order to avoid interruption.

The determination of CONE takes place also according to the methodology approach outlined in Article 23(6). The security of supply 2020 report of Elering AS gives an overview of the standard technology requirements in finding CONE as follows:

- Nor subsidised neither supported by the state in any way.
- Must be a standard solution, which means that different project development solutions should not have big technical or economical differences in the location of erection. The way of

[13] https://www.konkurentsiamet.ee/sites/default/files/saamata_jaanud_energia_hind_0.pdf

production is reliable and the fixed and variable costs for it are known. The efficiency and profitability of the technology should not be dependent on the unit capacity.
- The implementation of production technology does not conflict with the decision made to achieve climate goals.

On the basis of CONE and VOLL values an optimal socio-economic number of limitation hours is found according to the formula:

$$\mathrm{LOLE_{norm}\ (h)} = \frac{\mathrm{CONE\ (EUR/MW)}}{\mathrm{VOLL\ (EUR/MWh)}}$$

Against the determined normal LOLE and deriving from it EENS values all further electricity system adequacy analyses and parameters are assessed.

On the grounds of the conducted reliability standard study an average optimal interruption duration shall be 9 hours. In the time of the writing of the report the number of interruption hours is not yet affirmed by the Government, but the socio-economic benefit is the highest in just this point. The study can reviewed on the web site of Elering AS[14].

Should it become clear on the basis of the probabilistic system adequacy assessment (MAF analysis) that the actual situation is worse than 9 hours, a Member State first of all shall remove possible market constraints which may restrict market base addition of capacity. In the event if the removal of market constraints will not improve the security of supply forecast, a capacity mechanism shall be introduced, which is essentially a state aid to the producers to make them offer necessary amount of capacity. The permission to introduce a capacity mechanism is given by the European Commission.

In 2020 Elering also conducted an analysis of capacity mechanisms in cooperation with the Competition Authority and the MoEAC in order to map various capacity mechanisms and to find the most suitable for Estonia. In the result of mapping of different capacity mechanisms and suitability analysis it has become evident that the most perspective solution is strategic reserve, which is recommended also by the Electricity Regulation. The study results can be reviewed on the web site of Elering[15]. In connection with the strategic reserve an important detail is that the capacity offered by it must not at the same time participate in the electricity market, but must be ready to cover the peak load. In addition, Article 22(4) of the Electricity Regulation sets out limiting norms to carbon dioxide emissions from the reserve capacity mechanisms as follows:

- Emission level shall not be higher than 550 g of CO_2 per kWh of electricity
- Annual quantity of emissions shall not be higher than 350 kg of CO_2 per one kW of installed electrical capacity

2.3.2. Security of supply in Estonia, system adequacy production capacity

Major part of electricity in Estonia has historically been produced from oil shale in Eesti Energia's Narva Power Plants (PP). Keeping in mind that unit 1 of Balti PP was commissioned in 1959 and Eesti PP achieved its designed capacity in 1973, the Narva PP have already over 45 years been some of the basic energy producers in the Baltic region. Estonia got used to the situation where we have more generation capacities than the consumption demand. Since the close down of Ignalina nuclear PP in 2009 Estonia have been the main supplier of energy in the Baltic region and the electricity exporting energy system.

[14] https://elering.ee/varustuskindluse-standardi-uuring

[15] https://elering.ee/sites/default/files/public/T%26A/Study%20on%20a%20Capacity%20Remuneration%20Mechanism%20for%20Estonia.pdf

It is important to understand that such a situation is going to change drastically in the years immediate ahead. The production of electricity from oil shale is environmentally harmful and CO_2 intensive. In the last years the price for CO_2 has increased and in the light of toughening environmental requirements and we have come to an expected situation where our oil shale units are not competitive any more. In the coming years closing down of large generation capacities in Narva PP is expected. **The Estonian electricity system is rapidly going to change from an exporting system to the most deficient system in the Baltics.**

Production capacity and its growth

According to the 2020 security of supply analysis of Elering it can be said that on the basis of data from the producers and distribution networks on the production facilities connected to them. As of 1 January 2020 the total installed net capacity of the Estonian electricity system is 3041 MW. During peak load 1779 MW out of this production capacity is usable. An overview of the production equipment connected to the Estonian electricity system as of 1 January 2020 in presented in Table 22 below. Major changes have taken place in the usability of Narva Power Plants. In the evaluation of Elering it has decreased by 213 MW, compared to the previous year, although, the installed capacity has not changed. Another bigger change is the large increase in solar power plants, installed capacity of which now totals 128 MW, compared to the 37,9 MW in the previous year.

Table 22. Estonian production capacities as of 1 January 2020 (source: Elering)

Power plant	Installed net capacity, MW	Production capacity available during peak load, MW
Estonian Power Plant	1355	867
Balti Power Plant	322	165
Auvere Power Plant	272	250
Iru Power Plant	111	111
Kiisa Emergency Reserve Power Plant	250	150
Põhja CHP plant	78	78
Sillamäe CHP Plant	16	8
Tallinn CHP Plant	39	39
Tartu CHP Plant	22	22
Pärnu CHP Plant	20,5	20,5
Enefit	10	4
Other industrial and CHP plants	80	60
Hydro power plants	8,4	4
Wind mills	329	0
Solar power plants	128	0
Total	**3040,9**	**1778,5**

In broader context there is a problem with sufficiency of production capacity in Estonia. Few new production capacities are coming to the market and their volume is little. In greater detail sufficiency of production capacity is presented in section 2.3.2 through deterministic analyses.

From the point of view of the competitiveness of economy generally the most preferable approach is when the construction of new production capacities takes place in free market conditions and with lowest possible interference by the state. At the same time the European markets are encumbered by various market constraints, which have brought to the situation where in order to ensure security of supply in several Member States the construction of new production capacities on the basis of market principles has been placed in doubt and a lot of reserve capacity is used in the form of different capacity mechanisms.

As a basic market constraint in Estonia larger producers have pointed out the so-called "Russian electricity" (electricity imported from Russia, Belarus and Kaliningrad) entering the market without import tariffs. In the production of Russian electricity CO_2 quota charges are not paid and this puts local EU producers into unfavourable situation and creates unfair competition. In 2019 the import of Russian electricity without tariff into the Baltics in the Baltic-Nordic countries region compared to locally produced electricity constituted 1% - does not seem really much, but it is important to realise herewith that the impact on electricity price in not linear. It depends which offers on the market bidding curve were so-to-say abandoned due to the given quantity. In addition, in the market of our region there are also bottle-necks that create smaller price impact areas and in such cases the impact of Russian electricity is already significantly bigger.

More narrowly, if to look at the Baltic region separately, from the electricity sold in the area the Russian (without tariff) electricity constituted over 35%, which is 13% more than in 2018. Table 23 presents the share of electricity imported to Baltics and the locally sold Russian electricity.

Table 23. The share of Russian electricity in the Baltics (data source: Nord Pool)

	2018	2019
Electricity produced in the Baltics	20,1 TWh	15,8 TWh
Electricity imported to the Baltics from Nordic countries and Poland	6,0 TWh	7,9 TWh
Electricity imported to the Baltics from Russia	5,5 TWh	7,8 TWh
Share of Russian electricity from the total electricity sold in the whole Baltic region	22%	35%

However, the impact of Russian electricity on the market price is important only in situation, where there are bottle-necks between EE-FI and SE-LT so that the Baltics are left as a separate price region. In 2019 the hours where in Finland-Estonia direction was a bottle-neck (when he prices in the Baltics were higher than in the Nordic countries) was in 3,7 % of the time. The number of hours where there was a simultaneous bottle-neck also between Sweden and Lithuania was even less. Thus, the actual hours, when the impact of Russian electricity in the Baltics market was feelable, practically constituted about 1 % of the time. Herewith, in the rest of the time, when these bottle-necks do not exist, for the fossil fuel fired power plants the market prices are quite low and their access to the market is difficult. The Nordic countries' hydro energy, as well as the nuclear energy influence prices more than the Russian electricity. In longer perspective we have to understand that the oil-shale electricity will not be competitive in the European electricity market. The increase in CO_2 price is continuing, this is the EU climate policy. Eliminating of the impact of the Russian electricity would give relatively little and

short term advantage to the Narva Power Plants, although may increase their access to the market in a few hours, during price peaks.

Beginning from the end of 2025, when synchronisation of the Baltic electricity systems with the electricity network of the Continental Europe takes place, according to existing synchronisation plan, there is no electrical connections with Russia and Belarus foreseen. This would mean also the end of any electricity trade between the Baltics and Russia. Russian electricity can still enter the European market also in the future, but this is via Finland where a network use charge for the Russian electricity has been established already now.

Irrespective of the degree of impact of the Russian electricity on the electricity price it is clear that the electricity entering with the import causes additional costs to the transmission network. Thus, **it would be reasonable to establish a network use charge similarly with that in Finland to the electricity imported from the third countries until 2025, when the synchronisation takes place. It is planned to establish respective network use charge (fee) during the first half of 2021 in cooperation with other Baltic countries.**

Situation with Narva Power Plants and future availability of capacities

Existence of capacities at Narva Power Plants depend on several components, both environmental requirements and economic ability, and also on possible production ability envisioned by the state.

The economic ability basically depends on the market price of electricity (herewith both day-ahead, intraday and balance market price), which determines how much the plant earns in money terms for its production/generation. Secondly, on the price of oil shale that in the Estonian context has been quite low. The third and very important component is the price for CO_2 emission, the price for which has abruptly increased in the last years and further increase can be foreseen also in the future. Some impact on the economic ability is added also by possible repairs and equipment improvements, which may be quite expensive in such an old power plants.

Deriving from the environmental requirements on the basis of the Industrial Emission Directive (hereinafter IED) the allowed hours of use of units 1, 2 and 7 of Eesti PP and unit 12 of Balti PP are estimate going to end up and thus, those are not usable in large volume any more. According to estimate of Eesti Energia three units in Eesti PP will be closed in the end of 2020 and unit 12 of Balti PP will also be closed by the end of 2020. Since the actual number of limited operation hours', as the derogation prescribes, utilisation depends on the wholesale prices formation in the electricity market, the precise planned close down time of these energy units is not known. It will be done first thing after the company management has made respective decision and the information about the decision is forwarded to publication in the power exchange. The capacity in question is 619 MW.

From 25 October 2021 the environmental requirements for oil shale fuelled power plants will be regulated by the BAT conclusions document on using oil shale for energy purpose. Existing production equipment (excluding the production equipment operating with limited operation time on the basis of the IED derogation) of Eesti PP, Auvere PP and Balti PP correspond to the requirements of these legal acts. The requirements fixed in the mentioned BAT document will presumably be in force approximately until 2030. Herewith it is unknown what will be the onward developments. Looking at the general European environmental and climate policy it is highly probable that the requirements will toughen.

In addition to the environmental requirements for the units that stay in operation also economic ability has to be taken into account. Herewith a very important aspect is the price of electricity in the regional market and the price for CO_2. The anticipated time for close down of Eesti PP pulverized combustion units equipped with desulphurization (units 3, 4, 5 and 6) may occur significantly earlier than both technical and environmental considerations would require. It is very probable that Eesti Energia will close down the units which are not profitable to operate in the market, first of all these are the units with desulphurization (3, 4, 5 and 6) with the total capacity of 658 MW. However, on 5 November 2019 the sole shareholder of Eesti Energia signed a written guideline, according to which the company shall ensure at least until the end of 2023 in his production portfolio the existence of 1000 MW of controllable electricity production capacity. Thus, the probability of closing down of units is going to be especially high from the year 2024.

Herewith Eesti Energia AS has let to know that regarding Balti PP unit 11 some economic and technical limitations are foreseeable. The technical limitation comes from the circumstance that some of the components of the PP unit 11 turbine are getting close to the end of their technical life by the middle of 2020s. Replacing them requires substantial investment and an economic viability of it is yet to be cleared. The economic limitation proceeds from the close down of the Balti PP older units, which makes the fixed cost of Balti PP unit 11 high and in case of increasing CO_2 price may exit the unit from the market even before the middle of 2020s. Thus, it is possible the closing down of the given Narva PP production capacities will take place even faster than it is foreseen in the Baseline Scenario of the analysis.

Based on the 2020 security of supply analysis of Elering, Eesti Energia has informed the system operator about the timeline of the production capacity close downs as follows:

- 2021 Close down of units of the Estonian PP, 815 MW;
- 2021 Close down of units of the Balti PP, 130 MW;
- 2024 Close down of additional units of the Estonian PP, 346 MW;
- 2031 Close down of units of the Estonian and Balti PP in total, 386 MW;

The total production capacity to be closed down in the years 2019-2024: 1291 MW.

*the capacity to be closed down includes also the capacity used with limitations

2.3.3 Probabilistic system adequacy analysis of European security of supply (MAF)

According to the European Electricity Regulation the security of supply in countries regarding system adequacy is first of all analysed by means of the annual MAF analysis (*Mid-term Adequacy Forecast* – MAF), which is conducted on the basis of the data submitted by the European system operators through ENTSO-E[16]. Respective analysis is probabilistic and it evaluates security of supply of countries in the framework of the already familiar parameters of LOLE and EENS on the basis of reliability standard. Common European resource adequacy analysis is important in the framework of the common internal electricity market, as in order to secure supply besides national production capacities an important issue is also the ability to import, i.e. the existence of sufficient cross-border connections. On the basis of solidarity principles free cross-border transmission of electricity between countries shall be secured, if the transmission capacities are sufficient. Member States shall not limit the transmission capacities other than only in case of emergency/repairs of network elements. Herewith,

[16] European Network of Transmission System Operators

in order to verify the sufficiency behind cross-border connections, i.e., whether import is still possible, it is important to analyse the whole European production sufficiency, consumption needs and existing connections as one complex analysis.

It is based on the Monte-Carlo methodology, according to which 35 different climatic years are simulated – each computed 20 times, considering wind conditions, solar radiation, hydrological situation and changing emergency conditions of elements in the system, through the use of 5 different software models.

In greater detail the results of the MAF 2020 assessment can be looked through in the report published on the ENTSO-E web site[17]. Herewith, the Competition Authority brings out some illustrated results for the year 2025 (Figure 10) and for the year 2030 (Figure 11). As seen, for Estonia and for other our region countries Finland, Latvia and Lithuania, small volume of interruption hours are envisioned, i.e. the hours when the limitation of consumption may be necessary to some extent. For Estonia respective indicator is in the range of 0,1-0,6 of interruption hours for 2025 and 0,2-1,8 hours for 2030. Herewith, in both cases the values lag far behind the maximum allowable number – 9 turn down hours, which is in the proposal for the Estonian reliability standard. If to compare the years 2025 and 2030, it is important to note the trend that almost in all countries the system adequacy parameters are going to worsen, but still being in the range of the reliability standard determined for the countries of the Baltic sea region.

The dedicated report also presents the order of magnitude of the studied *expected energy not served* (EENS). As regards Estonia respective parameter for 2025 is 0,04 GWh and for 2030 it is 0,14 GWh. For comparison purposes – an annual consumption in Estonia is approximately 8 TWh.

[17] https://eepublicdownloads.entsoe.eu/clean-documents/sdc-documents/MAF/2020/MAF_2020_Executive_Summary.pdf

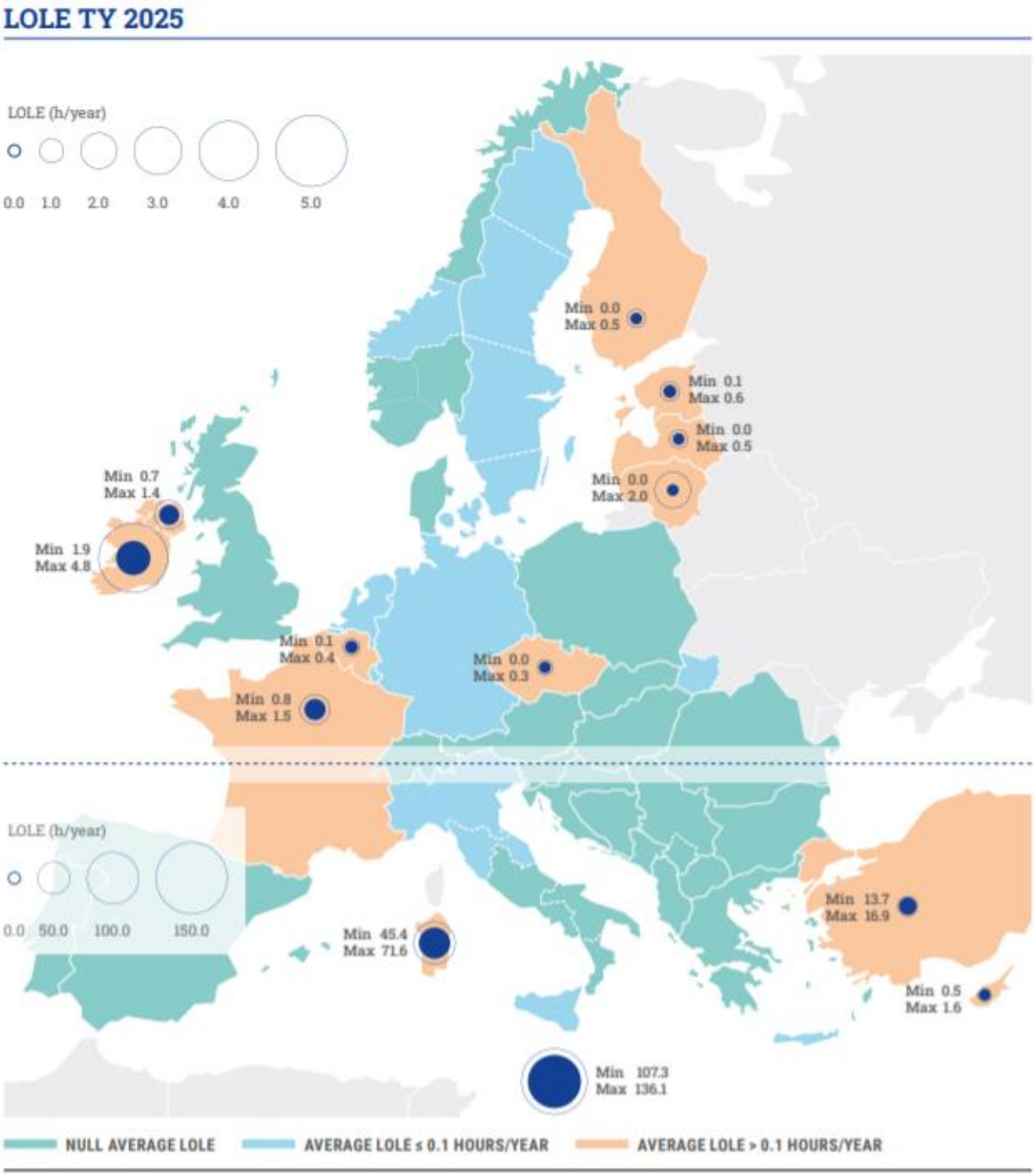

Figure 10. Loss of load expectation for year 2025 found in 2020 MAF analysis (source: ENTSO-E)

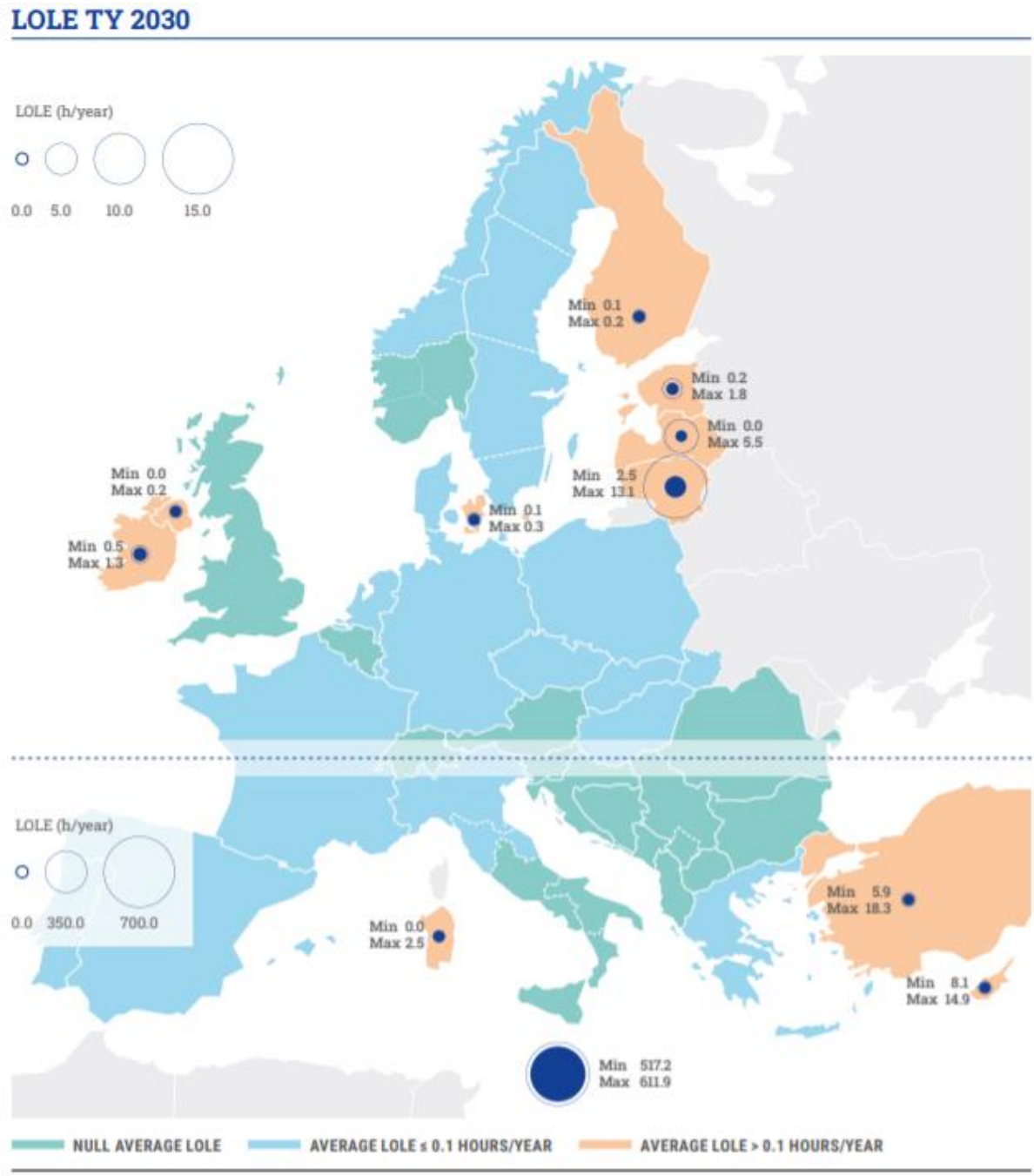

Figure 11. Loss of load expectation for year 2025 found in 2020 MAF analysis (source: ENTSO-E)

2.3.4 Estonian security of supply system adequacy on basis of deterministic analyses

In addition to the probabilistic system adequacy analysis, which was conducted as a European common MAF analysis, the Estonian system adequacy has been analysed also with deterministic methods in the 2020 Security of Supply Analysis of Elering. The report presents deterministic analyses conducted for a conventional scenario, thus considering only security of supply of Estonia and the Baltic-Finnish region.

The basic assumptions considered in conventional scenarios for production are the following:

- Narva PP IED-compatible units' capacity is taken into account until the end of 2020
- Narva PP units with desulfurization will be closed down in the end of 2023 due to economic reasons
- Balti PP unit 11 and Estonian PP unit 12 will be closed down in the end of 2030
- Due to its unpredictability and the principles of security of supply calculation, laid down in the Network Code on the Functioning of the Electricity System, wind and solar energy generation capacity are not taken into account - since there are time periods in Estonia during which wind energy is not available at its maximum capacity and respective statistical data on solar energy is not available.

The scenario is analysed as follows:

- Peak consumption is looked at in two situations – at normal peak load and, according to the principle laid down in Section 14 of the Network Code on the Functioning of the Electricity System - system's maximum daily consumption, which is augmented by a 10% reserve to ensure the supply of electricity in the event of unforeseen load fluctuations or extended unscheduled interruptions in generation
- Security of supply is analysed in the normal condition of the network and in the transmission capacity disturbance N-1-1 condition in the network, i.e. simultaneous tripping of two elements

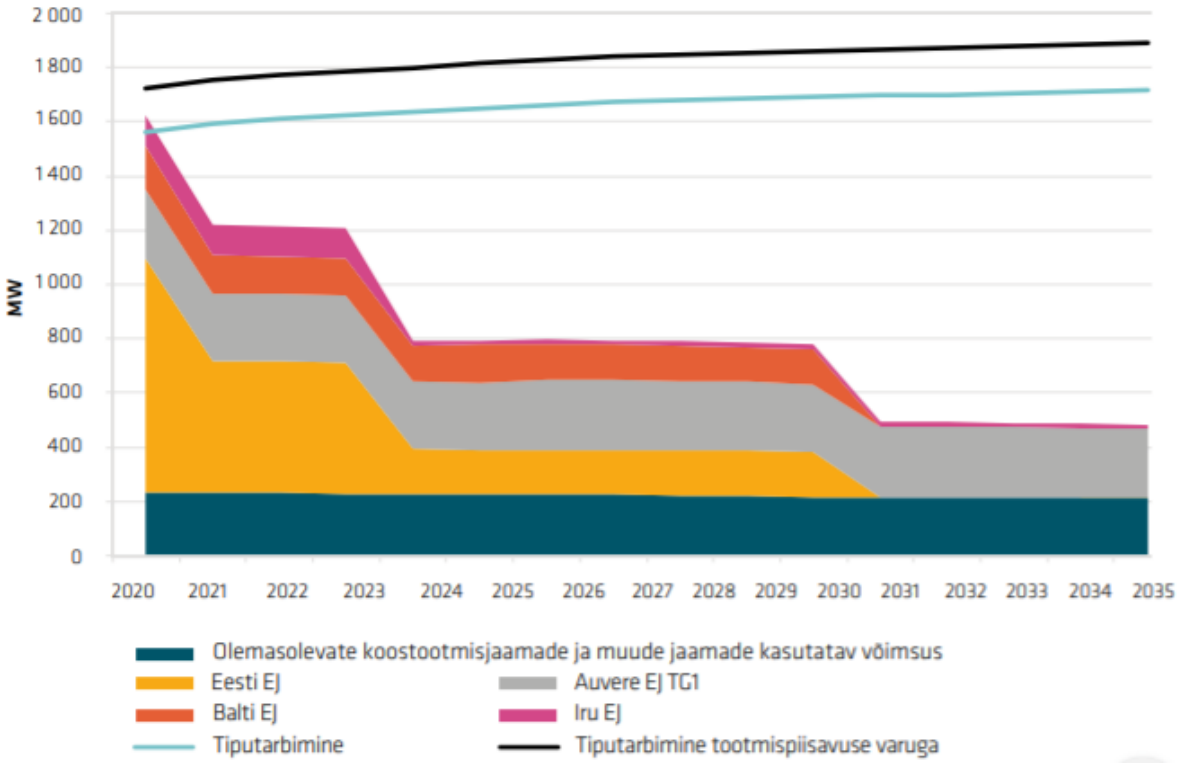

Figure 12. Assessment of available production equipment until year 2035, according to Security of Supply Analysis for 2020 of Elering[18], Figure 4.15 (source: Elering)

Figure 12 illustrates the assessment of the sytem operator (Elering) in relation to adequacy of the system on the basis of known at moment and production capacities to be developed in Estonia until

[18] https://elering.ee/sites/default/files/public/VKA2020.pdf

the year 2035. As seen from it, the domestic Estonian production cannot cover consumption peaks beginning from the end of 2020. Although, the illustrated scenario does not take into account the capacity of Kiisa emergency reserve power plant of 250 MW and as well considers some percentage of emergency situations (not all production capacity will be all the time available). But, even if to include the Kiisa capacity in the available maximum production capacity, the consumption peaks cannot be covered beginning from the end of 2020. Therefore, from the aspect of system adequacy, the consumption peaks can be covered only with the imported electricity.

Possible import ability of the Estonian power system is evaluated on basis of cross-border transfer capacity. Beginning from the end of 2020, when also the Estonia-Latvia transfer line between Kilingi-Nõmme and Riga is finalised, the volume of the Estonian cross-border connections will be as shown in Table 24 (source: https://umm.nordpoolgroup.com)

Table 24. Maximum volume of Estonian cross-border connections as of the end of 2020 (source: Nord Pool)

Connection	Max capacity of the connections, MW
EE->LV	1447
LV->EE	1259
EE->FI	1016
FI->EE	1016

Thus, the import ability of the Estonian system is 2275 MW. Figure 13 illustrates the adequacy of the Estonian system together with available import ability and in N-1-1 condition. Beginning form the year 2030, when the close down of additional two units in the Narva PP is foreseeable, a situation occurs, when consumption peaks cannot be covered all the time. Herewith, the system adequacy until the year 2030 is still ensured.

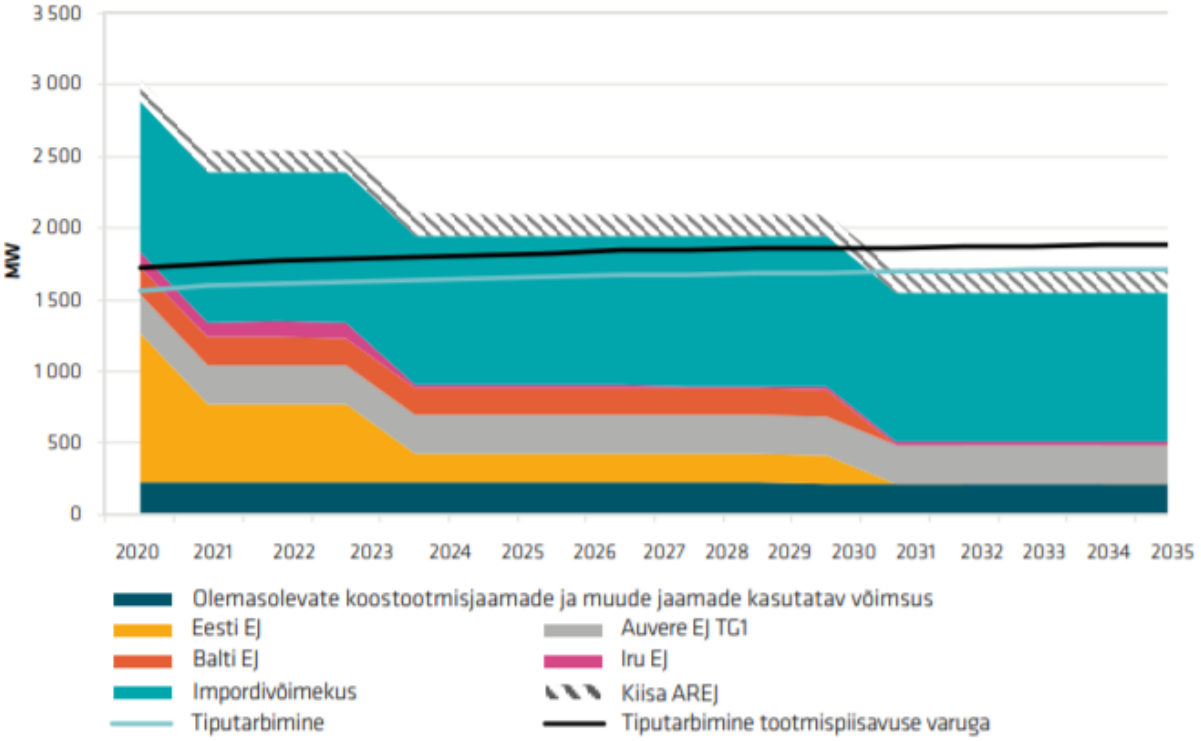

Figure 13. Adequacy of Estonian electricity system in N-1-1 condition until year 2035, according to Security of Supply Analysis for 2020 of Elering, Figure 4.15 (source: Elering)

Security of supply in summertime

Since in our climatic zone the peaks of consumption occur in winter, the security of supply analysis deals primarily with the winter period. In the period of minimum consumption in summer the peaks of consumption are considerably lower than in winter, being around 1200 MW. However, in the summer period many equipment mothballing and repairs are undertaken and thus, the availability of production capacity is also significantly lower than during the winter time peak loads. Due to this Elering has analysed adequacy of the system also in summertime. An overview of this is illustrated in figure 4.14 of the Security of Supply Analysis for 2020 of Elering, which is reproduced in Figure 13 of this report.

As seen from Figure 13, the summertime security of supply analysis shows a deep deficiency of domestic production capacity, compared to the peak consumption during the whole observable period of 2020-2035. However, as regards the transmission capacities the security of supply for the summer period is still ensured, although the year 2030 is more critical and then also the capacity of the emergency reserve power plant may be required.

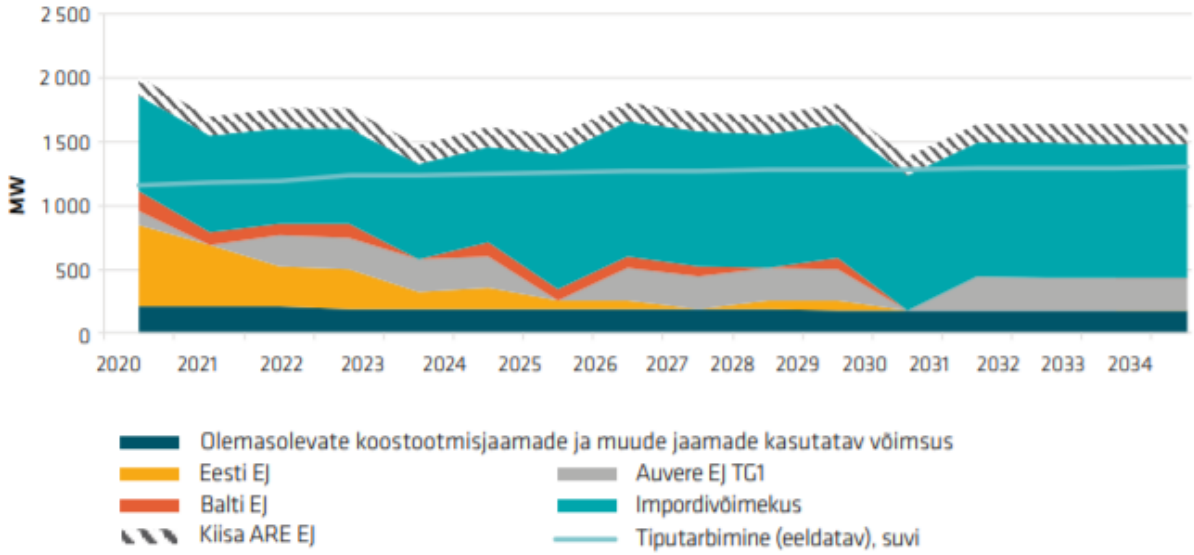

Figure 13. Available production capacity and peak load estimate in the period of minimum consumption (in summer) according to Security of Supply Analysis for 2020 of Elering, Figure 4.14 (source: Elering)

The security of supply system adequacy of the Baltics-Finland region, based on the deterministic analyses, presented in the Security of Supply Analysis of Elering, assumes that a deficiency of reserves may occur in the system beginning from the year 2030. Respective trends are illustrated in Figure 14. In case of N-2 scenario, where the two biggest elements of the region (two Finnish nuclear power plant units) simultaneously fall out of the system, a situation may occur where the peak load cannot be covered from the year 2032, as illustrated in Figure 15.

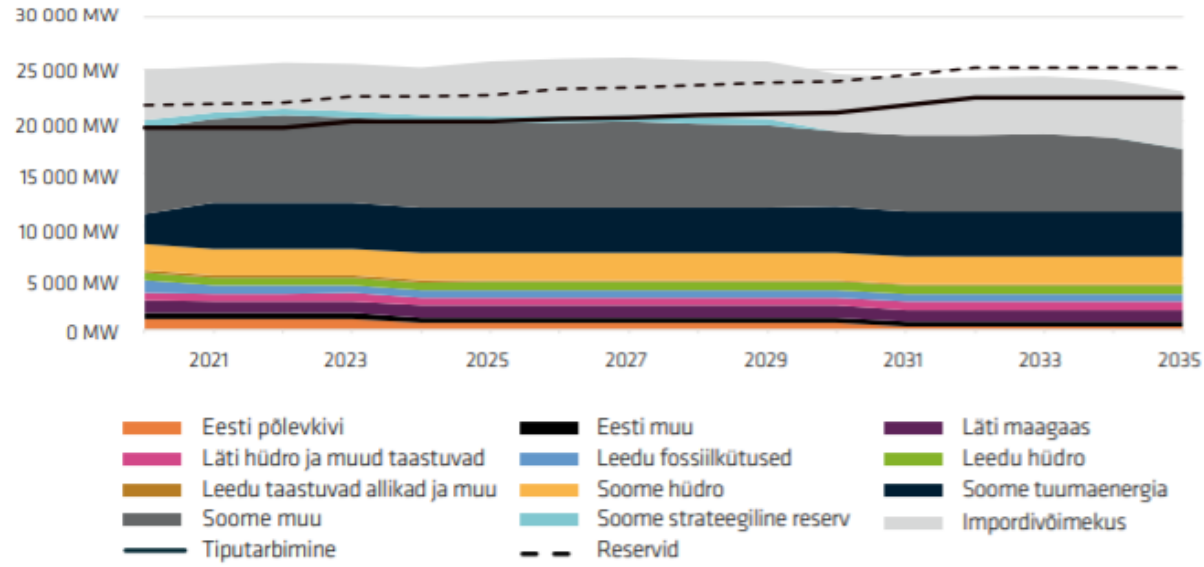

Figure 14. Available production and transmission capacities in the Baltics and Finland in period 2020-2030, according to Security of Supply Analysis for 2020 of Elering Figure 4.4 (source: Elering)

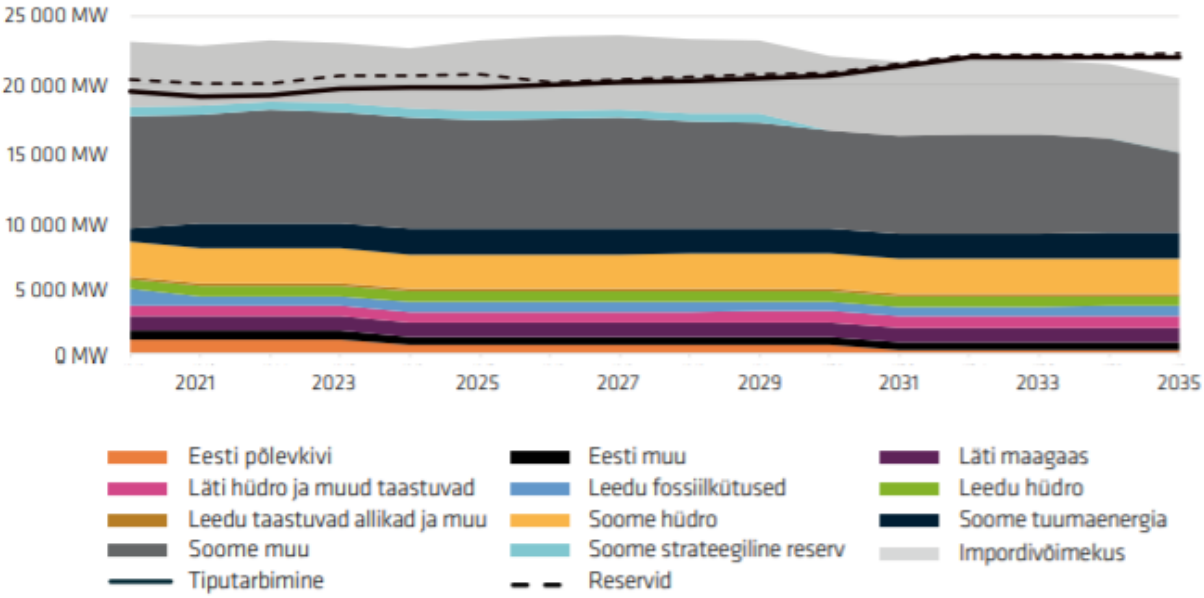

Figure 15. Available production and transmission capacities in the Baltics and Finland in N-2 scenario in period 2020-2030, according to Security of Supply Analysis for 2020 of Elering, Figure 4.5 (source: Elering).

In the scenario together with Finland (Figures 4 and 15) it shall be take in to account the connections between Estonia and Finland are DC (direct current) ones, while the connections between the Baltic countries are AC (alternating current) ones. Having strong DC connections between countries and with other synchronous areas is important and enables Estonia and the whole Baltics broader participation in the common European electricity market. While assessing from the security of supply point of view it is also reasonable to consider ever larger areas as having sufficiently strong connections in order to take into account wind parks and other uncontrollable production units – in case of larger area the coincidence factor increases. At the same time it shall be taken into account that the DC connections

involve certain risks. In the incurrence of major system control problems in a synchronous area (although very extraordinary events but still possible) in case of necessity a solution to problems can be possible limitations or disconnections between synchronous areas, as the connections between Estonia and Finland are such ones. That is why the Competition Authority's recommendation to Elering is to analyse also conventional scenarios in the future.

Extraordinary scenarios

In its 2020 Security of Supply Report Elering presented also the results of deterministic analyses of extraordinary scenarios until the year 2035, such as the scenario of Baltic synchronous area (Baltic area works as a separate synchronous area), the Baltic emergency condition sustainability scenario (Baltics are in island operation and no DC connections with other areas and the Estonian vital service scenario (operation of Estonia in island mode).

The Baltic synchronous area scenario envisions that in 2030 a situation may occur with a deficiency of reserves in the system and in case of emergency of the biggest element in the system a necessity of some consumption limitations in the system may occur.

In the emergency condition sustainability scenario it is necessary to limit industrial consumption beginning from 2023. Herewith it would be possible to cover business and public sector, as well as household sector needs.

The vital service scenario shows that the needs for vital service and the service of common interest can be covered also in this scenario.

In greater detail the descriptions of the scenarios and visual results can be acquainted with in section 4.5 of the report of Security of Supply Analysis for 2020 of Elering.[19]

2.3.5 Conclusions on security of supply

Beginning from 2021 the Estonian production capacities do not cover the domestic consumption. It is a dramatic change in the Estonian energy sector, as during 30 years since regaining independence there has been considerable surplus of production capacities. Respective change has been addressed also in the earlier report of the Competition Authority, where, due to this reason, the security of supply was analysed more thoroughly than usually. Compared to the earlier analysis we can see that the situation has been even deepen. In greater detail the comparison can be seen in Table 25, which shows the years of occurrence of security of supply system adequacy problems in different scenarios and analyses.

Table 25. Overview of security of supply system adequacy according to various analyses and scenarios conducted for Estonia (source: Competition Authority (CA), Elering, ENTSO-E)

[19] https://elering.ee/sites/default/files/public/VKA2020.pdf

	Year of occurrence of deficiency in adequacy of system	
Deterministic analyses/scenarios	**Data of CA report conducted in 2019**	**Data of CA report conducted in 2020**
Estonian peak load covered with domestic production capacities	2024-…	2021-…
Estonian system adequacy covered with production and import capacities	√	2030- …
Estonia summertime	√	2030
Baltics-Finland regional	√	2030-…
Probabilistic analyses	**Possibility of occurrence of disruption hour and their range**	
Pan-European 2025	No disruptions	0,1-0,6 hours
Pan-European 2030	-	0,2-1,8 hours

In spite of the big deficit of production capacities the adequacy of the system in Estonia is not endangered until the year 2030. The reason for this is that Estonia has strong transmission network and a high number of cross-border connection with neighbouring countries. The transmission capacities are capable to compensate for the deficit of production capacity and thus, considering the ability to import, the security of supply of the Estonian electricity system is covered until the year 2030. The European system adequacy assessment shall answer the question whether the is a probability of consumption limitations exceeds the level of the Estonian planned reliability standard or not. The last European probabilistic system adequacy assessment, MAF 2020, revealed a small number of disruption hours for Estonia by 2025, which slightly increases by 2030. Nevertheless, it will strongly stay within the level for the proposed reliability standard. Thus, the analysis did not confirm a reason to introduce additional capacity mechanism in Estonia.

While analysing regional security of supply in the Baltics and Finland possible system deficiency can be foreseen from the year 2030 and a small volume limitations of consumption. In addition, all four countries are individually taken dependent on import.

In its 2020 Security of Supply Report Elering has pointed out that in order to operate the Estonian power system approximately 1000 MW minimum firm capacity shall be maintained and most of it should be controllable capacity. Should the firm capacity fall below 1000 MW, a need for an additional capacity mechanism may occur. **Beginning from 2031 according to the currently available knowledge it is not possible to ensure 1000 MW firm capacity, as set forth by Elering, any more.** If in the coming years an updated knowledge will not correct the value, it will be necessary to weigh whether there still be a need to apply capacity mechanism, even if the results of the European probabilistic resource adequacy assessment will not reveal an infringement of the reliability standard. Preliminary it is necessary to await the European sytem adequacy assessment conducted in 2021. It will be the first one, which in a larger scale shall follow the principles of the approach outlined in Article 23 of the Electricity Regulation. Although, respective methodology for assessment shall be implemented in full from 2023 and it will provide an overview of what will take place after the year 2030. If the 2021 assessment will show risk to the Estonian reliability standard, a specific analysis of market constraints

shall be conducted. The latter will be a precondition for starting discussions on possible establishing capacity mechanism in cooperation with the European Commission. Regarding Estonia, the probable capacity mechanism is a strategic reserve. **To the currently available knowledge the need for capacity mechanism may occur beginning form the year 2030.**

Conclusive assessment of the Competition Authority on security of supply in Estonia until 2035

- **Based on the best knowledge we have today it can be said that adequacy of the Estonian electricity system in the next decade is ensured.**
- Adequacy of the electricity system is assessed on the basis of reliability standard using probabilistic method, pursuant to the European Electricity Regulation. In order to support the probabilistic method also the deterministic method is used.
- Currently the reliability standard envisions loss of load for 9 hours in a year, where there may occur a need to limit a little the consumption. However, the reliability standard comes into effect after it is established by a decision of the Government of the Republic.
- The probabilistic European system adequacy assessment MAF (*medium-term adequacy forecast*), which analyses the adequacy of system of states in the framework of the elements of the reliability standard (*expected energy not served* and *loss of load expectation* in hours of disruption) for a year does not foresee serious security of supply problems for Estonia until the year 2030. The number of disruption hours falls considerably below the number set forth in the reliability standard. Thus, for the time being there in no need to introduce additional capacity mechanisms.
- The deterministic analysis for Estonia shows that the system adequacy strongly depends on import. Beginning from the year 2021 the domestic production capacities will not cover peak load.
- Large scale close down of production capacities are foreseen at the Narva Power Plants. New production capacities are expected from the side of renewable energy (solar and wind). In addition, in the future energy system the flexibility of consumption and demand side management possibilities become more and more important, and can remarkably contribute to the security of supply.
- **The security of supply of Estonian is ensured through cross-border connections until the year 2030.**
- Current assessments show that from the anomic point of view there is no need to create strategic reserves until the year 2030. Strategic reserves shall be created only if the analyses show risk of failure to ensure the reliability standard, although, specific standard for Estonia has yet to be endorsed by the Government of the Republic.
- In addition to the reliability standard the system operator has pointed out the need to ensure firm capacity of 1000 MW in Estonia[20]. **Respective capacity is ensured until the year 2030.**
- **The situation after 2030 shows slight deficiency of the system adequacy.** However, before making final conclusions and the planning of further steps it is necessary to await the European sytem adequacy assessment conducted in 2021 that bases on Article 23 of the European (EU)

[20] According to the 2020 Security of Supply Analysis of Elering this is the capacity that the system operator can rely on. It is not necessarily controllable capacity, but the non-controllable capacity can be considered as part of it in the volume enabled by the coincidence factor (shows the portion of non-controllable capacity, which is historically always available. Regarding wind energy, there has been hours in Estonia when wind energy is completely unavailable, i.e. the coincidence factor is yet zero.

Regulation No 2019/943 on the internal market for electricity (hereinafter Electricity Regulation) and shows the situation after 2030.

Further steps:

- Establishing the *reliability* standard in the legislation; which is the basis in making decision on the capacity mechanism;
- Review of the reliability standard after every five years;
- Following the results of the European probabilistic resource adequacy assessment annually. The assessment to be conducted in 2021 will be the first one that follows the principles of approach, outlined in Article 23 of the Electricity Regulation and gives an overview of what is going to happen after 2030;
- In occurrence of risk to the reliability standard a specific assessment of market constraints shall be conducted, which is a precondition for starting discussing the possibility and if necessary, to implement a capacity mechanism in cooperation with the European Commission. Regarding Estonia, the probable capacity mechanism would be a strategic reserve.

3. Natural gas market

3.1 Regulation natural gas network

The main challenge regarding the regulation of the natural gas network was the preparation for the opening of the regional gas market from1 January 2020. Most significant milestones in this process were:

- Completion of the Balticconnectori in the end of 2019;
- Reaching agreement between the national TSOs and regulators on the details of the market region of Finland, Estonia and Latvia (FINESTLAT);
- Reaching agreement on the rules (standard terms and conditions) of the Common Balance Zone of Estonia and Latvia;
- Making decision according to the European Union network rules on the Estonian transmission price suitable for the FINESTLAT market zone.

3.1.1. Technical functioning

Interconnections of the Estonian gas system with the neighbouring countries as of the end of 2019 are given in Figure 16.

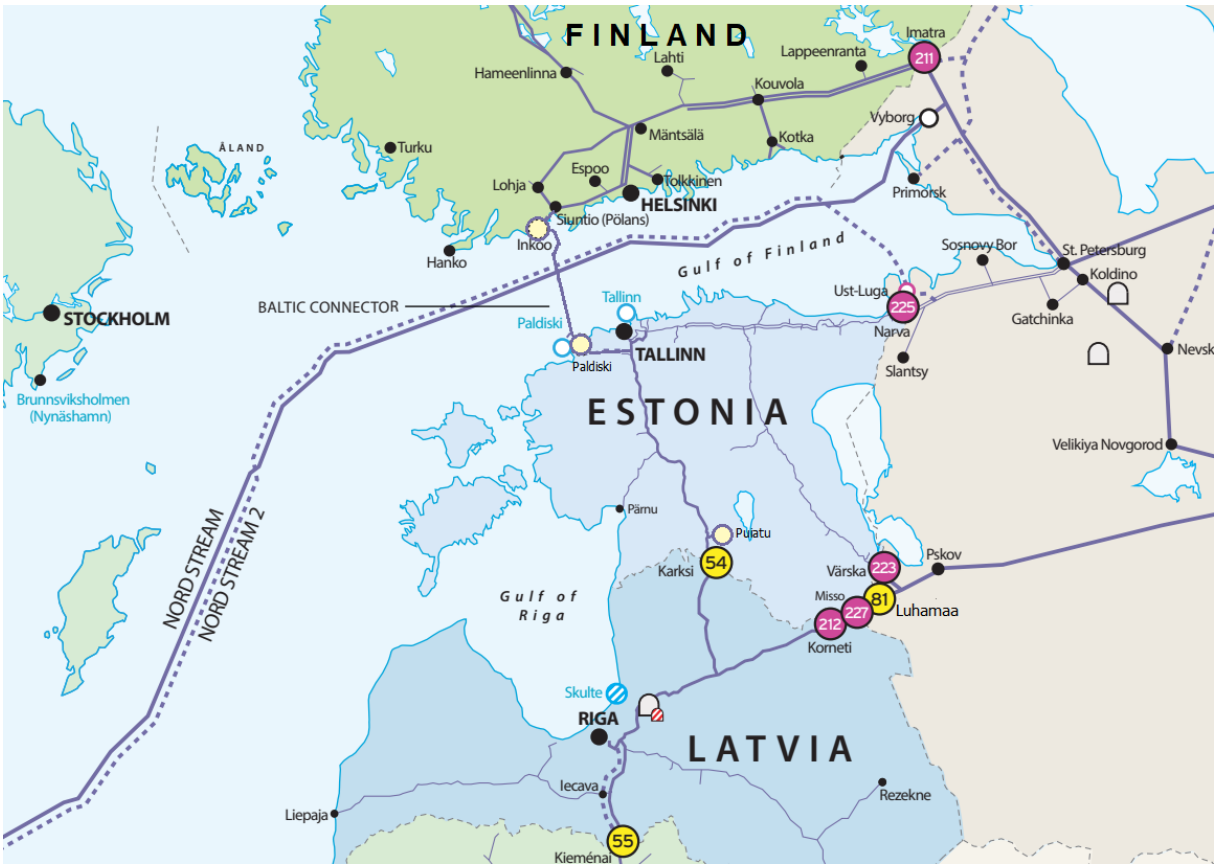

Figure 16. Transmission network of Estonian gas system. Source ENTSOG.

The Estonian gas transmission network consists of 977 km of gas pipelines, three gas metering stations [Karksi, Värska and Balticconnector (Paldiski)] and 36 gas distribution stations.

The data on the Estonian entry-exit points are presented in Table 26.

Table 26. Technical transmission capacity of border crossing points, Source ENTSOG and Elering AS

Connection point	Marking on drawing	Direction of moving of gas	Technical transmission capacity GWh/day
Narva connection	225	RU -> EE	31,5
Värska GMJ	223	RU -> EE	42,0
Luhamaa connection	227	RU -> EE	178,5
		EE -> RU	105,0
Misso GMJ	81	EE -> EE	0,3
Korneti connection	212	EE -> LV	178,5
		LV -> EE	105,0
Karksi GMJ	54	LV -> EE	105,0
		EE -> LV	105,0
Balticconnector	-	EE -> FI	81,2
		FI -> EE	81,2

The Narva connection is not in commercial use since 2019 (however, it is possible to use in extraordinary circumstances to ensure the security of supply).

Table 27. Inlet volumes of gas by border crossings in 2019 (GWh)

Period	Karksi GMS	Värska GMS	Misso GMS	Narva connection
January	317,484	472,113	0,203	0
February	327,404	239,211	0,146	0
March	510,235	52,969	0,140	0
April	94,899	261,635	0,077	0
May	0	275,539	0,038	0
June	0,513	170,120	0,008	0
July	0,673	183,390	0,011	0
August	30,325	174,182	0,010	0
September	2,228	248,632	0,042	0
October	273,192	111,206	0,099	0
November	421,355	57,892	0,133	0
December	471,575	110,501	0,155	0
Total	**2 450**	**2 357**	**1**	**0**

3.1.2 Use of gas network and charges for connecting

Until 1 January 2020 commodity based transmission exit prices were valid. Entry prices were not applied in Estonia. In addition, transit price was validated to the Luhamaa-Korneti gas stream (RU – EE – LV).

In connection with the application in Estonia of Commission Regulation (EU) 2017/460 establishing a network code on harmonised transmission tariff structures for gas, the transmission service prices changed considerably and essentially.

In 2019 the Competition Authority for the first time developed and established methodologies for the calculation of network service prices separately for transmission and distribution of gas [21]. Earlier a single methodology was used for both transmission network and distribution network service prices.

According to the gas transmission network prices approved in 2019 on the basis of the new methodology beginning from 2020 intrasystem and cross-system network use entry and exit prices will be valid.

[21] https://www.konkurentsiamet.ee/et/elekter-maagaas/maagaas/hindade-kooskolastamine

According to the rules set out in the Regulation in 2019 a consultation of market participants was carried out and the consultation document was submitted to the ACER[22] for analysis. In its analysis the ACER made a number of proposals for improvement of the price consultation in the future.

By the decision of the Competition Agency no 7-3/2019-054 of 30 September 2019 for the first time in Estonia capacity based entry and exit prices[23] and the multipliers of capacity products were approved.

The most important key words for the transmission network prices approved on the basis of the new mythology are the following:

- In combined influence of the Regulation (EU) No 2017/460 of the European Commission and the Natural Gas Act in Estonia the *price cap regime* is applied, in which the regulator approves the fixed payable transmission prices.
- In the calculation of transmission prices in Estonia the alone-standing postage stamp reference price method is applied.
- The entry prices are equalised with the neighbouring countries (Latvia and Finland) by adaption, based on a benchmark study of a European Union Member States' average together with an error margin.
- The connection points between the countries of the FINESTLAT market region are abandoned.
- The assumable compensations between the TSOs (ITC) are minimised through the exit tariffs of each country participating in the cooperation.

The FINESTLAT market arrangement ensures access to the market for gas with the lowest offered price in the region entries for the consumers for all three countries without additional costs in the connection points. The future challenges are to find an allocation of entry incomes which is satisfactory for Lithuania and thereby facilitate to emerge of a common market of four countries.
Connecting to both the transmission and distribution network is based on cost, as set forth in the Natural Gas Act. The network operators have the right to charge justified fee for connecting to their network. The calculation of connection fee proceeds from the need to cover justified costs which are necessary for connection, including:

- Investments, including construction of metering systems
- Fulfilment of environmental requirements
- Fulfilment of quality and environmental requirements

The size of connection fee is calculated by the network operator based on the methodology for calculation of connection fees approved by the Competition Authority.

Pursuant to Article 41(1) (s, n) of Directive No 2009/73/EC of the European Parliament and of the Council the regulatory authority shall follow established conditions of access to gas storage, to gas stored in the pipeline (*linepack*) and other ancillary services.
There is no gas storages in Estonia, the linepack gas is not used for commercial purposes and there is no other ancillary services provided by the network operator.
Due to the smallness of the transmission system the Competition Authority considers the situation, where the linepack gas is not used for commercial purposes and there is no other ancillary services provided by the network operator, justified.

The FINESTLAT common tariff zone is a unique system in the European gas market where between three countries free movement of goods (gas) takes place without any limitation. In the opinion of the

[22] ACER – Agency for the Cooperation of Energy Regulators
[23] https://www.konkurentsiamet.ee/et/elekter-maagaas/maagaas/kooskolastatud-hinnad

Competition Authority the application of the postage stamp system during 2020 has been well justified. Applying it there is no difference what is the original source of gas – consumers can use it at an equal network service price and thus, more equal possibilities for consumers in the region are ensured.

3.1.3 Balance responsibility

The Natural Gas Act sets out that in order to supply gas through the transmission network, a market participant concludes a balancing agreement with the system operator, except where the market participant has delegated its balance responsibility to another balance provider that has concluded a balancing agreement with the system operator.

Each market participant has one open supplier. In order to purchase the gas used to provide network services, the network operator must have one open supplier for the network boundary points. The customer and the producer each have one open supplier per metering point.

The system operator elaborates and obtains approval from the Competition Authority for the standard terms and conditions for balancing agreements and the methodology for determination the price of balance gas.

Elering AS, as the system operator, is responsible for ensuring balance in the Estonian gas system and for the determination of imbalances of the balance providers. The open supply between a balance provider and the system operator is called balancing agreement, the standard terms and conditions of which are public and the same for all balance providers. The balancing service which is provided according to this agreement contains the procedures for balance management and the conditions for purchasing and selling of balance gas.

Until the end of 2019 the standard terms and conditions for balancing agreements, approved on 15 January 2016 by the Competition Authority by its decision no 7.1-11/16-001, were valid.

In 2019 the Estonian and Latvian TSOs prepared Regulations for the Common Natural Gas Balancing Zone of Estonia and Latvia, which is to commence operation from 1 January 2020 and approved the standard terms and conditions for balancing agreements with the regulators of their countries.

The standard terms and conditions for balancing agreements applicable in the Common Balancing Zone of Estonia and Latvia establish also the imbalance gas price and neutrality charge calculation methodology.

By its decision no 7-10/2019-007 of 30 September 2019 the Completion Authority approved the standard terms and conditions for balancing agreements of Elering AS and A "Conexus Baltic Grid" to be applied in the Common Balancing Zone of Estonia and Latvia[24]. These standard terms and conditions were approved also by the Latvian regulator Sabiedrisko pakalpojumu regulēšanas komisija. More detailed description of the imbalance gas price calculation methodology, which will be enforced from the beginning of 2020, is given in Chapter 8 of the common standard terms and conditions for balancing agreements.

The marginal sell price (MSP) for gas day D shall be equal to the lower of:

[24] https://www.konkurentsiamet.ee/et/elekter-maagaas/maagaas/tuuptingimused#Bilanss

- the lowest price of any sales of title products in which a TSO was involved at relevant trading platforms in respect of gas day D;
- the weighted average price of all trades in title products at relevant trading platforms in respect of gas day D, multiplied by the MSP incentive factor.

The marginal buy price (MBP) for gas day D shall be equal to the greater of:

- the highest price of any purchases of title products in which a TSO was involved at relevant trading platforms in respect of gas day D;
- weighted average price of all trades in title products at relevant trading platforms in respect of gas day D, multiplied by the MBP incentive factor.

In 2020 the MBP incentive factor is 1,05 and the MSP incentive factor is 0,95. The TSOs have the right to re-adjust both factors during the year with a minimum notice time of 3 calendar days.
According to the standard terms and conditions of the gas balancing rules and to ensure the financial neutrality of the system operators, from 2020 a separate neutrality adjustment shall be set, which takes into account the following costs and revenues:

- Costs and revenues arising from daily imbalance charges
- Costs and revenues arising from the balancing actions
- Administrative costs arising from the balancing actions
- Other costs and revenues related to the balancing activities

Neutrality charge shall be applied to the network users' portfolio, based on the sum of network users offtakes (including domestic exit, cross-border exit and the quantities sold in the virtual trading point).
The prices for balance gas can be found at the web site:
https://dashboard.elering.ee/et/gas-balance/prices .
The advantage of common balance region is in considering imbalance of a balance provider based on the region, no on the country. This should give savings in the cost of keeping balance for a balance provider operating in both countries.

3.1.4 Cross-border capacity allocation and congestion management

In 2019 standard terms and conditions for the cross-border transmission service [25], were valid, which were approved on 17 May 2019 by the Competition Authority by its decision no 7-10/2018-015 and which regulated the use of capacity and cross-border infrastructure access conditions for third parties. This document also regulated the methodology for transmission capacity allocation and both contractual and physical congestion management methodology in the Estonian transmission system.

The data on offered and reserved capacity of the 2018/2019 gas year are presented on the web site of Elering AS [26].

In connection with the creation of the Common balancing zone of Estonia and Latvia from 1 January 2020 the Estonian and Latvian TSOs prepared Common standard terms and conditions for the network contracts, which regulate third party capacity use and cross-border infrastructure access conditions, methodology for transmission capacity allocation and both contractual and physical congestion management methodology in the balancing zone of Estonia and Latvia.

[25] https://www.konkurentsiamet.ee/et/elekter-maagaas/maagaas/tuuptingimused#%C3%BClekandeteenus
[26] https://elering.ee/ulepiiriline-gaasikaubandus#tab1

The Competition Authority approved the common standard terms and conditions for the network contracts on 30 September 2019 by its decision no 7-10/2019-007. These standard terms and conditions were approved also by the Latvian energy regulator. In 2020, in connection with the commencement of operations of the balancing zone of Estonia and Latvia a need to supplement these common conditions for the network contracts became evident. The additions proposed by the Estonian and Latvian TSOs were approved by the Competition Authority on 23 April 2020 by its decision no 7-10/2020-001.The additions were approved also by the Latvian energy regulator.

The capacity allocation mechanism for Balticconnector was agreed upon by the Estonian and Finnish TSOs and endorsed by respective energy regulators.

The reservation of entry and exit capacities with Finland, Russia and Lithuania takes place by trading through the Common Balance Zone IT platform or in the gas exchange GET Baltic [27], where the capacity is allocated at implicit auctions.

Until 2022 in the Balticconnector only day-ahead and intraday implicit capacity allocation products are offered. From 2022 it is planned that Finland will join the Estonia-Latvia balance zone and therewith a new transmission capacity allocation methodology will be developed.

In other Estonia-Latvia balancing zone connection points (Värska, Luhamaa-Korneti, Kiemenai) in addition to the day-ahead and intraday implicit allocation products also usual (explicit) annual, quarterly and monthly products are offered. In case of the latter FCFS[28] allocation principle is applied.

In case of the contractual congestion the following measures are used:

- surrender of the contractual capacity;
- mechanism corresponding to the long term UIOLI[29] principle;
- oversubscription and buy-back scheme.

In case of physical congestion firstly the interruptible capacity will be limited and after that the firm capacity is limited. Therewith, in the first instance the transmission capacity, which is sold as a short term service, is limited (this means that at last the yearly capacity service is limited).

In relation to the users of the same network service the transmission capacity is limited proportionally. The network operator informs the user of network on the transmission capacity limitation as soon as possible in a format which can be reproduced in writing.

Pursuant to Article 41(11) of Directive 2009/73/EC of the European Parliament and of the Council each market participant has the right to refer a complaint on the cross-border capacity allocation and congestion management to the regulatory authority which, acting as dispute settlement authority, shall issue a decision within a period of two months after receipt of the complaint.

In 2019 no such complaints were referred to.

[27] https://www.getbaltic.com/en/market-data/implicit-capacity-allocation/

[28] FCFS-principle (*First-Come-First-Served*) means the capacity allocation method when capacity is allocated primarily to the network users who have applied for capacity booking at the earliest

[29] UIOLI-principle (*Use It Or Lose It*) is the procedure for re-allocation of such capacity of the transmission system, which is reserved but not used, is made available for those who wish to use it

3.1.5 Application of network code of the European Union

The network code of the European Union is not applicable on the connection points of Member States if any relevant Member State has derogation from Article 49 of Directive 2009/73/EC.
Article 41 (1) of Directive 2009/73/EC explains that Estonia, Latvia and/or Finland have derogation until any of those Member States is directly connected to the interconnected system of any Member State other than Estonia, Latvia, Lithuania and Finland.

According to the Ministry of Economic Affairs and Communications the exemption for Estonia is valid until the end of 2020.

The Estonian state has promised to the European Commission that in connection with the development of cooperation of the Baltic states and Finland, Estonia will adopt all the European Union network codes for gas by the end of 2020.

In 2019 Regulation (EU) No 2017/459 establishing a network code on capacity allocation mechanisms (CAM) in gas transmission systems was not fully applied in Estonia. The main difference was in the methodology of transmission capacity allocation.

By the decision no 7-10/2019-007 of 30 September 2019 the Competition Authority approved the common Estonian-Latvian standard terms and conditions for network contracts which will enforce on 1 January 2020. The conditions are if full compliance with the CAM network code.

The common standard terms and conditions for balance contracts which were applied in 2019 (approved by the Competition Authority on 15 January 2016 by decision no 7.1-11/16-001) are in compliance with Regulation (EU) No 312/2014 establishing a Network Code on Gas Balancing of Transmission Networks (BAL).

By the decision no 7-10/2019-007 of 30 September 2019 the Competition Authority approved the common standard terms and conditions for balance contracts which will enforce on 1 January 2020. The conditions are if full compliance with the BAL network code.

Regulation (EU) No 2015/703 of the Commission establishing a network code on interoperability and data exchange rules (INT) has been adopter partly.

In 2019 Elering AS commissioned a data store system which is in compliance with Regulation (EU) No 2015/703 establishing network code on interoperability and data exchange rules (INT). As well, the common Estonian-Latvian standard terms and conditions for network and balance contracts are also in compliance with the INT network code.

Herewith, the gas quality metering will be brought into compliance with rules by the end of 2020.

In 2019 the Competition Authority approved new transmission prices. In the approval process Regulation (EU) No 2017/460 establishing a network code on the principles of harmonised transmission tariff structures for gas (TAR) was used as the guidance.

According to the rules established in the network code (TAR) a consultation with the market participants was carried out in 2019 and the consultation document was submitted to the ACER. <in his analysis ACER made a number of proposals for better arrangement of price consultations in the future.

By the decision no 7-3/2019-054 of 30 September 2019 the Competition Authority for first time approved separate entry and exit pieces and the multipliers of capacity products were approved [30] in Estonia.

3.1.6 Indicators of technical performance of network

Table 28. Indicators of technical performance of network (source: inquiry of Competition Authority)

Indicator	2016	2017	2018	2019
Maximum daily consumption of gas (GWh / day).	52,8	40,6	44,9	34,9
Entry capacity of the pipelines GWh / year*	24 468	18 216	20 396	23 989
Exit capacity of the pipelines (export), GWh / year	0	0	0	0
Number of transmission network operators	1	1	1	1
Length of transmission network (km)	885	885	885	977
Number of distribution network operators	23	23	23	23
Length of distribution network (km)	1 945	2 028	2 070	2 091
Average upper heating value used in the report (kWh/m^3)	10,476	10,481	10,461	10,474

* total gas entered into transmission network (import + transit)

3.2.1 Wholesale markets

Article 2(29) of Directive 2009/73/EC of the European Parliament and of the Council explains that wholesale customer is a natural or legal person who purchases natural gas for the purpose of resale inside or outside the system where he is established, excluding transmission system or distribution system operators.

The trends of the wholesale market in the last 12 years in Estonia are illustrated with the graph on Figure 17. The figure reflects only natural gas indicators as guidance of biomethane into the gas network in the period in question was marginal.

[30] https://www.konkurentsiamet.ee/et/elekter-maagaas/maagaas/kooskolastatud-hinnad

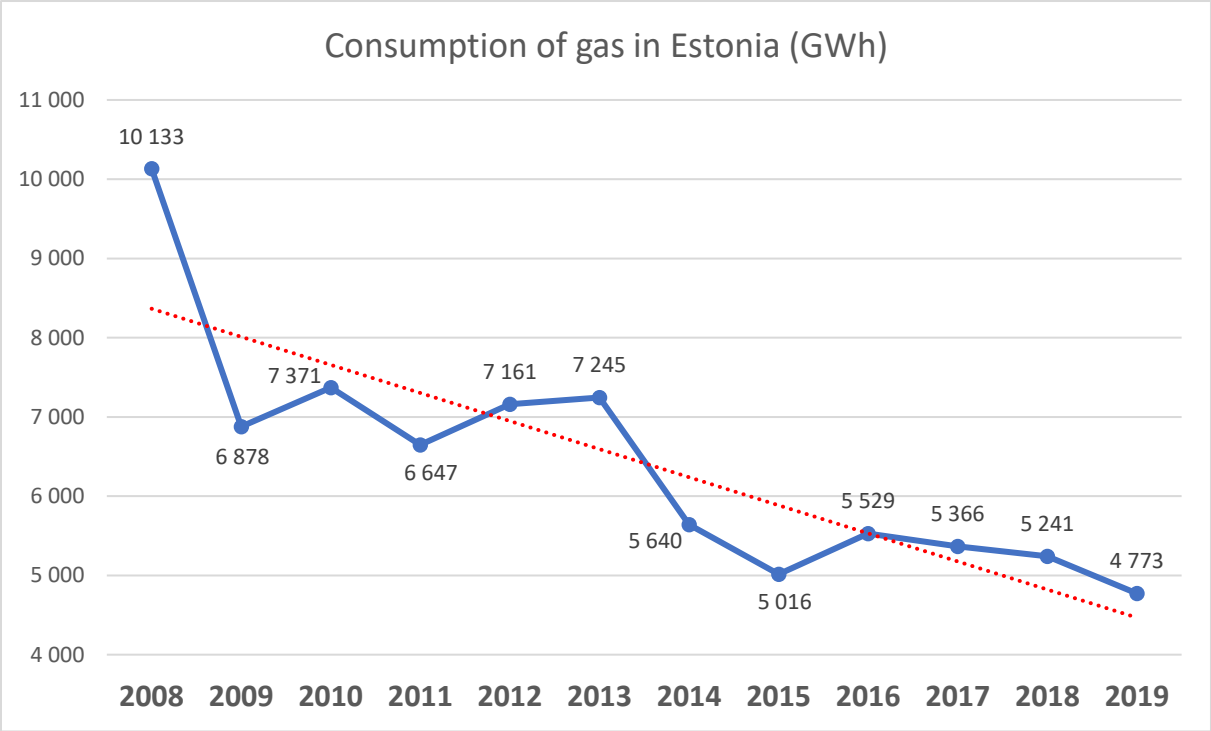

Figure 17. Consumption of natural gas in Estonia. Sources: Statistics Estonia and Elering AS

Figure 17 shows that the wholesale market trend in Estonia is falling. In 2019 the consumption of gas decreased 8,5% compared to the previous year.

Transparency of the wholesale markets

Article 41(13) of Directive 2009/73/EC of the European Parliament and of the Council provides that Member States shall create appropriate and efficient mechanisms for regulation, control and transparency so as to avoid any abuse of a dominant position, in particular to the detriment of consumers, and any predatory behaviour.

The biggest importer of gas to the Estonian market is Eesti Gaas AS (with market share of 84 % in 2019). Eesti Gaas AS sells natural gas to bigger customers and to other natural gas network undertakings on the basis of a price formula or at price fixed in the contract.

The Competition Authority monitors the situation in the wholesale market and if necessary, applies measures to bring the activities of market participants into compliance with law. In the context of the Competition Act Eesti Gaas AS is the undertaking dominant in the wholesale market (with its wholesale market share of 62% in 2019).

Pursuant to Section 9^1 of the Natural Gas Act the gas undertaking in market dominant position must, at the request of the Competition Authority, provide evidence regarding compliance of the selling price with the coverage of the necessary operating expenses, ensure that the necessary investments can be made and a justified return earned. If the selling price does not comply with the necessary operating expenses, necessary investments and a justified return conditions, then the Competition Authority has the right to require bringing it into compliance.

According to Section 16 of the Competition Act any direct or indirect abuse by an undertaking or several undertakings of the dominant position in the goods market is prohibited

Competition in the wholesale market

The Estonian domestic competition in the wholesale market is characterised by the share of portfolios of the balance providers out of the volume of consumption, which are presented in Table 29.

Table 29. Share of portfolio of balance providers from volume of supply (source: Elering AS)

Month 2019	Share of portfolio of balance providers from volume of supply					
	Eesti Gaas AS	**Eesti Energia AS**	**JSC Latvijas Gaze**	**Alexela AS**	**Scener OÜ**	**Elektrum Eesti**
1	55,9%	12,4%	24,8%	5,2%	1,6%	0,1%
2	58,5%	9,6%	24,5%	5,6%	1,8%	0,1%
3	60,0%	8,2%	24,1%	5,9%	1,7%	0,1%
4	65,2%	7,8%	18,0%	7,0%	1,9%	0,1%
5	67,6%	11,5%	11,3%	7,8%	1,8%	0,1%
6	68,3%	20,1%	2,0%	7,7%	1,8%	0,1%
7	70,9%	16,9%	1,6%	8,7%	1,8%	0,07%
8	70,6%	17,3%	1,7%	8,7%	1,7%	0,1%
9	70,0%	16,6%	2,8%	8,8%	1,8%	0,1%
10	66,2%	12,2%	11,0%	8,8%	1,7%	0,1%
11	62,8%	9,9%	18,1%	7,7%	1,4%	0,1%
12	56,2%	17,9%	17,9%	6,6%	1,3%	0,1%
Average	**64,3%**	**13,4%**	**13,2%**	**7,4%**	**1,7%**	**0,1%**

It appears from the table that in the wholesale market competition does exist (there are six active traders), but the consumers of gas prefer the biggest wholesale trader, which controls 2/3 of the wholesale market.

In connection with the start of operation of the FINESTLAT market region from 1 January 2020 the Competition Authority hopes in the enhancement of competition in the natural gas market.

Wholesale prices

Within the Estonian legal framework the Competition Authority cannot influence the import and/or supply prices, which is formed on contractual basis. However, the Authority can verify whether the seller of gas follows law and sells gas to all consumers on equal conditions and does not abuse its position in the market of goods.

The weighted average price in the UAB Get Baltic gas exchange in 2019 was 22,73 €/MWh.

Indicators of the functioning of wholesale market

Table 30. Indicators of wholesale market (source: inquiry of the Competition Authority)

Indicators of gas wholesale market	2016	2017	2018	2019
Number of active wholesale traders	6	6	7	7
Biogas entered in gas network (GWh/year)	0	0	40	63
Total gas demand (GWh/year)	5 497	5 219	5 216	4 773
Demand of gas for electricity production (GWh/year)	0	0	0	0
Import[1] volume (GWh/year)	5 529	5 366	5 241	4 828
Export volume (GWh/year)	0	0	0	0
The main country of origin of imported gas and its share (%) - Russia	100,0%	98,1%	92,4%	83,9%
Number of countries of origin of gas supplies	1	2	2	2
Wholesale market share of biggest natural gas suppliers (%)	**2016**	**2017**	**2018**	**2019**
1. Eesti Gaas AS	99,0%	73,6%	76,2%	62,0%
2. Baltic Energy Services OÜ / Scener OÜ	1,0%	6,6%	6,0%	1,7%
3. Eesti Energia AS	0%	17,5%	13,0%	12,4%
4. Alexela AS	0%	2,3%	4,8%	6,9%
5. Elektrum Eesti OÜ	0%	0%	0%	0,1%
6. JSC Latvijas Gaze	0%	0%	0%	17,0%
Number of active traders in wholesale market	6	6	7	7
Volume traded in OTC market (GWh/year)	5 494	5 934	6 230	5 240
Volume traded in Spot market (GWh/year)	0	0	30	72
Volume traded in Futures market (GWh/year)	0	0	0	73
Total traded volume (GWh/year)	*5 494*	*5 934*	*6 260*	*5 385*
Average import price of gas (€/MWh)	15,85	16,96	24,43	22,60
Number of protected customers	48 233	50 895	51 310	51 469
Volume sold to protected customers (GWh/year)	1 219	845	988	923

3.2 Competition and functioning of market

3.2.2 Retail market

Under the retail market it is meant the sale of gas to the final customer. Article 2(27) of the Directive No 2009/73/EC of the European Parliament and of the Council explains that the final customer means a customer purchasing natural gas for his own use.
The final customer can be a household (buys natural gas for his household purposes) and a non-household customer (buys natural gas in order to use it outside of his household).

Transparency of retail markets

In the retail market an undertaking (the seller of gas) itself forms the sale price of gas according to the purchase price from the importer and/or supplier and its sale margin. The formation of the gas sale

price in general is not subject to regulation, except the sales margin of an undertaking in the market dominant position.

If the Competition Authority demands it, the gas undertaking in a market dominant position must provide evidence regarding compliance of the selling price with the requirements: he selling price of gas must cover the necessary operating expenses and ensure that the necessary investments can be made and a justified profit is returned.

The gas undertaking in a dominant position shall obtain the approval of the Competition Authority for the ceiling rate of its sales margin annually and every year submit a report on the sales margin. In the event exceeding the sales margin, the surplus part must be returned to the household consumers.

According to the Natural Gas Act household consumers have to be notified about changes in the price 30 days in advance. The retail sale prices of the gas sold to final consumers are disclosed on the web sites of the gas undertakings. Based on the published market prices consumers can decide whether they wish to switch the seller of gas.

The price of natural gas in an average household consumer bill in 2019 constituted 56% (see Figure 18). In 2019 the share of cost of gas decreased in the total consumer price, mainly due to the increase in excise duty.

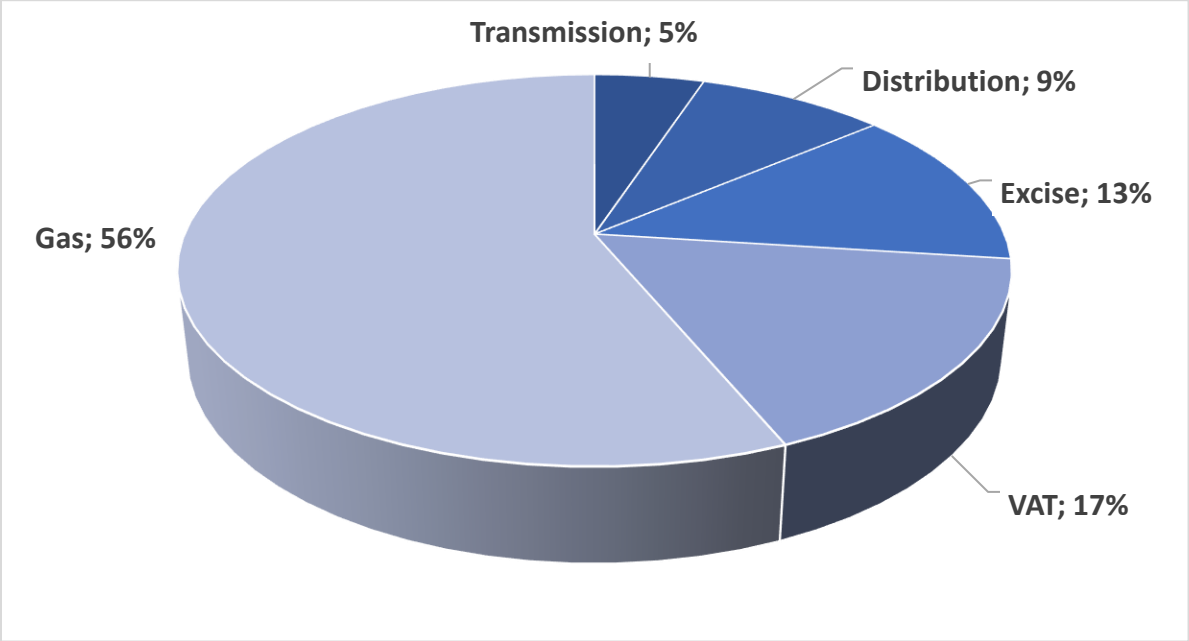

Figure 18. Cost for household consumer in buying gas in 2019

The changes in the excise duty on natural gas are presented in Figure 19. In 2020, in connection with the COVID-19 epidemic, the excise duty on natural gas was temporarily lowered for the period 1 May 2022 to 30 April 2022.

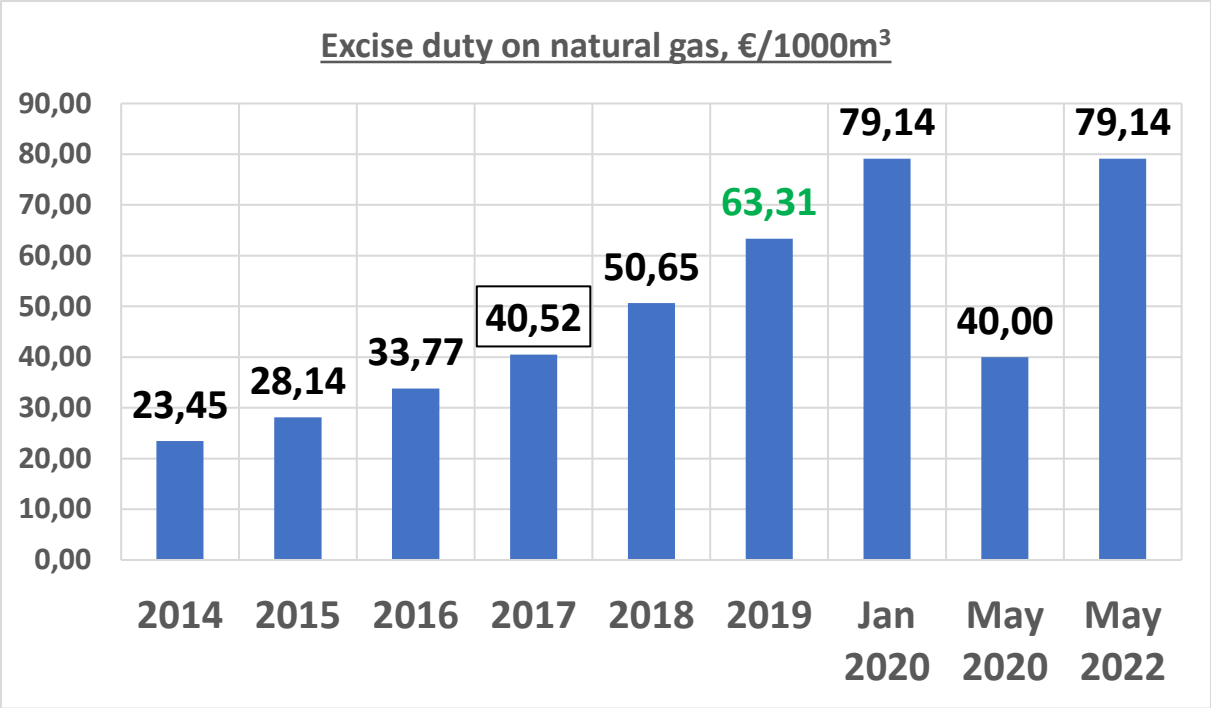

Figure 19. Excise duty on natural gas

Competition in the natural gas retail market

The number of customers in the retail market of gas is 56,85 thousand, 48,397 thousand of them are household consumers. In 2019 3625 customers changed/switched the supplier of gas, 3360 of them were households (in 2018 respective numbers was 2058, and 1827 were households). Thus, in 2019 6,4% of the clients changed the supplier of gas.

The switch of gas seller is very simple and does not involve cost nor disruption of gas supply. In most cases the new gas supplier will terminate the old contract for the consumer and the switch of seller takes place in the turn of calendar month. The natural gas packages price comparison portal dedicated to consumers https://gaasihind.ee/ helps to compare the prices of packages and conditions of sellers in an unbiased and overlooking way. The information important consumers for selecting seller of gas can be obtained quickly and in one place. This way there is no need to ask separate offers from service providers. Unfortunately, the biggest retail seller of gas Eesti Gaas AS, similarly to the biggest electricity market retail seller (Eesti Energia AS), does not forward their package prices to the comparison portal. In order to have functional transparent electricity and gas markets on equal bases the Authority has suggested both Eesti Energia AS and Eesti Gaas AS to disclose the electricity and gas packages price lists at least in one price comparison portal and made also respective public appeal to both: https://www.konkurentsiamet.ee/et/uudised/konkurentsiamet-soovitab-eesti-energial-ja-eesti-gaasil-hinnad-hinnavordlusportaalides

The Competition Authority is in the position that in spite of the single market dominant market player (Eesti Gaas AS) there is competition in the natural gas market. Eesti Gaas AS has assimilated into the competition situation and maintained a big part of its earlier market, as the largest trader can of a good price in most cases and that is why the customers have no motivation to change their supplier, although the latter has been made extremely simple.

Retail prices

Eesti Gaas AS, as the market dominant undertaking, is obliged to approve the sales margin included in the price of the gas sold to household consumers with the Competition Authority. The undertaking adds the approved sales margin to the import price of gas. The Competition Authority verifies annually the weighted average price of sold gas in a calendar year does not exceed the weighted average purchase price in the same period. Otherwise the gas undertaking in the market dominant position settles the balance with consumers

By the decision of the Competition Authority no 7.1-7/09-0051 of 1 October 2009 the sales margin of 0,7684 EEK/m^3 or 0,049110 €/m^3 was approved for Eesti Gaas AS. In 2019 Eesti Gaas AS did not exceed the ceiling rate of the sales margin. In the verification the Competition Authority found that the actual sales price for households was 39 % lower than the weighted average purchase price and the approved sales margin added thereto.

The data on average natural gas price for final consumers in 2019 in comparison with the 2018 prices are presented in Table 31. In addition to gas the presented price also includes network services and excise duty (but does not include VAT).

Table 31. Final consumer average prices of gas. Source: Statistics Estonia, KE31 and KE32

Customer group	2018 price, €/MWh	2019 price, €/MWh	Change %
Household consumer, annual consumption < 20 GJ	40,15	43,35	8,0
Household consumer, annual consumption 20 - 200 GJ	34,41	37,67	9,5
Household consumer, annual consumption > 200 GJ	32,98	36,31	10,1
Eligible consumer, annual consumption < 1000 GJ	33,46	36,73	9,8
Eligible consumer, annual consumption 1000 - 10000 GJ	32,02	35,23	10,0
Eligible consumer, annual consumption 10 - 100 TJ	31,55	33,84	7,3
Eligible consumer, annual consumption 100 - 1000 TJ	31,55	31,63	0,3
Eligible consumer, annual consumption 1000 - 4000 TJ	30,59	29,17	-4,6

Indicators of the functioning of the retail market

Table 32. Indicators of household retail market (source: inquiry of the Competition Authority)

Retail market indicators (household customers)	2016	2017	2018	2019
Consumption of gas (GWh/year)	683	718	731	732
Number of gas consumers	48 194	48 710	48 296	48 394
Number of registered gas suppliers	25	29	40	47
Number of active gas suppliers	19	22	30	31
Share (%) of three suppliers (by volume) with biggest market share				
Eesti Gaas AS	87,7%	85,4%	77,1%	74,9%
Eesti Energia AS	0,0%	0,1%	3,4%	3,4%
Alexela AS	3,6%	6,1%	9,9%	10,2%
Number of retail sellers with market share (by volume) of more than 5%	1	2	2	2
Number of retail sellers have the share of clients of more than 5%	1	2	2	2
Number of switches of seller per year (left clients)	3 840	4 009	3 367	3 491
Number of switches of seller per year (added clients)	2 020	5 329	3 025	3 360
Legally established time for switch of seller (days)*	21	18	14	14
Average actual time of switch of seller (days)	11	16	16	16
Number of gas supply disruptions due to failure to pay the bill	2	5	18	32
Price of gas for average household customer (9000 kWh per year),incl. taxes (€/kWh)	0,041	0,043	0,049	0,051

* Beginning from 2018 the seller of gas must make it possible to terminate the contract for the sale of gas on account of the customer's switching to another seller, within 14 days starting from the presentation of the corresponding request by the customer, provided the obligations arising from the contract to be terminated have been performed. The new contract for the sale of gas takes effect at the turn of the calendar month.

Table 33. Indicators of non-household retail market (source: inquiry of the Competition Authority)

Retail market indicators (non-household customers)	2016	2017	2018	2019
Consumption of gas (GWh/year)	4 814	4 501	4 485	4 041
Number of clients	6 990	7 065	8 188	8 454
Number of registered gas suppliers	25	29	40	47
Number of active gas suppliers	19	22	30	31
Share (%) of three consumers (by volume) with biggest market share				
Undertaking 1	n/a	n/a	n/a	5,6%
Undertaking 2	n/a	n/a	n/a	4,9%
Undertaking 3	n/a	n/a	n/a	2,7%
Number of retail sellers with market share (by volume) of more than 5%	1	3	4	4
Number of retail sellers have the share of clients of more than 5%	1	2	2	2
Number of switches of seller per year (left clients)	58	167	217	223
Number of switches of seller per year (added clients)	95	232	304	265
Legally established time for switch of seller (days)*	21	18	14	14
Average actual time spent for switch of seller (days)	15	18	24	24
Sales related HHI	n/a	5 352	6 173	4 328
HHI related to metering points	n/a	6 453	6 148	6 166
Number of protected custometrs	42	42	42	47
Volume of sales to protected customers (GWh/year)	17	17	17	812

* Beginning from 2018 the seller of gas must make it possible to terminate the contract for the sale of gas on account of the customer's switching to another seller, within 14 days starting from the presentation of the corresponding request by the customer, provided the obligations arising from the contract to be terminated have been performed. The new contract for the sale of gas takes effect at the turn of the calendar month.

3.3 Customer protection and resolution of disputes

The Competition Authority is in a position that the natural gas consumers are well protected and the obligations of market participants are defined in detail. Sufficient information is available to consumers both on the standard terms and conditions for customer contracts and on rights to change the supplier. Also, the Competition Authority has sufficient possibilities to perform market supervision.

3.3.1 Customer contracts

In the opinion of the Competition Authority the field of customer contracts is a well-regulated field and customer interests are sufficiently protected. According to the Natural Gas Act both the standard terms and conditions for selling gas to household customers and standard conditions for the provision of network services are to be approved with the Authority. The Authority has to monitor whether network service user's rights and obligations are balanced in the contract, as this forms the basis for the approval of prices for network services. An important criterion in the approval of standard terms and conditions is also their compliance with the Law of Obligations Act.

A connection contract, network contract or a contract for the sale of gas that is executed in a written or electronic form or a form that allows written reproduction or in any other form subject to stricter formal requirements, or the standard terms and conditions of such a contract, shall set out the following information:

- in the case of a network or connection contract, the name of the network operator, in the case of a contract for the sale of gas, the name and registration number in the Commercial Register of the network operator or the seller, as well as the address and other contact details of the network operator or the seller;
- a description of the services provided on the basis of the network or connection contract and the date on which the provision of services commences or the principal parameters of the natural gas sold under the contract for the sale of gas;
- main quality indicators of the service provided on the basis of the network or connection contract, or a reference to the available document in which these main indicators are presented;
- the time of initial connection to the network in accordance with the connection contract entered into for connection to the network or for amendment of the consumption or production conditions;
- a description of the maintenance services provided;
- the manner of obtaining relevant information concerning the charges payable under the contract;
- the conditions for amendment of the contract and the conditions for cancellation of the contract, including cancellation without charge;
- information concerning the conditions under which the consumer may obtain a refund or a money or other compensation if the quality of services provided under the network contract, sales contract or connection contract do not conform to the terms and conditions of the corresponding contract;
- information on the procedure of resolution of complaints;
- in the case of a network contract or a sales contract, the term of the contract and the conditions for renewal and termination of the contract;
- the procedure for estimating the amount of consumption by the network operator in the case that the customer has not provided that information;
- the options of payment for the service.

The standard terms and conditions of the contracts for the sale of gas shall, amongst other things, set out the following:

- the name, registration number in the Commercial Register, address and other contact details of the seller;
- a description of the services provided;
- the principal quality parameters of the services provided or a reference to a document which is accessible and which sets out such parameters;
- the procedure for notification of customers of the charges applied;
- the term of the contract, conditions for renewal, amendment and termination of the contract;
- conditions for cancellation of the contract without charge;
- the options of payment for the service.

Besides aforesaid the contract for the sale of gas shall set out the category of supply.

A contract for the sale of gas to a household customer may also include provisions of the contract for network services which deal with the provision of the network services necessary for the distribution of the gas to be sold.

With the amendment of the Natural Gas Act in 2017 it was established that, the seller of gas has to allow the termination of a contract for the sale of gas in the case of the customer's switching to another seller within 14 days of submission of the corresponding application by the customer. The new sales contract enters into force at the change of calendar month.

According to the Natural Gas Act the network operator or the seller shall forward to the customer a corresponding notice at least 30 days prior to amending the terms and conditions of a contract, including prices and tariffs. The notice shall set out the envisaged amendments, the basis for the envisaged amendments and the date on which they are intended to take effect, as well as information concerning the fact that the consumer is entitled to cancel the contract if he does not agree to the amendments.

3.3.2 Customer information

Both the gas network undertakings and the sellers of gas are obliged to maintain a web site and disclose on it the following information:

- charges for network services;
- maximum prices for gas;
- method for the calculation of connection fees;
- standard terms and conditions for contracts.

The network charges shall be disclosed at least 90 days and the prices for the gas for household consumers at least 30 days prior to their entry into force. In addition to the web site the tariffs have to be published also in at least one daily national newspaper. Besides the undertakings also the regulator is obliged to disclose all approved network service prices on its web site.

All gas undertakings are obliged to submit an invoice to a consumer for the consumed gas and network service at least once a month, unless otherwise agreed upon with the consumer.

No additional fee shall be charged for the submission of the invoice.

In case of a customer's switch to another seller, the former seller submits to the consumer final settlement invoice in six weeks after the termination of sales contract.

3.3.3 Ensuring access to customer data

For efficient functioning of the gas market, promote competition between traders and change/switch of open supplier the system operator has developed the digital environment – the data exchange platform (the Data Store). The task of the Data Store is ensuring efficient data exchange processes in fully opened market considering equal treatment principles. The Data Store integrates data of all the contracts related to the sale of natural gas and network services, as well as the metering data on the consumption of natural gas.

Similarly to a consumer of electricity a consumer of gas has the right to get the following information by means the Data Store:

- name of the network undertaking with whom the consumer has entered into network contract and validity period of the contract;
- name of the seller with whom the consumer has entered into open supply contract for a connection point(s) and validity period of the contract;
- natural gas quantities measured at consumer related metering points, with the possibility to observe historical consumption data;
- names of those sellers to whom the consumer has given the authorisation to see its consumption data and who have inquired for the data.

3.3.4 Definition of protected customer and disruption of gas supply

The Natural Gas Act sets out that unprotected customer is a household customer to whom subsistence benefit has been awarded pursuant to section 22(1) of the Social Welfare Act.
The Natural Gas Act does not provide advantages for vulnerable customers, instead, they are able to consume gas through the subsistence benefit.
The Natural Gas Act provides for suspension of gas supply. According to it network operators have the right to suspend a network connection without giving advance notice thereof to the final customer if there is a danger to the life, health or property of persons or to the environment. A network operator has the right to suspend a network connection immediately after it is established if there has been an unauthorised consumption of gas. Besides aforesaid, a network operator has the right to suspend gas supply, giving at least 7 days' advance notice, if:

- damaging the technical parameters of the network;
- the network operator is prevented from accessing a metering system located within territory owned or possessed by a final customer in order to inspect or replace the system or to perform necessary work for the gas installation to operate;
- breach of the contract entered into on the basis of the Natural Gas Act or violation of the stipulated conditions.

If a household customer fails to pay the contractual charge in time and if the customer has a permanent residential space heated by gas, supply may be suspended during the period from 1 October to 1 May only when at least 90 days have passed since relevant notice.

Before the gas supply is suspended in events as described above, the network operator shall give the final customer a reasonable term to eliminate the deficiencies and shall notify the final customer of the pending suspension in writing. The notice shall set out the grounds for suspension of gas supply, the term for elimination of the deficiencies. A network connection or gas supply that has been suspended for the reasons explained above shall be restored after the customer has paid for the justified costs of suspension and reconnection, unless the contract has been terminated.

3.3.5 Selling obligation and final consumer price regulation

According to the Natural Gas Act a seller of gas possessing the biggest market share within its network area is required to sell gas, within the technical limits of the network, to all household customers who have a network connection and are willing to buy.

In addition to above the Act provides that a market dominant producers applies a principle in setting up prices for the gas sold to household consumers that the weighted average price for gas contains the import price and a sales margin added to it.

In the purchasing of gas an undertaking shall base on good business practice and buy gas at the most favourable price and in case of a market dominant undertaking the sales margin added to the purchase price is subject to approval by the Competition Authority. Small gas sellers (which are not in market dominant position) have no obligation to approve with the Competition Authority their sales margin as a component of the price of gas sold to household consumers.

According to the Neural Gas Act the ceiling rate of the sales margin must cover the costs incurred in the sale of gas and ensure justified profitability. The Authority has developed and disclosed in its web site a unified methodology for the calculation of the ceiling rate of the sales margin and relies on it in the approval process. According to the methodology the sales margin consists of the sum of non-controllable costs, operating costs, capital expenditure and a justified return, which is divided by the anticipated sales volume.

The Authority applies *ex-post* regulation to the gas sold to households and this is first of all in relation to the market dominant seller of gas. If during a calendar year a weighted average price for sold gas differs from the weighted average purchase price with the added sales margin for the same period, then at the end of each calendar year the undertaking makes a settlement of accounts (equalization) with its consumers during three months' period and submits a relevant report to the Authority each year by 1 May at the latest. The equalization shall be reflected on a separate line of the sales invoice.

3.3.6 Smart metering systems

With the amendment of the Natural Gas Act in 2017 it was established that a network operator has to ensure from 1 January 2020, that any metering point through which a quantity of at least 750 cubic metres of gas is consumed from its network in a year is equipped with a metering system which, when measuring the quantity of gas, takes into account the temperature of gas in the metering system, and allows for remote reading of metering data.

When gas is consumed at a pressure that exceeds 20 millibar, the metering system, when measuring the gas, must take into account pressure and temperature and allow for remote reading of metering data.

From 1 January 2021 network undertakings shall ensure that the metering systems with remote reading function forward the metering data to the data store in each business day.

3.3.7 Resolution of disputes in natural gas sector

The Competition Authority has the right to get necessary information from a market participant and from state and local municipal authorities, the right to enter their territory, premises and facilities for the purpose of on-site inspection, examine the documents necessary for supervisory activities and other information and circumstances and make extract, transcripts and copies thereof.

The Authority can also inspect the accounts and price practices applied by gas undertakings and obtain necessary information concerning their economic activities. The Competition Authority can establish temporary prices for the transmission and distribution of gas for no longer than two months in situations where those prices are not justified or the gas undertaking fails to follow a precept issued by the Authority. The Authority can establish development obligation for an undertaking through the conditions of activity licence. For example, an obligation to invest in gas network can be imposed if the operator's former performance has not secured stable gas supply to customers in accordance with requirements.
All market participants have the right to refer to the Competition Authority as to an extra-judicial body. A market participant may record a written complaint with the Authority against an action or an omission of another market participant which is in conflict with the Natural Gas Act or legislation established on the basis thereof. The Authority reviews the complaint and makes a decision thereon within 30 days as of the receipt of the complaint. If the Authority requests information necessary for resolving the complaint, the passage of the term shall be suspended, but not for longer than 60 days. The Authority's decisions can be challenged with an administrative court in 30 days since receiving of the decision.
In 2019 there were 8 natural gas related customer inquiries in total. The main topics were contractual disagreement issues.
Besides, in 3 cases gas undertakings referred to the Competition Authority.

3.3.8 Numerical indicators of customer protection

Table 34. Numerical indicators of customer protection

Customer indicators (household consumers of gas)	2016	2017	2018	2019
Number of household consumers of gas	48 194	48 710	48 296	48 394
Number of household consumers using universal service	n/a	1 408	1 911	1 567
Volume of universal service (GWh/year)	n/a	114	47	21
Number of actual business days between submission of invoice and disruption of connection due to failure to pay	105	129	98	98
Number of disruption of household connections due to failure to pay	3	27	24	48

Universal service is the statutory (derived from Natural Gas Act) obligation of the network operator to sell gas to a household customer in case if the customer has no valid open supply contract.

3.4 Security of natural gas supply

3.4.1 General indicators of security of supply

From the security of supply point of view, it is important to know what is the share of natural gas in the energy balance (in final consumption). The statistics of 2018 is presented in Figure 20 (Statistics Estonia will publish the 2019 data in the autumn of 2020).

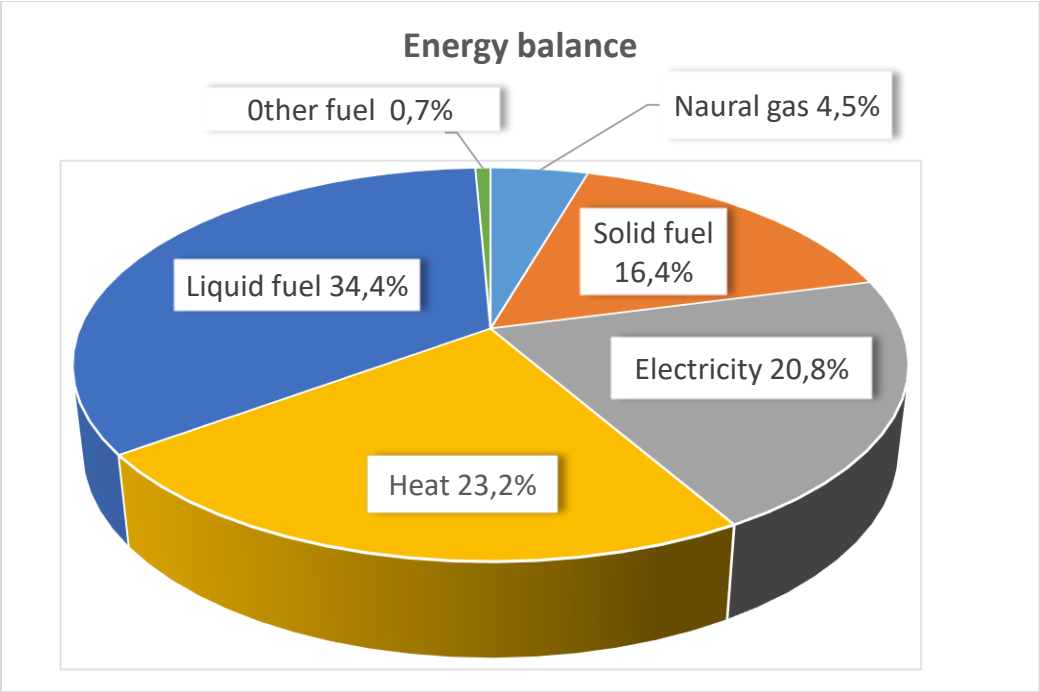

Figure 20. Energy balance 2018 (source: Statistics Estonia KE024)

The changes in the share of natural gas in the energy balance is presented in Figure 21. The share of natural gas has been quite stable, being on average about 4,5%.

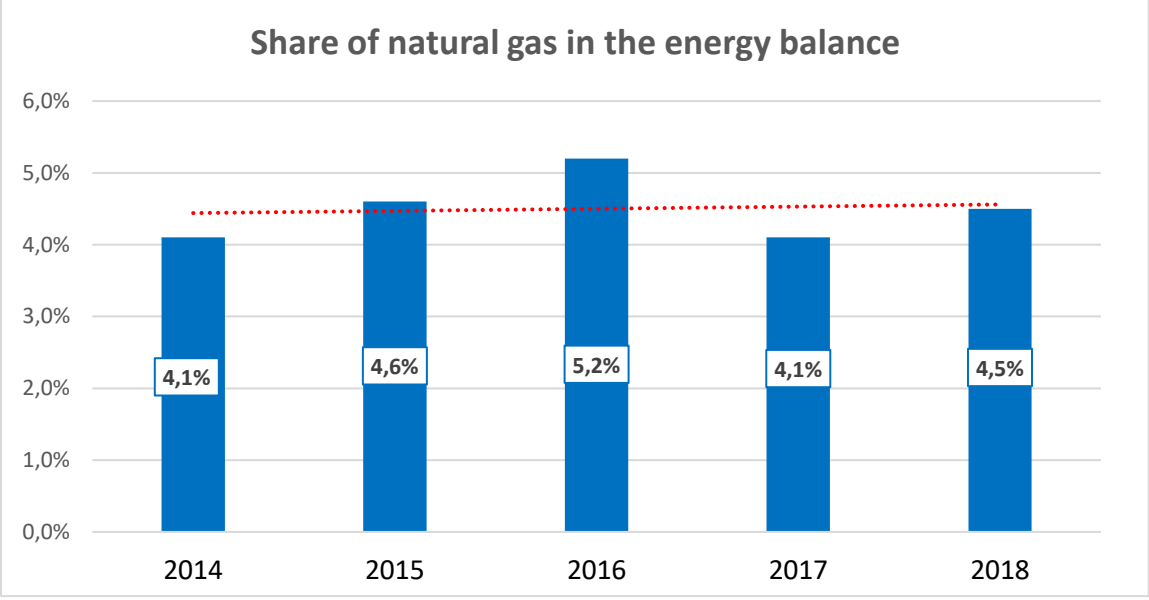

Figure 21. Share of natural gas in energy balance (source: Statistics Estonia KE024)

The share of heat in the energy balance is 23,2% (see Figure 20). Figure 22 presents the fuels that were used for the production of heat. Wood fuel has the biggest share, while the second is natural gas.

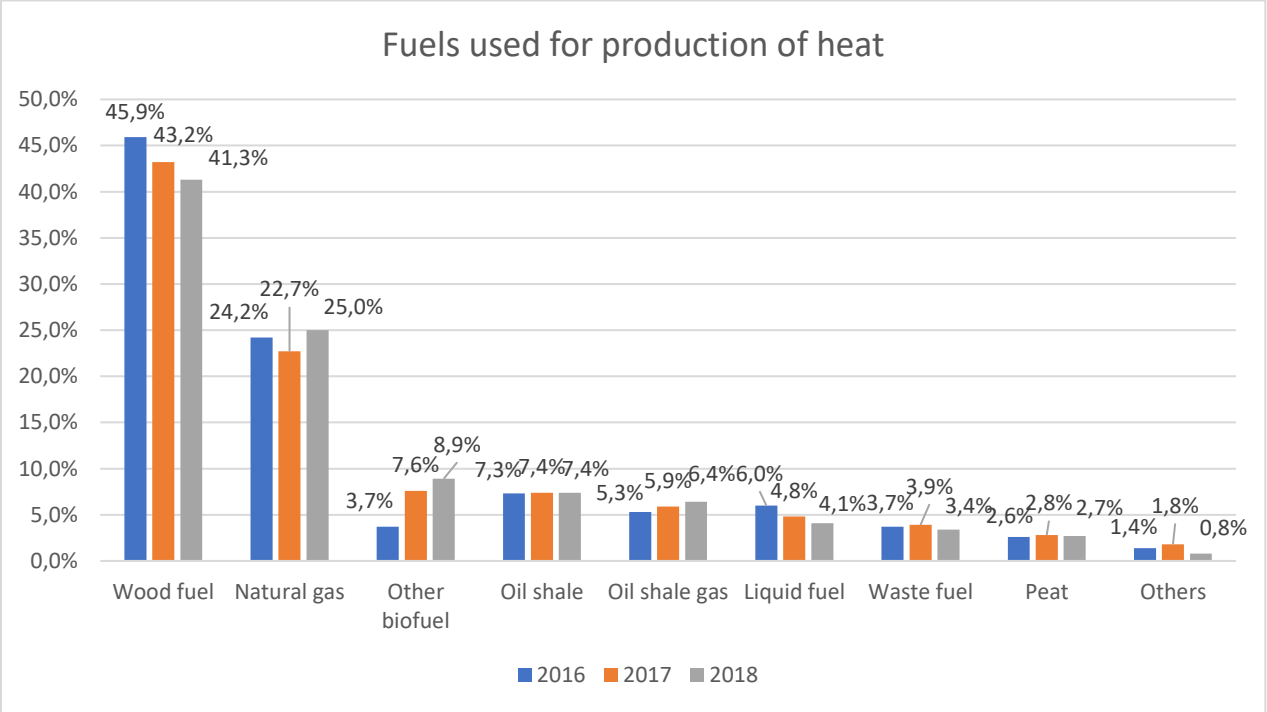

Figure 22. Fuels used for production of heat (source: Statistics Estonia KE024)

The share of natural gas in the production of electricity in the last five years has been 0,5%÷0,6% of the total produced electrical energy.

There is no lack of import capacity, as the gas network has been built up to satisfy considerably higher demand.

The Estonian transmission system technical transfer capacity in 2019 was 147 GWh per day (24h). The technical capacities of individual connections were the following:

- Karksi connection with Latvia 73,5 GWh daily (at the incoming pressure of 40-42 bar)
- Värska connection with Russia 42,0 GW daily (at the incoming pressure of 40-42 bar)
- Narva connection with Russia 31,5 GWh daily (at the incoming pressure of 28-30 bar)

In connection with the finalising of the Balticconnector and the reconstruction of the Estonia-Latvia connection the following transmission network technical transfer capacity changes will take place by the end of 2020.

- Karksi bi-directional connection with Latvia 105,0 GWh daily (at the incoming pressure of 40-42 bar);
- Balticconnectori bi-directional connection with Finland 81,2 GWh daily (at the incoming pressure of 68-70 bar);
- Russia may terminate the ability to supply gas through Narva border crossing.

The actual peak load of gas connections during the last 10 years is presented in Figure 23.

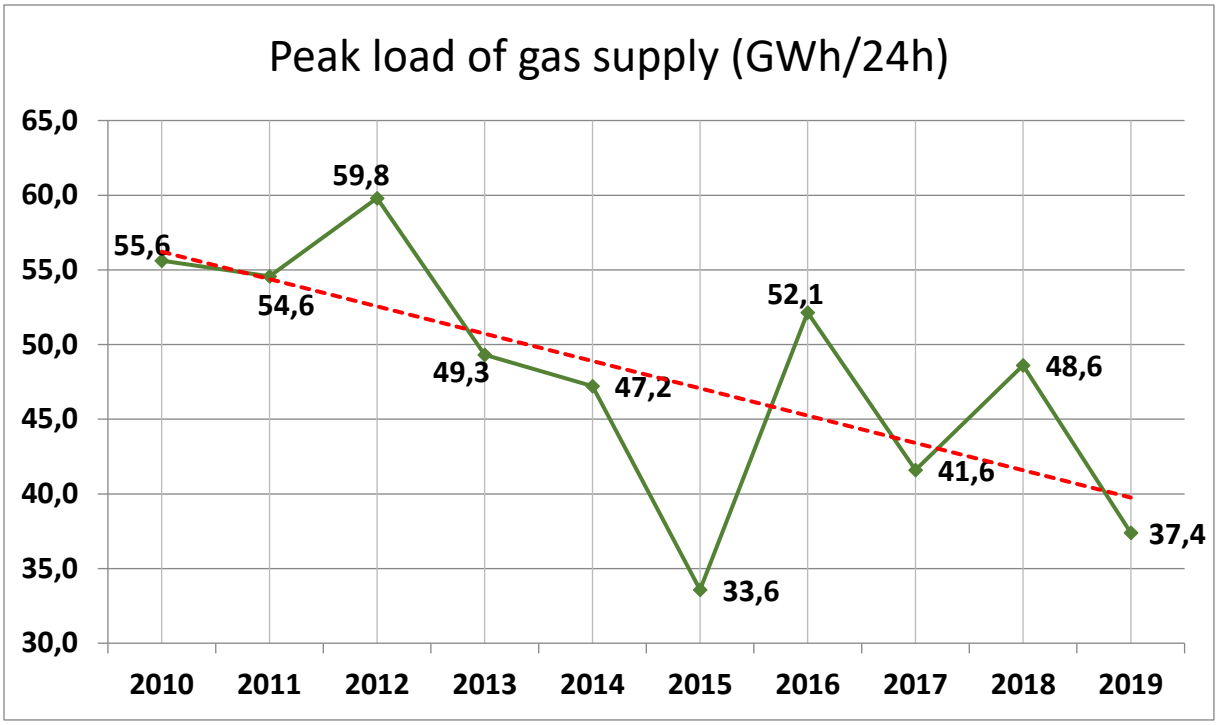

Figure 23. Peak load of natural gas cross-border connections (source: Elering AS)

The highest daily consumption in 2019 was on 22 January (37,373 GWh/day).
The highest daily consumption in the last 10 years was in February 2012, which constituted 40% of the technical transmission capacity. Thus, so far there have not been problems with natural gas supply to satisfy the Estonian gas demand.

3.4.2 Assessment of risk

The Estonian national risk assessment is based on Regulation (EU) 2017/1938 of 25 October 2017 that treats of the measures to safeguard the security of gas supply.

Pursuant to point 22 of Article 37 of the Natural Gas Act the Competition Authority performs the duties imposed on the competent authority by virtue of Article 3 of Regulation (EU) No 994/2010 of the European Parliament and of the Council. Deriving from the regional risk assessment [31] in Estonia the competent authority is the Ministry of Economic Affairs and Communications, which ensures the application of the measures provided for by Regulation (EU) 2017/1938.

Regulation (EU) 2017/1938 sets forth that the risk assessments have to be conducted at Member State, regional and Union level. Herewith, the Union risk assessment results have to be taken account on the regional level and the regional assessment results in a Member State level.

Regulation (EU) 2017/1938 places Estonia into Belorussian risk group and into the North-Eastern region (Finland, Estonia, Latvia and Lithuania) risk group. On the data of the assessment by European Natural Gas Transmission System Operators' Network (ENTSOG) possible Estonian risks may occur in the North-Eastern risk group.

According the Joint Research Centre (JRC) North-Eastern regional risk assessment a single separate risk for Estonia is a disruption of Estonia-Latvia cross-border connection due to technological risks

[31] Regional Risk Assessment of Security of Supply of Finland, Estonia, Latvia, Lithuania (2018)

(explosion, fire, intense leakage and alike). JRC evaluated the probability of such event as low (once in 1000 years in average).

The second factor of risk for Estonia according to the JRC regional risk assessment is a failure of the Inčukalns gas storage due to technological risks (explosion, fire, intense leakage, faulty equipment and alike) in combination with a total destitution of gas supply from Russia due to geopolitical risks (boycott, political unrest, terrorism and alike). Neither of the single risk categories, taken separately, affects the Estonian security of supply. JRC evaluated the probability of such combined event as very low (once in 1750 years in average).

The third risk that influences Estonia according to the JRC regional risk assessment is a low level of gas in the Inčukalns gas storage (commercial risk) during a cold wave in March (environmental risk) in combination with a total destitution of gas supply from Russia due to geopolitical risks (boycott, political unrest, terrorism and alike). None of the single risk categories, taken separately, affects the Estonian security of supply. JRC evaluated the probability of such combined event as quite low (once in 300 years in average).

The infrastructure standard shows whether the technical capacity of all remaining available gas infrastructure in the event of disruption of the single largest gas infrastructure is sufficient to supply total daily gas demand of the calculated area during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years.

The adequacy of the technical capacity of the infrastructure is calculated according to the formula N-1 of the Regulation (EU) 2017/1938.

The calculations shall take into account gas consumption trends, the long-term impact of energy efficiency measures and the utilisation rates of existing infrastructure.

The N-1 criterion, expressed as percentage shall be equal or higher than 100%. In such case the infrastructure corresponds to the security of supply requirements.

Regulation (EU) 2017/1938, Appendix II formula:

$$N-1 = \frac{EP_m + P_m + S_m + LNG_m - I_m}{D_{max}} \times 100\ \%$$

The parameters of the N-1 formula are:

„EPm“ means the sum of the technical capacity of all border entry points capable of supplying gas to the calculated area.

„Pm“ means the sum of the maximal technical daily production capability of all gas production facilities which can be delivered to the entry points in the calculated area.

„Sm“ means the sum of the maximal technical daily withdrawal capacity of all storage facilities which can be delivered to the entry points of the calculated area, taking into account their respective physical characteristics.

„LNGm“ means the sum of the maximal technical daily send-out capacities at all LNG facilities in the calculated area.

„Im“ means the technical capacity of the single largest gas infrastructure with the highest capacity to supply the calculated area. When several gas infrastructures are connected to a common upstream or downstream gas infrastructure and cannot be separately operated, they shall be considered as one single gas infrastructure.

Dmax“ means the total daily gas demand of the calculated area during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years.

The biggest daily gas demand in the last 20 years was in January 2006, when the peak load was 70,3 GWh/per day (6,7 mcm/d). Taking into account the trends in gas consumption (close down of the fertiliser producer AS Nitrofert, conversion to use of wood chips at many large heat producers), the peak demand is more correctly characterised with the daily consumption in February 2012 of 59,85 GWh/d (5,7 mcm/d).
The assessment of risk is based on the consumption during a day of exceptionally high gas demand occurring with a statistical probability of once in 20 years, in rounded quantity of 60,0 GWh/d.

Table 35. Calculation of N-1 for Estonia

Parameter	Values 2019	Values 2020
	GWh/24h	GWh/24h
EP_m	147,0	228,2
Karksi	73,5	105,0
Värska	42,0	42,0
Narva	31,5	0,0
Balticconnector	0,0	81,2
P_m	0	0
S_m	0	0
LNG_m	0	0
I_m	73,5	105
D_{max}	60	60
N-1	123%	205%

Thus, in Estonia the infrastructure complies with the requirements established in the European Union for the security of supply of consumers.

Considering current consumption volumes, the gas system in Estonia is quite flexible and this enables to cope with most of risks. The only risk having impact on the security of supply is an event of disruption of the Latvia-Estonia cross-border connection during the period of peak demand. However, the probability of occurrence of such event is extremely low (once in 1000 years). A scenario, when the supply of gas from Russia is completely disrupted in March and the reserves of the Inčukalns gas storage are small and, at the same time, a cold wave occurs, is the basis for the preparation of the preventive action plan and the emergency situation plan for Estonia.

According to the Natural Gas Act the Competition Authority shall submit a plan for coping with supply disruptions and the preventive action plan for reducing the risks affecting the security of gas supply to the Ministry of Economic Affairs and Communications. The Competition Authority updated the plans

on the basis of risk assessment in 2019 and presented the updated plans for endorsement to the Ministry of Economic Affairs and Communications.

The security of supply of Estonia and the North-Eastern region is improved by the Klaipeda LNG terminal and Balticconnector, which started operations in 2020. The non-market measures like limitation of consumption in case of supply disruptions could be applied in Estonia in case of absence of notional alternative suppliers of natural gas. However, taking into account the developments in gas market (common region with Finland and other Baltic countries) the probability of application of possible non-market measures in the future is very small.