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# Network Code on the Functioning of the Electricity System

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This Regulation is enacted under subsection 3 of § 42 of the Electricity Market Act.

## Chapter 1 General Provisions

### § 1. Scope of application

(1) This Regulation establishes:

- 1) requirements applicable in respect of the security of supply in the electricity system;
- 2) technical requirements for electrical installations which are dictated by the security of supply in the electricity system;
- 3) the rules governing restriction or interruption of the supply of electricity;
- 4) technical and metrological requirements for the metering of the electricity consumed from or supplied to the network and for the metering equipment;
- 5) the rules governing connection to the network and modification of consumption or generation conditions;
- 6) the rules governing the calculation of charges payable to the network operator for connection to the network and for modification of consumption or generation conditions;
- 7) conditions for technical cooperation between the transmission network operator and the relevant network operators of neighbouring countries.

(2) Section 16 is applicable to the following power-generating modules:

- 1) power-generating modules that conform to the requirements specified in paragraph 1 of Article 4 of Commission Regulation (EU) 2016/631 establishing a network code on requirements for grid connection of generators (OJ L 112, 27.4.2016, pp. 1–68);
- 2) power-generating modules that do not conform to the requirements specified in paragraph 2 of Article 4 of Commission Regulation (EU) 2016/631;
- 3) existing power-generating modules which fall under Article 4 of Commission Regulation (EU) 2016/631 and in respect of which the system operator has received an application regarding the implementation of the requirements of Commission Regulation (EU) 2016/631.

### § 2. Definitions

(1) The Regulation uses terms as defined for the purposes of the following legal instruments:

- 1) § 3 of the Electricity Market Act;
- 2) Article 2 of Commission Regulation (EU) 2016/631;
- 3) Article 2 of Commission Regulation (EU) 2016/1388 establishing a Network Code on Demand Connection (OJ L 223, 18.8.2016, pp. 10–54);
- 4) Article 2 of Commission Regulation (EU) 2016/1447 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current connected power park modules (OJ L 241, 8.9.2016, pp. 1–65);
- 5) Article 3 of Commission Regulation (EU) 2017/1485 establishing a guideline on electricity transmission system operation (OJ L 220, 25.8.2017, pp. 1–120);
- 6) Article 3 of Commission Regulation (EU) 2017/2196 establishing a network code on electricity emergency and restoration (ELT L 312, 28.11.2017, pp. 54–85).

(2) In addition to those referred to in subsection 1, this Regulation uses certain terms which are defined as follows:

- 1) ‘automatic failure-prevention equipment’ means automatic control devices intended to ensure the stable functioning of the electricity system and to prevent system blackouts, except for automatic control devices

which, under an agreement between the market participant and the system operator, alter the generation or usage capacity of the market participant or switch on or off certain electrical equipment of the market participant;

- 2) 'operating security of the electricity system' means the capacity of the electricity system to ensure the coherent functioning of power plants and electricity networks in the operation of that system;
- 3) 'connection enclosure' means the electrical enclosure that houses the connection point;
- 4) 'metering system' means the assembly of metering equipment and accessory devices which is intended to determine the parameters of the electricity consumed from or supplied to the network;
- 5) 'N-1-1' means emergency switch-off of an element of the electricity system when one of the elements that significantly influences the operation of that system is under maintenance or is being repaired;
- 6) 'area' means the supply area of a 330 kV substation;
- 7) 'automatic frequency-based device' means an automatic device for load control that operates based on the frequency of the electricity system;
- 8) 'consumption conditions' means the voltage system, the capacity of the network connection when electricity is consumed from the network, the permissible duration of interruptions in electricity supply or the time that it takes to restore such supply, and the location of the connection point;
- 9) 'generation conditions' means the voltage system, the type and maximum capacity of the power-generating module, the capacity of the network connection when electricity is supplied to the network, the permissible duration of interruptions in electricity supply or the time that it takes to restore such supply, and the location of the connection point.

## **Chapter 2**

### **Security of Supply in the Electricity System**

#### **Division 1**

#### **General Requirements**

##### **§ 3. Requirements for security of supply**

(1) In the event of a disturbance, the unity and operational capacity of the electricity system must persist. Maintaining the security of supply of the system as a whole takes precedence over maintaining the security of supply of a single district.

(2) When planning the operation and development of the electricity system, provision must be made to avoid the common disturbances N-1 and N-1-1 causing deviations in voltage, frequency or other parameters beyond the limits established in Commission Regulation (EU) 2017/1485, or causing extensive supply interruptions or the loss of system stability.

(3) During a disturbance and in a situation resulting from the disturbance, it is permissible for the electricity system to operate with a degree of reliability or of security of supply that falls below that which is usual in the operation of that system, or of certain parts of that system, provided this is required for the localization or elimination of the disturbance or for the restoration of electricity supply to consumers. When developing and operating the transmission network, the system operator makes provision for not allowing fault-caused supply interruptions to exceed the limit values set out in the regulation enacted under subsection 5 of § 65 of the Electricity Market Act.

(4) In order to ensure that the electricity system remains operational, the system operator, in cooperation with the system operators of Latvia and Lithuania, may separate that system from the synchronous area in parallel operation.

#### **Division 2**

### **Planning and Managing the Security of Supply in the Electricity System**

##### **§ 4. Planning and management of the electrical power balance of the electricity system**

(1) The capacity of the power-generating modules in the electricity system must meet the consumption demand of the system or a part thereof after the automatic failure-prevention equipment has been triggered, and must ensure the required level of short-circuit currents.

(2) Subsection 1 of this section applies in the case of normal operation, N-1 disturbances and scheduled interruptions of electricity supply.

(3) The electrical system must have sufficient reserves to guarantee the operational capacity of the system in an emergency.

(4) The system operator has the right to manage the power supplied by the power-generating modules to the extent of the technically available reserve capacity of the relevant equipment if this is necessary for ensuring the security of supply in the system or for the performance of international agreements.

#### **§ 5. Planning the stability of the electricity system**

(1) The normal operation of the electricity system must meet the requirements established in Commission Regulation (EU) 2017/1485.

(2) In order to ensure static stability, the static stability margin of the generators must be at least 20% under normal operation and at least 8% in the restorative state. The stability margin factor  $k_p$  of a generator is calculated by using the following formula:

$$k_p = \frac{P_{max} - P_0}{P_0} \times 100\%$$

where

$P_0$  is the active output power of the generator;

$P_{max}$  is the peak value of the load angle characteristic of the electricity system connected to the generator.

(3) The network operator ensures static stability of the connections between the parts of their electricity network according to active load. The connection's active-load-basis margin factor is calculated using the following formula:

$$k_p = \frac{P_{max} - P_0 - \Delta P}{P} \times 100\%$$

where

$P_{max}$  is the active power corresponding to static stability limit of the connection;

$P$  is the active load passing through the connection;

$\Delta P$  is the peak value of irregular oscillations of active load in the connection in the given mode.

(4) The static stability margin factor calculated according to the connection's active load must be at least 20% under normal operation and at least 8% in the restorative state.

(5) In the nodes of the electricity network and at consumer connection points, the network operator ensures static stability according to voltage. The voltage-basis margin factor is calculated using the following formula:

$$k_p = \frac{U - U_{kr}}{U} \times 100\%$$

where

$U_{kr}$  is the voltage corresponding to the static stability limit of the given load node;

$U$  is the load node voltage.

(6) The static stability margin factor calculated on a voltage basis must be at least 15% under normal operation and at least 10% in the restorative state.

#### **§ 6. Taking of measures to ensure security of supply**

(1) Electricity undertakings operating in the electricity system take measures to ensure the security of supply at the directions of the system operator.

(2) In order to ensure the security of supply in the electricity system or a part of the system, the system operator may, in an emergency, switch off consumption or generation to the extent that is technically required.

#### **§ 7. Operation of automatic failure-prevention equipment to prevent system blackout**

(1) A disturbance must lead to the activation of the relevant automatic frequency-based devices in order to maintain the balance of generation and consumption in the electricity system. The permitted frequency limits are set out in the system defence plan drawn up in accordance with Commission Regulation (EU) 2017/2196.

(2) Where a disturbance leads to more than one element disconnecting from the electricity system, automatic voltage-based load-shedding devices may be activated which may disconnect up to 80% of the electrical installations connected to the network in one or several areas.

(3) The system operator may require market participants who possess automatic failure-prevention equipment to verify the proper functioning of such equipment or to verify this itself.

#### **§ 8. Re-energization of the electricity system**

After a blackout of the electricity system, the system operator re-energizes the system in accordance with the system defence plan developed according to Commission Regulation (EU) 2017/2196.

### **Division 3 Disturbances of the Electricity System and their Consequences**

#### **§ 9. Tripping of one element (N-1)**

(1) The tripping of one element in the system must not cause interruption of consumer supply in the entire area or trigger the operation of automatic failure-prevention equipment.

(2) The system operator eliminates the disturbance in the electricity system following the system defence plan developed according to Commission Regulation (EU) 2017/2196.

(3) An interruption of electricity supply involving an entire area is not permitted when the electricity system is in normal operation or in maintenance mode.

#### **§ 10. Simultaneous tripping of two elements (N-2)**

(1) The simultaneous tripping of two elements must not cause a blackout of the electricity system.

(2) In the event of the simultaneous tripping of two elements, it is permissible for electricity consumption to shut down entirely in one or several areas or, up to 80%, in the entire electricity system.

(3) In the event of the simultaneous tripping of two elements when the electricity system is in normal operation or maintenance mode, the interruption of local electricity supply is permissible.

(4) When the electricity system is in normal operation mode, it is permitted to interrupt the electricity supply of up to 80% of the consumers of an area provided the area's automatic failure-prevention equipment has been triggered.

(5) During scheduled maintenance, interruption of the electricity supply of an entire area is permitted.

(6) In the normal operation mode or during scheduled maintenance it is not permitted to interrupt the electricity supply of several areas simultaneously. In both cases, it is permissible for automatic failure-prevention equipment to be triggered.

#### **§ 11. Simultaneous tripping of more than two elements (N-X)**

(1) As a result of a simultaneous disturbance in more than two elements, the stability of the entire electricity system may be lost and the system may disintegrate into islands, leading to a complete interruption of supply in an area or in several areas.

(2) In order to eliminate the disturbances named in subsection 1, the system operator develops a plan that makes provision for restoring the unity and security of supply of the electricity system. The system operator installs automatic failure-prevention equipment to prevent disturbance-triggered blackouts of the entire system.

#### **§ 12. Criteria for the operating security of the electricity system**

The criteria for the operating security of the electricity system are set out in the Annex entitled 'Operational Requirements for the Electricity System'.

### **Division 4 Generation Supply Required in order to Meet Consumption Demand**

#### **§ 13. Adequacy of the electricity system**

(1) 'Adequacy of the electricity system' means the capacity of that system, in its normal state, to ensure a balance between the consumption and generation of electricity, taking into account scheduled interruptions which have an impact on the adequacy of the system as well as the disturbances described in sections 9–11.

(2) The system operator assesses the adequacy of the electricity system when preparing the report mentioned in subsection 7 of § 39 of the Electricity Market Act, having regard to the provisions of this Division as well as European-level and regional generation adequacy analyses.

(3) For performing an assessment of the adequacy of the electricity system, the electricity producers present to the system operator, following a corresponding request by that operator which has been transmitted at the latest on 1 January, by 1 February immediately following the transmission of the request, the following information concerning the next fifteen years:

- 1) for each synchronous power-generating module and each power park module, their installed generation capacity;
- 2) for each synchronous power-generating module and each power park module, their conserved generation capacity;
- 3) for each synchronous power-generating module and each power park module, the generation capacity in use;
- 4) for each generation unit, the average value of generation capacity that is out of order;
- 5) for each generation unit, the generation capacity that is undergoing scheduled repairs;
- 6) for each synchronous power-generating module and each power park module, the generation capacity that is under reconstruction;
- 7) for each synchronous power-generating module and each power park module, their new generation capacity;
- 8) for each synchronous power-generating module and each power park module, the generation capacity tied into the reserves or generation measures of other states;
- 9) for each power-generating module, any other restrictions.

#### § 14. Assessment of generation supply required for meeting consumption demand

(1) The system operator draws up an assessment of the generation supply required for meeting consumption demand, basing that assessment on the requirement that the adequacy reserve of the system may not be less than the 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.

(2) In addition to the requirement mentioned in subsection 1, the system operator considers the following when drawing up the assessment of the generation supply required for meeting consumption demand:

- 1) the availability of the rated capacity of power plants;
- 2) scheduled interruptions;
- 3) unscheduled interruptions;
- 4) generation reserve required for system services of the transmission network;
- 5) connection contracts concluded with producers;
- 6) electricity import and export contracts concluded with producers.

(3) The adequacy reserve of the electricity system is calculated using the following formula:

$$P_{varu} = \left( \frac{P_{inst} + P_{imp} - P_{mittekasut} - P_{rekonstr} - P_{avarii} - P_{süsteemiteen} - P_{eksp}}{P_{tipukoormus}} \right) \times 100\%$$

where

$P_{inst}$  is the net capacity installed in the system;

$P_{imp}$  is the capacity that can be imported according to the system operator's assessment;

$P_{mittekasut}$  is the net capacity which is installed in the system but which is unusable according to the system operator's assessment;

$P_{rekonstr}$  are the power-generating modules which cannot be used due to reconstruction or due to scheduled repairs;

$P_{avarii}$  are the power-generating modules which cannot be used due to unscheduled interruptions;

$P_{süsteemiteen}$  are the reserves at the disposal of the system operator;

$P_{eksp}$  is the capacity stipulated in binding export contracts;

$P_{tipukoormus}$  is the estimated maximum net consumption of the electricity system including losses.

(4)  $P_{mittekasut}$  includes:

- 1) power-generating modules that have an irregular generation cycle and cogeneration plants that are exclusively heat driven;
- 2) power-generating modules that are not used due to environmental restrictions;
- 3) temporarily shut-down power-generating modules;
- 4) power-generating modules which are not used due to limitations of fuel supply, or unused net capacity.

(5) When ascertaining the adequacy reserve of the electricity system, consideration is to be given to throughput restrictions imposed by the system operator on export from and import to the neighbouring electricity systems and the dependence of those systems on the transit passing through the Estonian electricity system.

(6) Market participants must notify the system operator in advance of any electricity export and import contracts they envisage to conclude.

#### **§ 15. Publication of assessments and estimates**

(1) The system operator draws up a forecast of maximum and minimum consumption, assesses the potential difference between the base load and peak load and publishes the results on its website by 1 June each year. When drawing up a forecast of maximum consumption, the weather conditions characteristic of the season are taken as the basis.

(2) The system operator publishes on its website, by 1 June each year, for the January, which is indicative of maximum consumption, and for the July, which is indicative of minimum consumption, of each of the following fifteen years, an assessment of system adequacy and of the generation supply required for meeting consumption demand.

## **Chapter 3 Technical Requirements Applicable to Power-Generating Modules**

#### **§ 16. Requirements for power-generating modules**

(1) Power-generating modules are divided into the following categories:

- 1) type A modules – characterized by a connection point voltage below 110 kilovolts (hereinafter, ‘kV’) and by a maximum electrical capacity below 0.5 megawatts (hereinafter, ‘MW’);
- 2) type B modules – characterized by a connection point voltage below 110 kilovolts and by a maximum electrical capacity at least of 0.5 MW but below 5 MW;
- 3) type C modules – characterized by a connection point voltage below 110 kilovolts and by a maximum electrical capacity at least of 5 MW but below 15 MW;
- 4) type D modules – characterized by a connection point voltage at least of 110 kilovolts or by a maximum electrical capacity at least of 15 MW.

(2) Power-generating modules must meet the requirements established in Commission Regulation (EU) 2016/631.

## **Chapter 4 Conditions for Technical Cooperation between the System Operator and the Relevant Market Participants of the Neighbouring States**

#### **§ 17. Managing the operation of the electricity system in a synchronous area**

(1) If the electrical system is operating in a synchronous area and a part of the management of the operation of the synchronous area has been entrusted to the operator of the synchronous area by contracts, the duties related to the management of the synchronous area take precedence over duties related to the operation of the system, and the system operator fulfils the instructions of the operator of the synchronous area as a first priority.

(2) Technical issues related to the stability of the electricity system operating within a synchronous area are resolved by the system operator in cooperation with the operator of the synchronous area.

#### **§ 18. Reserves of capacity and of energy**

(1) An emergency reserve is intended as a replacement for any generation or transmission capacity in the electricity system that unexpectedly goes offline. In a synchronous area, allocation of the inter-system emergency reserve is provided for by an agreement concluded between the system operators.

(2) An adjustment reserve is intended to provide for balancing in accordance with clause 1 of Article 2 of Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing (OJ L 312, 28.11.2017, pp. 6–53).

(3) The system operator may purchase capacity reserves from neighbouring electricity systems of the synchronous area. The costs of the purchase are divided between the electricity systems of the synchronous area by mutual agreement.

(4) The volume of the electricity system’s adjustment reserve and emergency reserve and the rules governing the use of those reserves are determined by contracts concluded between the system operators.

(5) The system operator ensures the procurement and use of inter-system reserves.

## **Chapter 5**

### **Connection to the Network and the Calculation of Fees**

#### **§ 19. Application for connection and the modification of consumption and production conditions**

(1) In order for a new network connection to be established or for the consumption and production conditions of an existing network connection to be modified, the market participant files an application with the network operator as well as, where the network operator demands this, the following particulars and documents:

- 1) with respect to the electrical installation that is to be connected to the network, the decision establishing the spatial plan that allows such an installation to be erected, the conditions for designing that installation or the building permit for the installation, to show that the installation complies with the land use or building conditions of the spatial plan, or with the conditions for designing the installation, or with the building permit;
- 2) the decision made by the decision-maker referred to in the Environmental Impact Assessment and Environmental Management System Act, which proves that environmental impact has been assessed, or under which the assessment of such an impact is not required;
- 3) documents showing that the market participant who wishes to be connected to the network has a legal basis for using the registered immovable or building for which they wish a network connection to be established.

(2) The network operator has no right to demand the particulars and documents mentioned in subsection 1 if modification of the consumption or production conditions of the existing network connection does not require the building of a new connection point or the installation of a supplementary production module or where the capacity of the power-generating module to be connected to the network is up to 15 kW.

(3) Any new connection to the transmission network is established at the nominal voltage of 110 kV or 330 kV.

(4) Any market participant who, under subsection 2 of § 22 of the Electricity Market Act, does not require an authorization in order to provide a network service, may either be connected to the transmission network or to the distribution network.

(5) In the case where a new network connection is to be established or the consumption or production conditions of an existing network connection are to be modified, the configuration and technical parameters of the network are determined by the network operator.

(6) Where the market participant so wishes, the network operator issues them with the technical conditions for the connection which set out the estimated connection fee as well as information concerning connection-related reconstructions of the electricity network and connection-related new electrical installations.

#### **§ 20. General conditions of the connection contract**

(1) In order for a new network connection to be established for a given electrical installation, or for the consumption or production conditions of an active network connection to be modified, the network operator, following the corresponding application, issues a contract offer, which includes at least the following conditions:

- 1) the consumption or production conditions requested;
- 2) the amount of the connection fee or of the fee charged for modification of the conditions, and the conditions applicable to payment of that fee;
- 3) the time-limit for establishing the new network connection or for modifying the consumption or production conditions;
- 4) the conditions for amending and for terminating the contract.

(2) Unless agreed otherwise, the offer to conclude a connection contract remains valid for 60 days from the day it was issued.

(3) If no design work or building work needs to be carried out in order to perform the connection contract, the network operator has the right to present an invoice to the market participant for the costs associated with conducting the procedure and performing the operations related to the conclusion of the connection contract, to be paid as one of the instalments under the connection contract.

#### **§ 21. Contract for connection to the transmission network**

(1) Unless agreed otherwise, the transmission network operator issues the market participant with an offer for the conclusion of the connection contract within 90 days from receiving a corresponding application that meets the requirements.

(2) Unless agreed otherwise, the instalments to be paid under the network contract concluded between the market participant and the transmission network operator are divided as follows:

- 1) the first instalment makes up 20% of the initial fee stipulated in the connection contract;

- 2) the second instalment makes up 50% of the initial fee stipulated in the connection contract;
- 3) the third instalment constitutes the remainder of the actual costs from which the amounts paid in accordance with clauses 1 and 2 have been subtracted.

(3) Unless agreed otherwise, the market participant pays the instalment mentioned in clause 1 of subsection 2 within 60 days from concluding the connection contract and the instalments under clauses 2 and 3 within 45 days from receiving the corresponding invoice.

(4) Unless agreed otherwise, the network operator issues the invoice under clause 2 of subsection 2 within 20 days following announcement of the winning tender, and the transmission network operator issues the invoice under clause 3 within 30 days following completion of the connection point.

## **§ 22. Contract for connection to the distribution network**

(1) Unless agreed otherwise, the distribution network operator issues the market participant with an offer for conclusion of the connection contract within 30 days from receiving a corresponding application that meets the requirements.

(2) If the making of the offer by the distribution network operator depends on an operation to be performed by the transmission network operator, and unless agreed otherwise, the distribution network operator issues the offer for the connection contract within 30 days following the performance of the operation by the transmission network operator.

(3) The distribution network operator and the market participant may conclude the connection contract and the network contract at the same time.

## **§ 23. Notification of connection of power-generating modules to the distribution network and its approval by the transmission network operator**

(1) The network operator presents the transmission network operator, by 1 February of every year, with information, by each connection to the transmission network, concerning the net installed capacity of each connected synchronous module and energy farm module.

(2) Prior to connecting a type C or type D power-generating module to the network, the owner of the module is to obtain the approval of the transmission network operator regarding the design documentation of the electrical part of the power-generating module and the modelling model that conforms to Commission Regulation (EU) 2016/631.

(3) The system operator disseminates, by 1 June of every year, through its website, the following particulars concerning the power-generating modules connected to the network:

- 1) the time the module was connected to the network;
- 2) the location of the connection point and the connection voltage;
- 3) the name of the power plant;
- 4) the type of the power plant;
- 5) the capacity connected.

## **§ 24. Special rules for connection to the network of power-generating modules**

(1) If the offer of connection is issued to a producer who performs their generation by a cogeneration plant whose maximum electrical capacity is up to 5 MW or a generating module whose maximum electrical capacity is up to 200 kW, the transmission network operator, when drawing up the connection offer, does not take into account:

- 1) any connection offers made to other producers;
- 2) production capacities with respect to which a connection contract has been concluded but whose connection to the electricity network is scheduled such that it post-dates the connection to the network of the generating modules of the producer who is requesting a connection offer.

(2) If connection to the electricity network of a cogeneration plant whose maximum electrical capacity is up to 5 MW or of a generating module whose maximum electrical capacity is up to 200 kW has an impact on the connection capacity of the producer who concluded the connection contract, the transmission network operator establishes an additional connection capacity in order for such a module to be connected. In this case, the connection costs are also deemed to include costs that are incurred when, due to the connection, the network development obligation is performed before scheduled time.

(3) The costs of performing the network development obligation are not to be included in the connection fee if the network operator has started to perform that obligation before the filing of the connection application. The definitive connection fee is set by the network operator in the connection offer.

(4) The network operator has started to perform the development obligation if the corresponding investment appears in the plan of approved investments for at least the year when the connection offer is made or for the year following that year.



## **§ 25. Connection fee and the fee for modification of consumption or production conditions**

(1) When calculating the connection fee to be charged for establishing a new network connection, or the fee for a modification of consumption or production conditions, the network operator proceeds based on the justified costs involved. The connection fee or the fee for the modification of consumption or production conditions, and any components of those fees, may be based on average costs.

(2) In the accounts for a given year, the total of the connection fees or of the fees for modifications of consumption or production conditions that have been charged by the distribution network operator may not exceed the expenditures made towards performing the connection contracts.

(3) The expenditure required to connect new consumption or production capacities or for modification of consumption or production conditions is included in the connection fee or the fee for modification of the consumption or production conditions.

## **§ 26. Location and description of the connection point**

(1) In the case of connection to the distribution network at a voltage of up to 1000 volts (hereinafter, 'V'), the connection point is located:

- 1) in close proximity to the relevant registered immovable that belongs to the market participant;
- 2) in the connection enclosure located on the registered immovable of the market participant;
- 3) in the distribution device of the substation situated in the registered immovable of the market participant or on the border of that immovable
- 4) in the connection enclosure of the relevant building or
- 5) at a location agreed between the market participant and the network operator.

(2) In the case of connection to the distribution network at a voltage of over 1000 volts, the connection point is located in the distribution device of the substation or on a pole supporting the overhead line, or at a location agreed between the market participant and the network operator.

(3) If the location of an existing connection point whose voltage falls under 1000 V is not fixed with the network operator in a document, the connection point is located:

- 1) in the case of supply from an overhead line, on the first insulators as viewed from the supply side which are located on the building or on the upright trunking conduit;
- 2) at the point where the cable that is part of the consumer's electrical installation connects to the overhead line of the network operator;
- 3) in the distribution enclosure of the cabling installation or in the distribution device of the substation;
- 4) in the cabling installation of a residential building, in the main enclosure, on the building-side terminals of the main breaker.

(4) In cases falling under clause 1 of subsection 3, the upright conduit and insulators constitute a part of the consumer's electrical installation, while the connection terminals or connection bandages belong to the network operator. In cases falling under clause 2 of subsection 3, the connection terminals or connection bandages belong to the network operator. In cases falling under clause 3 of subsection 3, the cable and cable shoes are part of the consumer's electrical installation.

(5) In the case of connection to the transmission network, the connection point is located in the substation.

## **§ 27. Ensuring a network connection**

(1) The network operator ensures the presence of a network connection that conforms to the connection contract, provided a valid network contract has been concluded with respect to the use of the network connection and provided no grounds for refusing the provision of network service are present.

(2) The network operator energizes the network connection after it has verified, by consulting the technical regulatory information system established under § 12 of the Equipment Safety Act, that an audit of the relevant electrical installation has been performed, and that according to the verdict of that audit, the equipment is in working order and safe to be used for its intended purpose and in the intended manner.

(3) If, under the regulation on requirements for electrical installations that has been enacted under clauses 1–C0#3F4 of subsection 4 of § 9 of the Equipment Safety Act, the auditing of the electrical installation prior to its being taken into commission is not required, the network operator energizes the connection after it has received the certificate provided for in the aforementioned regulation concerning conformity to the requirements and safety of use of the electrical installation in question.

## **§ 28. Changing of the voltage system**

(1) If the changing of the voltage system at low voltage (up to 1000 V) is initiated by the network operator, the consumer must ensure, within three years from receiving the corresponding notice from the network operator, that their electrical installation meets the requirements and adjust it such that it conforms to the new voltage system. The designing and building of the cable installation between the connection enclosure that is part of the consumer's electrical installation and the main distribution board enclosure of the building is funded and arranged by the network operator.

(2) If the changing of the voltage system at a medium or high voltage (over 1000 V) is initiated by the network operator, the consumer must ensure that their electrical installation meets the requirements and adjust it such that it conforms to the new voltage system, and the network operator bears the related justified costs.

(3) The changing of the voltage system at the initiative of the consumer is regarded as modification of the consumption or production conditions.

## **Chapter 6 Metering**

### **§ 29. Requirements applicable to the metering of electricity**

(1) The network operator or the possessor of a closed distribution network meters, in kilowatt-hours (hereinafter, 'kWh'), the active energy consumed by the market participant provided that the contract concluded with the market participant provides for the possibility of taking electrical energy from the network.

(2) The network operator or the possessor of the closed distribution network meters, in kWh, the active energy supplied to the network by the market participant provided the contract concluded with that market participant provides for the possibility of feeding electrical energy into the network.

(3) The network operator or the possessor of the closed distribution network meters, in kilovolt-ampere reactive hours, the reactive energy consumed from or supplied to the network by the market participant provided that, at a voltage of up to 1000 V, the breaker at the market participant's connection point exceeds 63 amperes, or the connection point of the market participant operates on a voltage that exceeds 1000 V.

(4) The requirement of metering reactive energy does not apply to residential buildings in which the end consumer is a household consumer.

(5) The metering described in subsections 1–3 must be performed by a remote reading device. The requirement of metering by means of a remote reading device does not apply if no electricity has been consumed at the point of consumption starting 1 January 2013, as long as consumption has not been resumed.

(6) The market participant ensures that the electricity generated or consumed in the power plant is metered by energy type.

(7) The line possessor meters the quantities of electricity supplied to, and consumed via, a direct line.

### **§ 30. Special rules for metering**

(1) If the consumption of network services and of electricity is metered elsewhere than at the connection point, the network operator determines the volume of network services that have been provided, and the amount of electricity that has been consumed, by means of a calculation.

(2) The calculation referred to in subsection 1 is based on the metered volume of the network services provided, on the metered amounts of electricity, on the active resistance of the network between the metering point and the connection point and on the technical parameters of the electrical installations between the metering device and the connection point.

(3) In residential buildings, the calculation referred to in subsection 1 is based on the volume of the network services and amounts of electricity as metered at the connection point and at the metering points, and on the difference between these.

(4) The metering obligation lies on the network operator whose business occupies a higher level in the electricity system in terms of technical parameters. In the case that the operators are on an equal level, the metering obligation is allocated by the system operator.

(5) A remote reading device must make it possible:

- 1) to transmit to the network operator, through the data communication network, at least once in every 24 hour day, metering data recorded in each trading period;
- 2) to ensure access, by a person agreed between the market participant and the network operator, to metering data referred to in clause 1.

### **§ 31. Replacement of the metering system**

(1) If necessary, the electricity metering system of an apartment in an apartment building is replaced by the network operator, provided electricity is sold directly to the owner or occupant of the apartment.

(2) If the owner of a registered immovable wishes to start using a single metering system for payment purposes, that owner must permit the network operator to remove the metering system which belongs to that network operator.

(3) If the time limit for verification of the metering system that belongs to the consumer has expired, the network operator replaces that metering system, at their own expense, by a metering system that belongs to themselves.

## **Chapter 7 Implementing Provision**

### **§ 32. Entry into force of this Regulation**

This regulation enters into force on 27 April 2019.

Jüri Ratas  
Prime Minister

Kadri Simson  
Minister of Economic Affairs and Infrastructure

Taimar Peterkop  
State Secretary

[Annex](#) Operational Requirements for the Electricity System