

Standard terms and conditions of connection to the electricity transmission system of Elering AS

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1. GENERAL PART

- 1.1. These standard terms and conditions of connection to the electricity transmission system (hereinafter referred to as the Connection Conditions) of Elering AS (hereinafter referred to as the transmission system operator or the TSO) together with their annexes and guidelines stipulate the procedure for connecting to the electricity system of the TSO (hereinafter referred to as the Transmission System) and the approval of the power-generating modules to be connected to the distribution system. The Connection Conditions also stipulate the technical parameters of the Transmission System and the rules for the approvals necessary in the connection process as well as the rules for processing connection applications.
- 1.2. The Connection Conditions form an integral part of the connection contract.
- 1.3. A connection procedure shall be subject to the Connection Conditions applicable at the time of commencement of the connection procedure. A connection procedure shall also be subject to the document 'Standard terms and conditions of the network contracts of Elering AS'. The submission of a connection application shall be considered the commencement of a connection procedure.
- 1.4. In the Connection Conditions, terms are used in the meaning established in Commission Regulation (EU) No. 2016/631 (hereinafter referred to as the RfG), Commission Regulation (EU) No. 2016/1388 (hereinafter referred to as the DCC), the Electricity Market Act, the national grid codes, the Connection Conditions and other documents that regulate connection (e.g. resolutions of the Competition Authority) and legal acts. In these Connection Conditions, an electrical installation intended for the consumption and generation of electricity is hereinafter jointly referred to as a mixed installation, and a power-generating unit is understood to mean a single piece of power-generating equipment located in a power park or synchronous module (power-generating unit in the meaning of the RfG) which transforms solar radiation, kinetic or thermal energy into electricity and an aggregate of which forms a power-generating module. A power-generating module may consist of different or similar power-generating units.
- 1.5. The procedural and technical requirements contained in these Connection Conditions and its annexes and guidelines shall apply to the following clients of the TSO:
 - 1.5.1. the parties connected to the Transmission System;
 - 1.5.2. the consumers and producers connected to the Transmission System, to whose electricity network type A, B, C or D power-generating modules are connected;

- 1.5.3. the producers connected to the Transmission System, to whose electricity network an electricity consumer is connected which is not the houseload of the power-generating module and which requires reconstruction and/or reconfiguration necessary for fulfilment of the terms and conditions described in subsection 5.6 of the Connection Conditions;
- 1.5.4. the distribution system operators, to whose electricity network type A, B, C or D power-generating modules are connected;
- 1.5.5. the producers, whose type B, C or D power-generating modules are connected to the electricity network of a distribution system operator.
- 1.6. Pursuant to these Connection Conditions, connection shall mean the connection of a conforming electrical installation to the Transmission System, the connection of a conforming power-generating module to the electricity network of a consumer or producer that is connected to the Transmission System, the alteration of an electrical installation of a consumer or producer connected to the Transmission System into a mixed installation, the alteration of a mixed installation connected to the Transmission System to an extent which requires reconstruction and/or reconfiguration necessary for fulfilment of the terms and conditions described in subsection 5.6 of the Connection Conditions or the alteration of consumption or production conditions at the existing connection point/place of consumption of a consumer, producer or distribution system operator connected to the Transmission System, excluding the reduction of the existing consumption or production capacity, which is considered the reconstruction of an electrical installation. Upon increasing the agreed consumption and/or production conditions at an existing medium voltage connection point or place of consumption, the network connection shall be transferred to the nominal voltage of 110 kV if increasing the capacity requires the replacement of the power transformer owned by the TSO and connected to the connection point.
- 1.7. All of the procedures related to connection and the entailed data exchanges shall be performed in the connections e-environment of the TSO.
- 1.8. The TSO shall have the right to not apply the terms and conditions established in the connection conditions guideline 'Technical principles and solutions of the electrical installations of the transmission system operator' if the connection process does not cause an impairment of the security of supply of other clients and a fixed-term network contract is concluded on the basis of the connection contract.
- 1.9. Annexes to the Connection Conditions include:
 - 1.9.1. Annex 1: Forms;
 - 1.9.2. Annex 2: Standard form of a connection contract.
- 1.10. The following guidelines that specify technical requirements are annexed to the Connection Conditions:
 - 1.10.1. Technical requirements for the electrical installations of clients;
 - 1.10.2. Requirements for data exchange related to the electrical installations of clients;

- 1.10.3. Requirements for the preparation and modelling of electrical designs of clients;
- 1.10.4. Requirements for the testing of and preparation of a testing plan for the power-generating modules of clients;
- 1.10.5. Technical principles and solutions of the electrical installations of the transmission system operator.

2. CONNECTIONPROCEDURE

2.1. Connection application

- 2.1.1. In order to connect to the Transmission System, a client shall submit a conforming connection application stipulated in the Connection Conditions to the TSO together with the technical data of the electrical installation of the client in accordance with the volume specified in subsection 1.1 of Annex 1 to the Connection Conditions as well as other documents and/or approvals stipulated in legal acts. If the data required in the connection application have been previously submitted by the client to the TSO and there have been no changes thereto, the client may refrain from submitting the required materials by making reference to the previous application or letter in which the required data have been submitted. A document certifying the right of representation shall be annexed to the connection application, unless the right of representation of the person submitting the connection application is evident from the Commercial Register.
- 2.1.2. The TSO shall register the connection application of the client and inform the client thereof. The TSO shall issue an invoice for the processing fee on the basis of subsection 2.3.2 of the Connection Conditions within three (3) working days from submission of the application.
- 2.1.3. The verification of the connection application shall start after receipt of the processing fee and, in the course thereof, the TSO shall verify the data submitted in the connection application and notify the client of deficiencies in accordance with the terms specified in subsections 2.1.4 and 2.1.5. If there are no deficiencies and the processing fee has been received, the connection application shall be considered accepted by the TSO and the TSO shall notify the client of the acceptance of the connection application within five (5) working days and inform the client of the term within which at the latest a connection contract offer shall be presented to the client.
- 2.1.4. If there are deficiencies in the data submitted in the connection application, the TSO shall within five (5) working days at the latest from receipt of the processing fee forward a respective notice to the client indicating all of the deficiencies identified in the connection application.
- 2.1.5. Within twenty (20) working days from receipt of the respective notice from the TSO, the client shall have to bring the connection application into conformity with the requirements, including submit all of the missing data.
- 2.1.6. The TSO shall within five (5) working days after submission of a corrected application by the client forward a notice of the conformity of the application or a list of deficiencies identified in the corrected application. The application shall be considered accepted after submission of the notice of conformity.

- 2.1.7. If the client fails to bring the connection application into conformity with the requirements established by the TSO or eliminate all of the deficiencies specified by the TSO within the term specified in subsection 2.1.5 in the third correction of the application, the connection process shall be considered terminated and the client shall be given written notice thereof. Upon termination of the connection process due to the circumstances specified in this section, the TSO shall return the processing fee to the client to the extent of 50%.
- 2.1.8. All of the changes to the data submitted in the connection application requested by the client after acceptance of the connection application shall be submitted to the TSO digitally signed in the connections e-environment.
- 2.1.9. If the changes requested by the client before submission of a connection offer by the TSO are related to the desired location of the connection point or alteration of the desired capacity, which require an increase in apparent capacity or a reduction in the reactive power capability in the entire active power range, the client shall have to submit a new connection application, which shall terminate the previous connection process. A reduction in the desired generating capacity shall not cause the termination of an existing connection process. The new connection procedure shall be subject to the Connection Conditions applicable at the time of submission of the new connection application. Upon termination of a previous connection process, the TSO shall, due to the circumstances referred to in this section, return the processing fee to the client to the extent of 50% if the number of procedural acts to be performed by the TSO in the preparation of a new connection offer decreases, which shall be determined by the TSO.
- 2.1.10. One client cannot have more than one valid connection application concerning places of consumption or connection points located in one substation, and no more than one application can be submitted with regard to one place of consumption or one connection point.
- 2.1.11. The connection application and its annexes form an integral part of the connection contract.
- 2.1.12. The client shall have the right to terminate the processing of a connection application with a respective written statement of will. In such a case, the TSO shall not be obligated to make a connection contract offer to the client. If the procedure is terminated on the basis of the client's statement of will before issuance of a connection offer, the TSO shall return the processing fee to the client to the extent of 50% according to the number of procedural acts performed by the TSO in the preparation of a connection offer, which shall be determined by the TSO.

- 2.2. Connection contract offer and conclusion of connection contract**
- 2.2.1. Within ninety (90) days after acceptance of a connection application (unless agreed otherwise), the TSO shall submit to the client a connection contract offer that corresponds to the standard format of connection contracts provided in Annex 2 to the Connection Conditions, which shall among other things include:
- 2.2.1.1. A schematic diagram of the location of the connection and metering point;
 - 2.2.1.2. The estimated amount of the connection charge and the fee for amendment of the Connection Conditions and the terms and conditions of payment thereof and the calculation thereof;
 - 2.2.1.3. A technical connection solution with the basic electric parameters of the connection point;
 - 2.2.1.4. The consumption and/or production terms and conditions;
 - 2.2.1.5. The conditions for creating a new network connection or amending the consumption or production conditions, including the terms and other conditions;
 - 2.2.1.6. The capacity of the connection point(s) in apparent capacity units;
 - 2.2.1.7. The reactive power capability of the power-generating module to be connected to the network in the entire active power range;
 - 2.2.1.8. The terms and conditions of amendment and termination of the connection contract
 - 2.2.1.9. Other terms and conditions of the connection contract.
- 2.2.2. In preparing a connection contract offer, the TSO shall:
- 2.2.2.1. Observe the applicable technical standards and the requirements for the construction and use of the network, adhering to the principles established in the guidelines 'Technical principles and solutions of the electrical installations of the transmission system operator';
 - 2.2.2.2. Compare technical connection solutions;
 - 2.2.2.3. Find the technically and economically most preferable solution in the course of an analysis performed in cooperation with the client;
 - 2.2.2.4. Determine the location(s) of the connection point(s);
 - 2.2.2.5. Take into account the connection applications already accepted by the TSO, the applicable connection contract offers, the connection and network contracts and the conditions of the electricity network as at the time of accepting a connection offer.
- 2.2.3. A connection contract offer shall be valid for sixty (60) days and in the case of a connection contract offer made to a distribution system operator, for a hundred (100) days, unless agreed otherwise. Upon submitting a connection contract offer to the client, the TSO shall notify the client of the term for submission of agreement. If the client fails to submit their agreement by the due term, the connection contract offer shall become invalid and the connection application procedure shall be terminated.

- 2.2.4. The client may submit amendment proposals with regard to the connection contract offer within thirty (30) days after receipt of the connection contract offer. Amendments related to a change in the desired location of the connection point which require the performance of a new electrical solution and/or new network calculations and which require either an increase in apparent capacity or a reduction in reactive power capability in the entire active power range are not allowed. With regard to the rest of the amendment proposals, the TSO shall notify the client fourteen (14) days at the latest after the term of validity of the connection contract offer, but no later than within thirty (30) days from the received application, whether the TSO agrees to the proposals.
- 2.2.5. The connection process shall be considered terminated and the connection contract offer invalid, if:
- 2.2.5.1. The client waives the connection contract offer before the conclusion of a connection contract by informing the TSO thereof;
- 2.2.5.2. The amendments requested by the client in accordance with subsection 2.2.4 are not acceptable by the TSO and the client and the TSO fail to reach an agreement with regard to the amendment of the terms and conditions of the connection contract offer during the validity of the connection contract offer specified in subsection 2.2.3, with regard to which the TSO shall send the client a relevant written notice indicating the reasons for refusal;
- 2.2.5.3. The connection contract is not concluded within the prescribed term for any other reason.
- 2.2.6. After submission of the connection contract offer to the client, the TSO shall have the right to alter the technical connection solutions with the client's written consent, provided that the estimated cost of the construction works and related works shall not increase and the technical parameters specified in the connection contract offer are not impaired.
- 2.2.7. The connection contract shall be concluded if the TSO receives an acceptance of the offer on the last day of validity of the connection contract offer at the latest and if the client has submitted to the TSO all of the required data and documents with the connection application. The signing of the connection contract shall be considered acceptance of the connection contract offer.

2.3. **Connection charge**

- 2.3.1. The client shall pay the TSO a connection charge which covers all of the actual justified expenses related to connection. In calculating the connection charge, the TSO shall adhere to the 'Methodology of calculation of the connection charge and the fee for altering the consumption and production conditions of AS Elering' (hereinafter referred to as the Methodology; available on the homepage of the TSO). The connection charge shall consist of the following components:
- 2.3.1.1. The cost of construction works and related works;

- 2.3.1.2. The processing fee;
- 2.3.1.3. The procedural fee.
- 2.3.2. The processing fee shall be applied as follows, depending on the type of connection application:
 - 2.3.2.1. The connection of a consumer or a distribution system operator at a new connection point or the amendment of consumption and/or production conditions at an existing connection point of a distribution system operator or the amendment of consumption conditions at an existing connection point of a consumer – 1600 euros;
 - 2.3.2.2. The connection of a power-generating module or a mixed installation to the transmission system or the amendment of production and/or consumption conditions thereof – 2000 euros.
- 2.3.3. The processing fee shall be paid after submission of a connection application by the client on the basis of an invoice issued by the TSO within fourteen (14) days.
- 2.3.4. The procedural fee shall be applied as follows, depending on the volume of procedures entailed by the connection:
 - 2.3.4.1. The connection of a consumer or a distribution system operator at a new connection point or the amendment of consumption and/or production conditions at an existing connection point of a distribution system operator or the amendment of consumption conditions at an existing connection point of a consumer – 3300 euros;
 - 2.3.4.2. The connection of a power-generating module or a mixed installation to the transmission system or the amendment of production and/or consumption conditions thereof – 10,200 euros.
- 2.3.5. The procedural fee shall be paid together with the connection charge instalments in accordance with subsection 2.4.1 of the Connection Conditions.
- 2.3.6. In the case of a failure of the fault-ride-through (FRT) capability test due to the client, the TSO shall apply a procedural fee for the performance of every subsequent test, which is equivalent to the cost of measurement, assessment and other necessary justified procedures related to the new test by an independent party.
- 2.3.7. Value added tax shall be added to the connection charge in accordance with legal acts.

2.3.8. If the TSO, at its own initiative in the fulfilment of the connection contract, establishes electrical installations or equipment whose capacity or technical parameters exceed the minimum parameters specified in the guideline 'Technical principles and solutions of the electrical installations of the transmission system operator', the resulting increase in the price of the electrical installations shall not be included in the connection charge payable by the connecting client. For the purpose of determining the amount of the part of the connection charge payable by the client for such an electrical installation, the TSO shall hold a procurement in the course of which price offers shall be obtained for a technical solution that takes into account both capacities or technical parameters. The client's connection charge shall include the cost of electrical installations or equipment the capacities or technical parameters of which correspond to the minimum parameters to be used in the construction of the network of the TSO as specified in the guideline 'Technical principles and solutions of the electrical installations of the transmission system operator'.

2.4. **Payment of connection charge**

2.4.1. The client shall pay the connection charge prescribed in the connection contract as follows:

2.4.1.1. The first instalment shall be paid within sixty (60) days from the conclusion of the connection contract. The first instalment is 20% of the cost of the estimated construction works and related works and 20% of the procedural fee prescribed in the connection contract;

2.4.1.2. The second instalment is 50% of the cost of the estimated construction works and related works and 50% of the procedural fee prescribed in the connection contract. The TSO shall submit an invoice for the second instalment to the client within twenty (20) days from the announcement of the winner of the procurement necessary for fulfilment of the connection contract. The invoice for the second instalment shall be paid within forty-five (45) days at the latest from receipt of the invoice;

2.4.1.3. The third instalment comprises the remaining part of the actual costs, less the amounts paid by the client in accordance with subsections 2.4.1.1 and 2.4.1.2. The third instalment also includes 30% of the procedural fee prescribed in the connection contract. The TSO shall submit an invoice for the third instalment to the client within thirty (30) days from completion of the works. The invoice for the third instalment shall be paid within forty-five (45) days at the latest from receipt of the invoice.

2.4.2. If the performance of construction works and related works is not necessary for fulfilment of the connection contract and the connection charge only includes the procedural fee, the TSO shall have the right to submit an invoice for the procedural fee for the connection as a single connection charge payment.

- 2.4.3. Within three (3) working days from the date of registration of the connection application, the TSO shall issue an invoice for the processing fee to the client, payable by the client within fourteen (14) days or, in the case of an invoice submitted to a distribution system operator, within twenty-one (21) days from issuance of the invoice.
- 2.4.4. If the total amount of the first and second instalments of the estimated connection charge exceeds the cost of the procurement contracts concluded by the TSO for fulfilment of the connection contract, the amount of the connection charge shall be changed to correspond to the actual costs.
- 2.4.5. If the TSO has upon termination of a connection contract, including upon withdrawal from and cancellation of the connection contract on the basis of the request of the client or, in the cases prescribed in the connection contract, of the TSO, already incurred or is thereafter obligated to inevitably incur costs for fulfilment of the connection contract which exceed the connection charge actually paid by the client to the TSO, the client shall be obligated to compensate the respective costs to the TSO upon the request of the latter.

2.5. **Establishment of network connection**

- 2.5.1. The TSO shall hold procurements for the performance of the design and construction works specified in the connection contracts and agree on the results of the procurement with the client in accordance with the connection contract, except if the TSO and the client agree on the design and construction of the connection point by the client on the terms and conditions established by the TSO, taking into account the prerequisites for the application of exceptions specified in subsection 2.5.5. If the connection point is designed and built by the client, the TSO shall have the right to derogate from the terms and conditions established in the standard connection contract form, complying with the principle of equal treatment and ensuring the safety and security of supply of the system.
- 2.5.2. The TSO shall make the procurement documents public in the Public Procurement Register within six (6) months at the latest from receipt of the first instalment, except if grounds for the suspension of the connection contract occur in the connection contract. The TSO shall have the right to use procurement contracts concluded as a result of a procurement procedure of the TSO held before conclusion of the connection contract for fulfilment of the connection contract.
- 2.5.3. If a procurement is held after conclusion of the connection contract, the client shall be notified when the procurement has been published in the Public Procurement Register. The client shall have the right to submit comments concerning the procurement documents up to seven (7) days before the term for submission of tenders. Upon failure to submit comments by the due term, the client shall be considered to have no comments concerning the procurement documents.

- 2.5.4. In order to expedite the connection project procedure, the client shall have the right to order the geological and geodesic surveys of the TSO's substation, which are necessary for preparation of the procurement documents, in accordance with the conditions established by the TSO.
- 2.5.5. The client can upon agreement with the TSO and in accordance with subsection 2.5.1 establish an electrical installation that will remain the property of the TSO at the TSO's substations with an upper voltage of 110 and 330 kV, which have been renovated after 2003 and only if the electrical installation would, after energisation of the network connection, be used solely for the transmission of electricity acquired from the network and supplied to the network by the client.
- 2.6. **Amendment of connection contract**
- 2.6.1. The client can submit an application to the TSO for the amendment of a valid connection contract. The application for the amendment of the connection contract shall be digitally signed.
- 2.6.2. The application for the amendment of the connection contract and its annexes shall form an integral part of the connection contract.
- 2.6.3. The TSO shall submit a connection contract amendment offer to the client within ninety (90) days from receipt of the application referred to in subsection 2.6.1, which shall be signed by the client within the period of validity thereof and which shall enter into force under the terms and conditions determined in the agreement on the amendment of the connection contract.
- 2.6.4. The amendment of the connection contract shall be subject to the Connection Conditions applicable at the time of commencement of the connection procedure, including the processing and procedural fees and the principles of application thereof established in the Connection Conditions.
- 2.6.5. If the amendments requested by the client are related to changes in the location of the connection point agreed in the connection contract or changes in the desired capacity of the network connection, which require an increase in the apparent capacity or a reduction of the reactive power capability in the entire active power range, an application for amendment of the connection contract together with all of the annexes required in the connection application shall be submitted to the TSO. In such a case, the client shall also pay the processing fee.

- 2.6.6. The TSO shall perform an analysis of the electricity network with the new parameters desired by the client and determine the volume of electricity network construction works necessary for ensuring the capacity, taking into account all of the connection applications already accepted by the TSO, the applicable connection contract offers, the concluded connection and network contracts and the condition of the electricity network as at the moment of submission of the application for amendment of the connection contract. If the performed analysis indicates a need for reconstruction of the electricity network, an agreement on the amendment of the connection contract shall be concluded and the client shall pay the connection charge arising from said amendment.
- 2.6.7. In other cases of amendment of the connection contract, including upon the reduction of the consumption and/or production capacity of the connection point, the client shall bear all of the costs arising from said amendment to the connection contract.
- 2.6.8. Upon conclusion of an agreement on the amendment of the connection contract, the connection charge shall include the procedural fee if the TSO shall, after signing the agreement on the amendment of the connection contract, approve the client's technical design, organise the energisation of the connection point and, if necessary, the synchronisation of the power-generating module and check the conformity with the requirements of the RfG.
- 2.6.9. One client cannot have more than one valid connection contract for the places of consumption or connection points of one substation, and no more than one network contract can be concluded for one place of consumption or connection point.
- 2.7. **Termination of connection contract due to fulfilment**
- 2.7.1. The connection contract shall end upon fulfilment of the obligations established in the connection contract and the applicable legal acts.
- 2.7.2. The TSO shall confirm fulfilment of the obligations arising from the connection contract in writing. After fulfilment of all of the obligations established in the connection contract, a network contract shall be concluded with the client.

3. ENERGISATION OF NEW NETWORK CONNECTIONS OF CONSUMERS AND DISTRIBUTION SYSTEM OPERATORS, INTRODUCTION OF NEW CONSUMPTION OR PRODUCTION CAPACITIES OF DISTRIBUTION SYSTEM OPERATORS OR INTRODUCTION OF NEW CONSUMPTION CAPACITIES OF CONSUMERS

- 3.1. The requirements and procedures established in this chapter apply to consumers or distribution system operators upon the energisation of a new or existing reconstructed network connection, to distribution system operators upon the introduction of new consumption and/or production capacities of a network connection or to consumers upon the introduction of a new consumption capacity.
- 3.2. The client shall establish its own electrical installation in accordance with chapter 5 of the Connection Conditions and the guidelines 'Requirements for data exchange related to the electrical installations of clients' and 'Technical requirements for the electrical installations of clients'.
- 3.3. For the introduction of a new consumption and/or production capacity of a network connection in accordance with the connection contract, the client shall submit an energisation application in the format provided in subsection 1.2 of Annex 1 to the Connection Conditions to the TSO at the first opportunity, but no later than forty (40) days before the introduction of the new consumption and/or production capacity of the network connection. In the energisation application, the client shall, as a minimum, indicate the desired time of introduction of the new consumption and/or production capacity of the network connection.
- 3.4. For the introduction of a new consumption and/or production capacity of a network connection, including for the energisation of a network connection, the following requirements shall be previously met, the more detailed extent of the application of which shall be agreed in the connection contract concluded with the client:
 - 3.4.1. The network connection ensured by the TSO and the place of consumption are ready to be taken into use;
 - 3.4.2. The client's electrical installation is ready to be taken into use;
 - 3.4.3. The client has made all of the payments required by the date of energisation to the TSO and properly fulfilled all other obligations established in legal acts and the contract concluded between the client and the TSO;

- 3.4.4. The client has submitted the electrical design of the electrical installation to the TSO for approval in accordance with the guideline 'Requirements for the preparation and modelling of electrical designs of clients' at least fifty (50) days before the desired term of energisation in the necessary volume and has obtained approval thereof at least seven (7) days before the desired energisation. The TSO shall review the electrical design within the term specified in subsection 3.7 after submission of the design;
- 3.4.5. The client has submitted an energisation application in accordance with the format established in Annex 1 and has obtained approval thereof from the TSO at least seven (7) days before the desired term of energisation. The TSO shall review the energisation application within seven (7) days from the submission thereof;
- 3.4.6. The client has submitted an energisation plan at least fourteen (14) days before the desired term of energisation and the TSO has given approval thereof at least seven (7) days before the desired term of energisation. The TSO shall review the energisation plan within seven (7) days from the submission thereof;
- 3.4.7. The client has submitted the details of its electrical installation to the TSO in the volume required in the connection contract at least seven (7) days before the desired term of energisation;
- 3.4.8. The client has checked the functioning of signals and control with the TSO in accordance with the principles established in the guideline 'Requirements for data exchange related to the electrical installations of clients' and the information volume table form provided in section 6 of the guideline at least seven (7) days before the desired term of energisation;
- 3.4.9. The client has submitted the report of an audit conducted in accordance with the Equipment Safety Act and, if the client's electrical installation, including the earthing loop, is connected directly to Elering's electrical installation, a touch voltage report to the TSO at least seven (7) days before the desired energisation;
- 3.4.10. All of the pre-synchronisation approval conditions established in chapter 6 have been met with regard to the power-generating module that requires the production network connection;
- 3.4.11. The client has concluded a network contract with the TSO for the use of the consumption and/or production capacity of the network connection agreed in the connection contract.
- 3.5. The TSO shall issue an energisation operational notification which allows the introduction of the new consumption and/or production capacity of the network connection, including the energisation of the new network connection, within seven (7) days after proper fulfilment of the requirements established in subsections 3.4.1 to 3.4.11.

- 3.6. The TSO shall have the right to check the conformity of the client's electrical installation with the technical design and the provisions of the connection contract and/or network contract. If the client's electrical installations do not conform to the requirements, the TSO shall have the right to request the elimination of deficiencies or refuse to energise or interrupt the network connection on the grounds established in the Electricity Market Act or the Standard Terms and Conditions of the Provision of Network Services.
- 3.7. The TSO shall review the electrical design submitted for approval within up to thirty (30) days, approving the design or returning it with comments for the elimination of deficiencies.
- 3.8. The energisation plan referred to in subsection 3.4.6 cannot be submitted to the TSO before approval of the electrical design.
- 3.9. Within fourteen (14) days after energisation, the client shall have to check and ensure the correct functioning of all of the signals, measurements and control established in the technical design with the electricity system control centre of the Transmission System.

4. PROCEDURE FOR CONNECTING POWER-GENERATING MODULES OR MIXED INSTALLATIONS TO THE TRANSMISSION SYSTEM OR FOR AMENDMENT OF THE PRODUCTION AND/OR CONSUMPTION CONDITIONS THEREOF

4.1 General requirements

4.1.1 The requirements and procedures established in this chapter apply upon the connection of a power-generating module or a mixed installation to the Transmission System and upon the amendment of the production and/or consumption conditions thereof.

4.1.2 The client shall establish its own electrical installation in accordance with chapter 5 of the Connection Conditions and the guidelines 'Technical requirements for the electrical installations of clients' and 'Requirements for data exchange related to the electrical installations of clients'. Upon the connection of a mixed installation, the requirements established in the Connection Conditions shall be applied to the client's electrical equipment and/or installation which is built or modified and renovated in the course of the connection.

4.2 Energisation of network connections

4.2.1 Energisation is the first-time use of a new network connection established or an existing network connection reconstructed in the framework of the connection contract only for transmission of the consumption capacity to the client's electrical installation, for which the TSO shall issue an energisation operational notification.

4.2.2 The client shall submit an energisation application for taking a new network connection or an existing reconstructed network connection that is in accordance with the connection contract to the TSO at the first opportunity, but no later than forty (40) days before the desired consumption energisation of the network connection. The client shall, as minimum, indicate the desired time of energisation in the energisation application.

4.2.3 For the issuance of an energisation operational notification, the following conditions shall be previously met, the detailed extent of the application of which shall be agreed in the connection contract concluded with the client:

4.2.3.1 The network connection ensured by the TSO and the place of consumption are ready to be taken into use;

4.2.3.2 The client's electrical installation is ready to be taken into use;

- 4.2.3.3 The client has made all of the payments required by the date of issuance of the energisation operational notification to the TSO and properly fulfilled all other obligations established in legal acts and the contract concluded between the client and the TSO;
- 4.2.3.4 The client has submitted the electrical design of the electrical installation to the TSO for approval in accordance with the requirements established in the guideline 'Requirements for the preparation and modelling of electrical designs of clients' at least fifty (50) days before the desired term of energisation and has obtained approval thereof at least seven (7) days before the desired energisation. The TSO shall review the electrical design within the term specified in subsection 4.2.6 after submission of the design;
- 4.2.3.5 The client has submitted an energisation application in accordance with the format established in Annex 1 and has obtained approval thereof from the TSO at least seven (7) days before the desired term of energisation. The TSO shall review the energisation application within seven (7) days from the submission thereof;
- 4.2.3.6 The client has submitted an energisation plan at least fourteen (14) days before the desired term of energisation and the TSO has given approval thereof at least seven (7) days before the desired term of energisation. The TSO shall review the energisation plan within seven (7) days from the submission thereof;
- 4.2.3.7 The client has submitted the details of its electrical installation to the TSO in the volume required in the connection contract at least seven (7) days before the desired term of energisation;
- 4.2.3.8 The client has checked the functioning of signals and control with the TSO in accordance with the principles established in the guideline 'Requirements for data exchange related to the electrical installations of clients' and the information volume table form provided in section 5 of the guideline at least seven (7) days before the desired term of energisation;
- 4.2.3.9 The client has submitted the report of the audit conducted in accordance with the Equipment Safety Act and, if the client's electrical installation, including the earthing loop, is connected directly to Elering's electrical installation, a touch voltage report to the TSO at least seven (7) days before the desired energisation;
- 4.2.3.10 The client has concluded a network contract with the TSO for the consumption use of the network connection agreed in the connection contract.
- 4.2.4 The TSO shall issue an energisation operational notification which allows the consumption energisation of the network connection within seven (7) days after proper fulfilment of the requirements established in subsections 4.2.3.1 to 4.2.3.10 by the client.

- 4.2.5 The TSO shall have the right to check the conformity of the client's electrical installation with the technical design and the provisions of the connection contract and/or network contract. If the client's electrical installations do not conform to the requirements, the TSO shall have the right to request the elimination of deficiencies or refuse to energise or interrupt the network connection on the grounds established in the Electricity Market Act or the Standard Terms and Conditions of the Provision of Network Services.
- 4.2.6 The TSO shall review the electrical design submitted for approval within up to thirty (30) days, submitting its approval or comments for the elimination of deficiencies in response.
- 4.2.7 The energisation plan referred to in subsection 4.2.3.6 cannot be submitted to the TSO before approval of the electrical design.
- 4.2.8 Within fourteen (14) days after energisation, the client shall have to check and ensure the correct functioning of all of the signals, measurements and control established in the technical design with the electricity system control centre of the Transmission System.

4.3 Synchronisation of power-generating modules

- 4.3.1 Synchronisation is the first-time synchronisation of a power-generating module agreed in the connection contract by the client with the electricity network, for which the TSO shall issue an interim operational notification.
- 4.3.2 For the issuance of an interim operational notification, the following conditions shall be previously met, the more detailed extent of the application of which shall be agreed in the connection contract concluded with the client:
- 4.3.2.1 The TSO has issued an energisation operational notification and the client has fulfilled the requirement established in subsection 4.2.8 of the Connection Conditions;
- 4.3.2.2 The network connection ensured by the TSO and the place of consumption are ready to be taken into use;
- 4.3.2.3 The client's electrical installation is ready to be taken into production use and the client's power-generating module is ready to be synchronised;
- 4.3.2.4 The client submits a synchronisation application in accordance with the format established in Annex 1 to the TSO at least seven (7) days before the desired synchronisation of the power-generating module;
- 4.3.2.5 The TSO has approved the comprehensive electrical design of the electrical installation prepared by the client in accordance with the guideline 'Requirements for the preparation and modelling of electrical designs of clients.' The electrical design shall be approved by the TSO seven (7) days before the desired term of synchronisation. The TSO shall review the electrical design within thirty (30) days from the submission thereof. The electrical design shall among other things include the following, prepared in accordance with the guideline 'Requirements for the preparation and modelling of electrical designs of clients':

- 4.3.2.5.1 Type test reports for every type of power-generating unit;
- 4.3.2.5.2 A power-generating unit and electricity network cooperation simulation report;
- 4.3.2.5.3 PSS/E and PSCAD models.
- 4.3.2.6 The TSO has approved the acceptance test plan of the power-generating module prepared by the client in accordance with the guideline 'Requirements for testing of and preparation of test plans for the power-generating modules of clients.' The acceptance test plan shall be approved by the TSO seven (7) days before synchronisation. The TSO shall review the acceptance test plan within fourteen (14) days from the submission thereof;
- 4.3.2.7 In the case of synchronous generators, the TSO has approved the results of the no-load operation tests of the power-generating module. The results of no-load operation tests shall be submitted at least fourteen (14) days before the desired synchronisation of the power-generating module. The TSO shall review the results of no-load operation tests within seven (7) days from the submission thereof;
- 4.3.2.8 The client has made all of the payments required by the date of energisation to the TSO and properly fulfilled all other obligations established in legal acts and the contract concluded between the client and the TSO;
- 4.3.2.9 The client has checked the functioning of signals and control in the direction of the TSO in accordance with the principles established in the guideline 'Requirements for data exchange related to the electrical installations of clients' and the information volume table form provided in section 5 of the guideline at least seven (7) days before the desired synchronisation of the power-generating module;
- 4.3.2.10 A temporary network contract has been concluded, allowing the production capacity of the network connection.
- 4.3.3 Within fourteen (14) days after synchronisation, the client shall finally check and ensure the correct functioning of all of the signals, including measurements and control, established in the technical design with the electricity system control centre and forward the signal test report after synchronisation.
- 4.3.4 The TSO shall issue an interim operational notification which allows the synchronisation of the power-generating module within seven (7) days after fulfilment of the conditions established in subsections 4.3.2.1 to 4.3.2.10 by the client.
- 4.3.5 The period of validity of the interim operational notification is twenty-four (24) months, during which the client shall have to fulfil all of the conditions of issuance of a final operational notification.

4.4 Verification and certification of conformity of power-generating modules

4.4.1 General provisions

- 4.4.1.1 The verification and certification of the conformity of a power-generating module shall take place in accordance with the provisions of the connection contract, the Connection

Conditions, the RfG, the Grid Code and the Electricity Market Act.

- 4.4.1.2 The conformity of a power-generating module with the established requirements shall be assessed at the connection point between the TSO and the client.
- 4.4.1.2.1 The control of a mixed installation and the communication connection thereof with the electricity system control centre shall be established in accordance with the requirements established in subsection 5.6 of the Connection Conditions. The connection point of a mixed installation shall be located at the connection point between the client and the TSO and the procedure of the connection and the verification and certification of conformity shall take place in accordance with the requirements and conditions established in these Connection Conditions. Upon an addition of a consumer to a power-generating module, the aim of testing is to check and test functionalities and the effects of the control system influenced by the connection. In the case of power-generating modules connected to the electricity network before 2003, it shall be verified whether measurement data concerning additional electricity consumption are forwarded to the electricity system control centre of the TSO with regard to electricity consumers additionally added to the power-generating module in the course of the connection process in accordance with the guideline 'Requirements for data exchange related to the electrical installations of clients'. The verification of such measurement data does not require the conclusion of an agreement on the temporary use of the network connection; after approval of the electrical design by the TSO and verification of the measurement data additionally forwarded to the electricity system control centre, a new permanent network contract shall be concluded with the client.
- 4.4.1.2.2 The power-generating module of a mixed installation shall meet the requirements of the Grid Code and the Connection Conditions applicable at the moment of connection of the power-generating module, except for power-generating modules connected to the electricity network before 2003, upon the connection of additional consumption to which the conformity with the Grid Code is not checked. If an additional power-generating unit is added to the electrical installation of a consumer or producer, the conformity of the power-generating module shall be checked on the basis of the legal acts, the Grid Code and the Connection Conditions applicable upon connection of the additional power-generating unit.
- 4.4.1.3 The TSO shall approve the conformity of the power-generating module in writing on the basis of the test results.
- 4.4.1.4 The obligation to conduct tests lies with the client, except with regard to the FRT test which shall be conducted by the TSO in accordance with subsection 4.4.6 of the Connection Conditions and the guideline 'Requirements for testing of and preparation of test plans for the power-generating modules of clients.'
- 4.4.1.5 If the client's power-generating module is built in stages, the conformity of the power-generating module with the requirements shall be verified in accordance with the

provisions of subsection 4.4.8 of the Connection Conditions after the connection of every stage to the electricity network.

- 4.4.1.6 If the capacity of the network connection of the power-generating module is lower than the maximum capacity of the power-generating module, the power-generating module shall be tested on the basis of its maximum capacity and the client shall ensure the control of the power-generating module as well as its communication connection with the electricity system control centre in accordance with the requirements established in subsection 5.6. The connection point of such a power-generating module to the electricity network shall be located at the connection point between the client and the TSO and the connection procedure of such a power-generating module and the verification and certification of conformity shall take place in accordance with the requirements and conditions established in this chapter.

4.4.2 Preparation of test plans

- 4.4.2.1 A test plan shall, depending on the type of power-generating module, be agreed upon in accordance with the sample test plan provided in the guideline 'Requirements for testing of and preparation of test plans for the power-generating modules of clients.'
- 4.4.2.2 A test plan shall include:
- 4.4.2.2.1 A list of tests, the time of testing of and the person responsible for performing the tests;
- 4.4.2.2.2 Measurement equipment data, network diagrams and other data, on the basis of which the content and sequence of the tests can be planned and the results analysed;
- 4.4.2.3 An agreed test plan signed by the client and the TSO shall be a prerequisite to the commencement of testing.

4.4.3 Performance of tests

- 4.4.3.1 Tests shall be performed in accordance with the requirements established in the guideline 'Requirements for testing of and preparation of test plans for the power-generating modules of clients' generally in three stages:
- 4.4.3.1.1 Quality measurements
- 4.4.3.1.2 Functionality tests of the power-generating module
- 4.4.3.1.3 The FRT test
- 4.4.3.2 In order to start the testing, the client shall submit a testing readiness declaration prepared in accordance with the format provided in the guideline 'Requirements for testing of and preparation of test plans for the power-generating modules of clients' to the connection project manager three (3) days before the planned time of commencement of the testing.
- 4.4.3.3 The TSO shall be notified of the completion of the tests.
- 4.4.3.4 In planning the tests and preparing the test plans and in the subsequent testing phase, activities shall be agreed with the connection project manager of the TSO. The

connection project manager shall be kept up to date with developments in the tests and allowed to attend the testing.

- 4.4.3.5 A test plan shall cover all of the control functions of the power-generating module, which have to be tested both by local control and by control from the electricity system control centre.
- 4.4.3.6 The tests shall be performed in accordance with the sequences agreed in the test plan. The sequence of the tests can be altered upon the parties' agreement.
- 4.4.3.7 The prior consent of the electricity system control centre shall be obtained for all of the tests performed in parallel to the electricity system, unless agreed otherwise.

4.4.4 Quality measurements

- 4.4.4.1 Quality measurements shall be performed for all of the power park modules in the first test that operates in parallel to the first network. The specific quality limits shall be agreed with the client in the connection contract.
- 4.4.4.2 The quality measurement period shall last for at least seven (7) days, during which there shall be no interruptions in measurements, except for brief interruptions for downloading measurement data. The number of interruptions per week shall be agreed with the TSO before commencement of the testing.
- 4.4.4.3 An event time series shall be presented with regard to all of the events occurring during the testing period (including inverter on/off switching events and causes), commands between the central computer and the power park module, commands between the TSO's Supervisory Control and Data Acquisition (hereinafter referred to as SCADA) and the client's SCADA.
- 4.4.4.4 A summary report on the quality measurements shall be submitted in accordance with the format provided in the guideline 'Requirements for testing of and preparation of test plans for the power-generating modules of clients' within ten (10) working days after completion of the quality measurements together with confirmation that the electricity quality indicators are within the allowed limits and the power park module does not cause non-permissible disruptions for other clients connected to the electricity network.
- 4.4.4.5 If the results contained in the summary report on the quality measurement are within the limits agreed in the connection contract, the TSO shall within ten (10) working days give permission to continue with the tests in accordance with the test plan up to the FRT test.
- 4.4.4.6 The full report on the quality measurements shall in addition to the data provided in the summary report include a graphical representation of the results and state the active and reactive power generated during the quality measurements.

4.4.5 Functionality tests of power-generating modules

- 4.4.5.1 After performance of the tests specified in the test plan, the client shall within thirty (30) days submit a report on the results of the tests to the TSO. The report submitted with

regard to functionality tests shall include the results of quality measurements, which shall be submitted in accordance with the requirements established in Annex 3.

- 4.4.5.2 The test report shall include an assessment of the operating characteristics of the power-generating module, the electricity quality and conformity with the requirements agreed in the RfG, the Grid Code, the Connection Conditions and the connection contract.
- 4.4.5.3 The TSO shall assess conformity with the requirements at the connection point between the client and the TSO. The TSO shall forward the assessment of the test results to the client within thirty (30) days from submission of the report.
- 4.4.5.4 If the report indicates the existence of incompatibilities and it is concluded that the electrical installation is not in conformity with the requirements, the client shall determine the causes of the incompatibilities and the possibilities and time of eliminating these and perform new tests. In such a case, a new test report shall be submitted to the TSO. The TSO shall provide an assessment on the subsequent test report within thirty (30) days from receipt of the report or the supplement.

4.4.6 FRT test

- 4.4.6.1 The FRT test shall be performed by the TSO within thirty (30) days after completion of all of the other tests included in the test plan and approval of the final report by the TSO, if possible.
- 4.4.6.2 If it is not possible to hold the test within thirty (30) days due to seasonally high electricity flows or an abnormal condition of the elements of the electricity system without risking leaving other connection points of the TSO without power or the voltage exceeding the limits allowed in the Standard Terms and Conditions of Network Services, the test shall be performed at the first opportunity.
- 4.4.6.3 The FRT test shall be performed in accordance with the conditions agreed in the test plan at the connection point between the client and the TSO. The parameters of the FRT test shall also correspond to the FRT parameters established in the RfG, which the power-generating module must be able to tolerate without disconnecting from the electricity system.
- 4.4.6.4 The FRT test measurements shall be performed and the test result report prepared by a third party. The TSO shall submit the report to the client within ten (10) working days from completion of the test.
- 4.4.6.5 Upon failure of the FRT test due to reasons related to the TSO, the test shall be considered unsuccessful and shall be repeated at the first opportunity. In such a case, the fee established in subsection 2.3.6 of the Connection Conditions shall not be applied.
- 4.4.6.6 Upon failure of the FRT test due to reasons related to the client's power-generating module:

- 4.4.6.6.1 The client shall have the right to submit justified objections to the third-party report within seven (7) working days from the forwarding of the ;
- 4.4.6.6.2 Within thirty (30) days from the submission of the test result report specified in subsection 4.4.6.4 by the TSO, the client shall prepare a report on the reasons for the failure of the test, an activity plan of the improvements performed in the power-generating module to ensure the success of the subsequent test, a report on the client's improvements and a declaration provided in the guideline 'Requirements for testing of and preparation of test plans for the power-generating modules of clients' to the effect that the power-generating module is ready for a new FRT test. A description of the former situation and the corrected situation with the parameters and the expected impact thereof shall be provided with regard to all of the improvements;
- 4.4.6.6.3 The TSO shall review the client's report within up to ten (10) working days, after which the planning of the repeat test shall be started or the report returned to the client for corrections;
- 4.4.6.6.4 If the TSO decides that the volume and content of the client's report is sufficient, the repeat test shall be performed within thirty (30) days at the latest after approval of the report, provided that the client has introduced the improvements to the power-generating module and the situation in the electricity system allows it.
- 4.4.6.7 The test plan shall be considered fulfilled after the successful performance of all of the agreed tests.

4.4.7 Certification of conformity

- 4.4.7.1 After the successful performance of all of the agreed tests, the TSO shall in accordance with subsection 2.8 provide an assessment of the conformity of the power-generating module with the requirements established in the Grid Code, the RfG and the connection contract.
- 4.4.7.2 Certification of conformity by an authorised certifier:
 - 4.4.7.2.1 If the client wishes to substantiate conformity pursuant to the RfG on the basis of a certificate issued by an authorised certifier, the client shall submit a detailed plan for certification of the conformity of the power-generating module issued by an institution accredited on the basis of DIN EN ISO/IEC 17065. If the power-generating module has an output lower than 5 MW, substantiating FRT capacity is also allowed on the basis of simulations. For this purpose, the client shall conduct conformity modelling pursuant to the RfG with a previously validated model. After that, the client shall conduct simulations of special-type faults pursuant to the legislation and other normative documents applicable in Estonia. In addition to the simulations, the person performing the work must provide a guarantee that none of the fuses installed in the installation of the client do not switch off the power-generating module within the time period of a 250 ms fault.

4.4.7.2.2 The respective plan shall be prepared in accordance with the requirements established in Estonia and the TSO shall have the right to make its own amendments and proposals.

4.4.8 Connection of power-generating modules to an electricity system in stages

4.4.8.1 If a power-generating module is built and brought into conformity with the requirements in stages, the integral conformity of the power-generating module with the requirements shall be verified after synchronisation of every stage with the network, taking into account the provisions of subsections 4.4.7 and 4.4.8, in order to obtain the final operational notification for the power-generating module.

4.4.8.2 The volume of the stages shall be agreed in the connection and the network contract.

4.4.8.3 A power-generating module which is connected in stages shall be referred to by a single name, while the stages of the power-generating module may have different names. The nominal active power of a power-generating module shall be determined as a sum of the nominal active powers of the completed stages.

4.4.8.4 The devices necessary for the generation of electricity installed in different stages shall be considered an integral power-generating module (an operational assembly) and shall be tested integrally if these have a joint:

4.4.8.4.1 Connection point with the TSO and/or;

4.4.8.4.2 Control and protection system and auxiliary equipment.

4.4.8.5 The control of a power-generating module shall be established so that control is connection point specific, regardless of the number of stages.

4.4.8.6 All of the stages of a power-generating module that is capable of operating in stages shall be capable of meeting the requirements established in the connection contract and the RfG and the Grid Code in both individual and joint operation. In fulfilment of the functional requirements of the Grid Code:

4.4.8.6.1 The required primary and secondary reserves of the power-generating module shall be determined from the nominal active power of the operating stages;

4.4.8.6.2 The minimum power generated by the power-generating module as well as the active power adjustment speed together with the range of application of the requirement shall be determined from the nominal active power of the operating stages;

4.4.8.6.3 The technical capacity of the power-generating module as established in the reactive power P/Q diagram shall be achievable as an aggregate of the P/Q diagrams of the operating stages in both reactive power and voltage control modes.

4.4.8.7 The FRT test necessary for the assessment of the conformity of the power-generating module shall be performed upon all completed stages operating in parallel.

4.5 Permanent commissioning of power-generating modules

4.5.1 The client shall gain the right to operate a power-generating module using the network connection after verification and certification of the conformity of the power-generating

module and fulfilment of all of the obligations established in the connection contract, the Connection Conditions and legal acts, with regard to which the TSO shall issue a final operational notification.

- 4.5.2 The terms and conditions of issuing a final operational notification, unless a more detailed extent of application thereof has not been agreed otherwise in the connection contract or an agreement on the temporary use of a network connection to be concluded with the client, are as follows:
 - 4.5.2.1 The TSO has issued an energisation operational notification and the client has fulfilled the requirements established in subsection 4.2.8 of the Connection Conditions;
 - 4.5.2.2 The TSO has issued an interim operational notification and the client has fulfilled the requirements established in subsection 4.3.3 of the Connection Conditions;
 - 4.5.2.3 The power-generating module has been assessed for conformity and the TSO has issued a certificate of conformity with the requirements of the Grid Code;
 - 4.5.2.4 The TSO has approved the models of the electrical installation corrected and verified by the client. The client shall submit verified models to the TSO after the declaration of conformity of the power-generating module together with the documentation specified in the guideline 'Requirements for the preparation and modelling of electrical designs of clients';
 - 4.5.2.5 The client has eliminated all of the incompatibilities identified for the purpose of interim operation notification status by the TSO;
 - 4.5.2.6 The client has made all of the payments required in the course of fulfilment of the connection contract to the TSO and properly fulfilled all other obligations established in legal acts and the connection contract concluded between the client and the TSO;
 - 4.5.2.7 A network contract has been concluded between the client and the TSO.
- 4.5.3 The TSO shall issue the final operational notification within fourteen (14) days after fulfilment of the conditions established in subsection 4.5.2 by the client.
- 4.5.4 The client is allowed to maintain the interim operational notification status for up to twenty-four (24) months unless the TSO has established a shorter term.
- 4.5.5 If the client fails to fulfil the requirements for the issuance of a final operational notification within the established term or within twenty-four (24) months at the latest from issuance of the interim operational notification, the TSO shall disconnect the power-generating module from the network.
- 4.5.6 In order to extend the term of validity of an interim operational notification, a request shall be submitted to the TSO no later than six (6) months before expiry of the term of validity of the interim operational notification. The request for an extension of the validity term of an operational notification shall be submitted to the TSO in accordance with the derogation procedure established in Article 60 of the RfG.
- 4.5.7 The request for an extension of the validity term of an interim operational notification shall among other things include a detailed overview of the technical reasons for the

failure to achieve a final operational notification, the measures of elimination thereof and a time schedule of eliminating the deficiencies.

- 4.5.7.1 The validity term of an interim operational notification may only be extended if the owner of the power-generating module has made significant progress towards achieving full conformity.
- 4.5.7.2 In processing the extension request, the RfG shall be complied with in matters not regulated by the Connection Conditions.
- 4.5.8 If the client wishes to connect a power-generating module to the Transmission System after disconnection of the power-generating module by the TSO in accordance with the conditions established in subsection 4.5.5, the TSO shall have the right to allow the connection of the power-generating module to the Transmission System for the period of two (2) years for the purpose of fulfilment of the conditions of the final operational notification if the owner of the power-generating module presents the measures of achieving fulfilment of the conditions of the final operational notification in the request.
- 4.5.9 By submitting the request specified in subsection 4.5.8, the client shall lose the right to the guaranteed transmission capacity agreed in the connection contract and can use the transmission capacity in the extent left over from ensuring the transmission capacity established in the network contracts of other clients of the network services.
- 4.5.10 The client and the TSO shall agree on the more detailed terms and conditions of the re-energisation and use of the network connection in an amendment to the connection contract. Other market participants can submit connection applications for taking the transmission capacity freed in accordance with the conditions established in subsection 4.5.5 into use.
- 4.5.11 The client referred to in subsection 4.5.5 shall be allowed to start a new connection procedure for applying for guaranteed transmission capacity after three (3) years have passed from expiry of the interim operational notification status.

5 TECHNICAL REQUIREMENTS FOR THE ELECTRICAL INSTALLATIONS OF CLIENTS

5.1 General requirements

- 5.1.1 The client shall be responsible for the conformity of its electrical installations with the applicable legal acts (including the construction standards of electrical installations) and the standards and requirements established by the TSO in the version applicable at the time of submission of the connection application.
- 5.1.2 In designing, building and operating an electrical installation, the client shall comply with the requirements established in this chapter and in the guideline 'Technical requirements for the electrical installations of clients', the applicable standards and rules and the provisions of the Standard Terms and Conditions of Network Contracts of the TSO. In preparing and submitting the design of an electrical installation, the client shall comply with the guideline 'Requirements for the preparation and modelling of electrical designs of clients.'
- 5.1.3 The client shall be responsible for having reviewed all of the relevant requirements before commencement of design and construction works.
- 5.1.4 It is recommended for the client to submit the electrical design to the TSO for approval before commencement of the construction of the electrical installation, but no later than fifty (50) days before energisation of the relevant part of the electrical installation. Approval of the electrical design shall be obtained from the TSO at least seven (7) days before the desired energisation, synchronisation and/or introduction of the desired consumption and/or production capacity.

5.2 Automatics and relay protection

- 5.2.1 The relay protection of the client's electrical installation and the Transmission System shall be compatible and operate selectively in order to ensure the reliability of the electricity system. Both parties shall be responsible for the protection equipment in their ownership being in working order.
- 5.2.2 The owner of primary equipment shall be responsible for the protection of its equipment. The protective devices in the TSO's network are intended for protection of the equipment of the TSO. The client shall have to take into account the fact that the TSO's protective devices do not ensure the disconnection of the client's equipment in the case of faults and short-circuits and do not protect these from damages.
- 5.2.3 The TSO shall give the client the position signals of the switchgear of the client's bay.

5.3 Requirements for the operation of power-generating modules upon frequency and voltage changes and network disturbances

5.3.1 Power-generating modules must be capable of operating and remain in parallel operation with the electricity system within the frequency and voltage ranges determined in legal acts.

5.4 Protection function of power-generating modules

5.4.1 Power-generating modules shall be equipped with protection functions that must meet the requirements established in legal acts and the purpose of which is to avoid damages to the power-generating modules in the course of malfunctions or electricity system disturbances during which variations in operating parameters or the duration of such variations exceed the designed and minimum required values of the power-generating module.

5.4.2 The protective devices installed on a power-generating module must ensure that the module trips to houseload in the cases established in legal acts and is capable of reconnecting to the network when the disturbance has passed.

5.4.3 After activation of protection, a power-generating module may be reconnected to the network on the terms and conditions established in legal acts.

5.5 Control of active reactive power and voltage

5.5.1 It must be possible to control the active and reactive power output by a power-generating module from the electricity system control centre via remote control.

5.5.2 Active power shall be controlled ($P=\text{constant}$) on a connection point basis. In active power control, the distribution of load between the individual power-generating units of the power-generating modules connected to one connection point can be freely decided by the client if the maximum and minimum possible output active power of the operating power-generating units is achievable.

5.5.3 Upon using the $P=\text{constant}$ method of control, it must be possible to change the active power setpoint by increments of 1 MW in the entire active power control range.

5.5.4 Reactive power shall be controlled ($Q=\text{constant}$) on a connection point basis and can be done by the TSO as needed and shall be compensated to the client on the basis of a relevant agreement. Distribution of the production or consumption of reactive power between power-generating units shall be free, provided that the reactive power of the operating power-generating units in accordance with the P/Q curve is achievable.

5.5.5 Upon using the $Q=\text{constant}$ method of control, it must be possible to change the reactive power setpoint by increments of 1 Mvar in the extent of the P-Q diagram declared by the client, but no less than the minimum capability established in the Grid Code.

- 5.5.6 The power-generating modules are in addition to active and reactive power control required to have voltage control functionality ($U=\text{constant}$) capable of changing the reactive power output of the power-generating module according to the setpoint and network voltage within the range of the P-Q diagram declared by the Client, but no less than the minimum capacity established in the Grid Code. The TSO shall launch the use of the voltage control functionality as needed and it shall be compensated to the client. In the course of the voltage control functionality, the distribution of reactive power between the power-generating units of a power-generating module connected to one connection point shall be free, provided that the reactive power of the operating power-generating units in accordance with the P/Q curve is achievable.
- 5.5.7 The connection point to the network of the TSO shall be the reference point for all of the adjustable outputs (voltage, active and reactive power, etc.).

5.6 Additional requirements for the connection of mixed installations

- 5.6.1 The connection point between the TSO and the client as defined in the connection contract shall be the reference point of the control system of a power-generating module regardless of the connection points of the equipment intended for the generation of electricity in the client's electrical installation.
- 5.6.2 Upon the connection of a mixed installation, a full electrical design shall be submitted, but all of the annexes which the client has already submitted in the course of a previous connection process may be left unsubmitted if there are no changes in the previously submitted data and the client makes reference to the application or letter in the course of which the data have been sent to the TSO. The need to submit models shall be reviewed on a specific case basis. In the case of power-generating modules connected to the electricity system before 2003, to which additional electricity consumption is connected in the course of the connection process, only data concerning the client's electrical equipment and installations which are constructed or altered and renovated in the course of the connection shall be submitted in the composition of the electrical design.
- 5.6.3 For the purpose of the data exchange of the mixed installation, the client shall perform additional measurements to the electricity system control centre of the TSO, which shall reflect the power-generating module at the connection point between the client and the TSO without the effect of consumption (hereinafter referred to as the virtual measurement point of the power-generating module). The conformity of a power-generating module shall be assessed on the basis of measurements at the virtual measurement point of the power-generating module.
- 5.6.4 The control system of a power-generating module shall be built in a way that ensures the TSO the option to control the power-generating module from the virtual measurement point in accordance with the explanatory figure provided in subsection 5.6.8.

- 5.6.5 The Q=constant control signal must function at the virtual measurement point of a power-generating module and it must be possible to control the reactive power of the power-generating module within the declared P/Q diagram without taking into account the effect of consumption.
- 5.6.6 The Q=0 control signal must function at the connection point of a mixed installation and when the signal is active, the power-generating module must maintain 0 MVar at the connection point of the mixed installation.
- 5.6.7 The U=constant control signal must function at the connection point of a mixed installation where the power-generating module must maintain the pre-defined voltage value within the reactive power range.
- 5.6.8 The P=constant control signal must function at the virtual measurement point of a power-generating module where active power must be controllable within the range of P_{MAX} and P_{MIN} independent of the effect of consumption.

Figure explaining the data exchange and control of a mixed installation:

LP, VMT – connection point (virtual measurement point) 110 kV

OT – houseload

OL – direct line (mixed installation consumption)

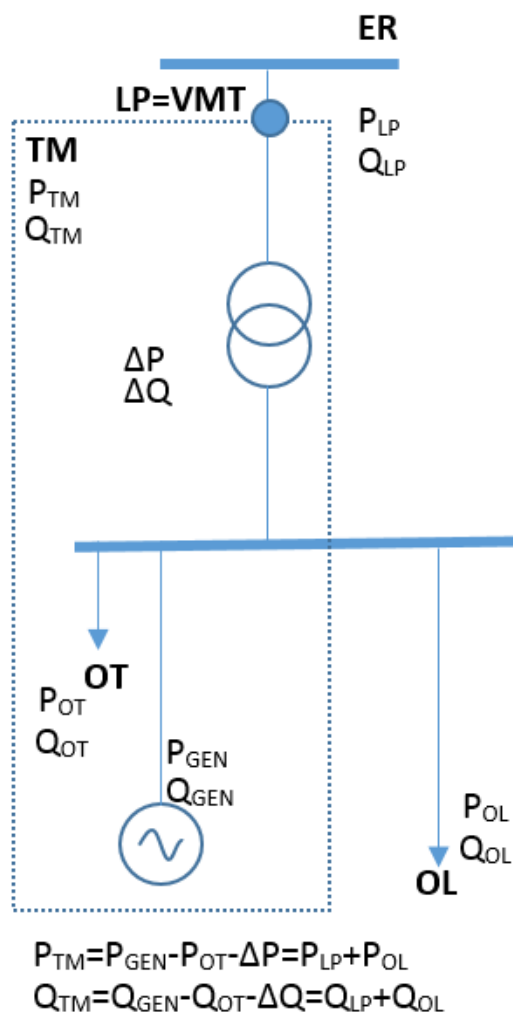
GEN – generator

TM – power-generating module (without the effect of consumption)

Δ – loss

P – active power

Q – reactive power



6 PROCEDURE FOR THE TSO'S APPROVAL OF POWER-GENERATING MODULES CONNECTING TO THE ELECTRICITY SYSTEMS OF DISTRIBUTION SYSTEM OPERATORS

6.1 General part

- 6.1.1 The TSO has established the procedure provided below for the purpose of specifying the TSO-related obligations of power-generating modules connecting to the electricity systems of distribution system operators as established in the Grid Code and the RfG.
- 6.1.2 A producer shall initiate the approval process upon the connection of type C and D power-generating modules to the electricity system after conclusion of a connection contract between the producer and the distribution system operator by forwarding the required details of the power-generating module of the producer and the additional mandatory annexes to be prepared by the distribution system operator in accordance with subsection 6.4 or 6.5 to the TSO.
- 6.1.3 The producer shall pay the TSO a processing fee of 2000 euros to the TSO for the approval of type C and D power-generating modules. An invoice for the processing fee shall be submitted to the producer within three (3) working days after the forwarding of the materials required for the approval of the connection of the power-generating module to the TSO with a payment term of twenty-one (21) days.
- 6.1.4 The TSO shall have the right to notify the producer of deficiencies in the documents submitted by the producer within ten (10) working days from receipt of the documents submitted by the producer together with the approval application and the processing fee (if applicable). The approval procedure shall be suspended until submission of the proper materials.
- 6.1.5 If the connection of the producer causes a need to alter the consumption and/or production conditions at the connection point between the distribution system operator and the TSO, the distribution system operator shall in addition to the approval process initiate a connection process between the distribution system operator and the TSO, for which purpose the distribution system operator shall submit a connection application in accordance with subsection 2.1 and which shall be subject to the processing fee specified in subsection 2.3.2.1 and the procedural fee specified in subsection 2.3.4.1.
- 6.1.6 The TSO shall review the electrical design, including the data communication design, within thirty (30) days, presenting the approval of the electrical design of the producer's electrical installation or comments concerning the elimination of deficiencies in response.

6.2 Type A power-generating modules

6.2.1 Upon the connection of type A power-generating modules to the electricity system, the distribution system operator shall submit the data concerning the type A power-generating modules connected to its network in accordance with section 23 of the Government of the Republic Regulation 'Network Code on the Functioning of the Electricity System'.

6.3 Type B power-generating modules

6.3.1 Upon the connection of type B power-generating modules to the electricity system, the distribution system operator shall submit the data concerning the type B power-generating modules connected to its network in accordance with section 23 of the Government of the Republic Regulation 'Network Code on the Functioning of the Electricity System'.

6.3.2 Before synchronisation of a power-generating module, the producer shall forward the producer's design for the communication connection to the electricity system control centre and the forwarded measurement and remote control signals in accordance with the guideline 'Requirements for data exchange related to the electrical installations of clients' to the TSO using the e-mail address kliendihaldur@elering.ee.

6.3.3 Before synchronisation of a power-generating module, the owner of the power-generating module shall ensure and test the communication connection to the electricity system control centre in accordance with the guideline 'Requirements for data exchange related to the electrical installations of clients.'

6.3.4 The real-time measurement and remote-control signals required by the TSO shall be tested from the electricity system control centre and with the power-generating module being tested in parallel operation to the system within three (3) months after synchronisation.

6.4 Type C power-generating modules

6.4.1 For the connection of type C power-generating modules to the electricity system, the producer shall submit an application for the connection of its power-generating module to the distribution system to the TSO using the e-mail address kliendihaldur@elering.ee.

6.4.2 The producer shall submit the electrical design of the power-generating module for approval. The electrical design shall be approved by the TSO seven (7) days before synchronisation of the power-generating module. The electrical design shall include a single line diagram up to the connection point of the TSO (also including the client's cable and transformer details), the data sheets of the technical parameters issued by the manufacturer for every type of power-generating unit, the basic data of the power-generating module in accordance with subsection 1.1.2.1 of Annex 1 to the Connection

Conditions and the communication connection design in accordance with the guideline 'Requirements for data exchange related to the electrical installations of clients.'

- 6.4.3 Before synchronisation of a power-generating module, the producer shall ensure and test the communication connection to the electricity system control centre in accordance with the guideline 'Requirements for data exchange related to the electrical installations of clients.'
- 6.4.3.1 The real-time measurement and remote-control signals required by the TSO shall be tested from the electricity system control centre and with the power-generating module being tested in parallel operation to the system within three (3) months after synchronisation.
- 6.4.3.2 The producer shall submit verified models prepared in accordance with the guideline 'Requirements for the preparation and modelling of electrical designs of clients' to the TSO.
- 6.4.4 Before issuance of a final operational notification, the distribution system operator shall:
 - 6.4.4.1 Verify the absence of complaints from the TSO with regard to the functioning of the real-time measurement and remote-control signals forwarded to the electricity system control centre by the producer in real-time.

6.5 Type D power-generating modules

- 6.5.1 For the connection of type D power-generating modules to the electricity system, the producer shall submit an application for the connection of its power-generating module to the distribution system to the TSO using the e-mail address kliendihaldur@elering.ee.
- 6.5.2 The producer shall submit the electrical design of the power-generating module for approval. The electrical design shall be approved by the TSO seven (7) days before synchronisation of the power-generating module. The electrical design shall include a single line diagram up to the connection point of the TSO (also including the client's cable and transformer details), the data sheets of the technical parameters issued by the manufacturer for every type of power-generating unit, the guaranteed aggregate (PQ) diagram of the active and reactive capability of the power-generating module calculated at the connection point, the basic data of the power-generating module in accordance with subsection 1.1.2.1 of Annex 1 to the Connection Conditions, the communication connection design in accordance with the guideline 'Requirements for data exchange related to the electrical installations of clients', a plan for testing the conformity of the power-generating module with the Grid Code in accordance with the guideline 'Requirements for the testing of and preparation of a testing plan for the power-generating modules of clients' and PSS/E and PSCAD models together with the cooperation simulation report in accordance with the guideline 'Requirements for the preparation and modelling of electrical designs of clients.'

- 6.5.3 Before synchronisation of a power-generating module, the producer shall ensure and test the communication connection to the electricity system control centre in accordance with the guideline 'Requirements for data exchange related to the electrical installations of clients.'
- 6.5.3.1 The real-time measurement and remote-control signals required by the TSO shall be tested from the electricity system control centre and with the power-generating module being tested in parallel operation to the system within three (3) months after synchronisation.
- 6.5.3.2 The producer shall submit verified models prepared in accordance with the guideline 'Requirements for the preparation and modelling of electrical designs of clients' to the TSO. The verified models shall be approved by the TSO.
- 6.5.4 Before issuance of a final operational notification, the distribution system operator shall:
 - 6.5.4.1 Verify the absence of complaints from the TSO with regard to the functioning of the real-time measurement and remote-control signals forwarded to the electricity system control centre by the producer in real-time.

7 TEMPORARY CONNECTION OF A PROTOTYPE DEVICE TO THE TRANSMISSION SYSTEM

7.1 General principles

- 7.1.1 This chapter establishes the terms and conditions of temporarily connecting a prototype power-generating module to the Transmission System.
- 7.1.2 In this chapter, connection shall mean the connection of an electrical installation of a prototype device to the Transmission System via a new or an existing connection point.
- 7.1.3 The connection to the Transmission System shall be established at the nominal voltage of 110 kV or 330 kV.
- 7.1.4 If a connection point has to be built for the connection of a prototype device, a connection process shall be carried out. After completion of the connection process, a fixed-term network contract shall be concluded for up to five (5) years from completion of the connection point.
- 7.1.5 In the case of a prototype device, the new connection point can be used for up to three (3) years from the date of synchronisation of the prototype device.
- 7.1.6 Within two (2) years after the end of the three-year period, a connection application can be submitted for the connection of a permanent electrical installation to the same connection point or an application for using the same connection point for a new prototype device. If no proper connection application or an application for using the connection point is submitted within two (2) years, the right to use the connection point expires and the client will no longer receive network services from said connection point.
- 7.1.7 Within two (2) years after the period of use of a prototype device specified in subsection 7.1.5, the client can submit an application for the connection of an electrical installation of a new prototype device to the Transmission System at the same connection point.
- 7.1.8 If the client wishes to use an existing connection point for the connection of a prototype device the prototype device must not produce or consume more than stipulated in the valid connection and/or network contract.
- 7.1.9 A prototype device or prototype devices may be connected to the connection point for up to three (3) years and no other power-generating units, power-generating modules or additional consumers may be connected to the same connection point.
- 7.1.10 Any communication and data exchange with the TSO with regard to connection to the Transmission System as well as approvals and testing shall be done by e-mail.
- 7.1.11 The client shall pay all of the justified costs arising from the connection of a prototype device to the electricity system.

7.2 Technical principles of connection

- 7.2.1 The aggregate rated power of prototype devices to be connected to an electricity system node shall be below 0.2% of the short circuit capacity, calculated at the normal operation of the system.
- 7.2.2 If a connection point indicates disturbances coming from the client, in the case of which the electricity quality limits (planning values) established in the guideline 'Technical requirements for the electrical installations of clients' or the smooth supply of other consumers connected to the electricity system with electricity is not ensured, the client's electrical installation shall be disconnected from the Transmission System.
- 7.2.3 After the occurrence of disturbances, the client shall submit a detailed report on the causes of the disturbances.
- 7.2.4 The client's electrical installation shall not be re-connected to the Transmission System until the client has submitted a detailed plan together with explanatory activities to eliminate the disturbances. The electrical installation shall be energised to the Transmission System after the plan for the elimination of the disturbances has been approved by the TSO and the disturbances have been eliminated.
- 7.2.5 The period of three (3) years specified in subsections 7.1.5 and 7.1.6 and established in the connection contract of the prototype device shall not be extended upon the occurrence of disturbances and the disconnection of the prototype device from the Transmission System.

7.3 Brief description of the connection process of a prototype device

- 7.3.1 A person wishing to connect a prototype device to the electricity system shall submit an application to the TSO in accordance with the form 'Application for the connection of a prototype device' provided in subsection 1.5 of Annex 1. The following shall be submitted together with the application:
- 7.3.1.1 The basic data of the power-generating module in accordance with the form provided in subsection 1.1.2.1 of Annex 1 to the Connection Conditions;
- 7.3.1.2 A schematic diagram of the electrical installations up to the connection point;
- 7.3.1.3 A PQ diagram of the power-generating unit and separately up to the connection point.
- 7.3.2 If the TSO finds the project feasible on the basis of the initial information in accordance with the provisions of subsection 7.3.1, an invoice for the processing fee shall be issued to the client in accordance with subsection 2.3.2.1 of the Connection Conditions.
- 7.3.3 After receipt of the processing fee and acceptance of the application for the connection of a prototype device by the TSO, the TSO shall prepare a contract offer and issue it to the client within ninety (90) days at the latest from receipt of the processing fee. The contract offer shall be valid for up to sixty (60) days.
- 7.3.4 If the client agrees to the offer, a contract for the connection of a prototype device shall be concluded with the client.

- 7.3.5 After the contract is signed, an invoice for the first instalment shall be issued, which shall also include the procedural fee in accordance with subsection 2.3.4.1 of the Connection Conditions.
- 7.3.6 The client shall submit information concerning its electrical installation for approval by the TSO at least thirty (30) days before submission of an energisation application which shall include:
- 7.3.6.1 The electrical design at least for consumption in accordance with the guideline 'Requirements for the preparation and modelling of electrical designs of clients';
- 7.3.6.2 The signals to be transmitted to the TSO at least in the volume of whether the power-generating module(s) are on/off and real-time measurements of the client's electrical installation P, Q, I, U;
- 7.3.6.3 Relay protection configurations (as well as power-generating unit configurations), which shall be specified in the agreement on the connection of a prototype device.
- 7.3.7 In the case of a wind turbine, an assessment of capability of the electrical part of the power park module, an assessment of the fulfilment of the requirements of the Grid Code and an assessment of the fulfilment of the electricity quality limits prepared by a company with an accreditation required in standard IEC 61400-22 shall be submitted. The reports shall be submitted in accordance with standard IEC 61400-21.
- 7.3.8 In the case of other types of prototype devices, the prototype certificate shall be submitted in accordance with the relevant standards.
- 7.3.9 The client shall submit an application for the energisation of its electrical installation at least thirty (30) days before the planned initial energisation in accordance with form 1.2 in Annex 1 to the Connection Conditions.
- 7.3.10 As an annex to the agreement on the connection of a prototype device, the TSO and the client shall before energisation conclude an agreement on the temporary use of the network connection.
- 7.3.11 The client shall submit an application for the synchronisation of its electrical installation at least thirty (30) days before the planned initial synchronisation in accordance with form 1.3 in Annex 1 to the Connection Conditions.

ANNEXES TO THE CONNECTION CONDITIONS

ANNEX 1 – Forms

ANNEX 2 – Standard connection contract form

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1. FORMS

1.1 Connection application

- 1.1.1. The following shall be indicated in the connection application:
 - 1.1.1.1. Details of the applicant
 - 1.1.1.2. Details of the location of the connection point
 - 1.1.1.3. Clarification of whether it is a new or an existing connection point
 - 1.1.1.4. The voltage of the desired connection point
 - 1.1.1.5. The desired production or consumption capacity of the connection point
 - 1.1.1.6. The desired requirements for the security of electricity supply of the place of consumption
 - 1.1.1.7. The number of connection points at the substation after establishment of the connection
 - 1.1.1.8. A brief description of the connection of the electrical installation to the network
 - 1.1.1.9. Details of the power-generating module or electrical installation
 - 1.1.1.10. Details of the power-generating module
 - 1.1.1.11. Other important information concerning the application

1.1.2. List of Annexes to be submitted together with the connection application

Title of annex	Connection of power-generating modules or mixed installations to the Transmission System or amendment of the production and/or consumption conditions thereof	Connection of a consumer or a distribution system operator at a new connection point or amendment of consumption and/or production conditions at an existing connection point of a distribution system operator or amendment of consumption conditions at an existing connection point of a consumer
Documents required by § 19 1 ¹⁾ and 1 ²⁾ of the Network Code on the Functioning of the Power System.	x	
In the event that the drafting of plans is not obligatory, confirmation from the local government or another planner that there is no such obligation for the construction of an electrical installation to be connected to the network.	x	
The layout plan, which indicates the existing or desired location of the electrical installation and connection point with coordinates and the entire power-generating module connected to the electricity transmission system by the customer.	x	x
A description of the starting and stopping process of the electrical installation and a description of the forecast operation, stating all of the important circumstances that have an effect on operation.		x <i>if the capacity of a single consumer's electricity consuming appliance is more than 10 MW</i>
List of production modules which have already been connected to, or are to be connected to, the distribution network on the basis of a subscription application.		x
Payment order for the payment of the security deposit or letter of guarantee.	x	x <i>if needed</i>
Other important annexes to be added to the application which the applicant considers necessary to submit (not mandatory).		

1.1.2.1. General data of power generating module

Tootmismooduli põhiaandmed / General data of power generating module

Tabeli C osa tuleb täita iga erineva planeeritava tootmisüksuse kohta

Table is to be filled for each different unit

A	Tootmismooduli kirjeldus	Data	General information about power station
A.1	Tootmismooduli nimi		Name of the power station
A.2	Tootmismooduli aadress		Address of power station unit
A.3	Tootmismooduli omaniku nimi		Name of power station owner
A.4	Liitumispunkti pinge		Voltage of the connection point
A.5	Jaotusvõrguettevõtja alajaam		Substation of the Distribution System Operator
B	Maksimaalne väljastatav võimsus	Data	Maximum/minimum power and
B.1	Maksimaalne tootmismooduli väljundvõimsus		Maximum net capacity
B.2	Minimaalne tootmismooduli püsivalt väljastatav võimsus		Minimum continuous net capacity
C	Tootmisüksuse elektrilised nimiandmed	Data	Generator
C.1	Tootmisüksuse tüüp (sünk, asünk, inverter vms)		Type of power generating module (synchronous, asynchronous, inverter etc.)
C.2	Tootmisüksuste arv		Number of generation devices
C.3	Niminäivvõimsus (1 p.u.) Sn MVA		Nominal apparent power (1 p.u.) Sn MVA
D	Reaktiivvõimsuse kompenseerimine	Data	Reactive power compensation
D.1	Juhul kui reaktiivvõimsuse kompenseerimiseks kasutatakse kondensaatorpatareid/reaktoreid, siis selle suurus, Mvar		Size of additional capacitor/reactors if any (Mvar):
D.2	Reaktiivvõimsuse kompenseerimise seadme astmete suurus, Mvar		Steps of switching shunts (Mvar):
F	Tootja jõutrafo andmed	Andmed	Step-up transformer
F.1	Jõutrafo niminäivvõimsus Sn MVA		Nominal apparent power (1 p.u.) Sn MVA
F.2	Ülepingemähise nimipingeline Up kV		Nominal primary voltage (1 p.u.) Up kV
F.3	Alampingemähise nimipingeline Us kV		Nominal secondary voltage Us kV
F.4	Lühispingeline uk% (eeldatav)		Short circuit voltage uk% (preliminary)
F.5	Astmelülitid ja astme suurus (online/offline)		Step changer and step size (online/offline, % kV)
F.6	Lülitusgrupp		Connection type (e.g. YNd11)

1.2 Energisation application

Details of the client (to be completed by the client):

Substation	
Electrical installation to be energised	
Reason	
Desired date of energisation	
Technical parameters submitted as an annex	
Contact details (name, telephone, e-mail address)	
Submitted by (name, telephone, e-mail address)	
Client's resolution: We hereby confirm that our electrical installation is ready for energisation.	
Date, signature	

1.3 Energisation plan

No.	Content	Responsible person	Notice of fulfilment
1.	PERSONS RESPONSIBLE FOR FULFILMENT OF THE ENERGISATION PLAN		
1.1.	Responsible for fulfilment of the energisation plan: <i>/ company / position / name / contact telephone /</i>		
1.2.	Responsible for the correct assembly and configuration of equipment: <i>/ company / position / name / contact telephone /</i>		
1.3.	The fulfilment of the energisation plan shall be directed by the dispatcher of the electricity system control centre (hereinafter referred to as the ESCC): <i>/ company / position / name / contact telephone /</i>		
2.	OBJECTIVE		
2.1.			
3.	INITIAL SITUATION		
3.1.			
4.	PREPARATIONS FOR BLOCKING CHECK		
4.1.			
5.	BLOCKING CHECK		
5.1.			
6.	PREPARATIONS FOR ENERGISATION		
6.1.			
7.	ENERGISATION		
7.1.			
	ANNEXES		
	Annex 1: initial energisation scheme (Elering's part)		
	Annex 2: initial energisation scheme (CLIENT's part)		
	Annex 3 final scheme (Elering's part)		
	Annex 4 final scheme (CLIENT's part)		
	Annex 5 configurations (Elering's part)		
	Annex 6 configurations (CLIENT's part)		

Client's confirmation:

Client's representative:	Date:
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Approvals of the TSO:

Conforms to relay protection and automation requirements. Reliability expert of the ESCC of the TSO:	Date:
Conforms to the operating requirements of the Estonian electricity system. Dispatcher control expert of the ESCC of the TSO:	Date:

1.4 Synchronisation application

Details of the client (to be completed by the client):

Substation	
Electrical installation to be synchronised	
Reason	
Desired date of synchronisation	
Technical parameters submitted as an annex	
Contact details (name, telephone, e-mail address)	
Submitted by (name, telephone, e-mail address)	
Date, signature	

1.5 Application for the connection of a prototype device

BUSINESS NAME OF APPLICANT / NAME (ELECTRICITY PRODUCER WHOSE ELECTRICAL INSTALLATION IS TO BE CONNECTED TO THE TRANSMISSION SYSTEM)		REGISTRY CODE OR PERSONAL IDENTIFICATION CODE
ADDRESS (ACCORDING TO COMMERCIAL REGISTRY CARD DATA)		
TELEPHONE:		E-MAIL:
NAME OF APPLICANT'S REPRESENTATIVE:		BASIS OF REPRESENTATION: <input type="checkbox"/> POSITION <input type="checkbox"/> POWER OF ATTORNEY
REPRESENTATIVE'S TELEPHONE:		REPRESENTATIVE'S E-MAIL

GENERAL TECHNICAL INFORMATION

DESIRED LOCATION OF THE CONNECTION POINT (NAME OF ELERING'S SUBSTATION, VILLAGE, CITY, COUNTY)	
TERM OF CONNECTION	
CONNECTION POINT VOLTAGE	KV
NUMBER OF CONNECTION POINTS AND REQUIREMENTS FOR SECURITY OF ELECTRICITY SUPPLY	
A BRIEF DESCRIPTION OF THE CONNECTION OF THE ELECTRICAL INSTALLATION TO THE NETWORK (CABLE/OVERHEAD LINE, SINGLE OR DOUBLE CIRCUIT LINE)	

PRODUCTION OF ELECTRICITY

RATED POWER OF THE POWER-GENERATING MODULE TO BE CONNECTED TO THE NETWORK	MW. $\cos\phi$
DESIRED RATED POWER OF POWER TRANSFORMERS TO BE CONNECTED TO THE CONNECTION POINT	MVA

IF NO CONNECTION OFFER CAN BE MADE IN THE EXTENT OF THE DESIRED CAPACITY, WOULD YOU LIKE TO RECEIVE A CONNECTION OFFER IN THE EXTENT OF THE MAXIMUM POSSIBLE CAPACITY?	<input type="checkbox"/> YES <input type="checkbox"/> NO
--	--

CONSUMPTION OF ELECTRICITY

DESIRED AGGREGATE CONSUMPTION CAPACITY	MW $\cos\phi$
DESIRED RATE POWER OF THE POWER TRANSFORMERS TO BE CONNECTED TO THE CONNECTION POINT (MVA)	MVA
DESIRED AGGREGATE FUTURE CAPACITY STATE YEARLY, IF POSSIBLE	MW

To be separately added to the application:

Annex 1 Basic data of the power-generating module in accordance with the form provided in subsection 1.1.2.1 of Annex 1 to the Connection Conditions

Annex 2 Schematic diagram of the electrical installations up to the connection point

Annex 3 PQ diagram of the power-generating unit and separately until the connection point

ANNEX 2 – Standard connection contract form

CONNECTION CONTRACT NO.

Elering AS (hereinafter referred to as the Transmission System Operator, or the TSO), registry code 11022625, located at Kadaka tee 42, 12915 Tallinn, represented on the basis of the articles of association by chairman of management board and member of management board,

and

..... (hereinafter referred to as the Client), registry code, located at, represented by member of management board,

have concluded (hereinafter referred to as the TSO and the Client individually and jointly referred to as a Party and the Parties) this connection contract (hereinafter referred to as the Contract) in the following:

1. Contract object

- 1.1 By concluding the Contract, the Parties have agreed that the TSO shall design and build electrical installations located towards the Transmission System at the connection point (hereinafter also referred to as the Connection Point) at the substation (hereinafter referred to as the Substation) in accordance with the Contract and the Client's connection application and connect these to the Client's conforming electrical installations at the connection point for the purpose of ensuring a network connection for the Client. The Client's connection application is an integral part of the Contract.
- 1.2 The Contract sets forth the terms and conditions of connection of the Client's electrical installation to the Transmission System, including:
 - 1.2.1 The rights, obligations and liability of the Client and the TSO arising from the connection;
 - 1.2.2 The principles of calculation and the procedure for payment of the costs related to connection;
 - 1.2.3 The ownership of the electrical installations of the Client and the TSO and the location of the connection and measurement point;
 - 1.2.4 The term for fulfilment of the Contract;
 - 1.2.5 The terms and conditions of amendment and termination of the Contract;
 - 1.2.6 The terms and conditions of ensuring and certifying the conformity of the Client's electrical installation;

- 1.2.7 Other terms and conditions necessary for fulfilment of the Contract.
- 1.3 In fulfilment of the Contract, the Parties shall in addition to the Contract comply with the following documents: 'Terms and conditions of connection to the electricity transmission system of Elering AS' (hereinafter referred to as the Connection Conditions), 'Methodology of calculation of the connection charge and the fee for the amendment of consumption or production conditions of Elering AS' (hereinafter referred to as the Methodology) and 'Standard network contract terms and conditions of Elering AS' (hereinafter referred to as the Standard Network Contract Terms and Conditions), which form integral parts of the Contract. By signing the Contract, the Client confirms that it has reviewed the documents referred to and the content thereof is understandable for the Client.
- 1.4 A description of the electrical installations to be designed and built and the technical specifications of the network connection are provided in Annex 1 to the Contract.
- 1.5 The estimated calculation of the connection charge is provided in Annex 2 to the Contract and the connection charge payment schedule is provided in Annex 3 to the Contract.
- 1.6 The electrical parameters of the connection point are provided in Annex 4.
- 1.7 The technical requirements and rules applicable to the Contract are provided in Annex 5.
- 1.8 The meetings held between the Parties with regard to the fulfilment of the Contract shall be recorded in minutes and the relevant minutes signed by the Parties shall be used in the interpretation of the Contract.
- 1.9 The TSO shall ensure a functioning network connection that corresponds to the terms and conditions established in the Contract for the Client within (.....) months at the latest from the payment of the first instalment of the connection charge specified in the payment schedule provided in Annex 3. Said term shall be extended by the period during which the TSO has refused to fulfil its obligations on justified grounds or has suspended fulfilment of the Contract in other cases established in the Contract and in legal acts.
- 1.10 The TSO shall ensure a temporary network connection for the Client for taking the electrical installation into use and for performing the tests necessary for verifying conformity in accordance with the Connection Conditions.
- 1.11 The conformity of the electrical installation shall be verified in accordance with the provisions of the Connection Conditions, and for the purpose of performing the tests the Client and the TSO shall conclude an agreement on the temporary use of the network connection as an annex to the Contract, during which the Client shall have the right to perform the tests that cannot be performed without a network connection. Conformity shall be verified in accordance with the guidelines established by the TSO.

1.12 The TSO shall order all of the works or services necessary for fulfilment of the Contract via a procurement procedure if such an obligation derives from law. Procurement is understood to mean fulfilment of the rules of procurement procedures mandatory for the TSO arising from the Public Procurement Act (public procurements and simple procurements). In the Contract, procurement is also understood to mean all other orders and purchases of works or services, in the case of which the TSO is not obligated to comply with the Public Procurement Act.

2. Rights and obligations of parties

2.1 The TSO shall, if necessary, announce the procurements needed for the performance of the design and construction works required for fulfilment of the Contract within months at the latest after payment of the first instalment of the connection charge by the Client. The TSO shall also have the right to use other procurement contracts concluded as a result of procurement procedures held before conclusion of the Contract for fulfilment of the Contract.

2.2 The Client shall have the right to demand that the TSO perform the design works which are necessary for fulfilment of the Contract and for which holding a public procurement is not required before payment of the first instalment of the connection charge established in the Contract by paying the costs incurred in the performance of such design works to the TSO in accordance with subsection 3.6 of the Contract.

2.3 The TSO shall notify the Client in writing of procurement results within ten (10) calendar days from determination of the results of a procurement held for the performance of design and construction works or the provision of services necessary for fulfilment of the Contract. If a procurement for the performance of design and construction works or the provision of services necessary for fulfilment of the Contract has been held before conclusion of the Contract, the TSO shall notify the Client in writing of the results of the previously held procurements after conclusion of the Contract.

2.4 The Client shall notify the TSO within thirty (30) calendar days at the latest from receipt of the notice specified in subsection 2.3 whether the Client agrees or does not agree to the conclusion of a procurement contract that allows the fulfilment of this Contract on the specified terms and conditions or to the results of the procurements held before conclusion of the Contract. If the Client fails to notify the TSO of its agreement or disagreement within the aforementioned term, the Client shall be considered to have disagreed. Disagreement, including failure to notify, shall be considered as the Client's statement of withdrawal from the Contract, which shall entail the consequences established in subsection 7.5 of the Contract. The TSO shall not have to agree the results of procurements whose expected cost is below euros (including procurements held before conclusion of the Contract) with the Client.

- 2.5 If the Client gives notice of agreement to the conclusion of a procurement contract or the application of a previously concluded procurement contract in accordance with subsection 2.4 and the requirements specified in subsection 1.7 have been met, the TSO shall conclude said procurement contract or apply a previously concluded procurement contract and ensure the design and construction of electrical installations located on the Transmission System side of the connection point in accordance with the Contract. If a procurement is contested in the public procurement review committee or court, the TSO shall have the right to suspend the fulfilment of the Contract for the period from contestation until the entry into force of the resolution made in the dispute. The TSO and the Client shall cooperate to ensure compliance with the term established in subsection 1.9 regardless of the suspension of fulfilment of the Contract.
- 2.6 If it turns out upon conclusion of a procurement contract by the TSO that the term of construction of the network connection specified in the Contract is considerably shorter, the Parties shall, if possible, negotiate and agree on a shorter term of construction of the network connection.
- 2.7 At the Client's request, the term of construction of the network, which may be shorter than the term specified in subsection 1.9, shall be added to the procurement terms and conditions. In such a case, the connection charge may increase considerably.
- 2.8 The Client shall have the right to receive information from the TSO about the procurements held for fulfilment of the Contract and demand that the TSO provide the documentary certification and justification of the expenses which are incurred in the fulfilment of the Contract and are payable by the Client as the connection charge. The TSO shall notify the Client in writing of the completion of the connection point.
- 2.9 The Client shall be obligated to cooperate with the TSO in obtaining the permits and establishing the servitudes necessary for construction of the electrical installation specified in Annex 1 to the Contract and establishment of a line. The Client shall also be obligated to ensure the removal of objects and circumstances that obstruct or may obstruct establishment of the connection point from the area in the Client's territory which is necessary for the establishment of said electrical installations at its own expense before commencement of the construction works. Upon failure to reach an agreement with the land owner with regard to the erection of the electrical installation or upon failure to obtain other permits or consents necessary for fulfilment of the Contract (including obstructions arising from spatial plans), the TSO shall have the right to suspend fulfilment of the Contract until such agreements, permits or consents are obtained. The TSO shall initiate proceedings for the establishment of compulsory possession or appeal to court only with the Client's consent and agreement. The costs related to reaching agreements are included in the connection charge.
- 2.10 The TSO shall be obligated to immediately notify the Client of any circumstances which obstruct or may obstruct proper fulfilment of the TSO's obligations arising from the Contract or circumstances which cause the suspension of the fulfilment of the Contract.

- 2.11 The Client shall be obligated to:
 - 2.11.1 Ensure the timely conformity of its electrical installation in accordance with the prerequisites and conditions presented in the connection application;
 - 2.11.2 Allow the TSO to install electrical installations and measurement systems necessary for the Client's power supply, which remain the property of the TSO, in the Client's territory and buildings;
 - 2.11.3 Ensure access necessary for the maintenance and upkeep of the electrical installations and measurement systems referred to in subsection 2.11.2;
 - 2.11.4 Not charge a fee for the TSO's electrical installations and measurement systems being located in the Client's territory or buildings or for the use of the Client's territory or premises for the maintenance and use thereof, unless stipulated otherwise in legal acts;
 - 2.11.5 The Parties shall, if necessary, negotiate for the establishment of free-of-charge servitudes to ensure the activities specified in subsections 2.11.2 and 2.11.3.

3. Calculation and payment of connection charge

- 3.1 The Client shall be obligated to pay the connection charge to the TSO by the payment term indicated on the invoices for the connection charge. The Client shall upon payment of an invoice be obligated to make reference to the reference number indicated on the invoice. The TSO shall grant the Client a term of at least fourteen (14) days for payment of invoices.
- 3.2 Value added tax shall be added to all of the payments in accordance with legal acts.
- 3.3 The Client shall pay the TSO a connection charge for the connection, which must cover all of the actual and justified expenses incurred by the TSO in connecting the Client. The connection charge shall include any additional costs incurred due to changes in the time schedule of construction caused by the conduct of the Client. The estimated expected amount of the connection charge is established in the calculation provided in Annex 2 to the Contract. The Parties have agreed upon conclusion of the Contract that said amount and cost lines of the connection charge are only an estimate which the TSO has made on the basis of the best available knowledge and practice and the actual exact amount of the connection charge shall be determined in the course of fulfilment of the Contract and cost lines not included in Annex 2 may be added. The Parties shall be obligated to immediately notify each other of all circumstances that may have an effect on the estimated amount of the connection charge.

- 3.4 The Client shall pay the connection charge on the basis of the payment schedule provided in Annex 3 to the Contract, taking into account the specification established in subsection 3.6. The Parties have agreed that the payment schedule on the basis of which the connection charge is paid has been prepared and must be altered, if necessary, on the principle that all of the reasonable and justified expenses incurred by the TSO in connecting the Client shall be paid by the Client to the TSO in instalments in advance according to the works performed by the TSO and the payment schedule prepared on the basis thereof (excluding the last instalment payable under the payment schedule).
- 3.5 The TSO shall upon the Client's request submit documentary evidence with regard to all of the amounts charged from the Client as the connection charge. Upon changes in the initially estimated amount of the connection charge, the Client shall upon the TSO's request be obligated to conclude a written agreement with the latter on the amendment of the connection charge calculation provided in Annex 2 to the Contract and/or the payment schedule on the basis of the provisions of subsections 3.3 to 3.5.
- 3.6 The TSO shall have the right to demand, on the connection charge invoice set forth in the Contract, that the Client compensate the actual, justified and reasonable expenses incurred in the preparation of connection-related procurements and in the connection before the term for the payment of the connection charge if the TSO commences the works necessary for fulfilment of the connection contract upon the Client's request and in the extent agreed with the Client before receipt of the first instalment of the connection charge. Said expenses shall be compensated once a month within ten (10) days after the TSO has submitted a report on the aforementioned connection-related works performed in the previous month together with the cost thereof to the Client. The amounts paid by the Client on the basis of this subsection shall be taken into account in the calculation of the last instalment of the connection charge payable under the Contract.
- 3.7 If it turns out upon completion of the connection point that the Client has paid the connection charge to the TSO on the basis of the connection charge estimates in an amount that is larger than the actual costs incurred in the fulfilment of the connection contract, the TSO shall return the overpaid amounts to the Client within thirty (30) days from the signing of the final report on completion of the connection point.
- 3.8 If the Client fails to pay the connection charge to the TSO by the payment term, the Client shall be obligated to pay the TSO a penalty for late payment in the amount of 0.05% (point-zero-five per cent) of the payment unpaid by the payment term per day until full receipt of the entire payment to the bank account of the TSO.
- 3.9 If the TSO delays in the payment of the amount referred to in subsection 3.7, the TSO shall be obligated to pay the Client a penalty for late payment in the amount of 0.05% (point-zero-five per cent) of the payment unpaid by the payment term per day until full receipt of the entire payment to the bank account of the Client.

3.10 When the Client pays the instalments of the connection charge, the first instalment shall be considered paid first, then the second instalment and then the third instalment. Said payment sequence shall apply regardless of the Client's unilateral will.

4. Ownership of electrical installations

4.1 The Parties have agreed that the boundary of ownership of the electrical installations of the Client and the TSO is determined by the respective connection point in accordance with Annex 1 to the Contract.

4.2 A description of the location of the electrical installations owned by the TSO and the Client is provided in Annex 1 to the Contract. By signing the Contract, the Client confirms that the Client is aware that the description of the location of the connection point is approximate and may change insignificantly due to engineering-technical reasons in the course of establishment of the connection point. In the case of said changes, the Parties shall be obligated to sign a new Annex 1 to the Contract within ten (1) working days after the TSO has submitted it to the Client.

4.3 Each Party shall be obligated to ensure the preservation, upkeep and conformity of the electrical installations in their ownership or possession with the applicable legal acts and the contracts concluded between the Parties, unless the Parties have agreed otherwise.

5. Fulfilment of Contract and liability

5.1 The TSO shall have the right to suspend fulfilment of the Contract and its obligations if the Client is in material violation of the obligations arising from the Contract or legal acts (including if the Client has failed to ensure the conformity of its electrical installation or meet other prerequisites presented in the connection application) or if the right to suspend fulfilment of obligations arises from other provisions of the Contract. The TSO shall submit the notice of suspension of the Contract in writing and the Contract shall be suspended from the submission of the notice. If possible, the TSO shall notify the Client of the suspension of the Contract at least seven (7) calendar days in advance and the Contract shall be suspended if the Client has not eliminated the circumstances that cause the suspension of the Contract within the aforementioned period. In the case of suspension of the fulfilment of the Contract, the Client shall compensate the TSO for the expenses already incurred as well as the justified additional expenses related to suspension and resumption of the fulfilment of the Contract. In the case of suspension of the fulfilment of the Contract, the term of completion of the network connection shall be extended by the period during which fulfilment of the Contract was suspended. During the suspension, the TSO shall have the right to continue the fulfilment of the Contract in areas not affected by the obstructing circumstances. Upon elimination of the grounds for suspension, the TSO shall continue the fulfilment of the Contract, notifying the Client thereof.

- 5.2 A Party shall not be liable for the non-fulfilment and/or improper fulfilment of its obligations arising from the Contract or legal acts (violation of obligations) and shall therefore not be obligated to compensate the other Party for the damage caused by the violation of obligations and the other Party shall have no right to rely on the violation of obligations in any other way in exercising its rights if the violation of obligations is excusable and the violating Party could not have been reasonably expected to have foreseen or taken it into account at the time of conclusion of the Contract or avoided or overcome the consequences thereof, including:
- 5.2.1 Natural disasters;
 - 5.2.2 Thunder, frost and other natural phenomena that exceed the design standards of the electrical installations;
 - 5.2.3 Fires;
 - 5.2.4 Strike, acts of diversion or unrest;
 - 5.2.5 Declaration of an emergency situation or a state of war.
- 5.3 If the circumstance, event, activity or inactivity referred to in subsection 5.2 is only temporary, the Party shall not be liable for the violation of obligations only for the period during which that circumstance, event, activity or inactivity affected the fulfilment of obligations.
- 5.4 The Parties shall be obligated to notify each other at the first opportunity of the occurrence of the circumstances referred to in subsection 5.2 as well as of the impact and extent thereof with regard to the Party's ability to fulfil its obligations and of the cessation of said circumstances. Upon violating this obligation, the Party that is in material violation of obligations shall lose its right to rely on the obstructing circumstances from the occurrence or cessation of the circumstances until fulfilment of the relevant notification obligation.
- 5.5 The occurrence of the circumstance, event, activity or inactivity referred to in subsection 5.2 shall not release the Parties from the obligation to take all possible measures to avoid or reduce the damage and other adverse effects caused by the violation of obligations.
- 5.6 The Client shall immediately notify the TSO of any unsafe situations or accidents or other circumstances which endanger or may endanger the fulfilment of obligations assumed under the Contract.

6. Compensation of damages

- 6.1 The Parties shall be obligated to compensate the damage caused to the other Party in the fulfilment of the Contract or otherwise in connection with the Contract only and solely in the cases, in the extent and on the terms and conditions established in this chapter. The limit of liability shall not apply in the case of intentionally caused damages.

- 6.2 The violating Party shall only compensate the direct proprietary damages caused to the electrical installations of the other Party or other items in the ownership or possession of the other Party by the violation of obligations. The legal remedy established in subsection 6.3 of the Contract is not in contradiction with this section.
- 6.3 If the TSO delays in the fulfilment of its obligations past the term agreed in subsection 1.9 of the Contract, the TSO shall pay the Client a penalty for late payment in the amount of 0.05% (point-zero-five per cent) of the amount of the connection charge or the fee for amendment of the conditions for every day of delay in the fulfilment of the obligations. The TSO shall not be obligated to pay a contractual penalty if the obligations were violated due to force majeure or the term established in subsection 1.9 has been extended on the grounds established in the Contract.
- 6.4 The Parties shall have the right to demand from each other the submission of evidence and other documents and information necessary for determining the existence and amount of the damages to be compensated and the existence of the grounds for compensation of damages.
- 6.5 The Client shall in no case have the right to demand that the TSO compensate damages which have occurred as a result of the TSO exercising its rights as a system operator established in legal acts.

7. Contract validity

- 7.1 The Contract is digitally signed and can be amended upon written agreement between the Parties.
- 7.2 The Contract shall end:
- 7.2.1 Upon proper fulfilment of the Parties' obligations established in the Contract;
 - 7.2.2 Upon written agreement between the Parties;
 - 7.2.3 Upon withdrawal from or termination of the Contract in the cases prescribed in the Contract upon the request of one Party.
- 7.3 The TSO shall have the right to withdraw from the Contract by giving the Client fourteen (14) days' prior written notice thereof and provided that the Client has not eliminated the deficiencies within said fourteen (14) days if:
- 7.3.1 The Client has failed to make the payments agreed in the Contract (including the connection charge) by the agreed term;
 - 7.3.2 The Client is in material violation of other obligations established in the Contract or legal acts;
 - 7.3.3 One or several circumstances specified in subsections 8.7.1 to 8.7.4 occur and it is evident due to this or any other circumstances notified by the Client in accordance with subsection 8.7.5 that the Client is unable to properly fulfil the Contract;
 - 7.3.4 The fulfilment of the Contract has been suspended in accordance with subsection 5.2 of the Contract and the total duration of the suspension is ninety (90) days or more.

- 7.4 The Client shall have the right to withdraw from the Contract by giving the TSO thirty (30) days prior written notice thereof.
- 7.5 Upon either Party withdrawing from the Contract on the grounds established in the Contract or legal acts, the TSO shall return the amounts paid by the Client as the connection charge to the latter, having deducted all of the justified and certified costs already incurred by the TSO in the fulfilment of the Contract and inevitably incurred in the termination of the contracts for services already concluded for fulfilment of the Contract by the moment of receipt of the withdrawal application as well as other payments payable by the Client to the TSO under the Contract.
- 7.6 If the TSO has upon withdrawal from the Contract on the grounds established in subsection 7.3 of the Contract already incurred justified and certified costs in the fulfilment of the Contract or is inevitably obligated to incur justified and certified costs in the termination of contracts for services already concluded by the moment of receipt of the withdrawal application, which exceed the connection charge actually paid by the Client to the TSO by that moment, the Client shall be obligated to compensate the TSO for the costs that exceed the amounts paid as the connection charge request within thirty (30) days from receipt of the relevant justified claim.
- 7.7 The TSO shall pay the amount repayable to the Client on the basis of subsection 7.5 to the Client within thirty (30) days from the sending or receipt of the withdrawal application by the TSO. Upon delaying in the payment of said amount or any other amount payable to the Client under this Contract, the TSO shall be obligated to pay the Client a penalty for late payment in the amount of 0.05% (point-zero-five per cent) of the amount unpaid by the payment term per day until full receipt of the entire amount to the bank account of the Client.

8. Other agreements

- 8.1 Starting from the entry into force of the Contract, any previous agreements between the Parties with regard to the connection points established in the Contract shall become invalid, excluding valid network contracts.
- 8.2 By signing the Contract, the Client confirms that the Client has been given sufficient opportunity to review the content of the Contract and the Client has reviewed it and understood its content. By signing the Contract, the Client also confirms that the Client has submitted the data and documents required under the Regulation of the Government of the Republic, 'Network Code on the Functioning of the Electricity System', to the TSO and that these are valid upon the conclusion of the Contract and throughout the period of validity of the Contract.

- 8.3 The Client is aware that a network contract shall be concluded with the Client and the Client's electrical installation shall be connected to the network and TSO shall ensure a network connection in accordance with the requirements (establishment of a network connection) only if the Client's electrical installation is in conformity with the requirements specified in the Contract, the Connection Conditions and legal acts (conforming electrical installation) and all of the documents required in the Contract, the Connection Conditions and legal acts have been submitted.
- 8.4 A provision of the Contract being fully or partly in contradiction with a legal act and therefore void or declared invalid or not part of the Contract by law shall not affect the validity of the Contract as a whole and the Parties shall be obligated to fulfil the Contract with regard to the parts which are not void or declared invalid and which are parts of the Contract by law. The Parties shall also be obligated to immediately start negotiations and conclude an agreement within a reasonable period of time to replace the provisions that are void or have been declared invalid with provisions which are valid and create a balance of rights and obligations for the Parties that is as similar as possible to the balance of rights and obligations which existed between the Parties in accordance with the aforementioned provisions that were void or declared invalid.
- 8.5 The Parties shall have no right to transfer the rights and/or obligations arising from the Contract to third persons or encumber these in the benefit of third persons without the written consent of the other Party. The TSO shall, however, have the right to transfer all of the rights and/or obligations arising from the Contract to a subsidiary of the TSO, into whose ownership or possession the TSO is transferred, and the Client shall be deemed upon the signing of the Contract to have given its written consent to such a transfer of rights and/or obligations and shall be obligated to conclude the respective agreements, if necessary.
- 8.6 The Parties shall during the validity of the Contract and after expiry of the Contract be obligated to maintain the confidentiality of any information they have learnt about the other Party in the conclusion and fulfilment of the Contract, the disclosure of which may damage the interests of the other Party or which the other Party is or may be interested in keeping confidential. A Party may disclose information to its consultants who are bound by the obligation of confidentiality as well as to courts and authorities upon their request.
- 8.7 The Client shall be obligated to immediately notify the TSO in writing:
- 8.7.1 If a competent person or body has made a decision on the dissolution, including a compulsory dissolution, of the Client;
- 8.7.2 If a statement of claim has been filed against the Client in an amount that exceeds twenty percent (20%) of the Client's equity;
- 8.7.3 If a petition for the declaration of bankruptcy has been filed with regard to the Client or the Client has been issued a bankruptcy warning;
- 8.7.4 If the Client, as a legal person, is being merged, split or restructured;

- 8.7.5 Of all the circumstances which have or may have an effect on fulfilment of the Client's obligations established in the Contract.
- 8.8 The Parties shall have the right to set off payments payable to the other Party only upon agreement between the Parties.
- 8.9 Upon the Client's request, the TSO shall be obligated to give the Client information on the fulfilment of the Contract, including the completion of the network connection and the technical data concerning the connection of the Client (i.e. the connection point substation diagram, equipment specifications and other technical indicators/diagrams/technical drawings related to the connection of the Client).

9. Settlement of disagreements

- 9.1 The Parties shall settle any disagreements and disputes arising from the fulfilment, amendment or termination of the Contract primarily by way of negotiations.
- 9.2 If disputes arising from the Contract cannot be settled by way of negotiations, the disputes shall be settled in Harju County Court.

10. Expressions of will

- 10.1 All notices, consents, approvals and other expressions of will as well as other information (hereinafter referred to as the Expressions of Will) which have a legal meaning shall be submitted to the contact person of the other Party in writing. Informational notices, the forwarding of which to the other Party has no legal consequences, may also be submitted in a written reproducible format.
- 10.2 An Expression of Will shall be considered received when it has been forwarded in the connections e-environment. All Expressions of Will which do not deviate from the terms and conditions of the Contract shall be considered valid and binding for the Parties only if given by the persons specified in the Contract or by persons directly authorised by them for this purpose.

11. Contact addresses and persons of Parties

- 11.1 The Parties designate the following persons as their contact persons for the settlement of issues related to fulfilment of the Contract or disputes arising from the Contract, excluding amendment of the terms and conditions of the Contract:

<p>TSO Elering AS</p> <p>Contact address: Kadaka tee 42, 12915 Tallinn telephone: 715 1222 e-mail: info@elering.ee</p> <p>Contact person: telephone:</p>	<p>Client</p> <p>Contact address: telephone: e-mail:</p> <p>Contact person: telephone:</p>
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e-mail:

e-mail:

- 12. A Party shall notify the other Party immediately of any changes in the contact persons and details specified in subsection 11.1.**

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Chairman of Management Board

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Member of Management Board

Client

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Description of the connection point and electrical installations to be designed and built and the technical specifications of the network connection together with the connection diagram

1. Location of connection point:
2. Description of connection point: according to the connection diagram provided in
3. Description of electrical installation to be connected:
4. Description of connection:
5. Capacity of the to be connected at the connection point.
6. The reactive power production and consumption capability of the power-generating module to be connected to the connection point at the connection point¹.
7. The TSO shall in the fulfilment of the connection contract ensure the supply of electricity at the place of consumption and the connection point with the following parameters:
 - 7.1. The allowed maximum production capacity ²
 - 7.2. The allowed maximum consumption capacity ³
 - 7.3. The nominal voltage of the connection point is
 - 7.4. The electrical parameters of the connection point are additionally provided in Annex 4.
8. The maximum installed production capacity in the Client's system is
9. The perspective short circuit current and short circuit capacity at the connection point:
10. The terms for the elimination of interruption in the supply of electricity per place of consumption are established in the Regulation of the Minister of Economic Affairs and Communication 'Quality Requirements for Network Services and the Conditions for Reducing Network Charges in case of Breaches of Those Requirements.' The valid version of the Regulation shall always be complied with in the fulfilment of the Contract. At the time of conclusion of the Contract, the following terms are established in the Regulation:
 - 10.1. The term for eliminating interruptions in the supply of electricity due to faults at the place of consumption
 - 10.2. Durations of interruptions in the supply of electricity at the place of consumption per year:
 - 10.2.1. Interruptions caused by faults – up to hours per year
 - 10.2.2. Scheduled interruptions in the supply of electricity – up to hours per year

¹ Used in the case of connecting a power-generating module or a mixed installation

² In the context of this Contract, production capacity shall mean the supply of electricity from the connection point to the network

³ In the context of this Contract, consumption capacity shall mean the supply of electricity from the network to the connection point

- 10.3. The terms for the elimination of interruptions in the supply of electricity shall not apply to interruptions caused by the non-conformity of the Client's electrical installation with regulations.
- 10.4. The definition of an interruption in the supply of electricity is provided in the Standard Terms and Conditions of Network Contracts of the TSO.
- 11. The TSO's relay protection equipment is not intended as the main protection of the Client's equipment.
- 12. The TSO shall provide available technical data about its installation if this is necessary for the design of the Client's electrical installation.
- 13. The Client shall ensure and agree in the extent of the electrical design the existence of a functioning protection solution that is appropriate for the power-generating module in its system.
- 14. The TSO shall design and build for the connection charge at the substation of
- 15. The Client shall design and build its electrical installations up to the connection point.
- 16. The electrical installations and the protection, automation and control equipment thereof shall be designed in compliance with
- 17. The schematic diagram of the connection of the Client at the substation of

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Calculation of connection charge at substation

Description of work	Unit price	Quantity	AMOUNT
TOTAL CONNECTION CHARGE			

Value added tax in the amount established by law shall be added.

The prepared price offer takes into account the prices of the existing technical solutions of the TSO. The expected connection charge (excluding the procedural fee) shall be specified on the basis of procurement results.

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Schedule of payment of the estimated expected connection charge

Payment schedule	Amount, EUR (without VAT)	Amount, EUR (with VAT)
First instalment – to be paid within sixty (60) days from the conclusion of the connection contract and makes up 20% of the estimated cost of construction works and related works as well as 20% of the procedural fee established in the connection contract.		
Second instalment – to be paid within forty-five (45) days from the receipt of the invoice and makes up 50% of the estimated cost of construction works and related works as well as 50% of the procedural fee established in the connection contract.		
Third instalment – to be paid within forty-five (45) days from the receipt of the invoice and makes up the remaining part of the actual costs, less the amounts paid by the Client with the first and second instalments. The third instalment also includes 30% of the procedural fee established in the connection contract.		
TOTAL		

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1. Constant data of the electricity system at substation
NB! This is an example – the presented data are different at each connection point

1.1. Frequency

Nominal frequency	f	50	Hz
Frequency in normal conditions	f	49.8-50.2	Hz
Frequency in disrupted operation	f	49.0-50.5	Hz
Frequency in fault conditions	f	47.0-53.0	Hz

1.2. Voltage

Nominal voltage	Un	110	330	kV
Maximum allowed continuous operation voltage of the device	Um	123	362	kV
Maximum allowed short-term (20 min) voltage of equipment	Umax (20min)	126.5	379.5 (390 kV 15 min)	kV
Voltage in normal conditions	Unorm	105-123	330-360	kV
Voltage in fault conditions	U	97-126.5	280-379.5	kV

1.3. Nominal voltage of equipment

Nominal voltage	Un	110	330	kV
Power transformers		115/(38.5)/(22)/(16.5)/(11)/(6.6)	347/(117.5)/(38.5)/(22)/(16.5)/(11)/(6.6)	kV
Voltage transformers		110000: $\sqrt{3}$ / 100: $\sqrt{3}$ / 100	330000: $\sqrt{3}$ / 100: $\sqrt{3}$ / 100	V
Current transformers		123	362	kV
Switches		123	362	kV

1.4. Earthing system

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2. Basic electrical parameters of the place of consumption

Short circuit currents for the calculation of the earthing loop and the touch voltages	Base kV 110.00 Ph-Ph (63.51 @0 deg A-Gnd) Prefault 1.070 V (p.u.) @ 0.00		
	3I0	2.9	kA
	R	11.248	Ω
	X	29.952	Ω
Maximum short circuit current with the connecting generators	Base kV 110.00 Ph-Ph (63.51 @0 deg A-Gnd) Prefault 1.070 V (p.u.) @ 0.00		
	I(3)k	3.5	kA
	R	9.264	Ω
	X	17.15	Ω
Minimum short circuit current	Base kV 110.00 Ph-Ph (63.51 @0 deg A-Gnd) Prefault 1.070 V (p.u.) @ 0.00		
	I(3)k	1.17	kA
	R	30.95	Ω
	X	49.37	Ω
Typical short circuit current	Base kV 110.00 Ph-Ph (63.51 @0 deg A-Gnd) Prefault 1.070 V (p.u.) @ 0.00		
	I(3)k	3.0	kA
	R	10.83	Ω
	X	19.87	Ω

- 3. Limits of electricity quality at the place of consumption**
 - 3.1. Background levels of the electricity system
 - 3.2. Voltage harmonics
 - 3.3. Current harmonics
 - 3.4. Asymmetry
 - 3.5. Flicker
 - 3.6. Voltage changes
- 4. Details of the lines connected to the switchgear of the connection point**
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- 5. Details of the power transformers connected to the switchgear of the connection point**
- 6. Relay protection**

TSO

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Chairman of Management Board

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Member of Management Board

Client

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