



# A.1 General Terms on Electricity Transmission and System Management

#### 1. Introduction

- 1.1 Landsnet hf. (also referred to as IceGrid and hereafter in these Terms as Landsnet) is an independent company whose business is electricity transmission and system management in Iceland's power system.
- 1.2 These Terms are adopted on the basis of the Electricity Act, No. 65/2003, as subsequently amended (hereafter referred to as the Electricity Act); and Regulations No. 1040/2005, on the implementation of the Electricity Act; No. 513/2003, on system management in the electricity system; No. 1050/2004, on electricity trading and metering, as subsequently amended; and No. 1048/2004, on the quality and secure delivery of electricity.
- 1.3 These Terms shall apply to Landsnet's operations. Those connecting to Landsnet's transmission system and/or engaged in electricity trade are obligated to abide by these Terms as well as by the other of Landsnet's terms in effect at any time.
- 1.4 These Terms have been confirmed by the Minister of Industry pursuant to Article 9, Paragraph 6, of the Electricity Act.

### 2. Definitions

The following definitions apply in these Terms:

- 2.1 A *distribution system operator* is a company licensed to distribute electricity in a designated area.
- 2.2 *Transmission system* is electrical lines and connected facilities that transport electricity at 30 kV or higher. The transmission system shall extend from the high-voltage side of auxiliary transformers of power stations to substation transformers of distribution system operators.
- 2.3 *Balance Power* shall mean non-agreed power which corresponds to the difference between the planned production and the actual production, on one hand, as well as the difference between the planned consumption and the actual consumption, on the other hand.
- 2.4 *Firm Commitment* is the contracted obligation which a power intensive customer undertakes to pay for the transmission of the Contract Power for each year, whether or not the actual transmitted electricity in such periods is transmitted or not or does reach the average annual amount thus applicable.
- 2.5 *Ancillary Services* shall mean a service, other than the production of electricity, which is used to operate a stable and secure power system including reactive power, operating reserve, frequency control, blackstart capability and instantaneous disturbance reserve.
- 2.6 Power system is all the equipment used for the generation, transmission and distribution of electricity and forming an integrated operation.
- 2.7 *Regulating power* is the power Landsnet procures to balance differences between the forecast and the actual overall energy use in the electrical network.



- 2.8 *Spinning reserves* refer to the additional power that a production unit with automatic frequency control is capable of producing without notice. Determined at a frequency of 50 Hz, spinning reserves relate to the production units generating actual power for the network at that moment.
- 2.9 *Curtailable consumption* refers to electricity use which Landsnet is authorised to have reduced due to disruptions in the transmission system or electric power plants, or due to transmission limitations, maintenance or regular testing. Curtailments and rationing based on the ninth paragraph of Art. 9 of the Electricity Act are exempt from this.
- 2.10 A *supplier* is a business that sells electricity or engages in trade in electricity, whether in wholesale or retail.
- 2.11 A *connection agreement* relating to a transmission system is a contract between a transmission system operator and a producer, distribution system operator or power intensive users on connecting such a party to the transmission system, on transmitting electricity, on metering it or on other services involving the delivery point of the electricity.
- 2.12 *Non-spinning reserves* signifies the power capacity of particular production units which are available for operation and are not configured with the electrical network but can be started up, configured and fully utilised within a certain time frame after a request has been sent.
- 2.13 A production unit is *out of operation* if it is malfunctioning or undergoing maintenance; otherwise, it is *available for operation*, i.e. ready to run.
- 2.14 A *producer* is a company engaging in the generation of electricity or holding a power development licence.

### 3. Rights and obligations of Landsnet

- 3.1 Landsnet develops and operates the electricity transmission system and is in charge of system management, as provided for in Chapter III of the Electricity Act.
- 3.2 Landsnet bears responsibility for secure management of the electrical power system and is obligated to ensure the safety, reliability and quality of electricity delivery.
- 3.3 Regarding transmission system operation, Landsnet is among other things obligated to:
  - a. Connect to the transmission system all those so requesting, provided they fulfil the technical conditions of the terms for connection and pay the connection charge according to tariff stipulations. Nonetheless, it is permissible to refuse parties access to the transmission system, based on considerations of transmission capacity and of system security and quality. Such a refusal shall be written and supported by reasons, and the party to whom a connection is refused shall be permitted to demand information on the means and the time span which will accommodate changes in the system resulting in the possibility of connecting that party
  - b. Supply electricity in place of what is lost in the system
  - c. Supply the system with reactive power in order to utilise transmission capacity and ensure voltage quality
  - d. Ensure the reliability of system operations
  - e. Make certain that forecasts of electricity demand are available, as well as plans for developing the transmission system.
- 3.4 System management of the power system includes for instance the following:
  - a. Coordinating electricity generation and electricity demand so that it will be possible to solve inconsistencies between contracted purchases and electricity use; also, concluding agreements with producers in this regard
  - b. Ensuring the availability of adequate spinning reserves for operating the system
  - c. Standardising usage profiles where no power metering occurs
  - d. Metering the electricity received into or delivered from the transmission system, managing metering, and submitting data to the respective parties so electricity trade can be settled
  - e. Organising the inspection of operating units in the power system.



- 3.5 Landsnet shall direct reconstruction of the power system following disruptions in its operation.
- 3.6 Pursuant to the eighth paragraph of Art. 12 of the Electricity Act, Landsnet shall demand payment if the connection of new power plants or power intensive users to the transmission system causes added expenses for other system users. By the same token, consideration shall be given to connections that result in more efficient development or utilisation of the transmission system.
- 3.7 Landsnet shall adhere in its operations to principles of equality.
- 3.8 In other respects, the rights and obligations of Landsnet shall depend on the laws and regulations in effect at the time.

### 4. Rights and obligations of Landsnet customers

- 4.1 The owners of facilities connected to the transmission system are obligated to submit to Landsnet, for its consideration and agreement, the layouts, drawings, and descriptions of the owners' facilities which matter for transmission system operations.
- 4.2 The owners of facilities connected to the transmission system are obligated to inform Landsnet of plans for new facilities or modifications to facilities that might affect the operation and use of the transmission system. It is impermissible to start the use of new or modified facilities until the conditions Landsnet has set for them have been fulfilled.
- 4.3 The owners of facilities connected to the transmission grid are obligated to conclude connection agreements with Landsnet on the points of supply and delivery.
- 4.4 Landsnet is permitted to demand access to the switch position indicators of producers, transmission system operators and distribution system operators as well as access to the indicators for other instruments and metering data which Landsnet considers necessary for secure, efficient operation of the electrical power system.
- 4.5 The owners of facilities connected to the transmission grid are obligated to prepare plans meeting Landsnet's requirements on how they will return their electric facilities to normal operation following disrupted operation of the transmission grid or of facilities connected to it.
- 4.6 The owners of facilities connected to the transmission grid are obligated properly to maintain their operating units and equipment connected to the transmission grid, in compliance with current laws and regulations, so as not to cause damage or disruptions in the transmission grid and equipment connected to it.
- 4.7 The owners of facilities connected to the transmission grid are obligated immediately to rectify any faults in their operating units which curtail or disrupt the transmission of electricity between parties connected to the Landsnet transmission grid.
- 4.8 The owner of facilities connected to the transmission grid is obligated promptly to rectify any cause of outage or disruption in electricity delivery which stems from faults or inadequate maintenance of operating units or of facilities that are connected to operating units of the facility owner and that are the property of the owner or the owner's customers and that matter for transmission grid operations or system management. It is the responsibility of the owner to notify Landsnet immediately of the time when the disruption was noticed and subsequently when it has been rectified. The owner has no right to a cancellation of fees due to outages with such causes.
- 4.9 The owners of facilities connected to the transmission grid are obligated to ensure that their protective and regulating equipment conforms to Terms for Connecting to the Landsnet Transmission Grid and the corresponding annex, "Requirements for protection and control principles in the Icelandic power transmission system", to the extent that the facilities might matter for transmission grid operations.



- 4.10 Suppliers and distribution system operators are obligated to conclude agreements with Landsnet on balancing responsibility and to notify Landsnet of their sales and production plans and of changes to them, in adherence to Terms for the Procurement of Regulating Power and Settlement of Balancing Energy.
- 4.11 A producer is required to abide by Landsnet decisions on the quantities to produce so that Landsnet will be able to fulfil its obligations regarding system management, pursuant to Art.9 of the Electricity Act, and the producer is to be remunerated for this according to an agreement with the producer.
- 4.12 Landsnet customers must abide by the terms of Landsnet on connections and operations and must not cause disruptions or damage in the transmission grid or equipment connected to it.
- 4.13 Landsnet customers are obligated to follow the rules Landsnet has issued in its terms, as well as current laws and regulations on electricity transmission and system management.

### 5. Electrical quality

- 5.1 Landsnet delivers electricity as a three-phase alternating current, approximating 50 cycles per second on the voltage specified in the connection agreement. Under normal operating conditions, rms voltage variations shall not exceed plus five percent (5%) or minus nine percent (9%). In other respects, electrical quality shall conform to Regulation No. 1048/2004, on the quality of electricity and security of delivery.
- 5.2 Landsnet shall, through agreements with producers, provide at all times for adequate regulating capacity in the electric grid, along with minimum spinning reserves. Landsnet shall set baseline requirements for regulating capacity and spinning reserves which allow for the grid conditions at any moment. In addition, Landsnet shall by means of agreements ensure sufficient non-spinning reserves at all times, which potentially involves regulating power supplies, curtailable consumption, or generation by backup stations.
- 5.3 The reference to be used for assessing voltage quality in the transmission system is IEEE Standard 519-1992. The distortion phase current and the harmonic content of the phase current shall be in reference to the one-minute average according to measurements during normal operating conditions.
- 5.4 Landsnet and its customers are permitted to negotiate exceptions to the paragraphs of the present Article 5.

#### 6. Transmission rates, system services and payment terms

- 6.1 Landsnet sets a tariff for its services which conforms to the income possibility curve determined by the National Energy Authority for electricity transmission costs.
- 6.2 The Landsnet tariff shall be discussed by the National Energy Authority, in accordance with the seventh paragraph of Art. 12 of the Electricity Act.
- 6.3 Landsnet shall make certain that a tariff is officially published and always kept accessible.
- 6.4 Payments for Transmission Losses and Ancillary Services are additional to payments for the transmission of the Contract Power and will be charged according to appropriate terms valid at any time.
- 6.5 Balancing energy prices are to fluctuate, as determined by the market prices at any given time together with the Landsnet administration fee. The tariff for balancing energy shall be published on the Landsnet website.
- 6.6 Payments for Landsnet services shall be made monthly and based on the meter measurements of transmitted electricity and on the losses, system services, and balancing energy of the past month. More exact stipulations on payments for losses, system services, and balancing energy must be in line with the terms currently in effect, insofar as no agreements provide for exceptions due to special circumstances.



- 6.7 The issue date for invoices shall be the last day of the month they apply to. Usually within ten days of the end of the month when use occurred, Landsnet shall send the customer a billing statement showing the amount that must be paid for last month's services by Landsnet, according to Art. 6.6. The due date of an invoice is the last day of the month when this invoice is delivered.
- 6.8 If payment becomes overdue, penalty interest shall be calculated in accordance with Chapter III of Act No. 38/2001, on Interest and Price Indexation.
- 6.9 Payments are to be made into the bank account specified by Landsnet in each instance.
- 6.10 During the month of January of each calendar, year LANDSNET shall deliver to its customers an annual statement for the preceding calendar year showing:
  - i. The total metered transmission of electricity in the year, together with any corrections made for inaccurate metering multiplied by the applicable transmission tariffs.
  - ii. Only regarding power intensive users: The Firm Commitment applicable multiplied by the applicable transmission tariffs.
  - iii. Only regarding power intensive users: Any adjustment due for any variation in the average power factor below the contracted minimum.
  - iv. Annual adjustments of payments for Transmission Losses and Ancillary Services will be in accordance with terms and tariffs as valid at any time.

Only regarding power intensive users: The annual statement shall specify the aggregate amount due to LANDSNET in the preceding calendar year, which amount shall be larger of the amounts calculated according to subsections (i) and (ii) of the first Paragraph of this Article plus any amount due under subsection (iii). Such aggregate amount shall be compared with the total of payments for transmitted electricity shown by monthly statements for the calendar year. Net amounts due to LANDSNET shall be paid by the customer within thirty (30) days after receipt of the annual statements. Net amounts owed by LANDSNET shall be credited against the liability of the customer on the next monthly statement submitted by LANDSNET or payable to the customer within thirty (30) days from the expiry of this Agreement.

### 7. Metering and settlement

- 7.1 Landsnet shall bear responsibility for metering electricity into and out of the transmission grid in accordance with the Electricity Act; the Regulation on trade in electricity, No. 1050/2004, as subsequently amended; and Landsnet's Terms on Metering and Settlement. The obligations of Landsnet include for instance the following: installing, operating and maintaining metering equipment, along with collecting, correcting and confirming metering data and distributing it to the respective parties.
- 7.2 Landsnet must ensure that the electric meters in the transmission system which are used for settling electricity sales are certified.
- 7.3 The metering point shall be the location in the transmission system which is specified as the delivery point in the respective connection agreement, although a different metering point than the one specified in the connection agreement may be used temporarily if part of the metering equipment is not on hand, such as current transformers and/or voltage transformers.
- 7.4 Should a Landsnet customer request the connection of more meters at the respective metering point to the Landsnet data acquisition system, the customer is required to conclude a special agreement on this and to pay the expense of these metering services.
- 7.5 Landsnet is to have easy access to metering equipment, and moving metering equipment or modifying meter leads is impermissible, other than in consultation with Landsnet. Customers must comply with Landsnet rules on safe access.



- 7.6 Landsnet is obligated to provide producers, suppliers and consumers wisth the information necessary for them to fulfil their obligations. Such information shall be in the form determined by Landsnet and approved by the National Energy Authority.
- 7.7 Every power intensive user shall ensure that voltage and current transformers of the incoming lines and the outgoing feeders are installed and maintained. Each voltage and current transformer shall have at least two separate windings for metering.
- 7.8 Regarding power intensive users: LANDSNET shall install and maintain for measuring the delivery of electricity on each incoming lines and outgoing feeders bi-directional, 4 quadrants, main and check recording meters with hourly recording periods for MW and MVAr. Each unit in the metering system used shall have an accuracy rating of two-tenths of one per cent (0.2%). Both meters and transformers shall be subject to approval by both Landsnet and the corresponding customer. The customer shall provide LANDSNET with necessary space for its metering instruments and install the relevant wiring, at no cost to LANDSNET
- 7.9 Regarding power intensive users: Readings of both the main and check meters of LANDSNET shall be taken by LANDSNET through a communication network. The amount registered on the main meters of LANDSNET shall be used for billing purposes. Both Parties shall have unlimited access to those readings.

### 8. Electricity rationing

- 8.1 If unexpected, insurmountable incidents result in electricity supplies not meeting demand, Landsnet is obligated according to the ninth paragraph of Art. 9 of the Electricity Act to adopt electricity rationing to distribution system operators and consumers, while ensuring principles of equality and following objective criteria.
- 8.2 When rationing electricity, Landsnet complies with Operational Guideline VKL-21 (Controlling and monitoring the electric grid), Subdocument REG-9 (Curtailing power to customers at short notice). The first power to be used shall be that available in the regulating power market, the next taken shall be curtailable power, after that the available power in non-spinning reserves, and lastly power assigned to priority electricity.
- 8.3 According to the second paragraph of Art. 7 of the Electricity Act, a producer is obligated to abide by the decision of Landsnet on what volume to generate, thus enabling Landsnet to meet its obligations relating to system management.
- 8.4 If Landsnet foresees disruptions occurring in electricity deliveries, it shall notify the involved customers as soon as possible. Should Landsnet prove incapable of delivering contracted electricity to a customer due to *force majeure*, cf. Art. 10 of these Terms, Landsnet will, to the extent caused by such incidents, be free of its contractual obligations to transmit the electricity. Nonetheless, Landsnet shall do everything that is within its power and justifiable in respect of cost to rectify such occurrences as soon as possible.
- 8.5 Landsnet has the right temporarily to interrupt electricity deliveries due to work necessary for its facilities. The interruption shall be as brief as possible and at the time of day or night when it will cause, in the opinion of Landsnet, the involved electricity consumers the least discomfort. If possible, Landsnet shall notify the respective customers of the planned interruption with suitable advance notice.
- 8.6 If danger to life is imminent or it seems clear that property is threatened with substantial damage, Landsnet is permitted to interrupt the supply of electricity without notice.
- 8.7 Landsnet is permitted to curtail or interrupt curtailable service at short notice, in accordance with the terms and agreements of Landsnet regarding curtailable service.
- 8.8 Landsnet and its customers are permitted to negotiate exceptions to the paragraphs of the present Article 8.

### 9. Liability



- 9.1 Landsnet and its customers are obligated to build and operate transmission facilities and other structures for transmitting electricity, to maintain these in accordance with the procedures of painstaking, quality operators and to repair without delay any flaws or faults that cause or might cause damage.
- 9.2 If Landsnet or one of its customers violates provisions of terms or of agreements based on the terms in such manner as causes loss to the other party, the party suffering damage is entitled to a discount and/or compensation from the party causing the loss, as further stipulated in this Article. In cases of serious non-compliance, it is permissible to cancel the agreement concerned.
- 9.3 Landsnet and its customers may be held responsible only for damage that they cause intentionally or through gross negligence. It is the responsibility of the party suffering damage to take appropriate measures to limit or prevent the damage, and any shortcoming in taking such measures may limit the compensation to which the party suffering the loss might have a right.
- 9.4 Neither Landsnet nor its customers shall have a right to compensation for indirect or induced loss, e.g. lost profit, lost usage or hindrances in meeting obligations to a third party, other than to the extent that such damage results from an intentional breach of the contractual obligations of the parties or of a subcontractor of such a party (at whatever stage).
- 9.5 A party's liability to pay compensation on the basis of these Terms or agreements based on them is limited to an amount that is four times the price of transmitting the electricity that cannot be transferred due to the action or lack of action, though in no case higher than ISK 50,000,000 for each individual incident. However, no compensation shall be paid for a single loss of less than ISK 1,000,000. In evaluating what is considered a single loss event, the damage that one and the same occurrence causes within the same 24-hour period shall be considered one incident of loss.
- 9.6 Landsnet and its customers are permitted to negotiate exceptions to the liability provisions of the present Article 9.

### 10. Force majeure

- 10.1 Force majeure is defined in these Terms to mean an event or circumstances which are beyond the power of the party subjected to them (a party which acts and has acted as a good, painstaking operator), because their characteristics and their impact on this party's capacity to fulfil its obligations is such that it would not have been in fairness possible to expect them to be taken into consideration and such that it was not possible to avoid or overcome them by ordinary means. Without limiting the general implication of what is mentioned above, the words "event or circumstances", as applied here, shall include fighting (whether the situation of war is declared or not), actions of war, military occupations, revolutions, uprisings, civil wars, disturbances, riots, general unrest, mass hysteria, terrorist activities, acts of piracy, vandalism, radiation, plagues, explosions, fires, earthquakes, avalanches, volcanic eruptions, storms, tidal waves, floods, major ice formation, lightning, quarantines, bans on transport and any general halting of transport or navigation; and in this respect force majeure shall also include general strikes, localised strikes, bans on trade, lockouts, or comparable labour disturbances which the affected party would have been unable to prevent or control, even though that party had used all the ordinary means available to that party; nevertheless, this shall only be for the time that the party was unable to put an end to the situation through all such means as were available to that party.
- 10.2 The following shall not be considered events of *force majeure*: (a) changes in market conditions that influence costs or the availability of goods or services, (b) the unavailability of equipment which would have in fairness been avoidable by pursuing the procedures of careful operators, except to the extent that this unavailability stems directly from an event falling under the definition of *force majeure* above or (c) changes in market conditions which affect the price levels of energy or power.
- 10.3 A shortcoming or lack of action by the parties in fulfilling any obligation pursuant to a connection agreement or Landsnets terms shall not be accounted non-performance of such



an obligation if and to the extent to which it is demonstrated that such shortcoming or lack of action was due to *force majeure* or to be excused by it.

- 10.4 The party wishing to defend itself through *force majeure* according to these Terms shall have the burden of proving the existence of such a *force majeure*. Insofar as this Article is concerned, a shortcoming or lack of action shall be accounted to have been caused by *force majeure* only if the party involved in such shortcoming or lack of action proves that (a) the party's shortcoming or lack of action was the direct result of *force majeure*, as defined in Art. 10.1 above and (b) the party showed proper care and took all further measures which might be considered appropriate so as to avoid the shortcoming or lack of action.
- 10.5 Each party shall notify the other party in writing without delay of any *force majeure* that will lead to a shortcoming or lack of action in carrying out obligations, whether in part or in whole. A notification is also to be issued when the *force majeure* ceases to affect performance. The party affected by the *force majeure* shall use every appropriate means of reducing the impact of the shortcoming or lack of action on full compliance by that party and shall, as soon as the *force majeure* is no longer present, take every appropriate measure in that party's power to begin performing the party's obligations, with the shortest possible delays.
- 10.6 Where applicable, the specific provisions of agreements are valid in addition to these provisions on *force majeure*.

### 11. Obligation to provide information

- 11.1 Landsnet shall have access to any information of its customers which is necessary for the company to be able to carry out its role.
- 11.2 Landsnet is obligated, according to the fifth paragraph of Art. 9 of the Electricity Act, to provide its customers with the information necessary for evaluating whether the company is fulfilling its obligations in the operation and system management of the transmission grid and is achieving non-discrimination in electricity transmission.
- 11.3 Landsnet and its customers are obligated, if possible in advance, to notify each other of any situation which might matter significantly for electricity transmission and system management.
- 11.4 Landsnet's obligation to provide information in adherence to the present Art. 11 applies to the extent that the information does not infringe business interests and the obligation of confidentiality pursuant to Art. 12.

### 12. Obligation of confidentiality

- 12.1 Landsnet is obligated to set rules of procedure for itself regarding information security management.
- 12.2 As provided for in the eighth paragraph of Art. 9 of the Electricity Act, Landsnet shall safeguard the confidentiality of information touching on business interests and of whatever other information it is fair and appropriate to keep secret, other than with written customer approval. The obligation of confidentiality covers information of a commercial nature touching on customers and capable of being used for commercial purposes, cf. however the fifth paragraph of Art. 9 of the Electricity Act.
- 12.3 Landsnet is permitted to have information compiled and distributed which cannot be traced to individual customers.
- 12.4 Landsnet is authorised to provide public bodies or others with information, if this is demanded on the basis of law, regulations or court orders.
- 12.5 Should disagreement arise over whether Landsnet is obligated to provide requested information, the National Energy Authority shall decide.



## 13. Breach of terms

13.1 If customers neglect their obligations according to these Terms and other Landsnet terms, Landsnet is authorised to request the National Energy Authority to take action on the basis of Chapters VII and VIII of the Electricity Act.

### 14. Changing the Terms

14.1 The sixth paragraph of Art. 9 of the Electricity Act applies to changing the terms of Landsnet. The company shall inform its customers of significant changes intended in its terms at least thirty days prior to their taking effect and shall send out finalised terms seven days before their taking effect.

#### 15. Regulation

15.1 The National Energy Authority and Icelandic Competition Authority shall regulate the operations of Landsnet under the Electricity Act and the company's compliance with the conditions applying to these operations according to laws, regulations and the Terms of Landsnet.

### 16. Addressing issues of dispute

- 16.1 In case of disagreement on the implementation or interpretation of provisions in Landsnet Terms, the parties shall strive to resolve this dispute.
- 16.2 In case of disagreement on the implementation or interpretation of provisions in Landsnet Terms, the National Energy Authority shall be asked for a resolution in instances where it has the power to make a ruling on the basis of Chapters VII and VIII of the Electricity Act, and the Appeals Committee on Electricity shall be asked when applicable. Rulings of the Appeals Committee may be appealed to the courts, as provided for in Article 30 of the Electricity Act.
- 16.3 If the resolution of a dispute does not fall under the responsibility of the National Energy Authority, the case may be referred to the District Court of Reykjavik for resolution.

### 17. References

17.1 Operational Guideline VKL-21, Subdocument REG-9, on electricity rationing during disruptions