



## C.5 Terms for Curtailing and Rationing<sup>1</sup>

### 0. Changes to the previous version

The present version is the initial one.

### 1. Introduction

- 1.1 These Terms are adopted on the basis of the Electricity Act, No. 65/2003, as subsequently amended; and of Regulations No. 513/2003, on system management in the electricity system; and No. 1048/2004, on the quality and secure delivery of electricity, as subsequently amended.
- 1.2 These Terms have been confirmed by the Minister, pursuant to Article 9, Paragraph 6, of the Electricity Act.

### 2. Definitions

The following definitions apply in these Terms:

- 2.1 A *fault* is the inability of a component to perform its required function.
- 2.2 A *transmission system* is the electrical lines and connected facilities that are necessary to transmit electricity from power plants to power intensive users and to distribution system operators at the delivery points listed in the Annex to the Electricity Act, No. 65/2003, as subsequently amended. It extends from the high-voltage side of a power plant unit transformer connected to it, cf. the third paragraph of Art. 5 of the Electricity Act, to the high-voltage side of substation transformers for power intensive users or distribution system operators.
- 2.3 The *balancing energy price* is the market price of balancing energy. Any deviation from a schedule is to be settled according to the balancing energy price. The balancing energy price is fixed for each hour.
- 2.4 *System constraints (bottlenecks)* are situations in which the transmission capacity of transmission facilities or part of a transmission system is insufficient, requiring limitations in transmission of electricity.
- 2.5 *Curtailable electricity* refers to electricity consumption which the producer is permitted to curtail, depending on the sales terms for the particular company regarding curtailable electricity.
- 2.6 *Regulating power* is the power Landsnet procures to balance differences between forecast energy use and actual load in the electrical network as a whole.
- 2.7 The *regulating power market* is Landsnet's procurement market for regulating power.
- 2.8 A *regulating power option* is an agreement Landsnet concludes with a producer in the regulating power market whereby the producer offers a certain minimum of regulating power for definite

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<sup>1</sup> This is a translation from the Icelandic version of the grid code. In case of discrepancy the Icelandic version shall apply.

periods and within given power and price limits. Regulating power options guarantee a minimum supply in the regulating power market.

- 2.9 *Spinning reserves* refers 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.
- 2.10 *Disturbance* is an outage, forced or unintended disconnection or failed reconnection as a result of faults in the power grid.
- 2.11 *Curtable transmission* encompasses the electricity consumption which Landsnet may order curtailed due to the instances listed in Article 5.1 of the Terms for Curtable Transmission, but rationing based on Article 9, Paragraph 9, of the Electricity Act is excluded.
- 2.12 *Curtailement* is an outage or temporarily limitation of the curtable transmission to a consumer; such curtailment may occur either manually or automatically. Automatic curtailment is executed by special equipment of the transmission system in cases of load limitation or of the frequency or voltage dropping below a certain limit. Manual curtailment is executed by Landsnet, or shall be executed by the distribution system operator whenever Landsnet so requests.
- 2.13 *Rationing* means tripping or temporarily limiting the electricity delivery to a consumer because of unexpected, insurmountable incidents, in accordance with Article 9, Paragraph 9, of the Electricity Act.
- 2.14 *Power Intensive user* is a user who at one location utilises at least 14 MW of power for a total of 8,000 hours per year or longer.
- 2.15 *Temporary transmission congestion* is a system constraint which has not been designated as permanent transmission congestion and does not result from a disturbance in operations.
- 2.16 *Up regulation* refers to a demand for positive regulating power, i.e. power that needs to be fed into the system whenever actual consumption is higher than the use that was forecast for the electrical network as a whole.
- 2.17 *Non-spinning reserves* signifies the capacity of a power plant which is available for operation and is not synchronised to the electricity system but can be started up, synchronised to the system and fully utilised within a certain time frame after a request has been sent.
- 2.18 *Permanent congestion* is a system constraint which persists for structural reasons at a particular location and is not caused by operational disturbances.
- 2.19 The *generation schedule* of a producer must contain numerical information on the planned production of its power plants with a power capacity of 7 MW or more. Generation plans are prepared for a single day at a time, for each of the hours.
- 2.20 A *producer* is a company engaging in the generation of electricity or holding a power development licence.
- 2.21 *Surplus demand* refers to a situation in the transmission system in which total production according to generation plans, when added to the power being offered in the regulating power market, turns out lower than the actual overall power consumption.

### **3. These Terms in general**

- 3.1 Being obligated by law to ensure the secure operation and stability of Iceland's transmission system, Landsnet fulfils this duty inter alia by issuing rules on rationing pursuant to Article 9, Paragraph 9, of the Electricity Act, No. 65/2003, as subsequently amended, and pursuant to Articles 4, 5 and 6 of the Regulation on system management in the electricity system, No. 513/2003. In view of Landsnet's legal obligations, it is necessary to curtail or ration electricity in certain circumstances, as more precisely stipulated in these Terms.
- 3.2 Measures taken by Landsnet for curtailment and rationing shall as a rule be due to the following: (i) power shortages following transmission system disturbances, (ii) power shortages resulting from disturbance in the generation system and from surplus demand and (iii) localised limitations of transmission capacity.
- 3.3 Underfrequency and undervoltage protection is installed by Landsnet in order to ensure the secure operation of the transmission system. In certain circumstances, such protection will result for the customer in automatic load shedding. Rules regarding this are laid down in the Chapter 7 of these Terms.

#### **4. Curtailment and rationing due to power shortages following transmission system disturbances**

- 4.1 Landsnet is authorised to deal with power shortages arising from transmission system disturbances, and shall apply these authorisations in the given order below:
- (1) Curtailing curtailable electricity and curtailable transmission and utilising curtailment permissions which Landsnet has with power intensive users, cf. Article 4.2.
  - (2) Utilising regulating power, cf. Article 4.3.
  - (3) Maximising generation of producers, cf. Article 4.4.
  - (4) Activating and utilising non-spinning reserves, cf. Terms for the Procurement and Settlement of Non-Spinning Reserves (C3), as well as taking advantage of supply possibilities within distribution systems in agreement with the corresponding distribution system operators.
  - (5) Rationing, cf. Article 4.5.
- 4.2 Any curtailment of curtailable electricity and curtailable transmission shall comply with the terms for the particular producer and the Terms for Curtailable Transmission (B5). Curtailments among power intensive users shall comply with their respective agreements.
- 4.3 The use of regulating power on account of disturbance in the transmission system or in power plants shall be subject to the Terms for the Procurement of Regulating Power and Settlement of Balancing Energy (B3).
- 4.4 Producers shall maximise their generation whenever Landsnet requests it due to transmission system disturbances. Any deviations from plan which occur for this reason shall be settled at the balancing energy price as applicable at any given time.
- 4.5 In the event of Landsnet having to apply rationing, an effort shall be made to do so with proportional equality among all customers, so long as this is not prevented by system constraints. The relevant customers must respond immediately to Landsnet's request for rationing. An effort shall be made to ensure electricity to those companies and institutions providing the public with emergency services or guaranteeing public safety and order.

#### **5. Curtailment and rationing due to surplus demand or power shortages following disturbances at power plants**

- 5.1 Landsnet has the following authorisations to deal with surplus demand or with power shortages arising from power plant disturbances, and shall apply these authorisations in the following order:
- (1) Utilising regulating power, cf. Article 4.3.
  - (2) Curtailing curtailable electricity and curtailable transmission and utilising curtailment allowances which Landsnet has with power intensive users, cf. Article 4.2.
  - (3) Activating and utilising non-spinning reserves, cf. Terms for the Procurement and Settlement of Non-Spinning Reserves (C3).
  - (4) Maximising generation among producers, cf. Article 4.4.
  - (5) Rationing, cf. Article 4.5.

#### **6. Curtailment due to transmission capacity limitations**

- 6.1 Curtailments due to transmission capacity limitations shall conform to the Terms for Congestion Management (C6).

#### **7. Curtailments due to underfrequency and undervoltage**

- 7.1 Landsnet makes agreements with power intensive users and distribution system operators on implementation of underfrequency and undervoltage protection. Such agreements provide for automatic devices to curtail delivery to the particular power intensive user or distribution system operator whenever a certain frequency or voltage limit is reached.

- 7.2 If curtailment occurs on account of underfrequency or undervoltage protection, Landsnet shall endeavour to end this curtailment as soon as possible.

## **8. Landsnet's obligations to provide information regarding curtailment and rationing**

- 8.1 When Landsnet applies curtailment and/or rationing, it shall give information to the relevant customers as soon as possible, clarifying the period and estimated extent of rationing/curtailment.
- 8.2 Landsnet shall give its customers explanations of any rationing and/or curtailment no later than the next workday following the start of rationing/curtailment.
- 8.3 In addition to the articles in this chapter, Article 5 of the Terms for Curtailable Transmission (B5) also applies regarding obligations to provide information.

## **9. Liability**

- 9.1 As concerns distribution system operators, the stipulations on liability in the General Terms on Electricity Transmission and System Management (A1) shall also apply to the present Terms.
- 9.2 As concerns power intensive users, the terms of their particular agreements shall cover matters of liability.

## **10. Force majeure**

- 10.1 The stipulations on force majeure in the General Terms on Electricity Transmission and System Management (A1) shall also apply to the present Terms.

## **11. Breach of terms**

- 11.1 In the event of breaches of these Terms, the National Energy Authority may be requested to take action on the basis of Chapters VII and VIII of the Electricity Act.

## **12. Surveillance and remedies**

- 12.1 The National Energy Authority supervises the operation of companies pursuant to the Electricity Act, No. 65/2003, and their compliance with the conditions applying to these operations according to laws, regulations and these Terms.
- 12.2 In case of disagreement on the implementation or interpretation of provisions in these Terms, the National Energy Authority, and the Appeals Committee on Electricity where applicable, shall be requested to rule in instances where they have the power to make a ruling on the basis of Chapters VII and VIII of the Electricity Act. If a dispute cannot be appealed to the National Energy Authority, the case may be referred to the District Court of Reykjavik for resolution.

## **13. Reference**

- 13.1 A.1 General Terms on Electricity Transmission and System Management.
- 13.2 B.3 Terms for the Procurement of Regulating Power and Settlement of Balancing Energy.
- 13.3 B.5 Terms for Curtailable Transmission.
- 13.4 C.3 Terms for the Procurement and Settlement of Non-Spinning Reserves.
- 13.5 C.6 Terms for Congestion Management.