Appendix 1

HANDBOOK CONCERNING BALANCE RESPONSIBILITY AND IMBALANCE SETTLEMENT

PART 2:
FINGRID OYJ'S GENERAL TERMS AND CONDITIONS CONCERNING IMBALANCE SETTLEMENT

1 Introduction

This part of the handbook contains the terms, conditions and general procedures relating to Imbalance Settlement used in determining a Balance Responsible Party's (hereinafter Balance Responsible Party) rights, responsibilities and obligations relating to Imbalance Settlement. The general terms and conditions concerning Imbalance Settlement are based on the Government decree on the settlement and metering of electricity deliveries (*valtioneuvoston asetus sähköntoimitusten selvityksestä ja mittauksesta*) and the decree of the Ministry of Economic Affairs and Employment on the exchange of information to be followed in electricity trade and in the settlement of electricity deliveries (*Työ- ja elinkeinoministeriön asetus sähkökaupassa ja sähköntoimitusten selvityksessä noudatettavasta tiedonvaihdosta*) as well as the Commission Regulation (EU) 2017/2195 Electricity Balancing Guideline concerning the guidelines for power system balance management set by the European Commission (hereinafter EBGL).

A Balance Responsible Party is a participant of the electricity market, including the Nominated Electricity Market Operator, which balances the difference between its electricity production and procurement as well as between its electricity consumption and deliveries by means of imbalance energy delivered by Fingrid in the Finnish imbalance area, which equals the FIN day-ahead bidding area (market balance area). This area also corresponds to the Finnish imbalance price area.

A Balance Responsible Party shall have a valid Balance Agreement with Fingrid Oyj (hereinafter Fingrid) and a valid Imbalance Settlement Agreement with eSett Oy (hereinafter Imbalance Settlement Unit).

1.1 Definitions

The following definitions are used in this document:

Open Delivery refers to the supply of electricity in which the electricity supplier provides its customer with all the electricity it needs, as well as a supply of electricity in which the supplier balances the difference between the customer's electricity production & procurement and electricity consumption & delivery by supplying the deficit or by receiving the surplus during each hour.

Chain of Open Deliveries. Each participant in the electricity market must be a part of the Chain of Open Deliveries, where the last open supplier is the system operator Fingrid.

Bilateral Transaction refers to electricity deliveries where the electricity retailer delivers the pre-agreed amount of electricity to its client during the pre-agreed delivery hour.

Fixed Delivery refers to deliveries where the electricity retailer delivers the pre-agreed amount of electricity to its client during the pre-agreed delivery hour.

Consumption Balance refers to a balance consisting of the Balance Responsible Party's total Production Plan, fixed deliveries, measured deliveries (actual consumption) and Consumption imbalance adjustments.

Metering Grid Area refers to the physical area where consumption, production, and Metering Grid Area Exchanges can be measured. A Metering Grid Area can include both production and consumption, but also only one of these.

Nominated Electricity Market Operator refers to a market operator, that is to say, a power exchange that conducts energy exchange transactions with those market participants which possess a valid contract for conducting energy exchange transactions.

Nordic Imbalance Settlement (NBS) Handbook refers to the Nordic Imbalance Settlement (NBS) Handbook (Handbook), which is maintained by the Imbalance Settlement Unit on Fingrid's assignment and concerns Balance Responsibility and Imbalance Settlement. The handbook conforms to these terms and conditions and contains procedures that further define these terms, and a more detailed description of the implementation of an Imbalance Settlement.

Shared Power Plant refers to a power plant whose production is allocated hourly to the holders of power plant shares.

Metering Grid Area Exchange Trade refers to a Metering Grid Area Exchange generated between two Metering Grid Areas belonging to different market balance areas, which must be purchased or sold.

Metering Grid Area Exchange refers to the sum of meterings between two Metering Grid Areas, the hourly rate of which is used to settle the imbalances.

Regulation Object refers to a group of one or more generators and production units in a single transmission area. A Regulation Object can contain only one type of production (wind, water, nuclear, etc.). There can only be one Balance Responsible Party per Regulation Object.

Regulation Energy Transaction refers to an Imbalance adjustment between Fingrid and balance service provider which has been created by a regulation offer activated in the regulation-power market.

Balance Service Provider refers to a market participant whose reserve-providing units or groups are able to provide balance services to transmission system operators.

Imbalance adjustment refers to the amount of energy received from the Balance Service Provider equivalent to the imbalance energy, which the connecting transmission system operator applies during the Imbalance Settlement Period to the Balance Responsible Parties in question and which is used in the calculation of the Imbalance of the Balance Responsible Parties in question.

Imbalance Settlement Period refers to the time unit in which the Balance Responsible Parties' imbalances are calculated.

Imbalance Settlement refers to the post-clearance of realised production, consumption and Energy Transactions in an Imbalance Settlement Period. The Imbalance Settlement results in the energy balances of each of the parties involved in the electricity market.

The Imbalance Settlement Unit refers to the transmission system operator's operating unit, subsidiary or associated company which carries out the tasks related to the national Imbalance Settlement.

Imbalance Energy refers to the electrical energy provided by the Balance Services Provider used by transmission system operators for balancing the network. In this document, **Balancing Energy**.

Balance Responsible Party refers to a party in the electricity market with a valid Balance Agreement with Fingrid. In other words, the party's open supplier is Fingrid.

Balance Responsibility refers to the responsibility that the production and procurement of electricity of a electricity market participant cover its consumption and the supply of electricity during each hour. All participants in the electricity market have Balance Responsibility.

Energy Transactions refer to the Energy Transactions during the hour made by Fingrid for the purposes of balance management and, where appropriate, taking care of other system responsibilities.

Production Plan refers to the planned production before the delivery hour announced by the Balance Responsible Party for the delivery hour.

Production Balance refers to a balance consisting of the Balance Responsible Party's total Production Plan, realised production and Production imbalance adjustments.

2 Requirements for becoming a Balance Responsible Party

Requirements for becoming a Balance Responsible Party:

- must be a legal person registered under the law of the home state;
- must be registered with the national regulatory authority of the member state in accordance with the regulation (EU) 1227/2011 (REMIT);
- must have a clearing account approved by the Imbalance Settlement Unit;
- must place a collateral with the Imbalance Settlement Unit;
- must be able to receive invoices from the Imbalance Settlement Unit;
- must register and indicate the required structural information to the Imbalance Settlement Unit.

3 National Imbalance Settlement

The Imbalance Settlement procedure ascertains the electricity deliveries between the parties involved in the electricity market (hereinafter Market Party). The imbalances are calculated for each Balance Responsible Party on the basis of Production Plans, Fixed Deliveries (Bilateral Transactions and energy exchange transactions), consumption and production as well as Imbalance adjustments during the Imbalance Settlement Period (Energy Transactions and balancing energies) as shown in Figure 1. Each Balance Responsible Party carries financial responsibility for its imbalances.

The Nordic Imbalance Settlement model is based on a model of two balances, where the imbalances in Production Balance and Consumption Balance are calculated and settled separately. The Imbalance Settlement Unit is responsible for settling the balances of Balance Responsible Parties and for invoicing the imbalances at Fingrid's assignment.

Balance Responsible Party's production is handled in the Production Balance. Fixed Deliveries and consumption as well as imbalances in the Metering Grid Area are handled in the Consumption Balance.

Production Plans are handled both in the Production Balance and Consumption Balance.

Imbalance adjustments during the Imbalance Settlement Period (Energy Transactions and Balancing Energies) are handled either in the Production Balance or in the Consumption Balance depending on from which balance the Energy Transaction was made or in which balance the Balancing Energy was recorded.

The Imbalance Settlement Unit will automatically calculate the imbalance for the Balance Responsible Party every hour until the 13th day from the day after the delivery day. During that period, the Balance Responsible Party may request a recalculation of the imbalance, if it detects an error.

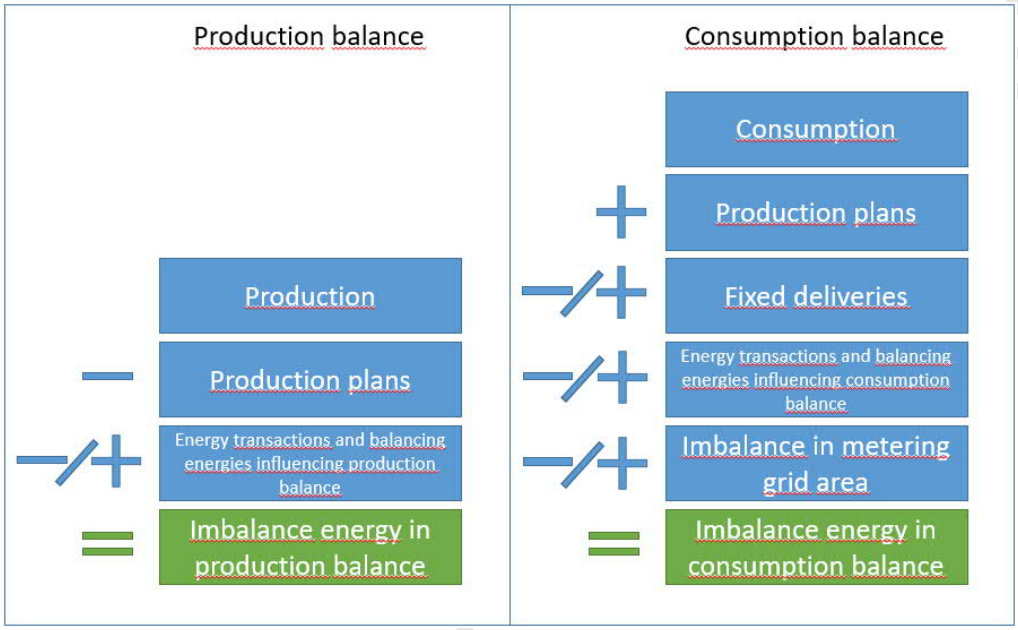

Figure 1. Imbalance calculation

4 Organisation of Balance Responsibility in the metering point of electricity

An electricity user must have one open supplier (electricity retailer) for using electricity in each metering point connected to the power grid. The electricity producer who feeds electricity into the power grid for transfer therein shall be one open supplier (electricity retailer) for the electricity production of each metering point of electricity connected to the power grid and the associated electricity usage. Notwithstanding this, the proportion of the production units of the Shared Power Plants shall be divided according to paragraph 6.1.4 Processing of Shared Power Plants.

The open supplier (electricity retailer) shall assign for any Open Delivery performed to an electricity market participant a Balance Responsible Party, who via this Open Delivery or via an unbroken Chain of Open Deliveries extending to it balances the electricity production and procurement as well as electricity consumption and delivery based on the Open Delivery in question to the participant.

5 Responsibilities of a Balance Responsible Party

A Balance Responsible Party is a Market Party which has a valid agreement with the Imbalance Settlement Unit and with Fingrid. A Balance Responsible Party's responsibilities include that it must:

- have a valid Balance Agreement with Fingrid;
- have a valid Imbalance Settlement agreement with the Imbalance Settlement Unit;
- submit plans of each Regulation Object to Fingrid;
- report Bilateral Transactions related to its balance to the Imbalance Settlement Unit and verify their correctness;
- carry financial responsibility for its imbalances;
- clarify imbalances in its Balance Responsibility with the Imbalance Settlement Unit;
- maintain up-to-date settlement structure information on Imbalance Settlement;
- check all information reported by the Imbalance Settlement Unit and report deviations;
- inform the Imbalance Settlement Unit of the electricity retailers in its balance itemised by the Metering Grid Areas, separately for production and consumption; and
- plan its electricity balance so that it is in balance on an hourly basis.

6 Reporting of settlement structure information

Settlement structure information is information on the Market Parties and their relationships with each other (e.g. the relationship between a Balance Responsible Party and an electricity retailer) and on the market entities and market entity connections (e.g. the relationship between an electricity retailer and a Metering Grid Area). The definitions can be found in the valid Nordic Imbalance Settlement (NBS) Handbook of the Imbalance Settlement Unit. Each Market Party is responsible for the delivery and updating of settlement structure information.

Each Market Party shall register with the Imbalance Settlement Unit in order to be able to operate in the market. Registration is made through the Service request contact service published by the Imbalance Settlement Unit on its website. Market Parties are responsible for registering and for their own information being up to date.

The Imbalance Settlement Unit maintains the settlement structure information on the basis of information provided by Market Parties, Fingrid and other market players (e.g. service providers).

6.1 Reporting responsibilities and schedules

The Imbalance Settlement Unit receives settlement structure information from Market Parties through the Online Service to the Imbalance Settlement system, where the Imbalance Settlement Unit verifies the information. When the Imbalance Settlement Unit has accepted the settlement structure information, the Imbalance Settlement Unit publishes the settlement structure information in question to the Market Parties entitled to have the information in the Online Service.

Every Market Party must apply to the Imbalance Settlement Unit for acceptance into the settlement structure. Market Parties themselves are responsible for registering and verifying that their information is up-to-date.

6.1.1 A Balance Responsible Party is responsible for reporting and maintaining the following settlement structure information:

- registering the company as a Balance Responsible Party;
- updating own contact information;
- registering for which retailers the Balance Responsible Party takes on the responsibility for Production Balance and in which Metering Grid Areas;
- registering for which retailers the Balance Responsible Party takes on the responsibility for consumption balance /trades and in which Metering Grid Areas;
- managing settlement structure information on Fixed Deliveries for retailers that the Balance Responsible Party is responsible for. Registration of a Fixed Delivery can be done by one of the Balance Responsible Parties, and the counterpart will then be informed by the Imbalance Settlement Unit that a Fixed Delivery has been registered with this Balance Responsible Party;
- assigning production unit to the correct Regulation Object;
- providing Fingrid with sufficient information to register Regulation Objects;
- power plants in its Balance Responsibility defined as Shared Power Plants, their shareholders (retailers), basic division ratios of the shareholders' production as ratios per Shared Power Plant (e.g. 3/9) and the capacities of the power plants by e-mail to the address settlement@esett.com;
- the Nominated Electricity Market Operator carries responsibility for maintaining the settlement structure information on energy exchange transactions; and
- the Nominated Electricity Market Operator also contributes to maintaining the settlement structure information on transmissions relating to the day-ahead market and intraday market between market areas.

6.1.2 Distribution system operator is responsible for reporting and maintaining the following settlement structure information:

- registering the company as a distribution system operator;
- updating own contact information;
- updating the settlement structure information on Metering Grid Area Exchanges;
- updating the settlement structure information on consumption within the Metering Grid Area:
    - provide following information: retailer, Metering Grid Area, consumption type and validity;
- updating the settlement structure information on production units within the Metering Grid Area:
    - provide following information: Metering Grid Area, production type, validity, production unit ID and capacity;

- updating the settlement structure information on production:
    - naming of retailer for production unit; and
- notifying a retailer for every Metering Grid Area to handle the Metering Grid Area imbalance and Metering Grid Area Exchange Trade.

6.1.3 Schedules for reporting of settlement structure information

The Imbalance Settlement structure information shall be reported in accordance with the following deadlines. The corresponding deadlines also apply to the reporting of the ending of settlement structure information.

6.1.3.1 Reporting by Balance Responsible Party

The settlement structure information on Fixed Deliveries in a Balance Responsible Party's Balance Responsibility shall be reported no later than three full days before the first delivery day (reported to the Imbalance Settlement Unit).

Assigning production units in a Balance Responsible Party's Balance Responsibility to Regulation Objects and Production Plans no later than 14 full days before the first delivery day (reported to Fingrid).

Assigning Regulation Objects in a Balance Responsible Party's Balance Responsibility to production units no later than one full day before the first delivery day (reported to the Imbalance Settlement Unit).

Assigning a retailer in a Balance Responsible Party's Balance Responsibility to consumption and production in every Metering Grid Area no later than 5 full days before the first delivery day (reported to the Imbalance Settlement Unit).

> As distinct from the previous, announcement of the termination of an electricity retailer's Balance Responsibility in a Metering Grid Area shall be given no later than 14 full days before the final delivery day (reported to the Imbalance Settlement Unit).

6.1.3.2 Reporting by distribution system operator

The settlement structure information on Metering Grid Area Exchanges in distribution system operator's Metering Grid Areas shall be reported no later than 14 full days before the first delivery day (reported to the Imbalance Settlement Unit).

The settlement structure information on consumption and minor production in distribution system operator's Metering Grid Areas shall be reported no later than seven full days after the delivery day (reported to the Imbalance Settlement Unit).

The settlement structure information on production in distribution system operator's Metering Grid Areas shall be reported no later than the day before the first delivery day (reported to the Imbalance Settlement Unit).

6.1.4 Processing of Shared Power Plants

A separate Metering Grid Area is established of a Shared Power Plant. This Metering Grid Area shall have one distribution system operator / party maintaining the Metering Grid Area, which is responsible for the Imbalance Settlement in the Metering Grid Area in question, such as for the calculation and reporting of production and other Imbalance Settlement information to the Imbalance Settlement Unit and to other parties entitled

to receive the information. Said Metering Grid Area is established in the same way as any other Metering Grid Areas in the Nordic Imbalance Settlement model, in other words it is separated from the other Metering Grid Areas by means of exchange metering, of which the Metering Grid Area Exchanges per equivalent metering areas are reported to the Imbalance Settlement Unit.

The shareholders of the Shared Power Plant are established in the Imbalance Settlement as retailers in accordance with the Nordic Imbalance Settlement model. As many production units as there are shareholders are established in the Metering Grid Area established from the Shared Power Plant. The distribution system operator of the Metering Grid Area / party maintaining the Metering Grid Area assigns the retailers to the production units established.

The Balance Responsible Party of the retailer of the imbalance in the Metering Grid Area established from the Shared Power Plant serves as the Balance Responsible Party of the Shared Power Plant.

The division of the realised production of the Shared Power Plant is based on the shareholder-specific production shares reported by the Balance Responsible Parties of the shareholders of the Shared Power Plant to the Imbalance Settlement Unit no later than 45 minutes before the delivery hour. The production shares are reported in megawatt hours.

The Balance Responsible Party of a shareholder of the Shared Power Plant reports during the delivery hour whether the shareholder-specific production share reported before the delivery hour is used as the realised fixed production of the shareholder in the delivery hour. Otherwise, the shareholder's realised production is calculated in proportion to all production shares of the Shared Power Plant, taking into account the confirmed fixed shares.

If the total energy of production shares that have been confirmed as fixed in a Shared Power Plant is greater than the realised total production of the Shared Power Plant in the hour in question, the realised production is allocated to the shareholders only in proportion to the production shares that have been confirmed as fixed.

If all production shares of a Shared Power Plant reported before the delivery hour have been confirmed or not confirmed in the delivery hour to be used as fixed shares in the delivery hour, the realised total production of the Shared Power Plant is divided in proportion to the production shares reported before the delivery hour.

If none of the shareholders production shares of a Shared Power Plant in a delivery hour has not been reported before the delivery hour, the realised total production of the Shared Power Plant is divided in accordance with the basic division ratios of the production of the shareholders.

If all shareholders of a Shared Power Plant report before the delivery hour that their production share is zero, the realised total production of the Shared Power Plant is divided in accordance with the basic division ratios of the production of the shareholders.

The production shares and their confirmations shall be delivered using the procedure specified in the separate instruction *Osuusvoimalaitosten tuotanto-osuuksien käsittely* by the Imbalance Settlement Unit.

The calculation and reporting of the realised production of a shareholder-specific production unit of a Shared Power Plant takes into account the shareholder-specific Regulation Energy Transactions needed to implement the system responsibility imposed on Fingrid by the Finnish Electricity Market Act, and other shareholder-specific regulation transactions in the delivery hour.

The distribution system operator of the Metering Grid Area / party maintaining the Metering Grid Area is responsible for the calculation of the above realised shareholder-specific production of the Shared Power Plant and for reporting the information to the Imbalance Settlement Unit.

7 Reporting of Imbalance Settlement information

A Market Party shall report the Imbalance Settlement information to the Imbalance Settlement Unit as messages or through the Online Service. Based on the information reported, the Imbalance Settlement Unit will settle the imbalances in the consumption and production of Balance Responsible Parties.

The Imbalance Settlement Unit shall report the Imbalance Settlement information to the Market Parties as messages or through the Online Service.

7.1 A Balance Responsible Party is responsible for reporting the following Imbalance Settlement information

A Balance Responsible Party shall report Imbalance Settlement information in accordance with items 7.1.1 and 7.1.2

7.1.1 Plans per Regulation Object

A plan per Regulation Object is an hourly plan concerning certain production units. A Balance Responsible Party shall report the plans per Regulation Object following the general terms and conditions of Part 1 of Fingrid Oyj's handbook in Appendix 1 to the Agreement.

7.1.2 Fixed Deliveries

A Balance Responsible Party shall report to the Imbalance Settlement Unit final hourly information on retailer-specific Fixed Deliveries, itemised by the counterparties, included in its Balance Responsibility no later than 20 minutes before the delivery hour.

Apart from the above, only a Nominated Electricity Market Operator reports retailer-specific energy exchange transactions in the day-ahead market and intraday market maintained by it, itemised by the counterparties, including transactions between bidding areas. In the case of intraday markets, the electricity market operator shall report preliminary information on deliveries before the start of the delivery hour and the final hour-level data on deliveries no later than 12:00 (CET) on the 13th day following the delivery day.

7.2 Distribution system operator is responsible for reporting the following Imbalance Settlement information

The distribution system operator shall report to the Imbalance Settlement Unit preliminary information on the deliveries on the second day following the delivery day no later than 11:00 and the final information on the deliveries on the eleventh day following the delivery day no later than 24:00.

7.2.1 Metering Grid Area Exchanges

The distribution system operator shall report the sums of the Metering Grid Area Exchanges in its Metering Grid Area in relation to the other Metering Grid Areas.

7.2.2 Production

The distribution system operator shall report the hourly-metered information on production units of more than 1 MW, itemised by production units, to the Imbalance Settlement Unit. A retailer's minor production of less than 1 MW can be netted with consumption, and it does not need not be reported. An exception to the above is a retailer's sum of minor production of less than 1 MW that exceeds the retailer's electricity consumption in a Metering Grid Area. This shall be reported separately.

Emergency power generators of more than 1 MW electric power, energy reserves and other minor production equipment, which are only intended for temporary use or disturbance management purposes, can be netted in the Consumption Balance.

7.2.3 Consumption

The distribution system operator shall report to the Imbalance Settlement Unit the sum information itemised by retailers and Metering Grid Areas. The sum information shall be reported itemised as follows:

- Metered consumption (hourly-metered)
- Consumption calculated using type load profile
- Losses
    - Losses in a Metering Grid Area are calculated on the basis of the Metering Grid Area Exchanges, metered production and metered consumption as follows: losses = – (Metering Grid Area Exchanges + metered production + metered consumption + consumption calculated using type load profile).

7.3 Reporting principles of the Imbalance Settlement Unit

The Imbalance Settlement Unit reports the following:

1) to the balance settler the preliminary imbalance settlement information related to the carrying out of its balance settlement duty on the second day after the delivery day and the final imbalance settlement information no later than on the 13th day after the delivery day;

2) to a Balance Responsible Party the preliminary information related to electricity deliveries between the Imbalance Power Unit and the Balance Responsible Party on the second day after the delivery day and the final information related to electricity deliveries between the Imbalance Power Unit and the Balance Responsible Party no later than on the 13th day after the delivery day;

3) to an electricity market participant the preliminary imbalance settlement information reported by balance settlers and concerning the participant itself on the second day

after the delivery day and the final imbalance settlement information no later than on the 13th day after the delivery day;

4) to a non-Finnish party (TSOs) the preliminary electricity deliveries that cross the border of the national market balance area on the second day after the delivery day and the final electricity deliveries no later than on the 13th day after the delivery day.

7.4 Delivery of information

The information supplied shall reach the recipient by the prescribed deadline. The most recent information received before the deadline replaces earlier information on the same matter.

7.5 Calendar and time zones

The Nordic Imbalance Settlement model utilises a combined Nordic calendar, which consolidates the public national holidays from all involved countries. The Nordic calendar can be found on the website of the Imbalance Settlement Unit.

The Nordic Imbalance Settlement model is operated in Central European Time (CET) / Central European Summer Time (CEST) and a 24-hour clock (10 o'clock in the evening is written as 22:00) in operation (for example in invoicing and Imbalance Settlement). All Market Parties acting with the Imbalance Settlement Unit shall follow this procedure. The Nordic Imbalance Settlement model also uses winter and summer time change. Accordingly, the last Sunday in March has 23 hours and the last Sunday in October has 25 hours.

The exception of the previous is that distribution system operators shall report the Imbalance Settlement information by following the official time of Finland in accordance with the decree of the Ministry of Economic Affairs and Employment, taking into account the transition to and from daylight saving time.

The management of settlement structures (e.g. retailer's Balance Responsibility) is complemented by national legislation in each country. In Finland, the settlement structures are managed in Eastern European Time (EET) / Eastern European Summer Time (EEST).

8 Breach of terms

In the event that the Balance Responsible Party does not comply with these terms and conditions, the Balance Responsible Party shall promptly provide the necessary explanations and take corrective action in accordance with Fingrid requirements.

In the event of a material breach, Fingrid is entitled to terminate the Balance Agreement.

In addition, Fingrid is entitled to terminate the Agreement immediately if the Balance Responsible Party is placed in liquidation, the equity capital of the Balance Responsible Party is registered as negative, the Balance Responsible Party defaults on its payments, is declared bankrupt, shows other signs of insolvency, or otherwise grossly violates the Agreement. Fingrid also has a similar right if the Balance Responsible Party does not have a valid Imbalance Settlement Agreement with the Imbalance Settlement Unit.

9 Damages

The parties to the Agreement shall not be liable for damage caused by a performance within the scope of the Agreement, unless the damage is demonstrated to be the result of negligence by the party to the Agreement or one acting on its behalf, which cannot be considered to be minor. The parties to the Agreement shall not be liable to each other for indirect or consequential damages, such as, for example, loss of profits or damages paid to a third party by a party to the Agreement, not any other consequential damages, unless the damage has been caused intentionally or by gross negligence or by a breach of a confidentiality obligation.