

Appendix 1

**HANDBOOK CONCERNING BALANCE RESPONSIBILITY AND
IMBALANCE SETTLEMENT**

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

1	Introduction	3
2	National imbalance settlement	3
3	Responsibilities of Balance Responsible Party	4
4	Reporting of settlement structure information	4
4.1	Reporting responsibilities and schedules	5
4.1.1	Balance Responsible Party is responsible for reporting and maintaining the following settlement structure information, among others:	5
4.1.2	Distribution system operator is responsible for reporting and maintaining the following settlement structure information, among others:	6
4.1.3	Schedules for reporting of settlement structure information	6
4.1.4	Processing of shared power plants	7
5	Reporting of imbalance settlement information	8
5.1	Balance Responsible Party is responsible for reporting the following imbalance settlement information, among others	8
5.1.1	Plans per regulation object	8
5.1.2	Fixed deliveries	8
5.2	Distribution system operator is responsible for reporting the following imbalance settlement information, among others	9
5.2.1	Metering grid area exchanges	9
5.2.2	Production	9
5.2.3	Consumption	9
5.3	Reporting principles of Balance Settlement Unit	9
5.4	Delivery of information	10
5.5	Calendar and time zones	10

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1

Introduction

This part of the handbook contains the terms and conditions relating to imbalance settlement and the general procedures for determining Balance Responsible Party's rights, responsibilities and obligations relating to imbalance settlement. The general terms and conditions of imbalance settlement are based on the Government decree on the settlement and metering of electricity deliveries (*valtioneuvoston asetus sähkötoimitusten selvityksestä ja mittauksesta*) and the decree of the Ministry of Employment and the Economy on the exchange of information to be followed in electricity trade and in the settlement of electricity deliveries (*Työ- ja elinkeinoministeriön asetus sähkökaupassa ja sähkötoimitusten selvityksessä noudatettavasta tiedonvaihdosta*).

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 use and deliveries by means of imbalance power delivered by Fingrid.

Balance Responsible Party shall have a valid balance agreement with Fingrid Oyj (hereinafter Fingrid) and a valid Imbalance Settlement Agreement with eSett Oy (hereinafter Balance Settlement Unit). At Fingrid's assignment, Imbalance Settlement Unit maintains manual: the Nordic Imbalance Settlement (NBS) Handbook, Instructions and Rules for Market Participants. The manual conforming to these terms and conditions contains procedures that specify these terms and a more detailed description of the implementation of imbalance settlement.

2

National imbalance settlement

The imbalance settlement procedure ascertains the electricity deliveries between the parties involved in the electricity market (hereinafter referred to as Market Participant). The balances are calculated for each Balance Responsible Party on the basis of production plans, fixed deliveries (bilateral transactions and power exchange transactions), consumption and production as well as hourly power transactions and reserve 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 production balance and consumption balance are calculated and settled separately. 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.

Power transactions during the hour and reserve energies are handled either in the production balance or in the consumption balance depending on from which balance the transaction was made or in which balance the reserve energy has been recorded.

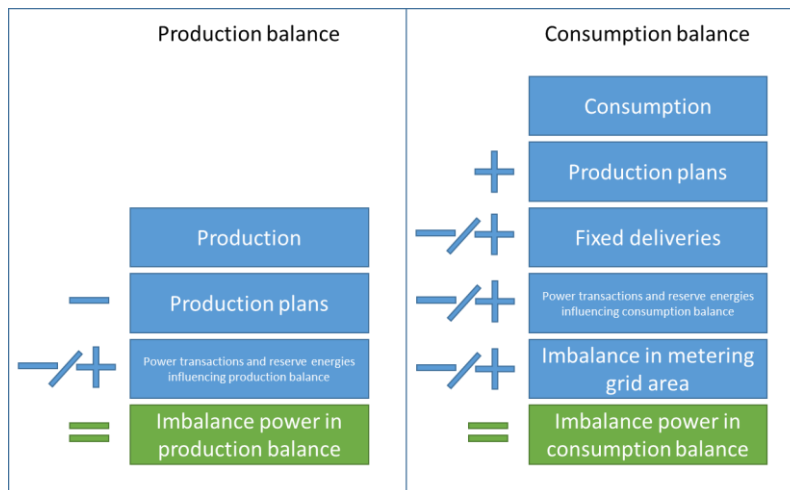


Figure 1. Calculation of balances

3 Responsibilities of Balance Responsible Party

Balance Responsible Party is a Market Participant which has a valid agreement with Imbalance Settlement Unit and Fingrid. Balance Responsible Party's responsibilities include that it must, among other things:

- have a valid imbalance settlement agreement with Imbalance Settlement Unit;
- submit plans of each regulation object to Fingrid;
- report bilateral transactions related to its balance to Imbalance Settlement Unit and verify their correctness;
- carry financial responsibility for its imbalances;
- maintain up-to-date settlement structure information on imbalance settlement;
- check all information reported by Imbalance Settlement Unit and report deviations;
- inform 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.

4 Reporting of settlement structure information

Settlement structure information is information on the Market Participants 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). Each Market Participant is responsible for the delivery and updating of settlement structure information.

Each Market Participant shall register with Imbalance Settlement Unit in order to be able to operate in the market. Market Participants are responsible for registering and for their own information being up to date.

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

4.1 Reporting responsibilities and schedules

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

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

4.1.1 Balance Responsible Party is responsible for reporting and maintaining the following settlement structure information, among others:

- registering the company as a Balance Responsible Party;
- updating own contact information;
- registering for which retailers Balance Responsible Party takes on the responsibility for production balance, and in which metering grid areas;
- registering for which retailers Balance Responsible Party takes on the responsibility for consumption/trade imbalance, and in which metering grid areas;
- managing settlement structure information on fixed deliveries for retailers that 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 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 address settlement@esett.com;
- the nominated market operator carries responsibility for maintaining the settlement structure information on power exchange transactions; and
- the nominated market operator also contributes to maintaining the settlement structure information on transmissions relating to the day market and intraday market between market areas.

4.1.2 Distribution system operator is responsible for reporting and maintaining the following settlement structure information, among others:

- 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.

4.1.3 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.

4.1.3.1 Reporting by Balance Responsible Party

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

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

Assigning a retailer in Balance Responsible Party's balance responsibility to consumption and production in every metering grid area no later than 14 full days before the first delivery day (reported to Imbalance Settlement Unit).

4.1.3.2 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 Imbalance Settlement Unit).

The settlement structure information on consumption in distribution system operator's metering grid areas shall be reported no later than three full days before the first delivery day (reported to Imbalance Settlement Unit).

The settlement structure information on production in distribution system operator's metering grid areas shall be reported no later than three full days before the first delivery day (reported to Imbalance Settlement Unit).

4.1.4 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 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 inter-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 Imbalance Settlement Unit.

The shareholders of the shared power plant are established in the imbalance settlement as retailers in accordance with the inter-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 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 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 power transactions needed to implement the system responsibility imposed on Fingrid by the Finnish Electricity Market Act, and other shareholder-specific reserve 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 Imbalance Settlement Unit.

5 Reporting of imbalance settlement information

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

5.1 Balance Responsible Party is responsible for reporting the following imbalance settlement information, among others

Balance Responsible Party shall report imbalance settlement information in accordance with items 5.1.1 and 5.1.2.

5.1.1 Plans per regulation object

A plan per regulation object is an hourly plan concerning certain production units. 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.

5.1.2 Fixed deliveries

Balance Responsible Party shall report to Imbalance Settlement Unit 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 market operator reports retailer-specific exchange transactions in the day market and intraday market maintained by it, itemised by the counterparties, including transactions between bidding areas.

5.2 Distribution system operator is responsible for reporting the following imbalance settlement information, among others

The distribution system operator shall report to 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.

5.2.1 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.

5.2.2 Production

The distribution system operator shall report the hourly-metered information on production units of more than 1 MW, itemised by production units, to 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 and other minor production equipment, which are only intended for temporary use and disturbance management purposes, can be netted in the consumption balance.

5.2.3 Consumption

The distribution system operator shall report to 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: $\text{losses} = - (\text{metering grid area exchanges} + \text{metered production} + \text{metered consumption} + \text{consumption calculated using type load profile})$

5.3 Reporting principles of Balance Settlement Unit

The Balance Settlement Unit reports the following:

1) to an electricity market participant the preliminary balance settlement information related to the carrying out of its balance settlement duty on the second day after the delivery day and the final balance 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 balance settlement information reported by other electricity market participants and concerning the participant itself on the second day after the delivery day and the final balance 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.

5.4 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.

5.5 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 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 Participants acting with 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 Employment and the Economy, 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).