

*Unofficial translation*

Fingrid Oyj

# Terms and conditions for providers of Automatic Frequency Restoration Reserves (aFRR)

29.2.2024

## Table of contents

<b>1</b>	<b>Introduction</b>	<b>3</b>
<b>2</b>	<b>Definitions</b>	<b>4</b>
<b>3</b>	<b>Procurement of reserves</b>	<b>6</b>
<b>4</b>	<b>Requirements for Balancing Service Providers</b>	<b>7</b>
<b>5</b>	<b>Requirements for a Reserve Unit</b>	<b>9</b>
<b>6</b>	<b>Aggregation of Reserve Resources</b>	<b>10</b>
<b>7</b>	<b>Rules of the aFRR Capacity Market</b>	<b>10</b>
7.1	Bidding rules	10
7.2	Processing of bids	11
<b>8</b>	<b>Rules of the aFRR Energy Market</b>	<b>12</b>
8.1	Bidding rules	12
8.2	Processing of bids	13
<b>9</b>	<b>Reporting and monitoring of reserve maintenance</b>	<b>13</b>
9.1	Balancing Service Provider's reporting to Fingrid or Fingrid's service provider	13
9.2	Fingrid's reporting to the Balancing Service Provider	14
9.3	Balancing Service Provider's reporting to the Balance Responsible Party	14
9.4	Reporting by Fingrid or Fingrid's service provider to the Balance Responsible Party and Open Supplier of a Reserve Resource:	15
<b>10</b>	<b>Energy processing</b>	<b>15</b>
<b>11</b>	<b>Fees and terms of payment</b>	<b>16</b>
11.1	Capacity Fee	17
11.2	Energy Fee	17
11.3	Independent Aggregator's Regulation Imbalance Fee and fixed weekly fee	19
11.4	Collateral requirement for Independent Aggregators	19
11.5	Invoicing	20
11.6	Interest on arrears	20
11.7	Complaints	20
11.8	Value-added tax and other indirect taxes and levies	20
<b>12</b>	<b>Assignment of a reserve obligation to another Balancing Service Provider</b>	<b>20</b>
<b>13</b>	<b>Force majeure</b>	<b>21</b>
<b>14</b>	<b>Breach of terms</b>	<b>21</b>
14.1	Sanction	21
14.2	Verification of control properties of reserves, and the Balancing Service Provider's reimbursement obligation	22
14.3	Temporary exclusion of a Balancing Service Provider from the reserve market	22
14.4	Cancelling the agreement	23

## 1 Introduction

This document defines the terms and conditions of Fingrid Oyj (hereinafter Fingrid) for the acquisition and maintenance of Automatic Frequency Restoration Reserves (aFRR) in accordance with the European Commission's Guideline on Electricity Balancing, Commission Regulation (EU) 2017/2195 (hereinafter EGBL) and the requirements for providers of the reserve services needed to balance the electricity system (hereinafter Balancing Service Provider), taking into account the following decisions by the Agency for the Cooperation of Energy Regulators (ACER):

- ACER Decision No 01/2020 on the methodology to determine prices for the balancing energy that results from the activation of balancing energy bids
- ACER Decision No 02/2020 on the Implementation framework for the European platform for the exchange of balancing energy from frequency restoration reserves with automatic activation
- ACER Decision 11-2020 on standard products for balancing capacity ACER Decision No 19/2020 on the common and harmonised rules and processes for procurement and exchange of aFRR balancing capacity for the Nordic LFC Block
- ACER Decision No 20/2020 on the exemption to the obligation to allow transfer of aFRR balancing capacity for the Nordic LFC Block
- ACER Decision No 21/2020 on the application of the Nordic CCR market-based allocation process for the Nordic LFC Block (A38)
- ACER Decision No 22/2020 on the market-based allocation process of cross-zonal capacity for the exchange of balancing capacity for the Nordic CCR.
- ACER Decision No 03/2022 on the amendment to the methodology for pricing balancing energy and cross-zonal capacity used for the exchange of balancing energy or operating the imbalance netting process
- ACER Decision 15-2022 on the Amendment of the aFRR-Platform Implementation Framework (automatic activation)

Frequency Restoration Reserves (FRR) are reserves whose purpose is to restore the frequency to a nominal value of 50.0 Hz and release the activated Frequency Containment Reserves (FCRs). The frequency restoration reserves are divided into two reserve products: the automatic Frequency Restoration Reserve (aFRR) and the Manual Frequency Restoration Reserve (mFRR).

The terms and conditions relating to the acquisition and maintenance of the automatic Frequency Restoration Reserve (aFRR) used in this document apply to the Balancing Service Provider's participation in the capacity and energy markets of the automatic Frequency Restoration Reserve (aFRR Markets).

Fingrid is entitled to publish the names of the Balancing Service Providers that participate in the aFRR Markets.

## 2 Definitions

The following definitions are used in this document:

*aFRR Energy Market* refers to energy markets maintained by Fingrid from which Fingrid procures automatic Frequency Restoration Reserves (aFRR).

*aFRR Capacity Market* refers to capacity markets maintained by Fingrid from which Fingrid procures automatic Frequency Restoration Reserves (aFRR).

*aFRR Market Agreement* refers to an agreement between Fingrid and a Balancing Service Provider on the provision of automatic Frequency Restoration Reserves (aFRR) to the aFRR Markets.

*Automatic Frequency Restoration Reserve (aFRR)* is a centrally controlled, automatically activating frequency restoration reserve, the purpose of which is to restore the frequency of the electricity system to the nominal frequency and to restore the power balance of the load-frequency control area to the design value.

*Open Supplier* refers to an electricity supplier that provides its customer with all the electricity the customer needs or an electricity supplier that balances the difference between the customer's electricity production and procurement and electricity consumption and supply by supplying the missing volume of electricity or receiving the surplus during each imbalance settlement period.

*BSP - Implementation Guide Nordic MMS - aFRR capacity market* refers to the guidelines prepared by the Nordic transmission system operators for Balancing Service Providers on the use of aFRR Capacity Markets and the related information exchange. The applicable revision of the guideline is published on the joint website of the Nordic transmission system operators.

*Energy fee* refers to compensation payable for the activation of a reserve. *Fingrid's Reserve Trading and Information Exchange* instructions refers to Fingrid's detailed instructions for Balancing Service Providers regarding, for example, the use of the reserve trading system and the submission of real-time data. The applicable revision of the guideline is available on Fingrid's website.

*Independent Aggregator* refers to a Balancing Service Provider that combines Reserve Resources, bypassing the conventional electricity supply chain. In other words, it refers to a party that is not an Open Supplier or Balance Responsible Party of the Reserve Resources. An Independent Aggregator may offer one or more Reserve Resources and aggregate Reserve Resources from different balances. An Independent Aggregator has not entered into an agreement on the use of the Reserve Resource for aFRR balancing with the Balance Responsible Party and Open Supplier of the Reserve Resource.

*Capacity Fee* refers to the compensation paid by Fingrid to a Balancing Service Provider for maintaining the reserve capacity.

*Compensation Fee* refers to the compensation fee charged or paid by Fingrid under the compensation model for Independent Aggregators.

*Compensation model* refers to the reimbursement of the costs incurred during the supply of down- and up-regulation by an Independent Aggregator. The compensation is paid towards the Balance Responsible Party of the Reserve Resource. In addition, an imbalance caused by the delivered balancing energy is adjusted in the Balance Responsible Party's balance with an imbalance adjustment.

*Manual Frequency Restoration Reserve (mFRR)* is a manually activating frequency restoration reserve, the purpose of which is to restore the frequency of the electricity system to the nominal frequency and to restore the power balance of the load-frequency control area to the design value.

*Market Time Unit* refers to the trading period in the reserve markets. The Market Time Unit of the aFRR Capacity Market is one hour, and the Market Time Unit of the aFRR Energy Market is 4 seconds.

*Pay as Bid Principle* refers to a pricing principle in which the price of each accepted bid is determined by the bid itself.

*Reference Power* (known as the baseline) is the power that a Reserve Resource would consume or produce if no reserves were activated.

*Reserve Unit* refers to a unit that fulfils the requirements concerning the provision of the reserve. A Reserve Unit can consist of one or more Reserve Resources.

*Reserve Resource* refers to an individual resource capable of control; a power plant, consumption facility or energy storage facility.

*Balancing Service Provider* refers to the contracting party that has concluded an agreement with Fingrid to participate in the reserve market. A Balancing Service Provider may be an Open Supplier or Balance Responsible Party of a Reserve Resource, an Independent Aggregator, a Contractual Balancing Service Provider or a combination of the above.

*Contractual Balancing Service Provider* refers to a Balancing Service Provider that is not an Open Supplier or Balance Responsible Party of Reserve Resources, but it or the Reserve Resource's owner has an agreement with the Balance Responsible Party and Open Supplier to provide the Reserve Resource to the automated frequency restoration reserve. A Contractual Balancing Service Provider can aggregate Reserve Resources from different balance responsibilities.

*Regulation Object (RO)* refers to an identifier used in imbalance settlement, indicating the balance responsibility information related to a balancing bid. A Regulation Object may have several different Balance Responsible Parties, Open Suppliers, and metering grid areas.

*Regulation Imbalance* refers to the difference between the balancing energy activated from the Balancing Service Provider and the balancing energy delivered by the Balancing Service Provider.

*Balance Responsible Party of the Regulation Imbalance* refers to information about the balance in which a Balancing Service Provider has caused a Regulation Imbalance.

*Frequency Restoration Reserve (FRR)* refers to a reserve that is available for the restoration of the frequency of the electricity system to the nominal frequency and to restore the power balance of the load-frequency control area to the design value.

*Frequency Containment Reserve (FCR)* refers to a reserve that is available for the containment of frequency during an imbalance between electricity production and consumption.

*Bidding Zone* refers to a bidding zone used in the Day-Ahead Market.

*Bid Validity Period* refers to the period in which bids are available for selection. The Bid Validity Period for aFRR capacity bids is the same as the Market Time Unit, and the Bid Validity Period for aFRR energy bids is 15 minutes.

*Balancing Service Provider (BSP)* refers to a market participant whose reserve-providing units or groups are able to provide balance services to transmission system operators. In this document, reserve suppliers are also called Balancing Service Providers. *Imbalance settlement period* refers to the time unit for which the Balance Responsible Parties' imbalances are calculated. The Imbalance Settlement Period is 15 minutes.

*Imbalance Power* refers to the electrical energy provided by the Balancing Service Provider that is used by transmission system operators for balancing the network. This document uses the term Balancing Energy for imbalance power.

*Balance Responsible Party* refers to the electricity market party that is responsible for the said market party's imbalances and has a valid Balance Agreement with Fingrid. In other words, the party's Open Supplier is Fingrid.

*Balance Responsibility Information* refers to information on the Open Supplier, the metering grid area and the Balance Responsible Party that are associated with the Reserve Resource's Regulation Object.

*Day-Ahead Market* refers to an electricity marketplace where parties trade in electricity sold and purchased for the next day.

### 3 Procurement of reserves

The reserves are procured in accordance with Article 157 of the Guideline on System Operation, COMMISSION REGULATION (EU) 2017/1485 (hereinafter SOGL). The obligations to maintain the Automatic Frequency Restoration Reserve are defined for each bidding zone in the System Operation Agreement between the Nordic Transmission System Operators (Nordic SOA).

Fingrid buys aFRR reserves from the aFRR Energy Market to balance electricity production and consumption. Fingrid procures aFRR reserve capacity from the aFRR Capacity Market to ensure that sufficient aFRR energy bids are available at any given

time. Fingrid procures automatic Frequency Restoration Reserves from the aFRR Capacity Market for hours announced in advance. The procurement hours and the procured volume are stated on the website maintained by the transmission system operators at least two hours before the closing time of the aFRR Capacity Market.

#### **4 Requirements for Balancing Service Providers**

A party that has access to Reserve Unit(s) that fulfil(s) the requirements laid down in section 5 can become a Balancing Service Provider.

The Balancing Service Provider must enter into an aFRR market agreement with Fingrid before entering the aFRR Energy Market or aFRR Capacity Market.

To participate in the aFRR Energy and Capacity Markets, the Balancing Service Provider must enter into an aFRR market agreement and an Imbalance Settlement Agreement or a Balancing Service Settlement Agreement with Fingrid's designated imbalance settlement unit.

The Balancing Service Provider must be the owner of the Reserve Resource or the owner's authorised representative or act either as an Open Supplier or a Balance Responsible Party for the Reserve Resource.

The Balancing Service Provider must have the consent of the owner of the Reserve Resource for the use of the reserve pursuant to the aFRR market agreement. Upon Fingrid's separate request, the Balancing Service Provider shall deliver the consent of the owner of the Reserve Resource to Fingrid.

Each individual Reserve Resource may only be offered to the aFRR Capacity or Energy Markets by one Balancing Service Provider.

If the Balancing Service Provider acts as an Open Supplier of the Reserve Resource, the following shall apply:

- The Balancing Service Provider shall inform the Reserve Resource's Balance Responsible Party of the balancing use of the Reserve Resource no later than when an aFRR market agreement is concluded.
- If the Balance Responsible Party of the Reserve Resource changes, the Balancing Service Provider shall inform Fingrid of the change in writing no later than 14 days before the change takes effect.

If the Balancing Service Provider acts as a Contractual Balancing Service Provider, the following shall apply:

- The Balancing Service Provider or the owner of the Reserve Resource must make an agreement with the Reserve Resource's Balance Responsible Party and Open Supplier on the use of the Reserve Resource in accordance with the aFRR market agreement. The Balancing Service Provider shall be obliged to notify Fingrid in writing that an agreement has been made with the Balance Responsible Party and Open Supplier of the Reserve Resource on the use of the Reserve Resource in accordance with the aFRR market agreement. The

written notice must include the consent of the Balancing Service Provider, the Balance Responsible Party and the Open Supplier of the Reserve Resource for the use of the Reserve Resource in accordance with the aFRR market agreement.

- If the Balance Responsible Party or Open Supplier of the Reserve Resource changes, the Balancing Service Provider shall notify Fingrid in writing of the change, including the consent of the Balancing Service Provider, the Balance Responsible Party and the Open Supplier of the Reserve Resource for the use of the Reserve Resource for balancing purposes at least 14 days before the change takes effect.

If the Balancing Service Provider acts as an Independent Aggregator, the following shall apply:

- An Independent Aggregator is financially responsible for the Regulation Imbalances that it causes which lead to imbalances in the power system. The Independent Aggregator does not assume the role of a Balance Responsible Party.
- The Balancing Service Provider shall be obliged to maintain the Balance Responsibility Information for the Reserve Resources and report the information to Fingrid or Fingrid's service provider in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions.

If the Balancing Service Provider acts as an Open Supplier of the Reserve Resource or as a Contractual Balancing Service Provider, and the Balancing Service Provider has Reserve Resources from several balances, the following shall apply:

- The Balancing Service Provider shall be obliged to maintain the Balance Responsibility Information for the Reserve Resources and report the information to Fingrid or Fingrid's service provider in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions.

If the owner has entered into an agreement with its Balance Responsible Party and Open Supplier to participate in the reserve, the owner shall be deemed equivalent to the Contractual Balancing Service Provider. The owner of a Reserve Resource shall be deemed equivalent to an Independent Aggregator if the owner has not agreed with their Open Supplier and Balance Responsible Party to participate in a reserve.

The Balancing Service Provider may authorise a representative to submit aFRR capacity or energy bids, handle real-time information exchange, or discharge the Balancing Service Provider's other obligations. However, as a contracting party to Fingrid, the Balancing Service Provider shall be responsible for complying with the terms and conditions of the agreement and its appendices. The Balancing Service Provider shall be obliged to notify Fingrid in writing of the authorisation or any changes to it no later than 14 days before they take effect.



The Balancing Service Provider or its authorised representative must be available for Fingrid to contact by telephone for a period beginning 25 minutes prior to the validity period of a bid and lasting until the end of the validity period.

If, after the deadline for Balancing Bid submission, the Balancing Service Provider finds that it cannot deliver the balancing in accordance with the Balancing Bid it has submitted, the Balancing Service Provider shall inform Fingrid of this immediately. A Balancing Service Provider who has participated in the Balancing Capacity Market shall inform Fingrid immediately if it is unable to submit Balancing Bids for an accepted Capacity Bid.

Reserve services shall be administered using digital systems operated by Fingrid and Fingrid's service provider. Balancing Service Providers shall be granted the necessary access rights to these systems. Balancing Service Providers are responsible for keeping their representatives' access rights up to date and for their actions while using the digital systems.

The Balancing Service Provider shall exchange real-time information with Fingrid in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions. The Balancing Service Provider shall be responsible for the security and reliability of the information exchange between the information systems of the Reserve Resources and the Balancing Service Provider.

## 5 Requirements for a Reserve Unit

Pursuant to SOGL Article 159, the Balancing Service Provider must demonstrate that the Reserve Unit reported as a reserve complies with the required control capacity by means of prequalification tests laid down in the document *Verification and Prequalification Process for the Technical Requirements of automatic Frequency Restoration Reserve (aFRR)* published by Fingrid.

As part of the process of technical verification and prequalification for the Automatic Frequency Restoration Reserve (aFRR), the Balancing Service Provider must present accounts of the balancing energy delivered and the associated Reference Power for each balancing object and a breakdown for each balance responsibility, as well as a description of how the Balancing Service Provider maintains the up-to-date Balance Responsibility Information for its Reserve Resources. The calculation of the balancing energy delivered and the associated accounts of Reference Power and the maintenance of the Balance Responsibility Information must meet the requirements of the document, 'Technical requirements and prequalification process for the automatic Frequency Restoration Reserve (aFRR)'. At any time, Fingrid shall be entitled to ask the Balancing Service Provider for additional information on the accounts of the balancing energy delivered and the associated reference power, as well as a description of how the Balancing Service Provider maintains the Balance Responsibility Information for its Reserve Resources. The Balancing Service Provider shall provide the requested additional information within 30 days. The Balancing Service Provider shall be responsible for the costs of clarification.

The Reserve Unit shall be located within Fingrid's system responsibility area<sup>1</sup>.

The balancing of the Reserve Unit is based on physical changes in the power output. Balancing must be realised at full power within 5 minutes of an order, including a maximum preparation time of 30 seconds and a power adjustment time of 4.5 minutes.

## 6 Aggregation of Reserve Resources

A Balancing Service Provider may participate in the aFRR Capacity Market or aFRR Energy Market and maintain automatic Frequency Restoration Reserves with Reserve Resources in different balances. The Balancing Service Provider must send the necessary Balance Responsibility Information to Fingrid or Fingrid's service provider if it acts as an independent aggregator or aggregates Reserve Resources from several different open supply chains as described in *Fingrid's guidelines on reserve trading and information exchange*. For shared power plants, the Balancing Service Provider must send Fingrid the necessary information on the proportions attributable to balances in each balance responsibility as described in *Fingrid's Reserve Trading and Information Exchange* instructions.

## 7 Rules of the aFRR Capacity Market

Fingrid shall procure up- and down-regulation capacity for the automatic Frequency Restoration Reserve in the aFRR Capacity Market for the hours in the following day, specified in the CET/CEST time zone, by running a bidding competition on the preceding day. The Market Time Unit and bid validity period in the aFRR Capacity Market is 1 hour. In the aFRR Capacity Market, the Balancing Service Provider undertakes to offer the volume of reserves approved in the bidding competition to the aFRR Energy Market for the corresponding Market Time Units. Fingrid shall pay a Capacity Fee to the Balancing Service Provider for this.

### 7.1 Bidding rules

Bids shall be submitted to the aFRR Capacity Market according to the separate instructions, *Fingrid Reserve Trading and Information Exchange* and *BSP - Implementation Guide Nordic MMS - aFRR capacity market*.

The minimum capacity of a single bid is 1 MW. Bids shall be submitted at an accuracy of 1 MW. A Balancing Service Provider can submit several bids. Up- and down-regulation capacity shall be offered separately. A bid must contain the following information:

- Capacity (MW) up and/or down
- Capacity price, separately for up-regulation and down-regulation bids (€/MWh)

---

<sup>1</sup> Finland excluding the autonomous region of Åland.

- Hour (CET/CEST timezone)
- Reserve capacity bidding zone (FI)

In addition, an aFRR capacity bid may include information that the aFRR capacity bid is:

- An alternative aFRR capacity bid alongside other bids, and only one of the alternate bids may be used during a single Market Time Unit
- An indivisible aFRR capacity bid, in which case the bid must be treated as undivided. In such a case, the maximum capacity of a single bid is 50 MW.
- A block bid to offer a bid with an identical price and capacity for several consecutive hours.

Inadequate or incomplete aFRR capacity bids will not be considered in the aFRR Capacity Market.

Balancing Bids may not be submitted earlier than 7 days (CET 00:00) before the operating hour that is the subject of the bid. Bids may be submitted for the hours of the next day by 07:30 (CET/CEST) on the preceding day. A bid may be submitted no earlier than seven days before the hour of use to which the bid applies. The deadline for submitting bids may also be extended by 30 minutes if one or more Balancing Service Providers cannot submit bids due to technical problems in the aFRR Capacity Market, providing that Fingrid is notified before the closure of the bidding period. The aFRR Capacity Market may also be reopened after the deadline for submitting bids has passed due to technical problems or insufficient bids. If the deadline for submitting bids is extended or the market is reopened, Balancing Service Providers may add new bids or amend existing ones. If the aFRR Hourly Market is reopened, the deadline for submitting bids shall be 08:30 (CET/CEST).

## 7.2 Processing of bids

The number of bids required in each Market Time Unit shall be approved in price order (from lowest to highest) for up- and down-regulation capacity separately, taking into account the transmission capacity between bidding zones for aFRR trading as defined below. A bid may be partially approved unless it was defined as an indivisible bid when it was submitted. The trades for the following day shall be confirmed in accordance with ACER Decision No 19/2020.

Contrary to ACER decision No. 22/2020, the allocation of transmission capacity between Finland and Sweden for aFRR capacity trading may apply to transmission capacity between the Finland (FI) and Sweden (SE1) bidding zones as follows:

- For transmission from Sweden to Finland, up to 5 per cent of the transmission capacity supplied to the day-ahead market may be allocated. In this transmission direction, Fingrid may purchase aFRR up-regulation capacity in the bidding zones outside Finland. Similarly, other Nordic transmission system

operators may purchase aFRR down-regulation capacity in the Finland bidding zone.

- For transmission from Finland to Sweden, up to 10 per cent of the transmission capacity supplied to the day-ahead market may be allocated. In this transmission direction, Fingrid may purchase aFRR down-regulation capacity in the bidding zones outside Finland. Similarly, other Nordic transmission system operators may purchase aFRR up-regulation capacity in the Finland bidding zone.

## 8 Rules of the aFRR Energy Market

Fingrid shall activate up- and down-regulation bids for the Automatic Frequency Restoration Reserve from the aFRR Energy Market. Resources shall be activated by sending a real-time signal in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions. The Market Time Unit is 4 seconds, and the bid validity period is 15 minutes. Parties may submit bids to the aFRR Energy Market without participating in the aFRR Capacity Market.

### 8.1 Bidding rules

aFRR energy bids shall be submitted in Fingrid's digital reserve trading system in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions. The number of aFRR energy bids required during the Market Time Unit shall be accepted in order of price.

aFRR energy bids can be submitted no earlier than 7 days prior to the bid validity period. A Balancing Service Provider may modify its aFRR energy bids up to 25 minutes before the start of the bid validity period. After that, the bids become binding.

An aFRR energy bid must include the following information:

- Power (MW), separately for up-regulation and down-regulation bids
- Price (EUR per MW,h), separately for up-regulation and down-regulation bids
- Validity period (EET/EEST time)
- Reserve capacity bidding zone (FI)

Inadequate or incomplete aFRR energy bids will not be considered in the aFRR Energy Market.

Each aFRR energy bid shall have a minimum capacity of 1 MW. aFRR energy bids shall be submitted with an accuracy of 1 MW. aFRR energy bids shall be fully divisible, meaning that the amount to be activated may be less than the minimum capacity.

Common European maximum and minimum prices of aFRR energy bids in accordance with the applicable ACER decision shall apply in the Finland bidding zone. The

maximum price of an aFRR energy bid in the Finland bidding zone is EUR 15,000 per MWh, and the minimum price is EUR -15,000 per MWh.

## 8.2 Processing of bids

For each bid validity period, Fingrid shall submit the available aFRR energy bids in Finland to the joint European aFRR energy market, where a joint European bid list is formed by sorting the bids in price order – up-regulation bids are sorted with the lowest aFRR energy bid first, and down-regulation bids are sorted with the highest aFRR energy bid first.

The required number of aFRR energy bids shall be activated from the common bid list in price order for every Market Time Unit (4 s). Bids shall be selected from within the relevant validity period (15 min).

If a Balancing Service Provider's aFRR energy bid cannot be used due to the state of the power system, information system problems, or a manifest error in the aFRR energy bid, the next best aFRR energy bid shall be selected from the local bid list in Finland. Fingrid shall remove unusable bids from the joint European bid list.

If Fingrid cannot participate in the joint European aFRR Energy Market due to the state of the power system, information system problems, the unavailability of the European marketplace, or any other force majeure event, aFRR energy bids shall be selected from the local list in Finland in price order.

## 9 Reporting and monitoring of reserve maintenance

The Balancing Service Provider and Fingrid provide information for each other in accordance with the *Fingrid Guidelines on Reserve Trading and Information Exchange*. Information exchange between the Balancing Service Provider and the aFRR Capacity Market is defined in *BSP - Implementation Guide Nordic MMS - aFRR capacity market*.

### 9.1 Balancing Service Provider's reporting to Fingrid or Fingrid's service provider

The Balancing Service Provider shall provide Fingrid or Fingrid's service provider with real-time data, data on the balancing energy delivered and the associated Balance Responsibility Information and historical data at its own expense in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions. Fingrid shall use real-time data to monitor the volume of maintained reserves and verify the amount of billable reserve capacity.

Fingrid or Fingrid's service provider shall use the Balancing Service Provider's reported figures of balancing energy delivered and balance responsibility information to determine the Compensation fees related to the Compensation Model of Independent aggregation and implement the imbalance adjustments of Balance Responsible Parties. The Balancing Service Provider must report preliminary information on the delivered balancing energy and the associated Balance Responsibility Information to Fingrid or Fingrid's service provider within two days (no later than D+2 10:00 CET/CEST) and final information on the delivered balancing energy and

Balance Responsibility Information within 13 days (no later than D+13 12:00 CET/CEST). The obligation to report the balancing energy delivered shall apply to Balancing Service Providers acting as independent aggregators and Balancing Service Providers that aggregate Reserve Resources from several different balances, with the exception of shared power plants.

The Balancing Service Provider shall be obliged to provide additional information and historical information about the activation of Reserve Resources at Fingrid's request. Reporting shall comply with *Fingrid's Reserve Trading and Information Exchange* instructions. Fingrid may disclose the information provided by the Balancing Service Provider to a third party for market supervision purposes.

In the case of a Contractual Balancing Service Provider that has Reserve Resources in several balances, if the balancing energy delivered does not correspond to the balancing energy activated from the Balancing Service Provider, the Balancing Service Provider shall be obliged to report the Balance Responsible Party of the Regulation Imbalance to Fingrid or Fingrid's service provider in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions.

In the case of a Balancing Service Provider that aggregates Reserve Resources, both as the Balance Responsible Party or Open Supplier of Reserve Resources and as an Independent Aggregator, if the balancing energy delivered does not correspond to the balancing energy activated from the Balancing Service Provider, the Balancing Service Provider shall be obliged to report the Balance Responsible Party of the Regulation Imbalance to Fingrid or Fingrid's service provider in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions.

The Balancing Service Provider shall notify Fingrid if its activities as an Independent Aggregator, Contractual Balancing Service Provider, Balance Responsible Party or Open Supplier of a Reserve Resource change or cease. The Balancing Service Provider is obliged to notify Fingrid of the changes in writing no later than 14 days before the change takes effect.

## 9.2 Fingrid's reporting to the Balancing Service Provider

Fingrid shall report the following information to the Balancing Service Provider in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions:

- upon request, the volume (MWh) and price (EUR per MWh) of activated Balancing Energy in each Imbalance Settlement Period.

## 9.3 Balancing Service Provider's reporting to the Balance Responsible Party

The Balancing Service Provider shall provide the Reserve Resource's Balance Responsible Party with information about the maintenance of the automatic Frequency Restoration Reserve and imbalance settlement. The Balancing Service Provider shall agree on the delivery of this information separately with the Balance Responsible Party of the Reserve Resource.

#### 9.4 Reporting by Fingrid or Fingrid's service provider to the Balance Responsible Party and Open Supplier of a Reserve Resource:

- Fingrid or Fingrid's service provider shall report to the Balance Responsible Party of a Reserve Resource on the distribution of imbalance adjustments related to the Independent Aggregation Compensation Model with Open Supplier level specification.
- Fingrid or Fingrid's service provider shall report to the Open Supplier of a Reserve Resource on the imbalance adjustments allocated to the Open Supplier's Balance Responsible Party under the Independent Aggregation Compensation Model.
- If the Balancing Service Provider acts a Contractual Balancing Service Provider or Open Supplier that activates the Reserve Resources from several balances, Fingrid or Fingrid's service provider shall report to the Balance Responsible Party on the imbalance adjustments in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions.

## 10 Energy processing

Energy processing is based on the activated or delivered balancing energy, depending on the role and activity of the Balancing Service Provider.

Balancing energy delivered refers to the Balancing Energy caused by the delivery of the Automatic Frequency Restoration Reserve. The balancing energy delivered shall be based on information that the Balancing Service Provider reports to Fingrid or Fingrid's service provider. The Balancing Service Provider shall determine the balancing energy delivered for Imbalance Adjustments for each Imbalance Settlement Period.

Balancing Energy activated is defined as follows:

The Balancing Energy activated is calculated as the product of the balancing power and the time in operation as follows:

$$\text{Balancing Energy activated (MWh)} = \text{balancing power (MW)} \times \text{time in operation (h)},$$

where the balancing power is the power activation signal sent by Fingrid at each point in time.

If the Balancing Service Provider acts as an Open Supplier or Balance Responsible Party of a Reserve Resource, or a Contractual Balancing Service Provider, and all the Reserve Resources are in one Balance Responsible Party's balance, the balancing energy activated (up and down) from the Balancing Service Provider shall be taken into account as an Imbalance Adjustment for the Balance Responsible Party of the Reserve Resource as a part of the national imbalance settlement. The balancing energy activated is calculated for Imbalance Adjustment for each Imbalance Settlement Period individually and is expressed as the cumulative volume of energy in the Imbalance Settlement Period separately for up-regulation and down-regulation.

Fingrid or Fingrid's service provider shall report to the Balance Responsible Party on the preliminary volumes of Balancing Energy activated within two days, and the final information shall be reported no later than within 13 days.

If the Balancing Service Provider acts as an Open Supplier or Balance Responsible Party of a Reserve Resource, or a Contractual Balancing Service Provider, and the Reserve Resources are in the balances of more than one Balance Responsible Party, the balancing energy delivered is defined as follows:

The Balancing Service Provider sends the balancing energy delivered to Fingrid or Fingrid's service provider separately for up- and down-regulation in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions.

The balancing energy delivered (up and down) shall be taken into account as an imbalance adjustment for the Balance Responsible Party of the Reserve Resource as a part of the national imbalance settlement. The balancing energy delivered (up and down) is calculated for Imbalance Adjustment for each Imbalance Settlement Period individually. In addition, if the Balancing Service Provider reports a Regulation Imbalance for which the Reserve Resource's Balance Responsible Party is responsible to Fingrid or Fingrid's service provider, the Regulation Imbalance reported by the Balancing Service Provider shall be taken into account in the national imbalance settlement as part of the Imbalance Adjustment of the Reserve Resource's Balance Responsible Party. Fingrid or Fingrid's service provider shall report the preliminary volume of Delivered Balancing Energy and Regulation Imbalance for which the Reserve Resource's Balance Responsible Party is responsible to the Balance Responsible Party within two days and the final information no later than within 13 days.

If the Balancing Service Provider acts as an Independent Aggregator, the balancing energy delivered is defined as follows:

The Balancing Service Provider sends the balancing energy delivered to Fingrid or Fingrid's service provider separately for up- and down-regulation in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions.

The balancing energy delivered (up and down) shall be taken into account as an imbalance adjustment for the Balance Responsible Party of the Reserve Resource during national imbalance settlement. The balancing energy delivered (up and down) is calculated for Imbalance Adjustment for each Imbalance Settlement Period individually. Fingrid or Fingrid's service provider shall report the preliminary volume of Delivered Balancing Energy to the Balance Responsible Party within two days and the final information no later than within 13 days.

## 11 Fees and terms of payment

Fingrid shall pay the Balancing Service Provider a Capacity Fee for bids approved in the aFRR Capacity Market. Fingrid shall pay the Balancing Service Provider an Energy Fee for activated bids in the aFRR Energy Market.

The Balancing Service Provider shall pay a sanction to Fingrid for reserve capacity that is not maintained. If the sanctions imposed for the invoicing period exceed the



sum of the Capacity Fee and Energy Fee, the Balancing Service Provider shall pay compensation to Fingrid.

### 11.1 Capacity Fee

The aFRR capacity maintained by the Balancing Service Provider shall be the lower of the following (for up- and down-regulation capacity separately):

- Real-time information provided by the Balancing Service Provider on the volume of the maintained reserve
- Sum of the bids submitted to the aFRR Energy Market

The Capacity Fee payable to a Balancing Service Provider is determined separately for the down- and up-regulation capacity in each Market Time Unit in the capacity market. The compensation received for maintaining the reserve capacity is equal to the price of the most expensive accepted bid (the marginal price) in each hour.

Unmaintained capacity refers to the difference between the sum of the capacity bids approved in the aFRR Capacity Market and the aFRR capacity maintained by the Balancing Service Provider if the capacity maintained by the Balancing Service Provider is lower. The Balancing Service Provider shall pay a sanction to Fingrid for capacity that is not maintained.

The sanction shall be determined for each Market Time Unit as follows:

*Sanction = undelivered reserve capacity × 3 × aFRR capacity market price, or*

*Sanction = unmaintained reserve capacity × price in the Finnish bidding zone on the Day-Ahead Market for the hour in question,*

The applicable sanction shall be the greater of the two. A sanction shall not be imposed if the non-delivery is due to force majeure.

### 11.2 Energy Fee

If the Balancing Service Provider acts as an Open Supplier or Balance Responsible Party of a Reserve Resource or a Contractual Balancing Service Provider, the Balancing Service Provider shall receive an Energy Fee in compensation for the activated balancing energy as follows:

- Up-regulation energy: Fingrid shall pay the Balancing Service Provider an Energy Fee for the balancing energy it has purchased from the Balancing Service Provider. The Energy Fee shall be the marginal price formed for the Finland bidding zone in the joint European marketplace during the market time unit. If bids on the local Finnish bid list are activated at a price higher than the aforementioned marginal price, an Energy Fee (pay-as-bid) corresponding to the bid price shall be paid for these bids.
- Down-regulation energy: Fingrid shall charge the Balancing Service Provider an Energy Fee for the balancing energy it sells to the Balancing Service

Provider. The Energy Fee shall be the marginal price formed for the Finland bidding zone in the joint European marketplace during the market time unit. If bids on the local Finnish bid list are activated at a price lower than the aforementioned marginal price, an Energy Fee (pay-as-bid) corresponding to the bid price shall be charged for these bids.

If the Balancing Service Provider acts as an Independent Aggregator, Energy Fee shall be paid to the Balancing Service Provider for the activated balancing energy and Compensation Fees shall be invoiced from the Balancing Service Provider and compensated for the Balance Responsible Parties of the Balancing Service Provider's Reserve Resources for the delivered balancing energy as follows:

- Up-regulation energy:
  - Fingrid shall pay the Balancing Service Provider an Energy Fee for the balancing energy it has purchased from the Balancing Service Provider. The Energy Fee shall be the marginal price formed for the Finland bidding zone in the joint European marketplace during the market time unit. If bids on the local Finnish bid list are activated at a price higher than the aforementioned marginal price, an Energy Fee (pay-as-bid) corresponding to the bid price shall be paid for these bids.
  - Fingrid shall charge the Balancing Service Provider a Compensation Fee, which is the product of the day-ahead market price in the Finland bidding zone and the balancing energy delivered.
  - Fingrid shall pay or charge the Balancing Service Provider for a Regulation Imbalance caused at the imbalance price during the relevant imbalance settlement period.
  - The Balance Responsible Party of a Reserve Resource shall be paid a Compensation Fee for the balancing energy delivered by the Balancing Service Provider at the day-ahead market price in the Finland bidding zone during the relevant imbalance settlement period.
  
- Down-regulation energy:
  - Fingrid shall charge the Balancing Service Provider an Energy Fee for the balancing energy it sells to the Balancing Service Provider. The Energy Fee shall be the marginal price formed for the Finland bidding zone in the joint European marketplace during the market time unit. If bids on the local Finnish bid list are activated at a price lower than the aforementioned marginal price, an Energy Fee (pay-as-bid) corresponding to the bid price shall be charged for these bids.
  - Fingrid shall pay the Balancing Service Provider a Compensation Fee, which is the product of the day-ahead market price in the Finland bidding zone and the balancing energy delivered.

- Fingrid shall pay or charge the Balancing Service Provider for a Regulation Imbalance caused at the imbalance price during the relevant imbalance settlement period.
- The Balance Responsible Party of a Reserve Resource shall be charged a Compensation Fee for the balancing energy delivered by the Balancing Service Provider at the day-ahead market price in the Finland bidding zone during the relevant imbalance settlement period.

The Energy Fees shall be determined in accordance with the pricing method in ACER decision 01/2020 (Methodology to determine prices for the balancing energy that results from the activation of balancing energy bids). The Energy Fee shall be determined for each market time unit (4s) in the Energy Market separately.

### 11.3 Independent Aggregator's Regulation Imbalance Fee and fixed weekly fee

If a Balancing Service Provider acts as an Independent Aggregator, the Balancing Service Provider shall pay Fingrid a fixed Regulation Imbalance Fee for each megawatt hour of Regulation Imbalances in an imbalance settlement period. The Regulation Imbalance is calculated as the difference between the balancing energy activated from the Balancing Service Provider and the delivered balancing energy. The Regulation Imbalance Fee corresponds to the Imbalance Fee allocated to the Balance Responsible Parties.

If the Balancing Service Provider acts as an Independent Aggregator, the Balancing Service Provider shall be charged the same fixed weekly fee as a Balance Responsible Party.

### 11.4 Collateral requirement for Independent Aggregators

Each Independent Aggregator must pledge collateral in case the Independent Aggregator is unable to fulfil its financial responsibilities related to Regulation Imbalances. The collateral may be pledged by depositing cash into a collateral account, submitting a bank guarantee, or a combination of the above. The Nordic Imbalance Settlement (NBS) Handbook, Imbalance Settlement Agreement and Balancing Service Settlement Agreement, maintained by Fingrid's Imbalance Settlement Unit, contain a more detailed description of the collateral procedures.

The collateral requirement for independent aggregators shall be calculated according to the following formula:

$$\text{Collateral requirement} = 3 * (S1 + S2) + X$$

Where

S1 = average weekly invoiced Regulation Imbalance Fees over the past three weeks, including value-added tax if applicable

S2 = average absolute values of the weekly invoiced sums for Regulation Imbalances over the past three weeks, including value-added tax if applicable

X = EUR 40,000.

#### 11.5 Invoicing

The Balancing Service Provider shall calculate the billable reserve capacity using the real-time data referred to in *Fingrid's Reserve Trading and Information Exchange* instructions. The hourly reserve capacities used for billing shall be calculated in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions.

If the exchange of real-time data is interrupted for a reason attributable to Fingrid, the Balancing Service Provider will be requested to submit the reserve maintenance data again, and the invoices shall be based on this information. If the reason for the outage is attributable to the Balancing Service Provider and there are no exceptional circumstances at play, the Balancing Service Provider shall be considered to have failed to maintain its reserve capacity, leading to a sanction. Circumstances are considered exceptional if the Balancing Service Provider could not reasonably have prepared for them. If the real-time data is missing or invalid, a reasonable margin of error shall be permitted in accordance with the *Fingrid Guidelines on Reserve Trading and Information Exchange*.

The Balancing Service Provider shall send Fingrid an invoice for the preceding month's capacity fees on the tenth day of each month or the first working day thereafter. The due date of the invoice is 14 days from the invoice date, which is the date the invoice was sent. Energy, Compensation and Regulation Imbalance Fees shall be billed at the same time as eSett Oy's imbalance power billing.

#### 11.6 Interest on arrears

If a contractual party's payment is delayed, the party shall be obliged to pay interest on arrears. Interest on arrears is determined in accordance with section 4(1) of the Interest Act.

#### 11.7 Complaints

When necessary, a contracting party shall make complaints regarding the invoice in writing. The other party shall inspect the invoice and send the necessary correction invoice without delay. A complaint does not exempt a party from the payment obligation by the due date unless otherwise agreed upon in each case.

#### 11.8 Value-added tax and other indirect taxes and levies

In addition to the fees specified in this document, value-added tax shall be added to the Balancing Service Provider's invoices at the applicable rate, along with any other taxes and levies imposed on the agreement by the authorities.

### 12 **Assignment of a reserve obligation to another Balancing Service Provider**

The Balancing Service Provider shall be entitled to assign an aFRR maintenance obligation arising on the aFRR Capacity Market to another Balancing Service

Provider in the Finland bidding zone in accordance with ACER decision no. 20/2020 by notifying Fingrid no later than one hour before the Market Time Unit to which the maintenance of the reserve obligation applies. Fingrid must receive confirmation of the assignment of the reserve obligation from the assigning party and the Balancing Service Provider that assumes the obligation. Confirmation shall be provided electronically in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions.

The fee for the maintained reserve capacity shall be paid to the Balancing Service Provider to which the aFRR maintenance obligation is assigned in accordance with section 11. The Energy Fee shall be paid to the Balancing Service Provider to which the aFRR maintenance obligation is assigned in accordance with section 10. The assignment of the reserve obligation must be confirmed to Fingrid electronically in accordance with *Fingrid's Reserve Trading and Information Exchange* instructions.

## 13 Force majeure

In the event of force majeure, the contracting parties have the right to restrict the maintaining of reserves or to interrupt it entirely.

Force majeure is considered to be an event beyond the control of a contracting party which was not known to the contracting parties when the agreement was being concluded and which could not have been prevented by a contracting party or the effects of which could not have been avoided by reasonable measures and which make the maintaining of the reserves in accordance with the agreement impossible, complicate it essentially or otherwise make it unreasonable.

Examples of force majeure may include war, internal unrest within a country, vandalism, sabotage, explosion, fire, unforeseen equipment failure, severe storm or other exceptional weather conditions, general interruption in traffic, strike or stoppage of a key employee group, lock-out ordered by an employer organisation, measures by authorities, or other reasons with equally significant and unusual consequences. If one of the factors listed above applies to one of the Balancing Service Provider's Reserve Resources, but the Balancing Service Provider could compensate for the lost reserve capacity using its other Reserve Resources, the situation shall not be considered force majeure.

The Balancing Service Provider shall promptly inform Fingrid in writing of the occurrence of force majeure and its estimated duration as well as its end. For the period of force majeure, Fingrid shall not pay compensation in accordance with these terms to the Balancing Service Provider, nor shall the Balancing Service Provider be subject to sanctions under these terms for unmaintained reserve capacity.

## 14 Breach of terms

### 14.1 Sanction

For capacity not delivered, the Balancing Service Provider shall pay a sanction to Fingrid in accordance with section 11.1.

#### 14.2 Verification of control properties of reserves, and the Balancing Service Provider's reimbursement obligation

Fingrid is entitled to verify the control properties of a Reserve Unit.

If the audit reveals a substantial deficiency, a temporary exclusion from the reserve market shall take place in accordance with section 14.3. A substantial deficiency refers to the erroneous activation of the reserve. For example, this can include an activation speed slower than required or an activated volume below the activation order. Once it has been reliably demonstrated that the deficiency has been corrected, the unit can return to the market. This can be demonstrated with a technical report or a new balancing test. The Balancing Service Provider shall be liable for the costs of such reports or tests.

If Fingrid's monitoring identifies a minor deficiency, the Balancing Service Provider must issue a report at Fingrid's request on the deficiencies in the maintenance of the reserve within 30 days. A minor deficiency refers to a defect that has not significantly affected the activation of the reserve in accordance with the requirements, based on information used in the audit. For example, this can include a compliant activation where the results of the balancing test show deviations, a lack of quality in the measurement data provided by the balancing service provider, or another observation that requires further clarification. The Balancing Service Provider shall be responsible for the costs of clarification. If the clarification leads to a minor deficiency being upgraded to a substantial deficiency, the follow-up measures shall be the same as in the case of a substantial deficiency observed in the initial audit.

If a Balancing Service Provider fails to provide the account requested by Fingrid by the deadline, the Balancing Service Provider shall reimburse the fees based on this document for the period the account must apply to.

If a verification, other test in accordance with this document or monitoring by Fingrid indicates that the reserve maintained by the Balancing Service Provider has been smaller than what has been agreed or if the Reserve Unit's balancing capacity differs from the terms and conditions of this document, the Balancing Service Provider shall reimburse the fees paid by Fingrid in so far as they have been based on a reserve volume which was higher than in reality.

#### 14.3 Temporary exclusion of a Balancing Service Provider from the reserve market

Fingrid shall be entitled to temporarily exclude a Balancing Service Provider from the aFRR markets if the Balancing Service Provider repeatedly fails to supply their aFRR in accordance with Fingrid's order without an acceptable reason, neglects its obligation to offer an acceptable amount of capacity from the aFRR Capacity Market to the aFRR ENergy Market, or otherwise breaches the terms and conditions in this document in spite of a written notice by Fingrid. The duration of the temporary exclusion shall be from one to three months, depending on the nature of the violation.

## 14.4 Cancelling the agreement

If the breach of contract is a material one, Fingrid shall be entitled to cancel the aFRR Market Agreement in accordance with the terms and conditions of the agreement.