

Fingrid Oyj

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

Valid from 1 January 2020

18 June 2019

## Table of contents

<b>1</b>	<b>Introduction</b> .....	<b>3</b>
<b>2</b>	<b>Definitions</b> .....	<b>3</b>
<b>3</b>	<b>Procurement of reserves</b> .....	<b>4</b>
<b>4</b>	<b>Requirements for a Balancing Service Provider</b> .....	<b>4</b>
<b>5</b>	<b>Requirements imposed on the Reserve Unit</b> .....	<b>5</b>
<b>6</b>	<b>Aggregation of Reserve Resources</b> .....	<b>5</b>
<b>7</b>	<b>Rules of the Hourly Market</b> .....	<b>5</b>
7.1	Bidding rules .....	5
7.2	Processing of bids.....	6
<b>8</b>	<b>Reporting and monitoring of reserve maintenance</b> .....	<b>6</b>
8.1	Real-time data.....	6
8.2	Invoicing data.....	6
8.3	Fingrid's reporting to the Balancing Service Provider .....	7
8.4	Balancing Service Provider's reporting to balance responsible party.....	7
<b>9</b>	<b>Processing of energy</b> .....	<b>7</b>
<b>10</b>	<b>Fees</b> .....	<b>8</b>
<b>11</b>	<b>Breach of terms</b> .....	<b>8</b>
11.1	Verification of control properties of reserves, and the Balancing Service Provider's reimbursement obligation .....	8
11.2	Temporary exclusion of a Balancing Service Provider from the reserve market ....	9
11.3	Cancelling the Agreement .....	9

18 June 2019

## 1 Introduction

This document defines the terms and conditions of Fingrid Oyj's (hereinafter Fingrid) balance management for the providers of reserve services needed to balance the electricity system (hereinafter Balancing Service Provider) in accordance with the Guideline on Electricity Balancing, Commission Regulation (EU) 2017/2195 (hereinafter EGBL).

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. 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 hourly market of the automatic Frequency Restoration Reserve (aFRR Hourly Market).

## 2 Definitions

The following definitions are used in this document:

*aFRR Hourly Market* refers to a reserve market maintained and used by Fingrid for the procurement of the automatic Frequency Restoration Reserve (aFRR) for the next day in the CET time zone.

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

*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.

*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.

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

*Day-Ahead Market* refers to an electricity market place that trades in electricity sold and purchased for the next day.

*Energy Fee* refers to the compensation paid for the activation of the reserve.

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

18 June 2019

*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.

*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.

*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.

*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 electricity storage facility.

### **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 concerning the maintaining of an automatic Frequency Restoration Reserve are specified between the Nordic transmission system operators pursuant to SOGL Article 157.

Fingrid uses the automatic Frequency Restoration Reserve to balance electricity production and consumption. Trade between countries is also possible in order to meet the reserve obligation.

Fingrid procures the reserve by means of daily procurements in the aFRR Hourly Market referred to in section 7.

Fingrid purchases automatic Frequency Restoration Reserve from the Hourly Market for hours reported in advance. Fingrid will report on its website, two weeks in advance at the latest, the hours on which the reserve will be maintained in the Nordic countries. The volume purchased from the aFRR Hourly Market might vary on the hours traded.

### **4 Requirements for a Balancing Service Provider**

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 make a contract with Fingrid before participating in the aFRR Hourly Market.

To participate in the aFRR Hourly Market, the Balancing Service Provider shall be the owner of the Reserve Resource or act either as an open supplier or a balance responsible party for the Reserve Resource. A Balancing Service Provider must have

18 June 2019

the consent of the owner of the Reserve Resource for the use of the reserve pursuant to the aFFR Hourly Market Agreement. Upon Fingrid's separate request, the Balancing Service Provider shall deliver the consent of the owner of the Reserve Resource to Fingrid.

## 5 Requirements imposed on the 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.

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

## 6 Aggregation of Reserve Resources

A Balancing Service Provider may combine different Reserve Resources in the bid, if they are included in the same balance.

## 7 Rules of the Hourly Market

### 7.1 Bidding rules

The volume of an individual bid must be 5 MW. A Balancing Service Provider may submit multiple bids; the up- and downregulation capacity is offered separately. The bids cannot be linked to each other, and each bid is processed separately.

A bid must contain the following information:

- capacity (MW) up or down
- capacity price, up or down (€/MW,h)
- type of activation signal to be sent to the reserve capacity
- hour (EET time zone).

Bids may be submitted for the hours of the next day on the previous day until 17:00 (EET). At the earliest, a bid may be submitted 31 days before the hour of use to which the bid applies.

The hourly bids shall be submitted for the hours of a day in the CET time zone. The hourly bids shall be submitted in Fingrid's electronic reserve trading system (Vaksi web) in accordance with Fingrid's separate guideline, *Fingrid's reserve trading and information exchange*. The currently valid guideline is available on the Fingrid website.

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

18 June 2019

## 7.2 Processing of bids

Fingrid arranges the bids by price and gives priority to the cheapest bid. A necessary number of bids will be used in price order for up- and downregulation capacity. Bids with the same price will be accepted in the order of receiving the bids. A bid is accepted in full. Fingrid confirms the transactions for the next day by 18:05 (EET).

## 8 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*.

### 8.1 Real-time data

Fingrid uses real-time data to monitor the maintenance and activation of the reserve. A Balancing Service Provider shall deliver, at its own expense, the following Reserve Unit specific data to Fingrid:

- aFRR capacity up (MW), capacity sold for reserve maintenance, if the capacity is not limited by the maximum power. Please note that if, due to an ordered upregulation of the aFRR, the free capacity is less than the sold aFRR capacity, this does not reduce the aFRR capacity.
- aFRR capacity down (MW), capacity sold for reserve maintenance, if the capacity is not limited by the minimum power. Please note that if, due to an ordered downregulation of the aFRR, the free capacity is less than the sold aFRR capacity, this does not reduce the aFRR capacity.
- Real-time power resulting from the activation of the aFRR reserve.
- Retransmission of the activation signal sent by Fingrid.

The real-time data exchange uses the FEN network.

The update interval for real-time data exchange must not exceed 10 seconds.

### 8.2 Invoicing data

For the Reserve Units that participated in the maintenance of reserves, the Balancing Service Provider shall, at their own cost, submit the following actuals data from the previous month as an hourly time series. The deadline for this submission is the 10th day of each month:

- aFRR volume.

The data shall be submitted in accordance with Fingrid's guideline, *Fingrid's reserve trading and information exchange*.

18 June 2019

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

Fingrid shall report the following hourly data to the Balancing Service Provider in accordance with the Fingrid guideline, *Fingrid's reserve trading and information exchange*:

- The actualised transactions (MW) for the next day (calculated in accordance with the CET time zone) and the average prices of the actual transactions for (€/MW,h) for the down- and upregulation capacity.
- Volume and price of Balancing Energy upon request.

### 8.4 Balancing Service Provider's reporting to balance responsible party

If a Balancing Service Provider is not the balance responsible party of the Reserve Resource, the Balancing Service Provider shall inform the balance responsible party of the Reserve Resource of the control use of the Reserve Resource no later than when an aFRR Hourly Market Agreement has been concluded. In addition, the Balancing Service Provider shall provide the Reserve Unit's balance responsible party 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 Unit.

## 9 Processing of energy

The Balancing Energy caused by the activation of an automatic Frequency Restoration Reserve is calculated for each hour, separately for up- and downregulation as the product of ordered power and usage time. The power is taken from the power activation signal sent by Fingrid at each point in time.

A power trade for the balancing energy is carried out between Fingrid and the balance responsible party of the Reserve Resource during the national imbalance settlement, and the Balancing Energy is compensated to the balance responsible party of the Reserve Resource by means of an Energy Fee as follows:

- For reserve electricity purchased by Fingrid, Fingrid pays an Energy Fee to the balance responsible party of the Reserve Resource. The Energy Fee is calculated for each hour by multiplying the calculated energy caused by the aFRR by the up-regulation price of each hour<sup>2</sup>.
- For reserve electricity sold by Fingrid, Fingrid charges an Energy Fee from the balance responsible party of the Reserve Resource. The Energy Fee is calculated for each hour by multiplying the calculated energy caused by the aFRR by the down-regulation price of each hour.<sup>3</sup>

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<sup>2</sup> The up-regulation price is the price of the most expensive mFRR up-regulation bid ordered; however, no less than the price for the bidding area of Finland in the Day-Ahead Market during the hour in question.

<sup>3</sup> The down-regulation price is the price of the cheapest mFRR downregulation bid ordered; however, no more than the price for the bidding area of Finland in the Day-Ahead Market during the hour in question.

18 June 2019

The Energy Fee is taken into account in the imbalance settlement of the balance responsible party of the Reserve Resource in conjunction with imbalance power invoicing. Fingrid reports the amount of the Energy Fee to the balance responsible party in the Fingrid extranet service after the usage hour, however not later than in 13 days.

## **10 Fees**

Fingrid shall pay a Capacity Fee to the Balancing Service Provider for Balancing Service Provider's contribution to the maintaining of the aFRR.

The Capacity Fee paid to a Balancing Service Provider is determined for each hour, separately for the up- and down-regulation capacity. The principle is that the compensation for an accepted bid is the same as the price that the Balancing Service Provider has set for the bid (pay-as-bid principle).

The Balancing Service Provider shall send the invoice for the maintenance of the previous month's reserves to Fingrid on the 10th of each month or the first working day following that date. The due date of the invoice is 14 days from the invoice date, which is the date the invoice was sent.

## **11 Breach of terms**

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

Fingrid has a right to verify the control properties of a Reserve Unit. If monitoring carried out by Fingrid indicates that a Balancing Service Provider has not maintained the agreed control properties, the Balancing Service Provider shall provide within 30 days an account requested by Fingrid concerning the shortcomings in the maintaining of reserves.

If the account requires a verification of the control capability by means of measurements carried out on Fingrid's demand and the measurements indicate that the reserve fulfils the valid requirements, Fingrid shall be responsible for the costs of the measurements. Otherwise, the Balancing Service Provider shall be responsible for the costs.

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 control capability of the Reserve Unit 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.

18 June 2019

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

Fingrid has a right to temporarily exclude a Balancing Service Provider from the aFRR Hourly Market, if the Balancing Service Provider:

- fails to deliver reserves without giving an acceptable reason despite Fingrid's written notice,
- has failed to give the account referred to under section 11.1,
- or has otherwise violated the terms and conditions of this document despite Fingrid's written notice.

The duration of the temporary exclusion is from one to three months depending on the nature of the violation.

## 11.3 Cancelling the Agreement

If the violation of the Agreement is a material one, Fingrid has a right to cancel the aFRR Hourly Market Agreement in accordance with the terms and conditions of said agreements.