Fingrid Oyj

Terms and conditions for providers of manual Frequency Restoration Reserves (mFRR)

19.3.2025

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1 Introduction

This document defines the terms and conditions of Fingrid Oyj (hereinafter Fingrid) for the acquisition and maintenance of Manual Frequency Restoration Reserves (mFRR) 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 decisions of the Agency for the Cooperation of Energy Regulators (ACER) and the Energy Authority.

- ACER Decision No 22/2020 on the market-based allocation process of cross-zonal capacity for the exchange of mFRR capacity for the Nordic CCR.
- Decision of the Energy authority: Methodology on the common and harmonized rules and processes for the exchange and procurement of mFRR capacity for the bidding zones of Denmark, Finland and Sweden
- Decision of the Energy authority: Methodology on the application of the Nordic CCR market-based allocation process of cross-zonal capacity for the exchange of manual Frequency Restoration Reserve capacity for the bidding zones of Denmark, Finland and Sweden.

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 on the procurement and maintenance of Manual Frequency Restoration Reserve (mFRR) stated in this document shall apply when the Balancing Service Provider participates in the mFRR energy Market and mFRR capacity Market as well as in competitive tendering on the procurement of mFRR capacity by means of mFRR capacity Agreements.

Fingrid shall be entitled to publish the names of the Balancing Service Providers who participate in the Balancing Power and mFRR capacity Markets and have made a mFRR capacity Agreement.

2 Definitions

For the purposes of this document, the following definitions shall apply:

The Activation Time is the time within which the Balancing Service Provider shall implement the activated regulation to its full Activated Power, either 12.5 minutes or 15 minutes.

The moment of activation is when Fingrid makes the activation decision and notifies the Balancing Service Provider of the activation. In the case of a Timed Activation, it will be 7.5 minutes prior to the start of the Market Time Unit and, in the case of Direct Activation, it will be at any time after the Scheduled Activation of that Market Period but before the time of the Scheduled Activation for the next Market Time.

Activated power is the change in active power resulting from the activation of the Balancing bid, up to the power of the Balancing bid. Fingrid submits information on Activated Power to the Balancing Service Provider in connection with activation.

Scheduled Activation is an activation method used in the mFRR energy market, where Fingrid sends a request for activation of the Balancing bid to the Balancing Service Provider 7.5 minutes before the Market Time Unit to which the regulation is directed.

The down-regulation price is the price (marginal price) of the lowest down regulation bid activated during the Market Time Unit or the direct activated for the previous Market Time unit.

Automatic Frequency Restoration Reserve (aFRR) is a centrally controlled automatically activated Frequency Restoration Reserve, the purpose of which is to restore the frequency of the power system to the rated frequency and restore the power balance of the frequency control range to the planned value.

Open supplier means an electricity supplier that supplies its customer with all the electricity it needs, or an electricity supplier that balances the difference between the customer's electricity production and procurement and electricity use and supply by supplying the missing amount of electricity or receiving a surplus during each imbalance settlement period.

BSP - Implementation Guide Nordic MMS - mFRR capacity market refers to more detailed instructions provided by Nordic transmission system operators to Balancing Service Providers on the use of the mFRR capacity market marketplace and the related exchange of information. The guidelines valid at any given time are published on the joint websites of the Nordic transmission system operators.

Deactivation refers to the change in power from full activated power back to the power level at which the reserve target would be without the regulation measure.

Electronic activation means that Fingrid activates the Balancing bid submitted by the Balancing Service Provider to the mFRR energy market by sending a message to the Balancing Service Provider or its authorised representative.

Energy fee refers to compensation paid for the activation of the reserve.

Special regulation refers to regulation that is activated for purposes other than balance management.

Fingrid's Reserve Trading and Information Exchange guidelines refer to more detailed instructions provided by Fingrid to Balancing Service Providers on, for example, the use of the Vaksi reserve trading system and the provision of real-time data. Fingrid publishes the currently valid guidelines on its website.

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

Capacity bid means a bid submitted by a Balancing Service Provider to the mFRR capacity market.

Manual frequency restoration reserve (mFRR) is a manually activated Frequency Recovery Reserve designed to restore the frequency of the power system to the rated frequency and restore the power balance of the frequency control range to the planned value.

The market time unit refers to the trading period of the reserve market. In the mFRR energy market, the Market Time Unit is 15 minutes, and in the mFRR capacity market, the Market Time Unit is one hour.

mFRR energy market refers to the energy market maintained by Fingrid from which Fingrid acquires Manual Frequency Recovery Reserve (mFRR).

mFRR capacity market refers to the capacity market maintained by Fingrid from which Fingrid acquires Manual Frequency Recovery Reserve (mFRR).

The pay as bid principle refers to a pricing principle in which the price of each accepted bid is determined by the bid.

Intra-day market refers to an electricity marketplace where parties trade in electricity sold and purchased for that day.

A reserve unit refers to an entity that meets the requirements for providing the reserve. A reserve object may consist of several or one Reserve Resource.

Reserve resource refers to a single controllable resource; a power plant, consumption object or energy storage.

Balancing Service Provider refers to the contracting party that has concluded an agreement with Fingrid to participate in the reserve market. A Balancing Service Pro-

vider 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.

The transmission area refers to the geographical area where power plants, consumption sites and energy storage facilities are located. There are three Transmission Areas in Finland; South, Central and North. The geographical location of transmission areas is presented in the map image of transmission areas on Fingrid's website. Fingrid notifies the Balancing Service Providers in writing of any changes to the geographical boundaries of the transmission areas at least one month before the changes enter into force.

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 manual frequency restoration reserve. A Contractual Balancing Service Provider can aggregate Reserve Resources from different balance responsibilities.

Direct Activation is an activation method used in the mFRR energy market, where Fingrid sends a request for activation of the Balancing bid for a Market Time Unit at any time after the Scheduled Activation of the Market Time Unit in question, but before the time of the Scheduled Activation for the next Market Time Unit.

mFRR capacity agreement refers to a longer-term agreement between Fingrid and the Balancing Service Provider on the provision of mFRR balancing capacity.

The Regulating Object (RO) identifier refers to the identifier used in imbalance settlement, which indicates the Balance Counterparty information related to the reserve bid.

Balance trade refers to the regulation resulting from the activation of the Balancing bid between Fingrid and the Balancing Service Provider implementing the transaction during the Market Time Unit.

Balancing market agreement refers to an agreement between Fingrid and the Balancing Service Provider that entitles the holder to participate in the mFRR energy and mFRR capacity markets.

Balancing bid means an bid made by the Balancing Service Provider to the mFRR energy market in accordance with the rules of the mFRR energy market.

Balancing need is the need for mFRR regulation determined by transmission system operators, and Fingrid activates Balancing bids from the mFRR energy market to fulfil it.

Frequency Restoration Reserve (FRR) refers to the reserve available to restore the frequency of the power system to the nominal frequency and restore the power balance of the frequency control range to the planned value.

Frequency Containment Reserve (FCR) refers to the reserve available for frequency stabilisation in the event of an imbalance between electricity production and consumption.

Balancing Service Provider (BSP) means a market participant whose entities or groups providing reserves are able to provide balancing services to transmission system operators. In this document, the *Balancing Service Provider.*

Imbalance settlement period refers to the unit of time in which the imbalances of Balance Responsible Parties are calculated. The imbalance settlement period is 15 minutes.

Balancing energy refers to electrical energy provided by the Balance Service Provider and used by transmission system operators to balance the grid.

Balance responsible party refers to an electricity market party that is responsible for imbalances of the market participant in question and has a valid balance service agreement with Fingrid. In other words, the party's Open Supplier is Fingrid.

Power change means a change in the active power produced or consumed by the Reserve Target as a result of the activation of the Balancing bid.

Preparation Time means the time that the Balancing Service Provider has from the Moment of Activation to the beginning of the Power Change

A day-ahead market refers to an electricity marketplace where electricity sold and purchased for the following day is traded.

The up-regulation price is the price (marginal price) of the most expensive upregulation bid activated during the Market Time Unit or the direct activated for the previous Market Time unit

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 a manual Frequency Restoration Reserve are specified between the Nordic transmission system operators pursuant to SOGL Article 157.

In order to balance electricity production and consumption, Fingrid activates Manual Frequency Restoration Reserve from the mFRR energy Market. Fingrid uses the mFRR capacity procured by means of mFRR capacity Agreements and from the mFRR capacity Market to ensure that there is, at all times, a sufficient volume of Frequency Restoration Reserve to maintain the power balance between production and consumption and for other needs required to ensure the operational security of the transmission system.

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 shall make a Balancing Market Agreement with Fingrid before they can participate in the mFRR energy and mFRR capacity Markets. The mFRR capacity Agreements are made on the basis of a separate competitive tendering process.

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.

In order to participate in the mFRR energy and mFRR capacity Markets and the competitive tendering of mFRR capacity Agreements, a Balancing Service Provider must be an owner of a Reserve Resource, the owner's authorised representative, or act either as an Open supplier or a Balance Responsible Party for the Reserve Resource. A Balancing Service Provider must have the consent of the owner of the Reserve Resource for the use of the reserve pursuant to the Balancing Market Agreement or mFRR capacity Agreement. Upon Fingrid's separate request, the Balancing Service Provider shall deliver the consent of the owner of the Reserve Resource to Fingrid.

If the Balancing Service Provider is not the Open supplier or the Balance Responsible Party for the Reserve Resource, the Balancing Service Provider acts as a Contractual Balancing Service Provider and 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 Balancing 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 Balancing 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 Balancing 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 Open Supplier of the Reserve Re-source, the following shall apply:

- The Balancing Service Provider shall inform the Reserve Resource's Bal-ance Responsible Party of the balancing use of the Reserve Resource no later than when the Balancing market agreement is concluded.

- If the Balance Responsible Party of the Reserve Resource changes, the Balanc-ing Service Provider shall inform Fingrid of the change in writing no later than 14 days before the change takes effect.

A Balancing Service Provider participating in the mFRR energy and mFRR capacity markets and the Balancing capacity tendering process or its authorized representative shall be able to receive activations of the Balancing bid both by message (Electronic activation) and by telephone.

The Balancing Service Provider or its authorised representative shall be available to Fingrid by phone 45 minutes before the start of the hours for which the Balancing Service Provider has submitted Balancing bids and until the moment of activation of the Balancing bids submitted by the Balancing Service Provider.

If the Balancing Service Provider finds after the submission period of the Balancing bids that it is unable to carry out the regulation in accordance with the Balancing bid, the Balancing Service Provider shall notify Fingrid of this immediately in accordance with Fingrid's Reserve Trading and Information Exchange instructions. A Balancing Service Provider that has participated in the mFRR capacity market must notify Fingrid immediately of *Fingrid's reserve trading and information exchange* if you are unable to submit Balancing bids related to an approved Capacity Bid.

Reserve services are managed in Fingrid's electronic systems. The Balancing Service Provider shall be granted the necessary access rights to these systems. The Balancing Service Provider is responsible for keeping its representatives' access rights up-to-date and for their actions as users of electronic systems.

5 Requirements set for the reserve object

Based on Article 159 of the SOGL, the Balancing Service Provider shall demonstrate by means of regulation tests carried out in accordance with the *document "Verification of the technical requirements for manual frequency return reserves (mFRR)* published by Fingrid that the reserve item declared as a reserve fulfils the required regulation characteristics.

The reserve site must be located in Fingrid's system responsibility area[1].

The regulation of the reserve object is based on physical regulation. The regulation shall be carried out to its full capacity within 12.5 minutes of activation, including a preparation time of 2.5 minutes and a 10-minute power modification time, or alternatively the regulation of the reserve object may be carried out to its full capacity within 15 minutes of activation.

[1] Finland, excluding the autonomous region of Åland.

6 Aggregation of reserve resources

The Aggregated Reserve Resources shall be located in the same Transmission area[2] (South/Central/North).

If the minimum capacity of the Balancing bid or the Capacity Bid of the mFRR capacity market would not otherwise be met in the Transmission Area, the Reserve Resources located in the different Transmission areas may be aggregated. However, a Balancing bid with aggregated Reserve Resources from different Transmission Areas may not be used in all situations due to the state of the power system.

The Balancing bid includes a Regulation Object ID (RO ID) through the name of the Reserve Item, which is used to assign the Balancing bid to a specific Balance Responsible Party and Transmission area. The RO code used in the mFRR energy market does not need to be Reserve Object or Production Mode specific, and the same RO identifier can be used to combine production and consumption items and energy storage facilities from the same Balance Manager's balance sheet. Reserve Resources located in the same Transmission area of the same Balance Responsible Party can therefore be aggregated by generating a single RO identifier for them, which includes the Reserve Resources to be aggregated.

If the same Balancing bid combines Reserve Resources from different Transmission Areas, a share in a cooperative power plant or Reserve Objects on the balance sheets of different Balance Responsible Parties, the Balancing bid shall specify the power quantities into sub-bids specific to the Transmission Area or Balance Responsibility.

7 Rules of the mFRR Energy Market

Fingrid activates Balancing bids from the mFRR energy market to balance electricity production and consumption. The market time Unit is 15 minutes.

7.1 Bidding rules

The Balancing bids are submitted to Fingrid's electronic reserve trading system (Vaksi) *in accordance with* Fingrid's separate instructions on reserve trading and information exchange.

Balancing bids can be submitted no earlier than 30 days before the operating hour that is the subject of the bid. The Balancing Service Provider may submit, amend and withdraw Balancing bids up to 45 minutes before the start of the Market Time Unit, after which they become binding. If necessary, Fingrid may request additional Balancing bids from the Balancing Service Provider also after this.

The Balancing bid must include the following information:

- power (MW), separately up and down Balancing bids

[2] There are three transmission areas in Finland (southern, central and north), the locations of which are shown in the map image of transmission areas on Fingrid's website.

- price (€/MWh), separately for up and down Balancing bid
- Name of reserve object[3]
- reserve information, if the Balancing bid is a reserve power bid
- Market Time Unit (EET/EEST time)
- activation type: Scheduled activation or Scheduled and Direct activation
- Divisibility of the bid: fully divisible, partially divisible or indivisible
- the minimum volume to be activated (at least 1 MW) if the tender is partially or fully distributed.

In addition, the Balancing bid may include information that the Balancing bid is:

- exclusive Balancing bid with other bids. Only one of the alternative bids may be activated during the same Market Period
- multi-part Balancing bid. When activating an bid, you must activate the most advantageous bids from the same multi-part group for the same Market Time Unit
- conditionally linked Balancing bid. The availability or type of activation of an bid depends on the activation of linked bids that have existed in the previous two Market Periods
- technically linked Balancing bid. The availability of the bid is affected by the Direct Activation of a linked bid during the previous Market Period
- data related to aggregation.

Multiple Balancing bids can be submitted for the same Reserve Item. An incomplete Balancing bid will not be taken into account in the mFRR energy market.

The minimum capacity of the Balancing bid is 1 MW. Balancing bids are given with an accuracy of 1 MW. The maximum capacity per reserve site in the Balancing bid is 200 MW. The Balancing Service Provider may, if it so wishes, request Fingrid to set a different maximum capacity for the Balancing bid.

The maximum price of the Balancing bid is €10,000/MWh and the minimum price is €-10,000/MWh. When the Intraday Market Price Limits change, the maximum and minimum prices of the Balancing bid will be set to coincide with the Intraday Market Price Limits.

[3] Fingrid's electronic reserve trading system (Vaksi) assigns names and related RO codes to the reserve sites, as well as regulation areas (south/centre/north) and, optionally, more detailed location information (coordinates and grid connection point). The names of the reserve resources are used in sub-bids for the Aggregated Balancing Bids.

7.2 Processing of Balancing bids

For each Market Time Unit, Fingrid submits the available Finnish Balancing bids to the Nordic mFRR energy market, where a Nordic bid list is formed by ranking the up-Balancing bids according to the cheapest Balancing bid first and the down-Balancing bids based on the most expensive Balancing bid first.

7.2.1 Selection of Balancing bids

For balancing and frequency maintenance purposes, Balancing bids (excluding reserve power bids) are used in price order. If, due to the state of the electrical system, information system problems, non-compliance with the terms of the Balancing bid or an obvious error in the Balancing bid, the Balancing bid cannot be used, the most advantageous Balancing bid available shall be selected.

In the case of scheduled activation, the proposal for the selection of Balancing bids is made by the algorithm of the Nordic mFRR energy market marketplace, which aims to meet the regional Regulation Needs defined by the transmission system operators and maximise the economic benefit of the area. Fingrid makes the decision on the selection of Regulation Bids. If the marketplace of the Nordic mFRR energy market does not receive a proposal for the selection of Balancing bids, Fingrid will select the bids to be activated from the local bidding list in price order.

The mFRR energy market uses cross-border transmission capacity available after the Day-ahead and Intraday markets to exchange balancing energy between bidding zones in order to select the most advantageous bids. If cross-border transmission capacity is not available between bidding zones, the cheapest available bid shall be selected.

In the case of direct activation, Fingrid selects the bids to be activated in price order from the local bid list, which consists of Balancing bids with activation types of Scheduled and Direct activation that have not already been used for Scheduled activation.

If, in order to meet the Regulation Requirement, a choice must be made between Balancing bids at the same price, fully divisible bids will be used first and they will be activated on a pro rata basis, i.e. in proportion to the bid sizes. If they are not sufficient to cover the Regulation Requirement, the undistributed Balancing bids will next be used so that the Regulation Need is met.

If the activation of undistributed Balancing bids would result in the Regulation Need being exceeded, undistributed Balancing bids will not be used. In this case, the next most advantageous Balancing bid is selected to meet the Regulation Requirement.

The activation time of the Reserve Item (12.5 minutes or 15 minutes) does not affect the selection of the Balancing bid.

An Balancing bid that aggregates Reserve Resources from different control ranges or a multi-part Balancing bid that includes resources from different control zones may

not be used due to the state of the electrical system, as part of that Balancing bid may be located in an area where activation is not possible.

7.3 Activating Balancing bids

The Balancing Service Provider or its authorised representative shall respond within two minutes to the Electronic Activation of the Balancing bid received from Fingrid. A Balancing Trade binding on the parties is created when Fingrid sends the Balancing Service Provider an Electronic Activation. An regulation transaction is deemed to have been concluded regardless of whether the Balancing Service Provider responds to the activation or approves the activation by the Balancing Service Provider.

In the case of telephone activations, the Regulation Trade binding on the parties is created in connection with the activation notified by Fingrid by telephone.

The minimum activation request from Fingrid is 1 MW, and the regulations are activated with an accuracy of 0.1 MW if the last selected Balancing bids are of the same price and shareable or in the case of aggregated partial bids.

7.3.1 Scheduled activation

In scheduled activation, Fingrid sends the activation 7.5 minutes before the start of the Market Time Unit.

When using an activation time of 12.5 minutes, activated power must be reached within 12.5 minutes of the Activation Moment including 2.5 minutes preparation time and 10 minutes Power Change Time, i.e. activated power must be reached five minutes after the beginning of the Market Time Unit. The regulation is carried out at activated power for at least five minutes. Deactivation may begin five minutes before the end of the Market Time Unit. The goal is that the Deactivation would be as symmetrical as possible with the activation, i.e. the Power Change time would be 10 minutes even in Deactivation. Figure 1 shows the principle of scheduled activation with an activation time of 12.5 minutes.

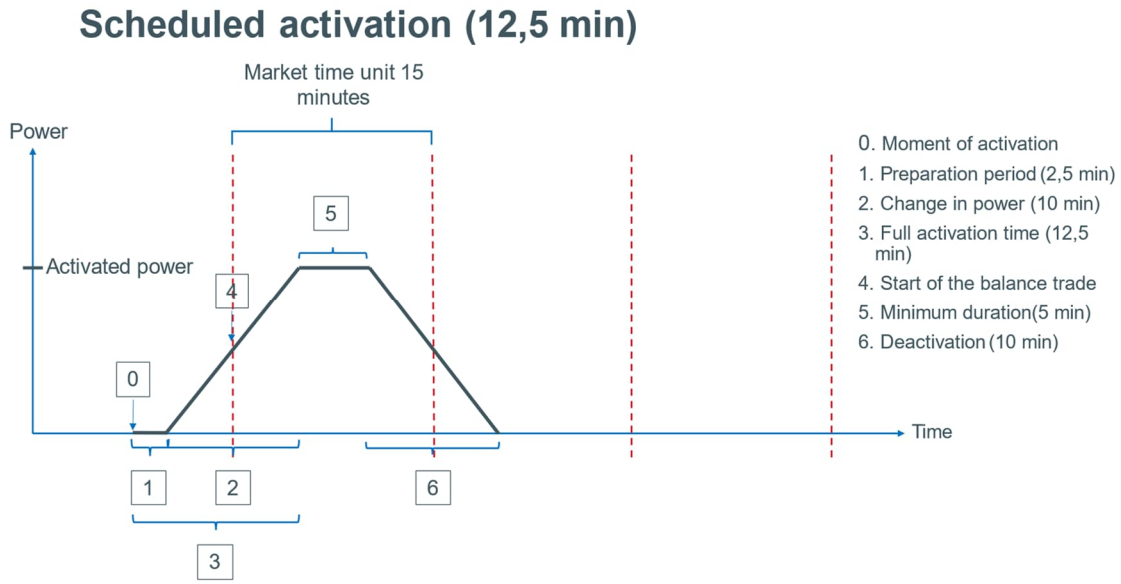

Image 1 Principle of scheduled activation with 12.5 min activation time

When using an activation period of 15 minutes, the activated power must be reached within 15 minutes of the moment of Activation. In timed activation, the regulation is carried out at activated power for 0–15 minutes, depending on the duration of activation and deactivation of the reserve target. The objective is that the Deactivation would be as symmetrical as possible with the Activation, the duration of the Deactivation would be no more than 15 minutes and the Deactivation would be carried out in such a way that half of the Deactivation would take place during the Market Time Unit that is the subject of the bid and half during the subsequent Market Time Unit. Figure 2 shows the principle of scheduled activation with an activation time of 15 minutes.

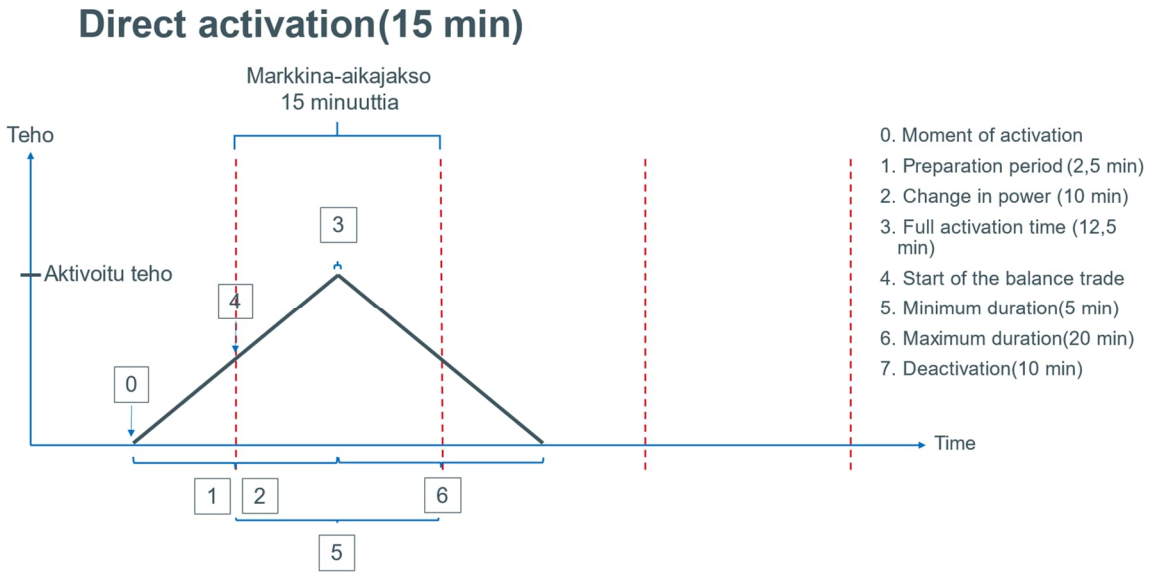

Image 2 Principle of scheduled activation with 15 min activation time

7.3.2 Direct activation

In direct activation, Fingrid sends the activation to the Market Time Unit at any time after the activation of the Timed Activation Bid for the Market Time Unit in question, but before the time of the Scheduled Activation for the next Market Time Unit. In addition to the Market Time Unit subject to the Balancing bid, directly activated regulations are always applied to the following Market Time Unit.

When using an activation time of 12.5 minutes, the activated power must be reached within 12.5 minutes of ordering, including 2.5 minutes of preparation time and 10 minutes of Power Change Time, i.e. in Direct Activation, regulation is carried out at activated power for 5–20 minutes, depending on the moment of Activation of the regulation. Deactivation may begin five minutes before the end of the next Market Time Unit, i.e. at the same time as the Deactivation of the Scheduled Activation of the next Market Time Unit may begin. The goal is that the Deactivation would be as symmetrical as possible with the activation, i.e. the Power Change time would be 10 minutes even in Deactivation. Figure 3 shows the principle of direct activation with an activation time of 12.5 minutes.

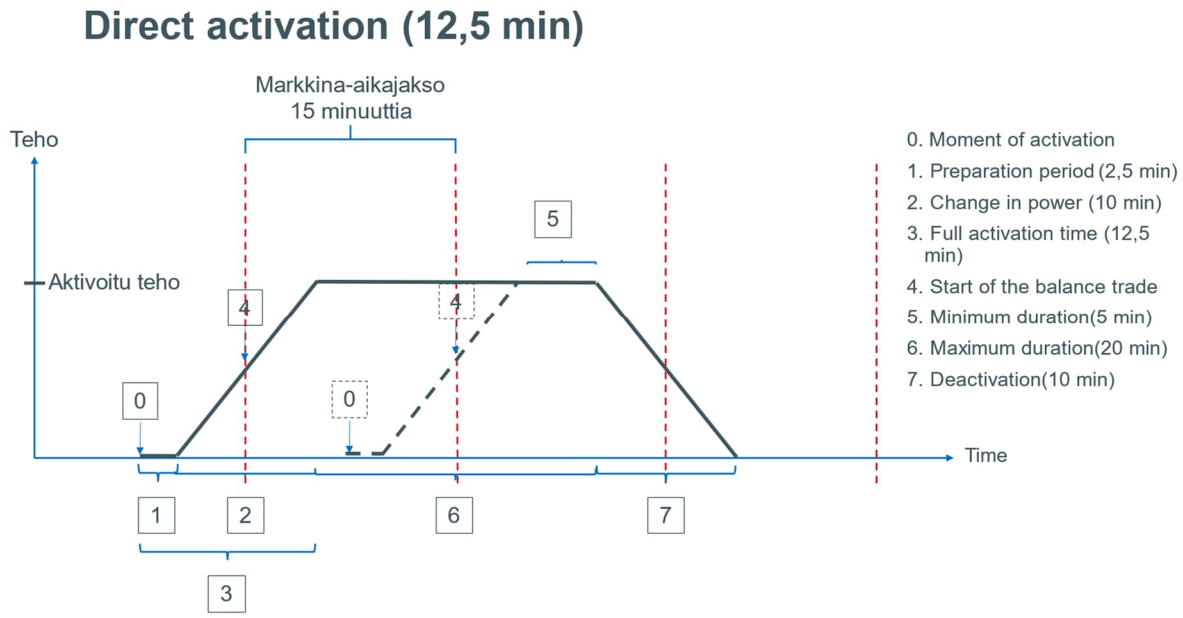

Image 3 Direct activation principle with 12.5 min activation time

When using the 15-minute activation time in Direct Activation, the regulation is carried out at the ordered power for 0–30 minutes, depending on the Activation moment of the regulation and the duration of activation and deactivation of the Reserve Target. Deactivation may commence midway through the Market Period following the Market Time Unit subject to the Balancing bid. The objective is that the Deactivation would be as symmetrical as possible with the Deactivation, the duration of the Deactivation would be no more than 15 minutes and the Deactivation would be carried out in such a way that half of the Deactivation would take place in the Market Time Unit following the Market Time Unit subject to the Balancing bid and half in the Market Time Unit following it. Figure 4 shows the principle of direct activation with an activation time of 15 minutes.

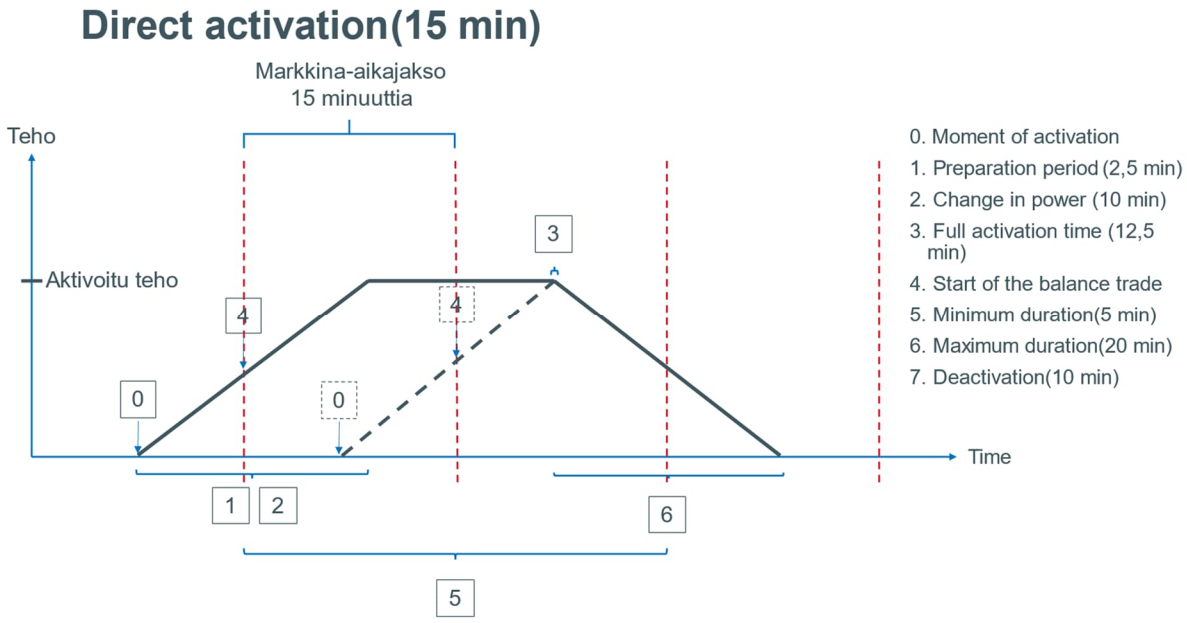

Image 4 Direct activation principle with 15 min activation time

7.3.3 Using scheduled activation and Direct activation

Fingrid uses Scheduled Activation to meet the anticipated Regulation Need based on forecasts and plans. Fingrid may also activate Balancing bids with Direct Activation, for example, when the Need for Regulation changes unexpectedly, for example due to a disturbance in the electricity system, other sudden changes in the electricity system or a forecast error. Fingrid only uses for Direct Activation Balancing bids that the Balancing Service Provider has defined when submitting the bid to be used for Scheduled and Direct Activation.

7.4 Special regulation

Fingrid can also activate Balancing bids for special regulations. Special regulation refers to regulation activated by Fingrid from the mFRR energy market, which is activated for reasons other than balancing management needs. Fingrid uses Balancing bids suitable for this purpose in terms of the transmission situation, and they are not necessarily used in price order. If more detailed location information (coordinates and grid connection point) is not available for a Reserve Site, Fingrid may not be able to use the Balancing bid given for the Reserve Site in question for Special Regulation. Fingrid can activate Balancing bids for Special Regulation with both Scheduled and Direct Activation. Fingrid will notify you in connection with the activation of the Balancing bid if the bid is activated for special regulation. In this case, the Balancing Service Provider shall carry out the regulation with the reserve item indicated in the Balancing bid.

8 mFRR capacity market rules

If necessary, Fingrid procures up- and down-regulation capacity from the mFRR capacity market through a pre-day tendering process for the hours of the following day according to the CET/CEST time zone. The Market Time Unit is one hour.

In the mFRR capacity market, the Balancing Service Provider undertakes to submit Balancing bids for the mFRR energy market equal to the amount (MW) approved in the tendering process. Balancing bids shall be submitted for those mFRR Energy Market Market Time Units (15 minutes) included in the mFRR Capacity Market Market Time Units (1 hour) for which Capacity Bids have been accepted. Fingrid pays capacity compensation to the Balancing Service Provider for this.

Balancing bids submitted on the basis of the Accepted Capacity Bid shall be Directly Activated for at least one hour during the first three Market Time Units (15 minutes) of the mFRR energy market. In addition, during the fourth, i.e. last, Market Time Unit of an hour, there must be Directly Activated Balancing bids if the Balancing Service Provider has accepted a Capacity Bid for the following hour as well. The number of directly activated bids in the last Market Time Unit of an hour shall be at least equal to the amount of the Capacity Bid accepted for that hour or the following hour, whichever is lower. The remainder of the number of Balancing bids submitted in the last Market Time Unit of the first hour based on the Accepted Capacity Bids may only be Activated in the Scheduled Activation.

Balancing bids submitted on the basis of approved Capacity Bids shall not be exclusive, multi-part or conditionally linked.

8.1 Bidding rules

The mFRR capacity market bids are submitted according to the separate Fingrid reserve trading and information exchange and BSP - Implementation Guide Nordic MMS - mFRR capacity market guidelines. The minimum capacity for a single capacity bid is 1 MW. Capacity bids must be submitted with an accuracy of 1 MW. A reserve provider can submit multiple capacity bids. The capacity bid must include the following information:

- Capacity (MW) up and/or down
- Capacity price, separately for up and down regulation bids (€/MW,h)
- Hour (CET/CEST time)
- Reserve capacity bidding area (FI)
- Transmission area (south, central, or north).

Additionally, the capacity bid can include information that the capacity bid is:

- An alternative capacity bid with other aFRR or mFRR capacity market bids, where only one of the alternative bids can be used during the same Market Time Unit
- An indivisible capacity bid, which must be treated as indivisible. In this case, the maximum capacity of the bid is 50 MW.
- A block bid, where the same price and identical capacity bid is offered for several consecutive Market Time Units.

Incomplete capacity bids are not considered in the mFRR capacity market.

Capacity bids can be submitted no earlier than 7 days before (CET 00:00) the day of the bid. Capacity bids can be submitted for the hours of the following day until 07:30 (CET/CEST) the previous day and no earlier than seven days before the target operating hour. The submission time for bids can also be extended by 30 minutes if one or more reserve providers are unable to submit bids due to technical issues with the mFRR capacity market platform, and this has been reported to Fingrid before the bid submission deadline. The mFRR capacity market can also be reopened after the bid submission deadline due to technical issues or insufficient bids. If the bid submission time is extended or the market is reopened, reserve providers can add or modify existing bids. If the mFRR capacity market is reopened, the bid submission time ends at 08:30 (CET/CEST).

8.2 Processing of bids

For each Market Time Unit, the required number of bids are accepted in price order (cheapest first) separately for up and down regulation capacity, taking into account the transmission capacity between bidding areas as determined below for mFRR capacity market trading. A bid can be partially accepted unless it is specified as an indivisible bid when submitted. The trades for the following day are confirmed according to the decision of the Energy Authority (dnro 3297/040303/2024).

The transmission capacity allocated in the reserve markets (aFRR and mFRR) is primarily used in the automatic frequency restoration reserve (aFRR) capacity market. The aFRR terms and conditions define or have defined the maximum amounts of transmission capacity allocated to the reserve markets at the borders of the Finnish bidding area. Only transmission capacity that has not already been used in the aFRR capacity market can be allocated to the mFRR capacity market at the borders of the Finnish bidding area. Capacity allocation is possible on 19.11.2024 at the earliest.

The transmission area specified in the capacity bid can be applied as the primary criterion if the operating situation of the electricity system requires it due to internal transmission restrictions within the bidding area. In this case, capacity bids are selected in price order, taking into account the location restrictions of the bids for procurement. If a bid is selected for transmission management needs due to restrictions and the bid price is higher than the price of the most expensive accepted bid in the bidding area for balance management needs, the bid does not set the marginal price of the mFRR capacity market, but the capacity compensation for the

bid is determined according to the bid price (Pay as bid principle). Restrictions due to the operating situation are communicated to the Balancing Service Provider when the procurement results are published.

If Fingrid announces at the latest when the mFRR capacity market procurement decision is published that the transmission area specified in the capacity bid is mandatory, the Balancing Service Provider must maintain the regulation capacity in the transmission area specified in the capacity bid. Otherwise, the Balancing Service Provider can maintain the regulation capacity in any transmission area.

9 Rules for balancing capacity acquired through balancing capacity agreements

Fingrid can also procure mFRR capacity with a mFRR capacity Agreement by arranging a separate competitive tendering procedure as necessary. A notification about the competitive tendering will be posted on Fingrid's website, and the time allocated for submitting the bids is at least one month from the start of the tendering procedure. The product to be procured (up- or down-regulation capacity) and the agreement period are determined in the tendering procedure.

A Balancing Service Provider who has a valid mFRR capacity Agreement undertakes to offer mFRR capacity to the MFRR energy Market for the duration of the agreement period.

In addition, any Reserve Unit offered for the competitive tendering of mFRR capacity Agreements must be capable of at least three hours of continuous activation. After the activation, the Reserve Unit is allowed a resting period, the duration of which is the same as the last activation but at least three hours and at most six hours.

The mFRR energy Bids in accordance with the MFRR capacity Agreement must be submitted for all hours of the day in the CET/CEST time zone by 8:00 (EET/EEST) on the morning of the previous day. After this, the MFRR energy Bids in accordance with the mFRR capacity Agreement is binding in terms of volume.

Balance Capacity Bids shall be submitted according to the following schedule:

Day	Clock (EET/EEST)	Event
D-1	8:00	Balancing bids under the Regulation Capacity Agreement must be delivered for all hours of the following CET/CEST day
D	00:15	Balancing bids under the Regulation Capacity Agreement can no longer be updated for the hour 1:00-2:00
D	1:00	The first hour of CET/CEST starts

9.1 Bidding rules

A bid must contain the following information:

- Capacity, constant for the contract period (MW)

- Capacity price, constant for the contract period (€/MW,h)
- Transmission Area[4] (south/central/north)
- Reserve Unit Name[5].

The minimum capacity of a single bid is 5 MW. A bidder can submit several bids. The bids shall be submitted at an accuracy of 1 MW.

9.2 Processing of bids

The procurement decisions concerning the mFRR capacity are made in order to ensure the operational security of the electricity system and to achieve the lowest possible procurement cost in the overall procurement of Frequency Restoration Reserves.

The Transmission Area submitted to the tendering procedure by the Balancing Service Provider is binding, meaning that the Balancing Service Provider must maintain the mFRR capacity in the Transmission Area in accordance with its bid if Fingrid announces during the Tendering that the Transmission area is Binding. The Reserve Unit indicated in the bid is not binding on the Balancing Service Provider, unless Fingrid separately announces in connection with the procurement decision that it will become binding for the bid in question. In this case, the Balancing Service Provider shall maintain the mFRR capacity in the Reserve Unit in accordance with the bid.

10 Reporting and monitoring of reserve maintenance

10.1 Balancing Service Provider's reporting to Fingrid

Based on real-time data, Fingrid monitors the activation of reserves. The Balancing Service Provider shall, at its own expense, provide the active power measurement of the reserve object or other real-time data that can be used to verify activation. Real-time information exchange complies with the *Real-time information exchange* application instructions published by Fingrid at any given time.

The update interval for real-time data exchange shall not exceed 60 seconds.

10.2 Balancing Service Provider's reporting to the balance responsible party

The Balancing Service Provider is obliged to report the number of activated regulations to the balance responsible party of the reserve resource.

[4] Finland has three Transmission Areas (south, central and north). The locations of the Transmission Areas are shown on the map of Transmission Areas on Fingrid's website.
[5] In Fingrid's electronic reserve trading system (Vaksi), the Reserve Units are assigned names, associated ROs and balancing areas (south/central/north) and, optionally, more detailed location information (coordinates and main grid connection point).

11 Processing of energy

Balance Trade creates a delivery of energy between Fingrid and the Balance Responsible Party of the Reserve Unit. The volume of energy generated from this in each imbalance settlement period is calculated as the product of the activated balancing power and the operating time.

Balance Trades affect the balance of the Balance Responsible Party of the Reserve Unit, and the Balancing Energies thereby created are automatically taken into account in the imbalance settlement of the Balance Responsible Party of the Reserve Unit. Fingrid or its service provider reports the preliminary volume of the mFRR energy to the Balance Responsible Party after the operating hour and the final information no later than within 13 days.

11.1 Scheduled activation energy

In the case of Scheduled Activation, the energy allocated to the imbalance settlement periods are calculated as described below.

The energy allocated to the imbalance settlement period preceding and after the Market Time Unit subject to the Balancing bid shall be calculated as follows:

$$Energy\ in\ the\ imbalance\ settlement\ period\ (MWh) = \frac{1}{2} \times \frac{1}{2} \times Activated\ power\ (MW) \times \frac{5}{60} h$$

For the imbalance settlement period corresponding to the Market Time Unit subject to the Balancing bid, energy calculated in the following manner shall be allocated:

$$Energy\ in\ the\ imbalance\ settlement\ period\ (MWh) = Activated\ power\ (MW) \times \frac{15}{60}\ h - 2 \times (\frac{1}{2} \times \frac{1}{2} \times Activated\ power\ (MW) \times \frac{5}{60} h)$$

The amounts of energy allocated to the different imbalance settlement periods are shown in Figure 5, where the energy allocated to the imbalance settlement period preceding and after the Market Time Unit subject to the Balancing bid is indicated in green and the energy allocated to the imbalance settlement period corresponding to the Market Time Unit subject to the Balancing bid is indicated in red.

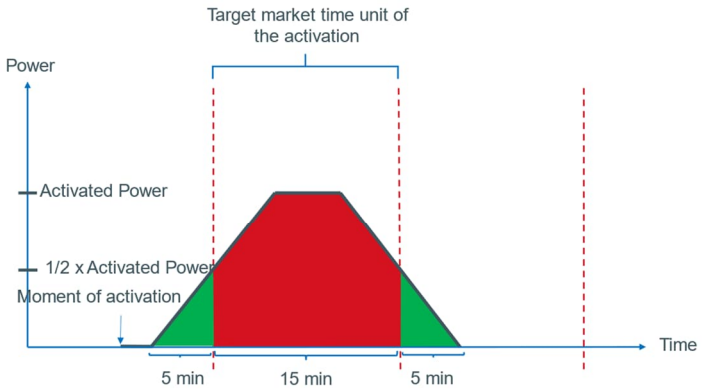

Image 5 Energy amounts of timed activation for different imbalance settlement periods

11.2 Direct activation energy

In the case of direct activation, the energy is calculated as described below.

11.2.1 Energy for the imbalance settlement period preceding the Market Time Unit subject to direct activation

The energy allocated to the Imbalance Settlement Period preceding the Market Time Unit subject to Direct Activationshall be calculated as follows, depending on the time at which Direct Activation takes place.

If the Power Change shown in Figure 3 begins before the Market Time Unit subject to Direct Activation, the following formula shall be used, where *t* is the time from the beginning of the Power Change to the beginning of the Market Time Unit subject to Direct Activation in minutes:

$$Energy\ in\ the\ imbalance\ settlement\ period\ (MWh) = \frac{1}{2} \times \frac{t}{10} \times Activated\ Power\ (MW) \times \frac{t}{60}(h)$$

In this case, the energy allocated to the imbalance settlement period preceding the Market Time Unit subject to Direct Activation is shown in Figure 6, where the energy is shown in red.

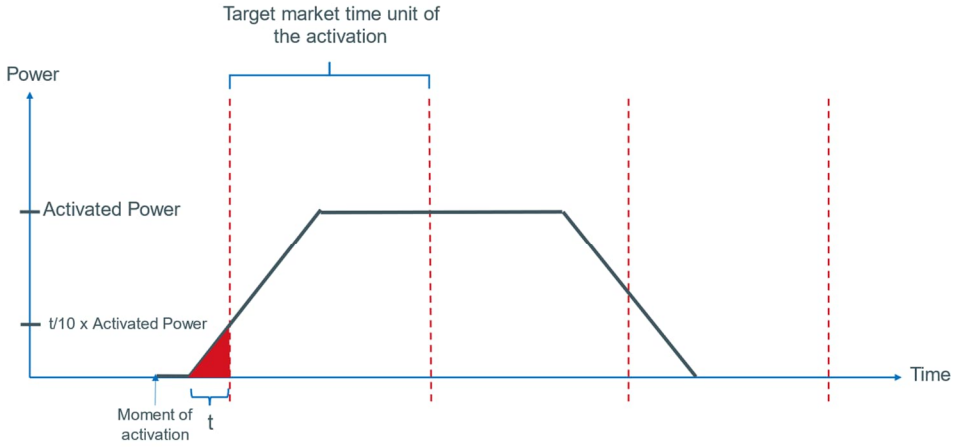

Image 6 Energy allocated to the Imbalance Settlement Period preceding the Market Time Unit subject to Direct Activation, when the Power Change begins before the Market Time Unit subject to Direct Activation

If the Power Change shown in Figure 3 starts at the beginning of or during the Market Time Unit subject to Direct Activation, the following formula is used:

$$Energy\ in\ the\ imbalance\ settlement\ period\ (MWh) = 0\ MWh$$

In this case, the energy allocated to the imbalance settlement period preceding the Market Time Unit subject to Direct Activation is shown in Figure 7.

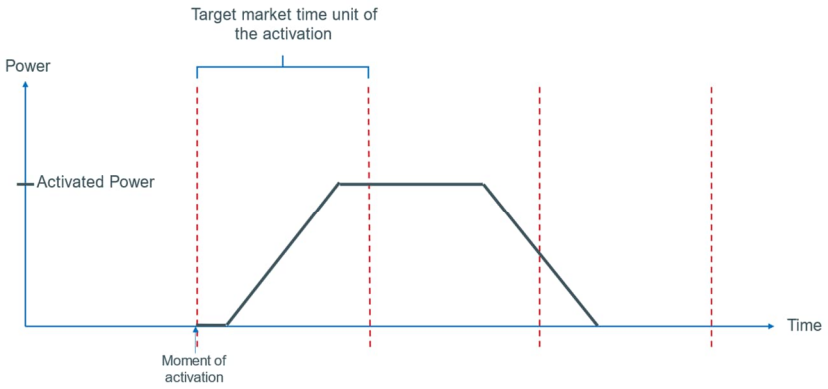

Image 7 Energy allocated to the Imbalance Settlement Period preceding the Market Time Unit subject to Direct Activation when the Power Change commences at the beginning of or during the Market Time Unit subject to Direct Activation

11.2.2 Energy for the imbalance settlement period corresponding to the Market Time Unit subject to direct Activation

The energy allocated to the Imbalance Settlement Period corresponding to the Market Time Unit subject to Direct Activation shall be calculated as follows, depending on the time at which Direct Activation is made.

If the Power Change shown in Figure 3 starts before the Market Time Unit subject to Direct Activation, the following formula is used, where *t* is the time from the beginning of the Power Change to the beginning of the Market Time Unit subject to Direct Activation in minutes:

$$Energy\ in\ the\ imbalance\ settlement\ period\ (MWh) = \frac{1}{2} \times Activated\ Power\ (MW) \times \left(\frac{15+t}{60} + \frac{5+t}{60}\right)(h) - Energy\ in\ the\ previous\ imbalance\ settlement\ period\ \ (MWh)\ .$$

In this case, the energy allocated to the Imbalance Settlement Period corresponding to the Market Time Unit subject to Direct Activation is shown in Figure 8, where the energy allocated to the Imbalance Settlement Period is indicated in red and the energy allocated to the preceding Imbalance Settlement Period is indicated in green.

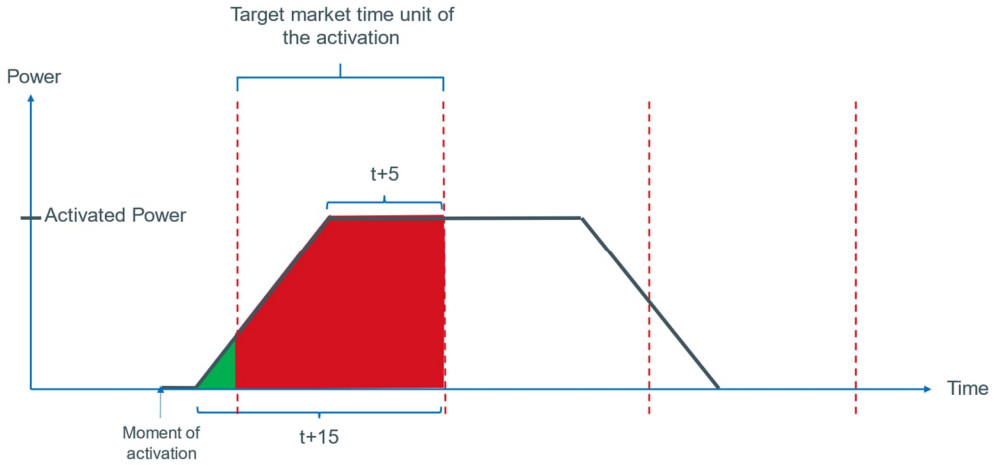

Image 8 Energy allocated to the Imbalance Settlement Period corresponding to the Market Time Unit subject to Direct Activation, when the Power Change begins before the Market Time Unit of Direct Activation

If the power change shown in Figure 3 starts at the beginning of or during the Market Time Unit subject to Direct Activation and ends before its end, the following formula is used, where *t* is the time from the beginning of the Power Change to the beginning of the Market Time Unit subject to Direct Activation in minutes:

$$Energy\ in\ the\ imbalance\ settlement\ period\ (MWh) = \frac{1}{2} \times Activated\ Power\ (MW) \times (\frac{15-t}{60} + \frac{5-t}{60})(h).$$

In this case, the energy allocated to the Imbalance Settlement Period corresponding to the Market Time Unit subject to Direct Activation is shown in Figure 9, where the energy allocated to the Imbalance Settlement Period is indicated in red.

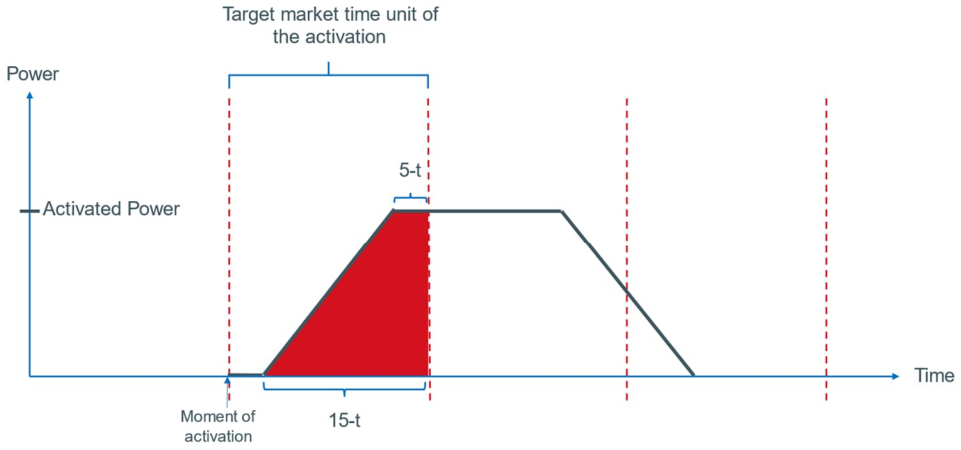

Image 9 Energy allocated to the Imbalance Settlement Period corresponding to the Market Time Unit subject to Direct Activation, when the Power Change begins at the beginning of or during the Market Time Unit subject to Direct Activation and ends before its end

If the Power Change shown in Figure 3 ends in the Market Time Unit following the Market Time Unit subject to Direct Activation, the following formula shall be used, where *t* is the time from the beginning of the Power Change to the beginning of the Market Time Unit subject to Direct Activation in minutes:

$$Energy\ in\ the\ imbalance\ settlement\ period\ (MWh) = \frac{1}{2} \times \frac{15-t}{10} \times Activated\ Power\ (MW) \times \frac{15-t}{60}\ (h)$$

In this case, the energy allocated to the Imbalance Settlement Period corresponding to the Market Time Unit subject to Direct Activation is shown in Figure 10, where the energy allocated to the Imbalance Settlement Period is indicated in red.

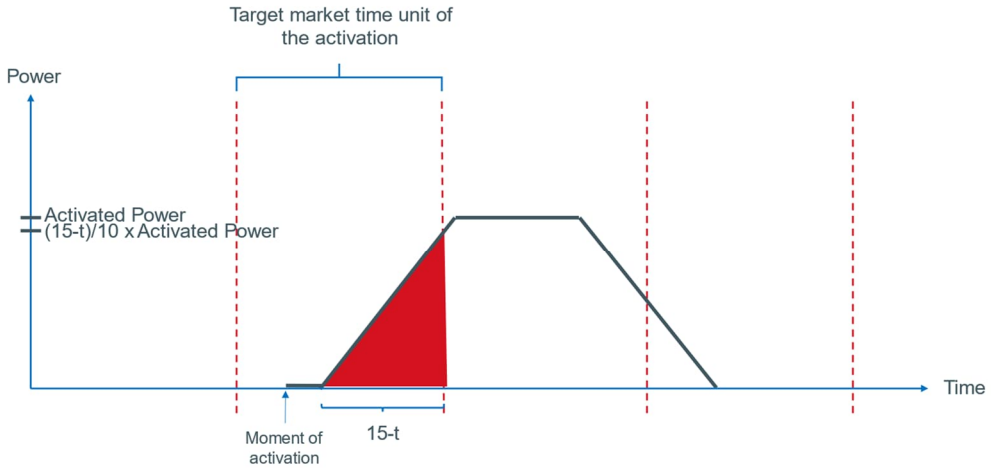

Image 10 Energy allocated to the Imbalance Settlement Period corresponding to the Market Time Unit subject to Direct Activation, when the Power Change begins during the Market Time Unit subject to Direct Activation and ends in the following Market Time Unit

11.2.3 Energy for the imbalance settlement period following the Market Time Unit subject to direct Activation

The energy allocated to the Imbalance Settlement Period following the Market Time Unit subject to Direct Activation shall be calculated as follows, depending on the time at which Direct Activation is made.

If the power change shown in Figure 3 starts before the Market Time Unit subject to Direct Activation, at the beginning of or during the Market Time Unit subject to Direct Activation, and ends before or at the end of the Markettime Period subject to Direct Activation, the following formula shall be used:

$$Energy\ in\ the\ imbalance\ settlement\ period\ (MWh) = Activated\ Power\ (MW) \times \frac{15}{60}(h) - \frac{1}{2} \times \frac{1}{2} \times Activated\ Power\ (MW) \times \frac{5}{60}(h).$$

In this case, the energy allocated to the Imbalance Settlement Period following the Market Time Unit subject to Direct Activation is shown in Figure 11, where the energy allocated to the Imbalance Settlement Period is indicated in red and for the subsequent Imbalance Settlement Period in green.

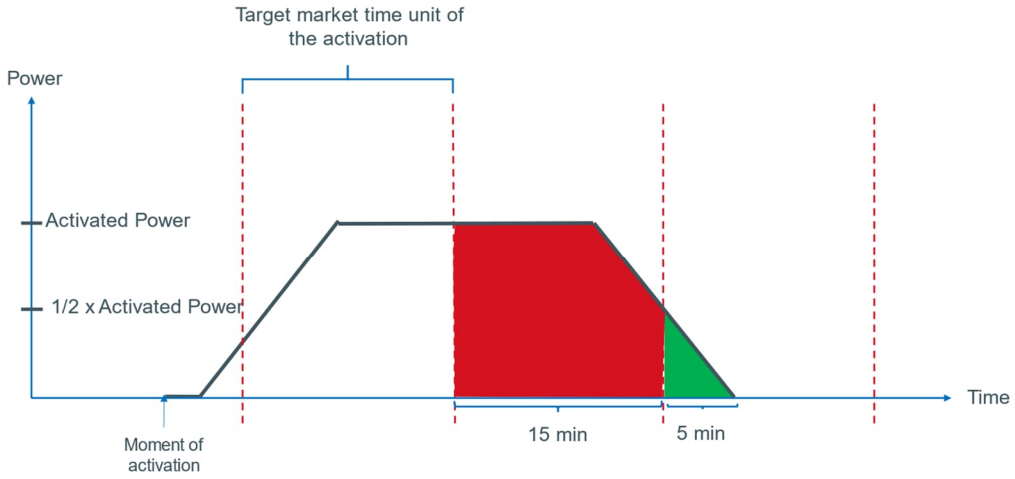

Image 11 Energy allocated to the Imbalance Settlement Period following the Market Time Unit subject to Direct Activation, when the Power Change begins before, at the beginning of or during the Market Time Unit subject to Direct Activation and ends before or at the end of the Market Time Unit subject to Direct Activation

If the Power Change shown in Figure 3 ends in the Market Time Unit following the Market Time Unit subject to Direct Activation, the following formula shall be used, where *t* is the time from the beginning of the Power Change to the beginning of the Market Time Unit subject to Direct Activation in minutes:

$$Energy\ in\ the\ imbalance\ settlement\ period\ (MWh) = Activated\ Power\ (MW) \times \left(\frac{15}{60} - \frac{1}{2} \times \left(\frac{t-5}{60} \times \frac{t-5}{10}\right) - \frac{1}{2} \times \frac{1}{2} \times \frac{5}{60}\right)(h).$$

In this case, the energy allocated to the Imbalance Settlement Period following the Market Time Unit subject to Direct Activation is shown in Figure 12, where the energy allocated to the Imbalance Settlement Period is indicated in red and for the subsequent Imbalance Settlement Period in green.

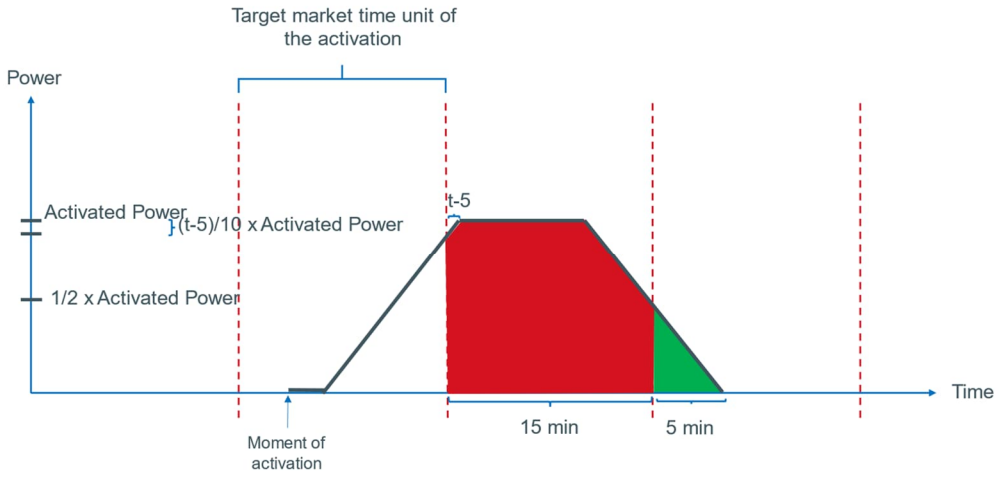

Image 12 Energy allocated to the Imbalance Settlement Period following the Market Time Unit subject to Direct Activation when the Power Change ends in the Market Time Unit following the Market Time Unit subject to Direct Activation

11.2.4 Energy for the imbalance settlement period following the Market Time Unit following the Market Time Unit subject to direct Activation

The energy allocated to the imbalance settlement period following the Market Time Unit following the Market Time Unit subject to direct Activation shall be calculated using the following formula:

$$Energy\ in\ the\ imbalance\ settlement\ period\ (MWh) = \frac{1}{2} \times \frac{1}{2} \times Activated\ Power\ (MW) \times \frac{5}{60}(h).$$

The energy allocated to the Imbalance Settlement Period following the Market Time Unit following the Market Time Unit subject to direct Activation is shown in Figure 13, where the energy allocated to the Imbalance Settlement Period is indicated in red.

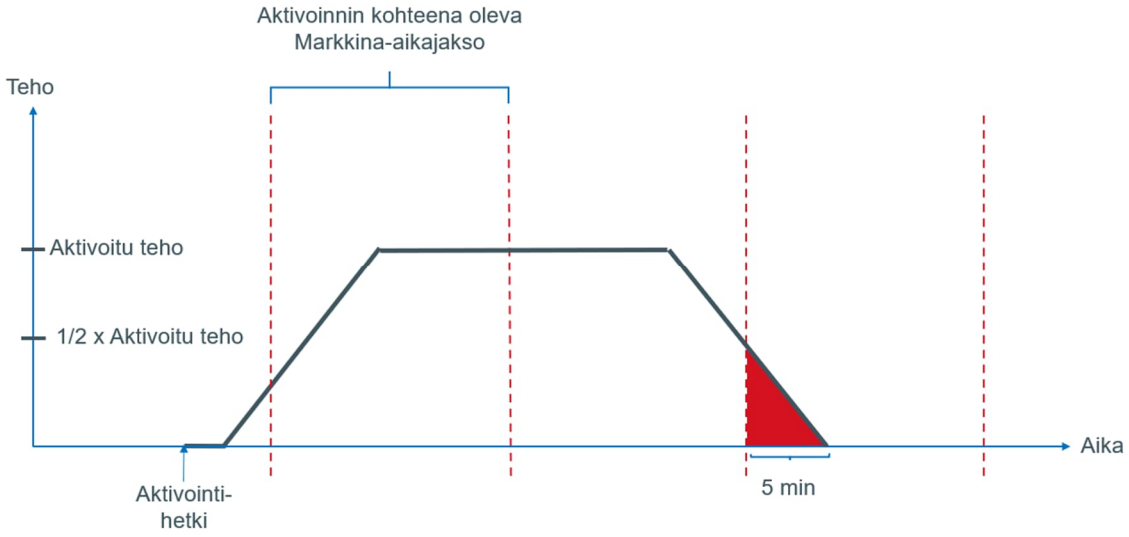

Image 13 Energy allocated to the Market Time Unit following the Market Time Unit subject to direct Activation

12 Fees and payment terms

12.1 Energy fee in the mFRR energy market

When Fingrid activates upward regulation from the Balancing Service Provider in the mFRR energy market, Fingrid pays the Balancing Service Provider an Energy Fee for the balancing energy it purchases. The Energy Fee is calculated by multiplying the[6] Upward Regulation Price for each hour during each Market Time Unit by the energy purchased from the Balancing Service Provider.

When Fingrid activates down-regulation from the Balancing Service Provider in the mFRR energy market, Fingrid charges the Balancing Service Provider an Energy Fee for the balancing energy it sells. The energy fee is calculated by multiplying the[7] Downward Regulation Price for each hour by the energy sold to the Balancing Service Provider during each Market Time Unit.

Energy is calculated by multiplying the sum of activated power by the operating time. In the case of scheduled activation, the usage period starts at the beginning of the Market Time Unit and lasts until the end of the Market Time Unit, i.e. 15 minutes.

In the case of direct activation, the usage period will end at the end of the next Market Time Unit, i.e. at least 15 minutes. In the case of Direct Activation, the operating time is calculated using the formula where t is the time until the end of the Market Time Unit subject to Direct Activation From the moment of Activation in minutes:

$$Operating\ time\ (Direct\ activation) = \ t - 7{,}5\ \mathrm{min} + 15\ min$$

[6] In the case of upward regulation activated by direct activation for the last Market Time Unit of the hour, the Up Control Price may differ for energies located in different Market Time Units.
[7] In the case of a down regulation activated by direct activation for the last Market Time Unit of the hour, the Down Control Price may differ for energies located in different Market Time Units.

In direct activation, the Control Energy is distributed over the Market Time Unit to be activated and the Market Time Unit following it. Energy for the Market Time Unit subject to Direct Activation is calculated using the following formula, where t is the time until the end of the Market Time Unit subject to Direct Activation From the moment of Activation in minutes:

$$Energy\ in\ the\ market\ time\ unit\ (MWh) = Activated\ Power\ (MW)\ x\ (\frac{t - 7{,}5\ min}{60})(h)$$

Energy for the Market Time Unit following the Market Time Unit subject to Direct Activation shall be calculated using the following formula:

$$Energy\ in\ the\ market\ time\ unit\ (MWh) = Activated\ Power\ (MWh)\ x\ \frac{15}{60}(h).$$

An example of the calculation of the energy used as the basis for the energy charge is shown in Figure 14, where the energy allocated to the Market Time Unit subject to direct activation is indicated in red and the energy allocated to the subsequent Market Time Unit is indicated in green.

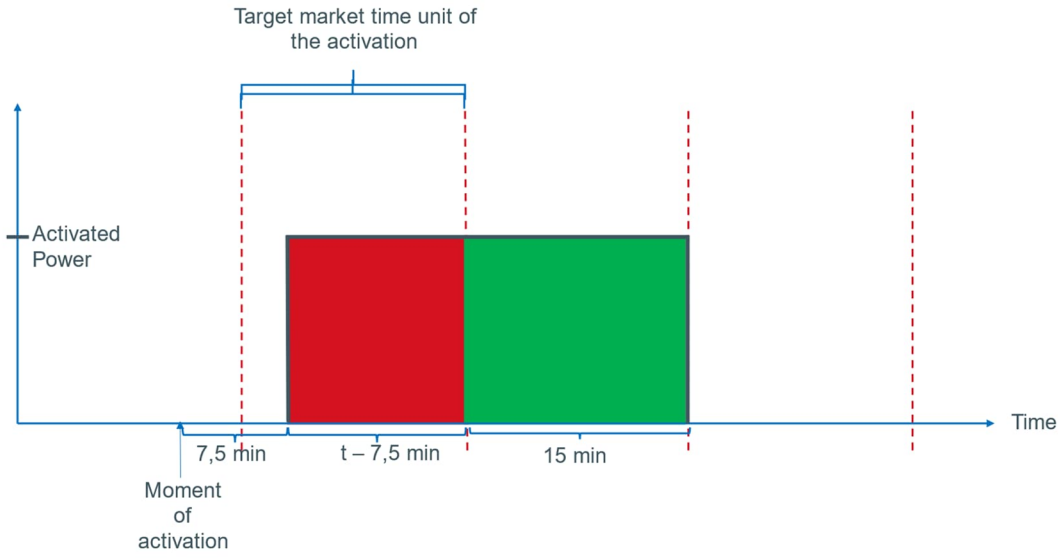

Image 14 Example of energy on which the energy charge for direct activation is based

The Upregulation Price (marginal price) of the Market Time unit is the highest of the following:

a) The price of the most expensive activated upregulation bid

b) The price of the most expensive Direct Activated upregulation bid in the previous Market time unit.

The Downregulation Price (marginal price) of the Market Time Unit is the lowest of the following:

a) The price of the cheapest activated downregulation bid

b) price of the cheapest Direct Activated downregulation bid in the previous Market time unit.

Special regulations are priced according to the Balancing bid (Pay as bid principle), however, so that the price for upward regulation used for special regulation purposes is at least equal to the Upward regulation price for the Market Time Unit in question. Similarly, the price for a down regulation used for special regulation purposes is no more than the Down regulation price for that Market Time Unit. The Balancing bid used for special regulation does not set the price of balancing power.

The energy fee for activating a Balancing bid submitted on the basis of an approved Capacity Bid or Balanncing Capacity Agreement is determined in the same way as for the activation of other Balancing bids. The Energy Fees do not affect the Capacity Compensation paid to the Balancing Service Provider.

The invoicing of energy fees takes place in connection with the imbalance electricity invoicing carried out by eSett Oy in accordance with the appendices to the settlement agreements mentioned in section 4

12.2 Capacity compensation in the mFRR capacity market

Fingrid will compensate the Balancing Service Provider in accordance with the Balance Energy Bids based on the accepted mFRR capacity Bids submitted by Balancing Service Providers, but no more than for the transaction agreed in the mFRR capacity Market for each Market Time Unit, taking into account possible sanctions. The Capacity Fee paid by Fingrid to the Balancing Service Provider is determined for each Market Time Unit as follows:

Capacity Fee (€) = maintained reserve capacity (MW,h) × mFRR capacity Market price (€/MW,h).

For each Capacity Bid accepted by Fingrid in the competitive tendering of the MFRR capacity Market, the mFRR capacity Market price for each Market Time Unit is determined on the basis of the price of the most expensive Capacity Bid accepted for that Market Time Unit (margin price).

Fingrid will pay the Balancing Service Provider the Capacity Fee in full if the Balancing Service Provider has maintained the mFRR energy Bids in full in accordance with the accepted Capacity Bid (taking into account the Transmission Area according to 8.2.) in the Market Time Unit in question. For unmaintained capacity or to the extent that the Balancing Service Provider cannot deliver the activation requested by Fingrid in accordance with its Balancing Bid, the Balancing Service Provider shall pay a sanction to Fingrid.

The sanction is determined by hour as follows:

Sanction (€) = reserve capacity not delivered (MW,h) × 3 × price in the mFRR capacity Market (€/MW,h)

or

Sanction (€) = reserve capacity not delivered (MW,h) × average price in the Finland bidding zone in the Day-Ahead Market for the hour (€/MW,h)

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.

If the Balancing Service Provider also has a mFRR capacity Agreement and the Balancing Service Provider has participated in the mFRR capacity Market without maintaining in full the Balance Capacity Bid in accordance with both the mFRR capacity Agreement and the MFRR capacity Market during the adjustment period, the Balancing Service Provider is considered to have primarily maintained the mFRR energy Bids in accordance with the MFRR capacity Agreement

The Balancing Service Provider shall send the invoice for the maintenance of the previous month's mFRR capacity to Fingrid on the tenth day 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.

If the sanctions imposed for the invoicing period exceed the Capacity Fee, the Balancing Service Provider shall pay compensation to Fingrid..

12.3 Capacity compensation according to the balancing capacity agreement

For each bid approved by Fingrid in the competitive tendering, the Capacity Fee is determined on the basis of the approved bid (Pay-as-Bid Principle), taking into account the adjustment procedure for the Capacity Fee below.

Fingrid will pay the Balancing Service Provider the Capacity Fee in full if the Balancing Service Provider has maintained the mFRR energy Bids in full in accordance with the MFRR capacity Agreement.

Fingrid will adjust the Capacity Fee to be paid to a Balancing Service Provider for each week in the CET/CEST time zone. The adjustment period is one week and the adjustment is made monthly. In the adjustment, Fingrid takes into account the actual permanence of the Balance Capacity Bid under the mFRR capacity Agreement during the period as well as the sanctions laid down in 12.3.1.

The adjusted Capacity Fee is calculated as follows:

Capacity Fee$_{adjusted}$ (€) = Capacity Fee (€) × permanence coefficient – sanctions (€).

Permanence is determined by an hourly review on the basis of the mFRR energy Bids submitted by 8:00 (EET/EEST) on the previous day as follows:

$$permanence = \frac{\text{MFRR energy Bids submitted by D}-1\ 8{:}00\ (\text{EET/EEST})\ (\text{MW})}{\text{Contracted Capacity (MW)}}$$

Permanence may not exceed 100% for any single hour. If the mFRR energy Bids have not been submitted by 8:00 (EET/EEST) on the previous day or has been deleted after 8:00 (EET/EEST) on the previous day or if the Balancing Service Provider cannot deliver the order requested by Fingrid as bid, the permanence for the hour is 0%. If the amount of the mFRR energy Bids have been reduced after 8:00 (EET/EEST) on the previous day, the permanence is determined on the basis of the maintained Balance Capacity Bid.

If several bids with different prices have been accepted from a Balancing Service Provider, the adjustment is made separately for each bid, and permanence is considered to be fulfilled primarily from the most affordable bids.

If the Balancing Service Provider has also participated in the mFRR capacity Market during the adjustment period without maintaining in full the mFRR energy Bids in accordance with both the mFRR capacity Agreement and the mFRR capacity Market, the Balancing Service Provider is considered to have primarily maintained the Balance Capacity Bid in accordance with the mFRR capacity Agreement.

The permanence of the entire adjustment period is the average of the hourly review, and it determines the permanence coefficient with a precision of two decimals linearly as follows:

Permanence	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%
Permanence coefficient	1	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0

The adjusted Capacity Fee can be negative if the sanctions for the adjustment period exceed the Capacity Fee determined on the basis of actual permanence. In such a case, the Balancing Service Provider shall pay to Fingrid a sum corresponding to the negative Capacity Fee.

The Balancing Service Provider shall send Fingrid an invoice based on Fingrid's notification within 14 days of the notification.

12.3.1 Sanction for removing Balancing bids under the Regulation Capacity Agreement

If a Balancing Service Provider deletes a mFRR energy Bid pursuant to the mFRR capacity Agreement, reduces the bid after 8:00 (EET/EEST) on the previous day or cannot deliver the activation requested by Fingrid in accordance with its Balancing Bid, the Balancing Service Provider shall pay Fingrid a sanction for the amount of the bid. The sanction is determined by hour as follows:

Sanction (€) = deleted or reduced bid amount (MW,h) × 3 × mFRR capacity price (€/MW,h) or

Sanction (€) = deleted or reduced bid amount (MW,h) × the price in the Finland bidding zone on the Day-Ahead Market for the hour (€/MWh)

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.

12.3.2 Effect of resting period

During the resting period referred to in section 9, the deletion or reduction of a mFRR energy Bids will not cause sanctions, but it does have an effect on the calculation of the permanence of the mFRR energy Bids according to the mFRR capacity Contract.

12.4 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.

12.5 Value-added tax and other indirect taxes and levies

In addition to the fees specified in these terms, 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.

12.6 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.

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.

Cases of force majeure may include war, a country's internal unrest, mischief, sabotage, explosion, fire, unforeseen equipment fault, 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 reason with equally significant and unusual consequences. If one of the factors listed above applies to one of the Balancing Service Provider's Reserve Units, but the Balancing Service Provider could compensate for the volume missing from the mFRR

energy Bids using its other units the situation shall not be considered force majeure. The other units must be within the same Transmission Area, if Fingrid has announced the Transmission Area is binding at the time of the capacity procurement.

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

The Balancing Service Provider pays Fingrid a sanction in accordance with sections 12.2 and 12.3.1.

14.2 Temporary exclusion of a Balancing Service Provider from the reserve market

Fingrid has the right to temporarily exclude a Balancing Service Provider from the mFRR energy and mFRR capacity Market, if the Balancing Service Provider fails repeatedly without an acceptable reason to activate their Balancing Bid in accordance with Fingrid's activation or otherwise breaches the terms and conditions in this document in spite of a written notice by Fingrid.

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

14.3 Cancelling the Agreement

14.4 In the event of a material breach of contract, Fingrid shall be entitled to terminate the Balancing Market Agreement as laid down in that contract or the mFRR capacity Agreement as laid down in that contract