

Fingrid Oyj

Terms and conditions for providers
of Manual Frequency Restoration
reserves (mFRR)

1.6.2020

1.6.2019

Table of contents

1	Introduction	3
2	Definitions	3
3	Procurement of reserves	5
4	Requirements for a Balancing Service Provider	5
5	Requirements imposed on the Reserve Unit	5
6	Aggregation of Reserve Resources	6
7	Rules of the Balancing Energy Market	6
7.1	Submitting Balancing Energy Bids	6
7.2	Processing of bids.....	7
8	Rules of the Balancing Capacity Market	8
8.1	Bidding rules	8
8.2	Processing of bids.....	9
9	Rules for balancing capacity procured with Balancing Capacity Agreements	9
9.1	Bidding rules	9
9.2	Processing of bids.....	10
10	Reporting and monitoring of reserve maintenance	10
10.1	Real-time data.....	10
10.2	Balancing Service Provider’s reporting to balance responsible party.....	10
11	Processing of energy	10
12	Fees	10
12.1	Energy Fee on the Balancing Energy Market	10
12.2	Capacity Fee on the Balancing Capacity Market	11
12.2.1	Sanction for deleting a Balance Capacity Bid	13
12.2.2	Effect of the rest period	13
12.3	Capacity Fee pursuant to the Balancing Capacity Agreement	13
12.3.1	Sanction for deleting a Balance Capacity Bid	14
12.3.2	Effect of the rest period	14
12.4	Value added tax and other indirect taxes and fees	15
13	Breach of terms	15
13.1	Sanction.....	15
13.2	Temporary exclusion of a Balancing Service Provider from the reserve market ..	15
13.3	Cancelling the Agreement.....	15

1.6.2019

1 Introduction

This document defines the terms and conditions of Fingrid Oyj (hereinafter Fingrid) 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 (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 Balancing Energy Market and Balancing Capacity Market as well as in competitive tendering on the procurement of balancing capacity by means of Balancing Capacity Agreements.

2 Definitions

The following definitions are used in this document:

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 Capacity Agreement means a longer-term agreement between Fingrid and the Balancing Service Provider on the provision of mFRR balancing capacity.

Balancing Capacity Market means weekly capacity market maintained by Fingrid from which Fingrid procures Manual Frequency Restoration Reserve (mFRR).

Balance Capacity Bid means a Balancing Energy Bid submitted by the Balancing Service Provider on the Balancing Energy Market pursuant to the Balancing Capacity Market or the Balancing Capacity Agreement, unless the text specifically restricts the bid to apply to only one of them.

Balancing Energy Bid means a bid submitted by a Balancing Service Provider to the Balancing Energy Market in accordance with the rules of the Balancing Energy Market.

Balancing Market Agreement means an agreement between Fingrid and the Balancing Service Provider, which entitles the Balancing Service Provider to participate in the Balancing Energy and Balancing Capacity Markets.

Balancing Energy Market means market maintained by Fingrid from which Fingrid procures Manual Frequency Restoration Reserve (mFRR).

1.6.2019

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 Bid means a bid submitted by a Balancing Service Provider to the competitive bidding process on the Balancing Capacity Market.

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.

Electronic order means that Fingrid orders a Balancing Energy Bid submitted by the Balancing Service Provider on the Balancing Energy Market. The order takes place by sending a message to the Balancing Service Provider.

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

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.

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.

Margin Price Principle refers to a pricing principle in which the price of the most expensive accepted bid determines the price of all approved bids.

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

Regulating Object (RO) refers to an identifier used in imbalance settlement, indicating the balance information related to a bid on reserves.

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.

Special Regulation means regulation ordered for some other purpose than balance management.

1.6.2019

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 orders Manual Frequency Restoration Reserve from the Balancing Energy Market. Fingrid uses the Balancing Capacity procured by means of Balancing Capacity Agreements and from the Balancing 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.

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

In order to participate in the Balancing Energy and Balancing Capacity Markets and the competitive tendering of Balancing Capacity Agreements, a Balancing Service Provider must be an owner of a Reserve Resource and 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 Balancing Capacity 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 reserve is in compliance with the required control capacity by means of prequalification tests laid down in the document, *The technical requirements and the prequalification process of manual Frequency Restoration Reserves (mFRR)* published by Fingrid.

The Reserve Unit shall be located within Fingrid's system responsibility area¹.

The change of power of the Reserve Unit to full power must be achievable within 15 minutes of the order. The balancing must be supplied at the offered power during the

¹ Finland excluding the autonomous region of Åland.

1.6.2019

entire operating hour. The minimum order for balancing is 1 minute. Transactions on the Balancing Energy Market are based on physical balancing.

In addition, any Reserve Unit offered for the competitive tendering of the Balancing Capacity Market and Balancing Capacity Agreements must be available for order electronically and must be capable of at least three hours of continuous activation. After the order, the Reserve Unit is allowed a rest period, the duration of which is the same as the last activation but at least three hours and at most six hours.

6 Aggregation of Reserve Resources

Reserve Resources may be aggregated under the following conditions:

- The aggregated Reserve Resources must be located in the same regulation area² (North/South)
- The aggregated Reserve Resources must reside in the balance of the same balance responsible party.
- Aggregation is allowed between consumption and production balance.

An exception to these rules is that Reserve Resources located in different balancing areas may be aggregated, if the minimum capacity of the Balancing Energy Bid would not otherwise be met in the balancing area.

The name of the Reserve Unit in the Balancing Energy Bid contains a Regulating Object (RO) by which the Balancing Energy Bid is allocated to a certain balance and balancing area. The RO used in the Balancing Energy Market does not have to be specific to a production form. For power plants over 100 MW, the RO does not have to be specific to the power plant. Thus, the Reserve Resources located in the same balancing area of the same balance area can be aggregated by assigning them a single RO that contains the Reserve Resources to be aggregated.

If a Balancing Energy Bid contains aggregated Reserve Resources from both consumption and production balance, from different balancing areas or a share of a shared power plant, the Balancing Energy Bid must split the power volumes into balance-specific and regulating-area-specific sub-bids by using different ROs. The aggregated sub-bids are linked to each other by the aggregation link number (1–10).

7 Rules of the Balancing Energy Market

7.1 Submitting Balancing Energy Bids

The Balancing Energy 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*.

Balancing Energy Bids may not be submitted earlier than 31 days before the operating hour that is the subject of the bid. A Balancing Service Provider may change and

² Latitude 64 divides Finland into the Southern and Northern regulation areas.

1.6.2019

cancel Balancing Energy Bids up until 45 minutes before the start of the operating hour, after which the bids will become binding. At their discretion, Fingrid may also ask the Balancing Service Provider to submit additional Balancing Energy Bids after this.

A Balancing Energy Bid must contain the following information about the Reserve Unit:

- Power (MW), separately for up-regulation and down-regulation bids
- Price, separately for an up-regulation and down-regulation bid (€/MWh)
- Reserve Unit Name³
- Information about the reserve, if the Balancing Energy Bid is a peak load reserve bid or a reserve power plant bid
- Aggregation link number (1–10), if the Balancing Energy Bid combines different ROs
- Hour (EET time zone).

Several Balancing Energy Bids may be submitted for a single Reserve Unit. An incomplete Balancing Energy Bid will be ignored on the Balancing Energy Market.

The minimum capacity of a single Balancing Energy Bid is 5 MW, if the Balancing Energy Bid can be ordered electronically. Otherwise, the minimum capacity of the Balancing Energy Bid is 10 MW. The Balancing Energy Bids are given at a resolution of 1 MW.

During the trial period, until 31 December 2020, Fingrid can accept a single Balancing Energy Bid of less than 5 MW from each Balancing Service Provider for each hour of use. During the trial period, the minimum capacity of a Balancing Energy Bid is 1 MW. Fingrid will notify the Balancing Service Providers in advance when bids below 5 MW can be submitted.

The maximum price of an up-regulation bid is 5000 €/MWh.

7.2 Processing of bids

For each operating hour, Fingrid submits Finland's Balancing Energy Bids to the Nordic Balancing Energy Market, which creates a Nordic list of bids by arranging bids in price order: for the up-regulation bids, the cheapest Balancing Energy Bid is placed on top and for the down-regulation bids the most expensive Balancing Energy Bid on top.

³ In the Balancing Market Agreement, the Reserve Units are assigned names, ROs and balancing areas (North/South). The sub-bids of an aggregated Balancing Energy Bid use the names of the Reserve Resources.

1.6.2019

For balance management and frequency maintenance, the Balancing Energy Bids (excluding peak load reserve bids and reserve power plant bids) are used in price order. If a Balancing Energy Bid cannot be used due to the state of the power system, the lowest cost Balancing Energy Bid will be chosen from the Nordic list of bids.

Fingrid can also order Balancing Energy Bids for special regulation. Special regulation means an adjustment that Fingrid orders from the Balancing Energy Market for another reason than balance management. For this purpose, Fingrid uses Balancing Energy Bids suitable for the transmission situation, and these bids are not necessarily used in price order.

8 Rules of the Balancing Capacity Market

Fingrid procures balancing capacity from the Balancing Capacity Market by means of weekly competitive tendering. The length of each procurement period is one calendar week in the CET time zone.

The tendering schedule is as follows:

Day	Time of Day (EET)	Event
D-4 (Thursday)	12:00	Deadline for Capacity Bid submission
D-3 (Friday)	12:00	Fingrid publishes its decision to purchase from the Balancing Capacity Market
D-1 (Sunday)	11:00	Balance Capacity Bids must be submitted for the 1st day of the procurement period
D (Monday)	1:00	The 1st day of the procurement period begins

In the Balancing Capacity Market, the Balancing Service Provider undertakes to offer to the Balancing Energy Market the reserve volume that was accepted in the tendering process for the duration of the procurement period, and Fingrid will pay a Capacity Fee for the Balancing Service Provider for this.

8.1 Bidding rules

The maximum capacity for a single Capacity Bid is 50 MW and the minimum capacity is 5 MW. The Capacity Bids shall be submitted at an accuracy of 1 MW. The Balancing Service Provider must indicate separately in the Capacity Bid, if the Capacity Bid must be treated as an undivided bid.

A Balancing Service Provider can submit several Capacity Bids. The bids must not be linked to each other, and each bid is processed separately. A Capacity Bid must contain the following information:

- Product (up- or downregulation)
- Capacity, constant for one week (MW/week)
- Capacity Fee, constant for one week (€/MW/h)

1.6.2019

- Regulation Area (South/North).

Capacity Bids are submitted to Fingrid's electronic reserve trading system (Vaksi web). The process for submitting Capacity Bids is described in the instruction, *Fingrid's reserve trading and information exchange*.

8.2 Processing of bids

Fingrid's purchase decision will optimise a low procurement cost, taking into account the prices and capacities (MW) of the Capacity Bids received in the competitive tendering process and the alternative procurement sources for Frequency Restoration Reserves available for Fingrid.

If a Balancing Service Provider requires that the bid be processed undivided, the bids might not necessarily be selected in price order. Instead, Fingrid will seek the lowest procurement cost in the overall procurement. Capacity Bids that have the same price and capacity will be processed in the order they have arrived.

9 Rules for balancing capacity procured with Balancing Capacity Agreements

Fingrid can procure balancing capacity with a Balancing Capacity Agreement by arranging a 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 downregulation capacity) is determined in the tendering procedure.

A Balancing Service Provider who has a valid Balancing Capacity Agreement undertakes to offer balancing capacity to the Balancing Energy Market for the duration of the agreement period.

9.1 Bidding rules

A bid must contain the following information:

- Capacity, constant for the contract period (MW)
- Capacity Fee (€/MW/h)
- Agreement period
- Readiness to start (date).

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.

1.6.2019

9.2 Processing of bids

The procurement decisions concerning the adjustment capacity are made in view of the lowest possible procurement cost in the overall procurement of Frequency Restoration Reserves.

10 Reporting and monitoring of reserve maintenance

10.1 Real-time data

Fingrid uses real-time data to monitor the activation of the reserves. The Balancing Service Provider shall at their own expense submit to Fingrid an active power measurement of the Reserve Unit or other real-time data that enables Fingrid to verify the activation. The real-time exchange of information is subject to Fingrid's application guideline *Real-time exchange of information*.

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

10.2 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 a Balancing Market Agreement or Balancing Capacity Agreement has been concluded. In addition, the Balancing Service Provider is obligated to report the amount of the ordered regulation operations to the balance responsible party.

11 Processing of energy

Balance trade creates a delivery of energy between Fingrid and the balance responsible party of the Reserve Resource. The hourly energy generated from this is calculated as the product of the balancing power and the operating time.

The balance trades affect the balance of the balance responsible party of the Balancing Service Provider, and the created balancing energies are automatically taken into account in the imbalance settlement of the balance responsible party of the Balancing Service Provider. A Balancing Energy Bid ordered from production will be taken into account in the production balance. By the same token, a Balancing Energy Bid ordered from consumption will be taken into account in the consumption balance. Fingrid reports the volume of the Balancing Energy to the balance responsible party in the Fingrid extranet service after the operating hour, however not later than in 13 days.

12 Fees

12.1 Energy Fee on the Balancing Energy Market

When Fingrid orders an up-regulation from a Balancing Service Provider on the Balancing Energy Market, Fingrid pays the Balancing Service Provider an Energy Fee that corresponds to the purchased balancing energy. The Energy Fee is calculated

1.6.2019

by multiplying each hour of the amount of energy ordered from the Balancing Service Provider by the up-regulation price of the hour. The up-regulation price is the price of the most expensive up-regulation bid ordered (Margin Price Principle); however, at least the price for the bidding area of Finland in the Day-Ahead Market during the hour in question.

When Fingrid orders a downregulation from a Balancing Service Provider on the Balancing Energy Market, Fingrid charges the Balancing Service Provider an Energy Fee that corresponds to the balancing energy sold by Fingrid. The Energy Fee is calculated by multiplying each hour of the amount of energy delivered by Fingrid by the down-regulation price of the hour. The down-regulation price is the price of the cheapest downregulation bid ordered (Margin Price Principle); however, no more than the price for the bidding area of Finland in the Day-Ahead Market during the hour in question.

Any special regulations are priced in accordance with the Balancing Energy Bid (Pay-as-Bid principle). However, the price for up-regulation that is used for special regulation purposes is at least the same as the up-regulation price of the hour. Similarly, the price for a downregulation used for special regulation purposes, does not exceed the down-regulation price of the hour.

The Energy Fee for a Balance Capacity Bid is determined the same way as in an order for any other Balancing Energy Bid. Energy Fees do not affect the Capacity Fee paid to the Balancing Service Provider.

If the Balancing Service Provider is a balance responsible party of a Reserve Resource, the invoicing will take place in connection with imbalance power invoicing by eSett Oy. Otherwise, Fingrid will send an invoice to the Balancing Service Provider no later than in six weeks from the date of delivery. The due date of an invoice shall be 14 days from the date of the invoice. The interest on arrears is in accordance with the valid Interest Act. If Fingrid's due is more than 100 000 €, Fingrid may send an invoice immediately.

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. The complaint does not exempt a party from the payment obligation by the due date unless otherwise agreed upon in each case.

12.2 Capacity Fee on the Balancing Capacity Market

For each Capacity Bid approved by Fingrid in the competitive tendering of the Balancing Capacity Market, the Capacity Fee is determined on the basis of the most expensive approved bid (Margin Price Principle), taking into account in the adjustment procedure for the Capacity Fee below.

Fingrid will adjust the Capacity Fee to be paid to the Balancing Service Provider within 14 business days from the end of each procurement period. In the adjustment, Fingrid

1.6.2019

takes into account the actual permanence of the Balance Capacity Bid from the Balancing Capacity Market during the procurement period and the sanctions laid down in 12.2.1.

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 Balancing Capacity Bids submitted by 11:00 (EET) of the previous day as follows:

$$permanence_{hour} = \frac{\text{Balancing Capacity Bid submitted on previous day by 11:00 (MW)}}{\text{Accepted Capacity Bid by Balancing Service Provider (MW)}}$$

Permanence may not exceed 100 % for any single hour. If the Balance Capacity Bid has not been submitted by 11:00 (EET) on the previous day, or has been deleted after 11:00 (EET) 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 Balance Capacity Bid has been reduced after 11:00 o'clock on the previous day, the permanence is determined on the basis of the maintained Balance Capacity Bid. Examples of permanence determination are set out in Appendix 1 of these terms and conditions.

If the Balancing Service Provider also has a Balancing Capacity Agreement and the Balancing Service Provider has participated in the Balancing Capacity Market without maintaining in full the Balance Capacity Bid in accordance with both the Balancing Capacity Agreement and the Balancing Capacity Market during the adjustment period, the permanence is considered to be primarily fulfilled by the Balance Capacity Bid in accordance with the Balancing Capacity Agreement, as laid down in example 3 in Appendix 1 to these terms and conditions.

The permanence of the entire procurement 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.

1.6.2019

12.2.1 Sanction for deleting a Balance Capacity Bid

If a Balancing Service Provider deletes a Balance Capacity Bid that conforms to the Balancing Capacity Market or reduces the bid after 11:00 o'clock on the previous day, the Balancing Service Provider shall pay to Fingrid a sanction for the amount of the bid. The sanction is determined by hour as follows:

sanction = the deleted or reduced bid amount x 10 x Capacity Fee for the hour or

sanction = deleted or reduced bid amount x the price in the Finnish bidding zone on the Day-Ahead Market for the hour,

The sanction applied is the greater of the two.

12.2.2 Effect of the rest period

During the rest period referred to in section 5, the deletion or reduction of a Balance Capacity Bid will not cause sanctions, but the deletions and reductions do have an effect on the calculation of the permanence of the Balance Capacity Bid.

12.3 Capacity Fee pursuant to the Balancing Capacity Agreement

For each Capacity 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 adjust the Capacity Fee to be paid to a Balancing Service Provider for each week in the CET 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 Balancing 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 Balancing Capacity Bids submitted by 12:00 (EET) of the previous week's Thursday as follows:

permanence_{hour} = $\frac{\text{Balancing Capacity Bid submitted by on Thursday of the previous week 12:00 (MW)}}{\text{Contracted capacity (MW)}}$

Permanence may not exceed 100 % for any single hour. If the Balance Capacity Bid has not been submitted by 12:00 (EET) on the previous day, or has been deleted after 12:00 (EET) 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 Balance Capacity Bid has been reduced after 12:00 o'clock (EET) on the previous week's Thursday, the permanence is determined on the basis of the maintained Balance Capacity Bid. Examples of permanence determination are set out in Appendix 1 of these terms and conditions.

1.6.2019

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 offers as described in example 6 of Appendix 1 to these terms and conditions.

If the Balancing Service Provider has also participated in the Balancing Capacity Market during the adjustment period without maintaining in full the Balance Capacity Bid in accordance with both the Balancing Capacity Agreement and the Balancing Capacity Market, the permanence is considered to be primarily fulfilled by the Balance Capacity Bid in accordance with the Balancing Capacity Agreement, as laid down in example 7 in the Appendix 1 to these terms and conditions.

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 deleting a Balance Capacity Bid

If a Balancing Service Provider deletes a Balance Capacity Bid that conforms to a Balancing Capacity Agreement or reduces the bid after 12:00 o'clock on the previous week's Thursday, the Balancing Service Provider shall pay to Fingrid a sanction for the amount of the bid. The sanction is determined by hour as follows:

sanction = the deleted or reduced bid amount x 10 x Capacity Fee or

sanction = deleted or reduced bid amount x the price in the Finnish bidding zone on the Day-Ahead Market for the hour,

The sanction applied is the greater of the two.

12.3.2 Effect of the rest period

During the rest period referred to in section 5, the deletion or reduction of a Balance Capacity Bid will not cause sanctions, but the deletions and reductions do have an effect on the calculation of the permanence of the Balance Capacity Bid.

1.6.2019

12.4 Value added tax and other indirect taxes and fees

In addition to the fees mentioned in this agreement, the invoices of the Balancing Service Provider shall be supplemented by the value added tax valid at any given time and other fees and taxes imposed by the authorities that are applicable to this agreement.

13 Breach of terms

13.1 Sanction

The Balancing Service Provider Shall pay Fingrid a sanction as described in sections 12.2.1 and 12.3.1.

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

Fingrid has the right to temporarily exclude a Balancing Service Provider from the Balancing Energy and Balancing Capacity Market, if the Balancing Service Provider fails repeatedly without an acceptable reason to activate their Balancing Energy Bid in accordance with Fingrid's order 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.

13.3 Cancelling the Agreement

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 Balancing Capacity Agreement as laid down in that contract.

1.6.2019

Appendix 1, examples of determining the permanence

1. Determination of hourly permanence on the Balancing Capacity Market

A 20 MW Capacity Bid has been approved from a Balancing Service Provider.

Balance Capacity Bids (MW)			Perma- nence	Explanation
	D-1 by 11:00 o'clock	45 min before the hour of use		
00–01	20	20	100%	
01–02	30	30	100%	Permanence may not exceed 100%
02–03	10	10	50%	Bid 50% of the approved Capacity Bid
03–04	20	0	0%	Bid deleted
04–05	20	10	50%	Bid has been reduced

2. Determining the permanence coefficient on the Balancing Capacity Market

The average of hourly permanence from a week-long procurement period is

- a) 90%, permanence coefficient is 0,80.
- b) 86%, permanence coefficient is 0,72.
- c) 74.5%, permanence coefficient is 0.49.
- d) 20%, permanence coefficient is 0.

3. Determining permanence on the Balancing Capacity Market, when the Balancing Service Provider has a valid Balancing Capacity Agreement

The contractual volume in the Balancing Service Provider's Balancing Capacity Agreement is 10 MW. In addition, 10 MW has been approved from the Balancing Service Provider to the Balancing Capacity Market.

	Balance Capacity Bids in total (MW)	Permanence of the Bal- ancing Capacity Agree- ment	Permanence of the bid approved on the Balanc- ing Capacity Market
00– 01	20	100%	100%
01– 02	15	100%	50%
02– 03	10	100%	0%
03– 04	0	0%	0%

1.6.2019

4. Determination of hourly permanence of the Balancing Capacity Agreement

The Balancing Service Provider's contractual volume is 20 MW.

Balance Capacity Bids (MW)		Perma- nence	Explanation	
	W-1 by Thursday 12:00	45 min before the hour of use		
00-01	20	20	100%	
01-02	30	30	100%	Permanence may not exceed 100%
02-03	10	10	50%	Bid 50% of the contractual volume
03-04	20	0	0%	Bid deleted
04-05	20	10	50%	Bid has been reduced

5. Determining the permanence coefficient on the Balancing Capacity Agreement

The average of hourly permanence from a week-long adjustment period is

- a) 90%, permanence coefficient is 0,80.
 - b) 86%, permanence coefficient is 0,72.
 - c) 74.5%, permanence coefficient is 0.49.
 - d) 20%, permanence coefficient is 0.
6. Determining the permanence of a Balancing Capacity Agreement, when several bids have been approved of a Balancing Service Provider, each with a different price

The following bids have been approved from a Balancing Service Provider:

- Bid 1: 10 MW 1 €/MW/h
- Bid 2: 10 MW 2 €/MW/h

	Balance Capacity Bids in total (MW)	Permanence of bid 1	Permanence of bid 2
00-01	20	100%	100%
01-02	15	100%	50%
02-03	10	100%	0%
03-04	0	0%	0%

1.6.2019

7. Determining the permanence of a Balancing Capacity Agreement when the Balancing Service Provider has also participated in the Balancing Capacity Market during the adjustment period

The contractual volume in the Balancing Service Provider's Balancing Capacity Agreement is 10 MW. In addition, 10 MW has been approved from the Balancing Service Provider to the Balancing Capacity Market during the adjustment period.

	Balance Capacity Bids in total (MW)	Permanence of the Balance Capacity Bid made in accordance with the Balancing Capacity Agreement	Permanence of the Balance Capacity Bid approved on the Balancing Capacity Market
00-01	20	100%	100%
01-02	15	100%	50%
02-03	10	100%	0%
03-04	0	0%	0%