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Reliable Sustainable Connected

FCR Yearly Market – Reserve Plans

Implementation Guide

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1. Introduction

This guide contains information about the process for submitting Reserve Plans for Frequency Containment Reserves (FCR) yearly market by electronic messages. The document describes the business rules as well as provides detailed information about the messages exchanged between Fingrid and Balancing Service Provider or their service provider (both referred later as BSP).

1.1 Abbreviations

BSP   Balancing Service Provider
FCR   Frequency Containment Reserve
FCR-N   Frequency Containment Reserve, Normal operation
FCR-D   Frequency Containment Reserve, Disturbance

1.2 Change log

1.3 References

[1] urn:iec62325.351:tc57wg16:451-7:plannedresourcescheduledocument:6:3
[2] urn:iec62325.351:tc57wg16:451-1:acknowledgementdocument:8:1

2. General Rules

2.1 Trade process

BSP can submit FCR reserve plans for the next day (CET time zone) until 18.00 (EET). Fingrid is obligated to remunerate the BSP for the provided reserve plan up to the contracted amount. For each reserve plan message that the BSP (or their 3rd party data provider) sends, Fingrid responds with an acknowledgement message telling if the reserve plan message was accepted or not.

2.2 Technical Aspects

Planned Resource Schedule documents and Acknowledgement documents will be exchanged between the parties using the ECP/EDX network.

2.3 Updating and deleting of Reserve Plans

BSP or BSP's data provider can update reserve plans by sending in a new message with a new document ID. The time interval of the document is not limited. The previous values are replaced by the values in the new message. Latest successfully received value is valid.

Reserve plans can be deleted/cancelled by sending in a new message with a new document ID, where the quantities are zero for all hours that want to be cancelled.

3. Message Implementation Guide

The reserve plan submitting process can be summarized in the following steps:

1. Reserve Plans are submitted by BSP using the ENTSO-E CIM Planned Resource Schedule document [1]
2. Fingrid will always acknowledge a schedule document using a standard ENTSO-E Acknowledgement Document **Error! Reference source not found.**

3.1 Reserve bid document

3.1.1 Business rules
- Recommended maximum time interval of the Planned Resource Schedule document is 30 days.
- Revision number is always "1"
- Reserve plan volume can have one decimal.
- Decimal separator must be a period.
- Document identification must be in UUID format
- EIC code shall be used as sender identification code and subject party code.
- Time stamps must be in ISO 8601 UTC format
- It is not allowed to submit reserve plans that exceed the yearly market contracted amount

3.1.2 Mapping table

Planned Resource Schedule	
Document Identification	*Unique identification of the document in UUID format*
Revision Number	Fixed **1**
Document Type	**A26** Capacity document
Process Type	**A28** Primary reserve process
Sender Identification	*EIC party code (X) of the BSP or their service provider* **XXXXXXXXXXXXX** (BSP or their service provider) codingScheme = **A01** (EIC)
Sender Role	**A46** Balancing Service Provider **A39** Data provider, if reserve plan is provided by 3rd party
Receiver Identification	**10X1001A1001A264** (Fingrid) codingScheme = **A01** (EIC)
Receiver Role	**A04** System Operator
Created Date Time	*Date and time for creation of the document. Must include seconds without decimals* YYYY-MM-DDTHH:MM:SSZ (ISO 8601 UTC format)
Schedule Period Time Interval	*The beginning and ending date and time of the period covered by the document. Does not include seconds* YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ (ISO 8601 UTC format)
Domain	**10YFI-1--------U** codingScheme = **A01** (EIC)
Subject Party	*EIC party code (X) of the BSP for whom the reserve plan is submitted* **XXXXXXXXXXXXX** (BSP) codingScheme = **A01** (EIC)
Subject Role	**A46** Balancing Service Provider
Planned Resource Time Series	
Reserve Bid Identification	*Unique identification of the Time Series in UUID format*
Business Type	**C26** FCR-N, Frequency Containment Reserves, Normal **C27** FCR-D, Frequency Containment Reserves, Disturbance
Flow direction	**A01** FCR-D up **A02** FCR-D down **A03** FCR-N
Product	**8716867000016** – Active Power
Connecting Domain	*EIC code for the national area* **10YFI-1--------U** *"The area where the resource is located"* codingScheme = **A01** (EIC)
Resource Provider Market Participant	*EIC party code (X) of the BSP for whom the reserve plan is submitted* **XXXXXXXXXXXXX** (BSP) codingScheme = **A01** (EIC)

Market Agreement type	**A04** – yearly market
Measure Unit Quantity	**MAW**
Series Period	
Time Interval	*The time interval of the provided schedule* YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ (ISO 8601 UTC format) This shall be included in the Schedule Period Time Interval
Resolution	**PT60M** or **PT1H**
Point	
Pos	Position within the Time Interval starting from **"1"**. *(Typically running number from 1 - 24)*
Qty	*The volume of the schedule for given hour. One decimal point allowed.* *Decimal separator is a period (.).*

3.1.3 Validation of bid document

An acknowledgement document **Error! Reference source not found.** is generated either accepting the completely received document or rejecting it completely. Partly accept is never used. Figure 1 shows an example of the acknowledgement document.

Following error codes are applied:
- A01 successfully received document.
- A02 discarded document.

```xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Acknowledgement_MarketDocument xmlns="urn:iec62325.351:tc57wg16:451-1:acknowledgementdocument:8:1" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <mRID>41de47a1-9017-4a63-bbea-d221fc217400</mRID>
  <createdDateTime>2023-11-30T15:06:20Z</createdDateTime>
  <sender_MarketParticipant.mRID codingScheme="A01">10X1001A1001A264</sender_MarketParticipant.mRID>
  <sender_MarketParticipant.marketRole.type>A46</sender_MarketParticipant.marketRole.type>
  <receiver_MarketParticipant.mRID codingScheme="A01">44X-DummyBSP100</receiver_MarketParticipant.mRID>
  <receiver_MarketParticipant.marketRole.type>A46</receiver_MarketParticipant.marketRole.type>
  <received_MarketDocument.mRID>76dcf364-7736-4f86-8866-5d3311de4778</received_MarketDocument.mRID>
  <received_MarketDocument.revisionNumber>1</received_MarketDocument.revisionNumber>
  <received_MarketDocument.type>A26</received_MarketDocument.type>
  <received_MarketDocument.process.processType>A28</received_MarketDocument.process.processType>
  <received_MarketDocument.createdDateTime>2023-11-30T15:06:12Z</received_MarketDocument.createdDateTime>
  <Reason>
    <code>A01</code>
  </Reason>
</Acknowledgement_MarketDocument>
```

Figure 1 Example of acknowledgement message to schedule document

The table below contains the list of error messages that will be included in the Acknowledgement document in case validation of a bid document fails:

Description	Level of validation	Error message
Schedule Market Document:		
Document Identification is mandatory	Message	*-Message reference missing.*
Document Identification must be in UUID format	Message	*-Document Identification must be in correct format*
Document type must be filled out correctly	Message	*-DocumentType missing.* *-DocumentType for FCR Reserve Plans must be A26*
Process type must be filled out correctly	Message	*-ProcessType not valid*
Message must be received within a given time	Message	*-Message was received after deadline. Gate closure for FCR Reserve plans is D-1 18:00 EET*
Sender Identification must be connected to the Subject Party	Message	*-SenderIdentification missing* *-Sender is not connected to the Subject Party.*
Message must contain correct Receiver Identification	Message	*-ReceiverIdentification missing.* *-ReceiverIdentification is wrong*
Message must contain correct subject party	Message	*-Subject party missing* *-Subject party not found.*
Time stamp of the document must be in correct format	Message	*-createdDatetime format is incorrect* *-Decimals are not allowed in createdDatetime*
Time interval of the document must be in correct format	Message	*-SchedulePeriodTimeInterval not in correct format*
Times Series		

TimeSeries Identification is mandatory TimeSeries Identification must be in UUID format	Time series	*-TimeSeriesIdentification missing.* *-TimeSeriesIdentification must be in correct format*
Business type must be correct	Time series	*-Business type missing* *-Message can only contain FCR-N or FCR-D reserve plans*
Flow direction must be correctly specified	Time series	*-Direction required* *-Flow direction must be A03 for FCR-N (C26)* *-Flow direction must be A01 or A02 fir FCR-D (C27)*
Product definition must be Active Power	Time series	*-Product definition is wrong.*
Connecting domain must be Finland	Time series	*-Connecting domain must be 10YFI-1--------U*
Measurement unit must be MAW	Time series	*-Quantity unit must be MAW.*
marketAgreement type must be specified correctly specified	Time series	*-Market agreement type required* *-MarketAgreementType must be A04*
Time interval of the series must be in correct format	Time series	*-Period TimeInterval not in correct format*
TimeSeries interval must be included in Document time interval	Time series	*-Period is not in header timeinterval*
Bid Periods are not allowed to overlap	Time series	*-Periods are overlapping*
Resolution not specified correctly	Time series	*-Resolution must be PT60M or PT1H*
Point position within a period must begin with 1	Time series	*-Point position within a period must begin with 1* *-Point position 'x' is missing from period* *-Position 'x' is not valid for period* *-Points must be in order by position number*
Quantity is required	Time series	*-Quantity required*
Quantity must be within accepted limits	Time series	*-Quantity must equal or lower than the contracted quantity*
Quantity can have 1 decimal	Time series	*Quantity can contain maximum 1 decimal*