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IMPLEMENTATION GUIDE

AVAILABILITY DATA

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1. Scope

This document aims to clarify and describe the business processes for submitting availability data for balance-responsible parties (BRPs) for production and consumption operating in the Danish electricity market.

2. Terms and definitions

The following business types are used in the availability data document:

MessageType:
A28(Generation availability schedule): This document contains information related to energy availability.

ProcessType:
A14(Forecast): The data contained in the document are to be handled in short, medium, long term forecasting process.

RoleType:
A06(Production responsible party): The balance responsible party for production.

A04(System operator): The system operator (Energinet).

BusinessType:
A61(Maximum available): The time series specifies a plan for maximum available production for a given resource object.

3. Business process for availability data

3.1 Overview

Requirements for the availability data process are stated in market regulation C3. A 'use case' is linked to the availability data process. The process for exchanging data and the way in which this is done is described below.

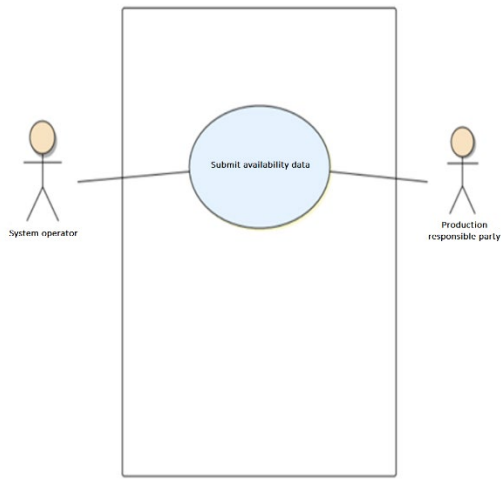

Figure 1 Use case Submit availability data

3.2 General outline

An availability data schedule contains a balance responsible party's total set of schedules for specific units.

Regulation C3, section 9, lists the production and consumption units that availability schedules must be submitted for.

The availability data schedule for BRPs for production and consumption must include the following time series:

- Schedule per unit, indicating availability of the unit.

The following information must be stated:

- Unit name
- Unit status (available, unavailable, or testing)
- Current maximum capacity

Note the following for statuses Unavailable and Testing: If it is possible that the unit will be back in operation within the 10 days stated in the forecast, the current maximum capacity that the unit can return to operation with must be stated.

3.3 Business process

Figure 2 and the following description explain the process of submitting availability data.

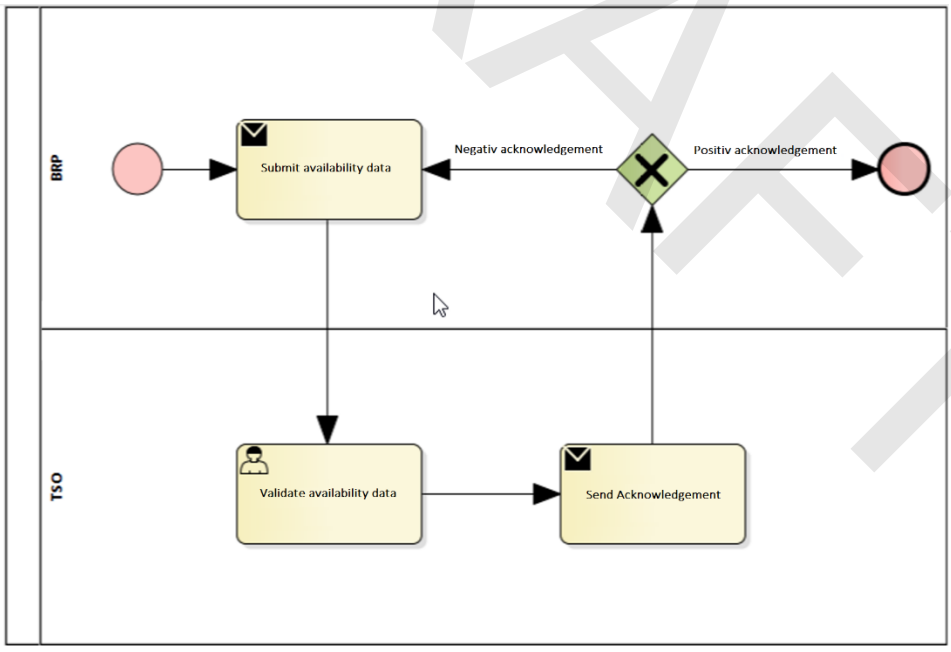

Figure 2 Schedule submission process for availability data (DK1 and DK2)

Prior to the submission of availability data, the BRP has assessed the current maximum capacity of the next 10 days for the units for which submissions must be made.

1. Send availability data

Each BRP for production and consumption with units governed by section 9 of C3 must submit availability data schedules for the next 10 days of operation. The schedules must at all times reflect current maximum capacity for all units governed by section 9 of C3. If a unit is not available and has an extended start-up warning, the schedule submitted must state that the unit is

unavailable. The extended start-up warning is indicated by specifying the maximum generation as of the hour in which the plant will become available. The schedule must always apply to the next 10 days of operation (to be reported per day).

2. Validate availability data

On receipt of availability data, Energinet will check syntax and semantics, for example that the codes used exist and the necessary elements of the message are present. The identification of the parties is verified, and a check is done of whether the schedule covers a 10-day period (a check that daily data is included).

3. Send receipt acknowledgement

Depending on whether errors are found or not, a positive or negative receipt acknowledgement will be generated, which is then sent to the party.

3.4 Business rules

All values must be indicated with a positive sign.

3.4.1 Description of parties

A participant is identified by its unique ID, irrespective of the number of roles of the participant. An approved BRP is a participant approved to handle balance responsibility for a given production unit, consumption, or trade towards Energinet. In this document, a balance responsible party is a BRP for consumption or production which is responsible for one or more electricity-generating or electricity-consuming units under section 9 of C3.

3.4.2 Dependencies with PlannedRessourceSchedule_MarketDocument

The Planned Resource Schedule market document is used to submit availability data.

	XSD requirements	
PlannedResourceSchedule_MarketDocument		
mRID	Mandatory	Senders Unique Identification
RevisionNumber	Mandatory	The revision number of the document
type	Mandatory	A28 = Generation availability schedule
process.processType	Mandatory	A14 = Forecast
sender_MarketParticipant.mRID	Mandatory	The coding scheme is the Energy Identification Coding Scheme (EIC), maintained by ENTSO-E.
		EIC for Energinet = 10X1001A1001A248
		A01=EIC
		GLN for Energinet = 5790000432752
		A10 = EAN/GLN
sender_MarketParticipant.marketRole.type	Mandatory	A06 = Production responsible party
receiver_MarketParticipant.mRID	Mandatory	The coding scheme is the Energy Identification Coding Scheme (EIC), maintained by ENTSO-E.
		A01=EIC
		A10 = EAN/GLN
receiver_MarketParticipant.marketRole.type	Mandatory	A04 = System operator
createdDateTime	Mandatory	Creation date/time of the document (in ISO 8601 UTC format)
		YYYY-MM-DDTHH:MM:00Z

schedule_Period.timeInterval	Mandatory	Period covered (in ISO 8601 UTC format) <period.timeInterval> <start>2013-07-21T22:00Z</start> <end>2013-07-31T22:00Z</end> </period.timeInterval> This should cover the complete period In relation to a CET time zone: In winter, the time spread is from 23:00 UTC to 23:00 UTC The change from winter to summer time spread is from 23:00 UTC to 22:00 UTC The summer time spread is from 22:00 UTC to 22:00 UTC The change from summer to winter time spread is from 22:00 UTC to 23:00 UTC
domain.mRID	Conditional	Not used
subject_MarketParticipant.mRID	Conditional	Not used
subject_MarketParticipant.marketRole.type	Conditional	Not used

Table 1 PlannedResourceSchedule_MarketDocument

PlannedResource_TimeSeries		
mRID	Mandatory	Unique identification of time series within the document
businessType	Mandatory	A61 = Maximum available
flowDirection.direction	Conditional	Not used
product	Mandatory	8716867000016 = Active power
connecting_Domain.mRID	Mandatory	DK1 = 10YDK-1--------W (EIC) DK2 = 10YDK-2--------M (EIC)
registeredResource.mRID	Conditional	GRSN for production/consumption unit >= 25 MW A10 = GS1, the coding scheme for the preceding attribute.
mktPSRType.psrType	Conditional	Not used
resourceProvider_MarketParticipant.mRID	Mandatory	A01=EIC The coding scheme is the Energy Identification Coding Scheme (EIC), maintained by ENTSO-E. A10 = EAN/GLN
Acquiring_Domain.mRID	Mandatory	DK1 = 10YDK-1--------W (EIC) DK2 = 10YDK-2--------M (EIC)
marketAgreement.type	Conditional	Not used
marketAgreement.mRID	Conditional	Not used
measurement_Unit.name	Mandatory	MAW = Megawatt
objectAggregation	Conditional	A06 = Resource Object. Production/consumption unit >= 25 MW

Table 2 PlannedResource_TimeSeries

UnavailableReserve_TimeSeries (associated with Original_MarketDocument)	Conditional	Not used

Table 3 UnavailableReserve_TimeSeries (associated with Original_MarketDocument)

Series_Period		
timeinterval	Mandatory	The start and end time of the first day. <period.timeInterval> <start>2013-07-21T22:00Z</start> <end>2013-07-22T22:00Z</end> </period.timeInterval>
resolution	Mandatory	PT60M or PT1H = one hour

Table 4 Series_Period

Point		
Position	Mandatory	Position within the time interval
Quantity	Mandatory	The actual production/consumption (only zero/positive values are reported) Precision is 0.1

Table 5 Point

Reason (On Point level)		
Code	Mandatory	Only when unavailable: B18 = Failure (Outage) B19 = Foreseen maintenance (Testing)
Text	Conditional	Not used

Table 6 Reason (On Point level)

4. Assembly Model's References

IEC 62325-451-7 – Planned Resource Schedule

IEC 62325-451-7 – Resource Schedule Confirmation