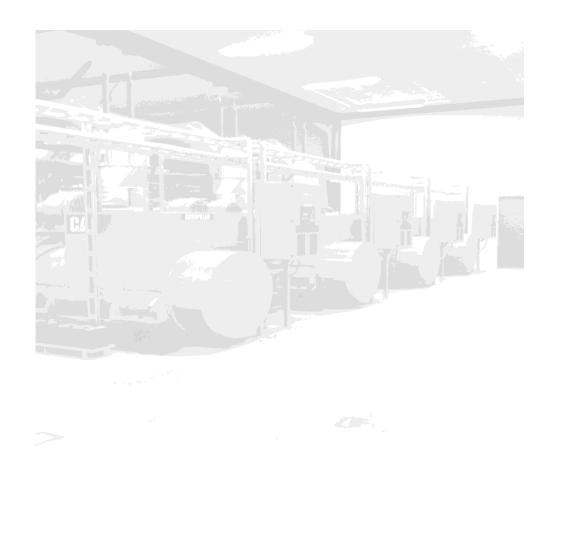
TEST OF REGULATORY POWER PLANT

Plant:

Tested by/date:



29-08-2024

	Identification
1	Plant name:
2.	Plant GSRN no.:
3.	Serial number of electricity consumption plant:
4.	Plant type:
5.	Contact person of the plant:
6	Address of the plant:
7.	Plant owner:
8	Address of owner:
9.	Balance Responsible Party:
	System performance
1	□ FFR
	□ FCR □ FCR-N
	□ FCR-D
	□ mFRR
	□ aFRR
	Plant data
1	Commissioning
_	date
	60 kV Station
	Connection type
	U _N
	I _N
	P _N
	P _{MIN}
	P _{MAX}
	P _{BID}
	Description of network connection
1	Voltage level at connection point:
1	Possible restrictions in connection point: ☐ No ☐ Yes
	General functional requirements.
1	The general functional requirements for the different types of reserves can be found in the
	specific document for prequalification of reserves for, respectively:

Doc.: 13/80940-95 Classification: Public/public

Requirements specification and testing of FFR
Requirements specification and testing of FCR
Requirements specification and testing of FCR-D
Requirements specification and testing of FCR-N
Requirements specification and testing of aFRR
Requirements specification and testing of mFRR

	Regulation
10	\square Remote control from the system responsible company responsible for the system via the
	balance responsible
	☐ Remote control from the Balance Responsible Party

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Testing

11 Test conditions

All costs related to testing/function control are borne by the supplier.

The test is approved when the plant has completed the test sequences required for the specific reserve type without errors and with constantly stable parameters for example voltage, power, temperature and pressure etc.

If errors occur during the test, the test must be interrupted. If the error is due to a defective component and the component can be immediately located and replaced, it can be agreed that the test is resumed from the beginning. If errors occur during a resumed test, the test is interrupted.

If the error has arisen as a result of errors in the plant's control and regulation system, a new date for testing will be agreed when there is an explanation of what additions/changes have subsequently been made to the regulation system.

A new date for testing is agreed when there is documentation that the plant has undergone a new internal test.

12 Preparation for the test

- a. The plant must be synchronized on the network.
- b. The plant must be set to run the reserve and status indications must be able to be transferred to Energinet.dk.
- c. The system must be prepared to be able to apply a test signal as an addition to the locally measured frequency in steps of 5 mHz. The changes in the frequency's target value must take place at a speed of at least 100 mHz/s (only relevant for FCR services).
- d. Maximum possible reserve power must be set on the plant.
- e. Data for power regulation, frequency deviation and power plan must be able to be "logged" and saved locally.

13 Test sequence

The specific test sequences for the different types of reserves can be found in the specific document for prequalification of reserves for respectively:

Requirements specification and testing of FFR

Requirements specification and testing of FCR

Requirements specification and testing of FCR-D

Requirements specification and testing of FCR-N

Requirements specification and testing of aFRR

Requirements specification and testing of mFRR

29-08-2024

Test results

14 Logged data

The following parameters must be logged during the test:

- Online measurement for active power.
- Frequency supplement signal regulator is pressed (only FCR services).
- Effect plan (only FRR benefits).

15 Result format

The format of the test results must be provided as either;

- csv file,
- Xcel file,
- SCADA print* or
- Other formats can be agreed upon.

*Only accepted if resolution and time scaling are of a quality that enables verification of the technical requirements for system performance.

	Notes for the test
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