

TEST OF REGULATORY POWER PLANT

Plant:

Tested by/date:



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	<input type="checkbox"/> FFR <input type="checkbox"/> FCR <input type="checkbox"/> FCR-N <input type="checkbox"/> FCR-D <input type="checkbox"/> mFRR <input type="checkbox"/> 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: <input type="checkbox"/> No <input type="checkbox"/> 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:

	<p>Requirements specification and testing of FFR</p> <p>Requirements specification and testing of FCR</p> <p>Requirements specification and testing of FCR-D</p> <p>Requirements specification and testing of FCR-N</p> <p>Requirements specification and testing of aFRR</p> <p>Requirements specification and testing of mFRR</p>
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	Regulation
10	<p><input type="checkbox"/> Remote control from the system responsible company responsible for the system via the balance responsible</p> <p><input type="checkbox"/> Remote control from the Balance Responsible Party</p>

Testing	
11	<p>Test conditions</p> <p>All costs related to testing/function control are borne by the supplier.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>A new date for testing is agreed when there is documentation that the plant has undergone a new internal test.</p>
12	<p>Preparation for the test</p> <ol style="list-style-type: none"> 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	<p>Test sequence</p> <p>The specific test sequences for the different types of reserves can be found in the specific document for prequalification of reserves for respectively:</p> <p>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</p>

Test results	
14	<p>Logged data</p> <p>The following parameters must be logged during the test:</p> <ul style="list-style-type: none"> • Online measurement for active power. • Frequency supplement signal regulator is pressed (only FCR services). • Effect plan (only FRR benefits).
15	<p>Result format</p> <p>The format of the test results must be provided as either;</p> <ul style="list-style-type: none"> • csv file, • Xcel file, • SCADA print* or • Other formats can be agreed upon. <p>*Only accepted if resolution and time scaling are of a quality that enables verification of the technical requirements for system performance.</p>
Notes for the test	
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