

Commission Regulation (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration (Text with EEA relevance)

CHAPTER VI

COMPLIANCE AND REVIEW

SECTION 1

Compliance testing of TSO, DSO and SGU capabilities

Article 43

General principles

1 Each TSO shall periodically assess the proper functioning of all equipment and capabilities considered in the system defence plan and the restoration plan. To this end, each TSO shall periodically verify the compliance of such equipment and capabilities, in accordance with paragraph 2 and with Article 41(2) of Regulation (EU) 2016/631, Article 35(2) of Regulation (EU) 2016/1388 and Article 69(1) and (2) of Regulation (EU) 2016/1447.

2 By 18 December 2019 each TSO shall define a test plan in consultation with the DSOs, the SGUs identified pursuant to Articles 11(4) and 23(4), the defence service providers and the restoration service providers. The test plan shall identify the equipment and capabilities relevant for the system defence plan and the restoration plan that have to be tested.

3 The test plan shall include the periodicity and conditions of the tests, following the minimum requirements outlined in Articles 44 to 47. The test plan shall follow the methodology laid down in Regulation (EU) 2016/631, Regulation (EU) 2016/1388 and Regulation (EU) 2016/1447 for the corresponding tested capability. For SGUs that are not subject to Regulation (EU) 2016/631, Regulation (EU) 2016/1388 and Regulation (EU) 2016/1447, the test plan shall follow the provisions of national law.

4 Each TSO, DSO, SGU, defence service provider and restoration service provider shall not endanger the operational security of the transmission system and of the interconnected transmission system during the test. The test shall be conducted in a way that minimises the impact on system users.

5 The test is deemed to be successful when it fulfils the conditions established by the relevant system operator pursuant to paragraph 3. As long as a test fails to fulfil these criteria, the TSO, DSO, SGU, defence service provider and restoration service provider shall repeat the test.

Article 44

Compliance testing of power generating module capabilities

1 Each restoration service provider which is a power generating module delivering black start service shall execute a black start capability test, at least every three years, following the methodology laid down in Article 45(5) of Regulation (EU) 2016/631.

Status: Point in time view as at 31/01/2020.

Changes to legislation: There are outstanding changes not yet made to Commission Regulation (EU) 2017/2196. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details)

2 Each restoration service provider which is a power generating module delivering a quick re-synchronisation service shall execute tripping to houseload test after any changes of equipment having an impact on its houseload operation capability, or after two unsuccessful consecutive tripping in real operation, following the methodology laid down in Article 45(6) of Regulation (EU) 2016/631.

Article 45

Compliance testing of demand facilities providing demand side response

1 Each defence service provider delivering demand response shall execute a demand modification test, after two consecutive unsuccessful responses in real operation or at least every year, following the methodology laid down in Article 41(1) of Regulation (EU) 2016/1388.

2 Each defence service provider delivering demand response low frequency demand disconnection shall execute a low frequency demand disconnection test within a period to be defined at national level and following the methodology laid down in Article 37(4) of Regulation (EU) 2016/1388 for transmission connected demand facilities or according to a similar methodology defined by the relevant system operator for other demand facilities.

Article 46

Compliance testing of HVDC capabilities

Each restoration service provider which is an HVDC system delivering a black start service shall execute a black start capability test, at least every three years, following the methodology laid down in Article 70(11) of Regulation (EU) 2016/1447.

Article 47

Compliance testing of low frequency demand disconnection relays

Each DSO and TSO shall execute testing on the low frequency demand disconnection relays implemented on its installations, within a period to be defined at national level and following the methodology laid down in Article 37(6) and Article 39(5) of Regulation (EU) 2016/1388.

Article 48

Testing of communication systems

1 Each DSO and SGU identified pursuant to Article 23(4), each TSO and each restoration service provider shall test the communication systems defined in Article 41, at least every year.

2 Each DSO and SGU identified pursuant to Article 23(4), each TSO and each restoration service provider shall test the backup power supply of their communication systems at least every five years.

3 By 18 December 2024 each TSO, in consultation with other TSOs, shall define a test plan for testing the inter-TSO communication.

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Article 49

Testing of tools and facilities

1 Each TSO shall test the capability of main and backup power sources to supply its main and backup control rooms, provided for in Article 42, at least every year.

2 Each TSO shall test the functionality of critical tools and facilities referred to in Article 24 of Regulation (EU) 2017/1485, at least every three years, covering both main and backup tools and facilities. Where these tools and facilities involve DSOs or SGUs, these parties shall participate in this test.

3 Each TSO shall test the capability of backup power sources to supply essential services of the substations identified as essential for the restoration plan procedures pursuant to Article 23(4), at least every five years. When these substations are in distribution systems, DSOs shall execute this test.

4 Each TSO shall test the transfer procedure for moving from the main control room to the backup control room, provided for in Article 42(4), at least every year.

SECTION 2

Compliance testing and review of system defence plans and restoration plans

Article 50

Compliance testing and periodic review of the system defence plan

1 Each DSO concerned by the implementation of the low frequency demand disconnection on its installations shall update once a year the communication to the notifying system operator provided for in point (b) of Article 12(6). This communication shall include the frequency settings at which netted demand disconnection is initiated and the percentage of netted demand disconnected at every such setting.

2 Each TSO shall monitor the proper implementation of the low frequency demand disconnection on the basis of the yearly written communication referred to in paragraph 1 and on the basis of implementation details of TSOs' installations where applicable.

3 Each TSO shall review, at least every five years, its complete system defence plan to assess its effectiveness. The TSO shall in this review take into account at least:

- a the development and evolution of its network since the last review or first design;
- b the capabilities of new equipment installed on the transmission and distribution systems since the last review or first design;
- c the SGUs commissioned since the last review or first design, their capabilities and relevant services offered;
- d the tests carried out and the analysis of system incidents pursuant to Article 56(5) of Regulation (EU) 2017/1485; and
- e the operational data collected during normal operation and after disturbance.

4 Each TSO shall review the relevant measures of its system defence plan in accordance with paragraph 3 before any substantial change in the configuration of the grid.

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5 When the TSO identifies the need to adapt the system defence plan, it shall amend its system defence plan and implement these amendments in accordance with points (c) and (d) of Article 4(2) and Articles 11 and 12.

Article 51

Compliance testing and periodic review of the restoration plan

1 Each TSO shall review the measures of its restoration plan using computer simulation tests, using data from the DSOs identified pursuant to Article 23(4) and the restoration service providers, at least every five years. The TSO shall define these simulation tests in a dedicated testing procedure covering at least:

- a the energising restoration path from restoration service providers with black start or island operation capabilities;
- b the supply of power generating modules main auxiliaries;
- c the demand reconnection process; and
- d the process for resynchronisation of networks in island operation.

2 In addition, where deemed necessary by the TSO for the effectiveness of the restoration plan, each TSO shall execute operational testing of parts of the restoration plan, in coordination with the DSOs identified pursuant to Article 23(4) and the restoration service providers. The TSO shall set out, in consultation with the DSOs and restoration service providers, those operational tests in a dedicated testing procedure.

3 Each TSO shall review its restoration plan to assess its effectiveness, at least every five years.

4 Each TSO shall review the relevant measures of its restoration plan in accordance with paragraph 1 and review their effectiveness before any substantial change in the configuration of the grid.

5 When the TSO identifies the need to adapt the restoration plan, it shall amend its restoration plan and implement these amendments in accordance with points (c) and (d) of Article 4(2) and Articles 23 and 24.

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