

Commission Regulation (EU) 2016/1388 of 17 August 2016 establishing  
a Network Code on Demand Connection (Text with EEA relevance)

TITLE II

**CONNECTION OF TRANSMISSION-CONNECTED  
DEMAND FACILITIES, TRANSMISSION-CONNECTED  
DISTRIBUTION FACILITIES AND DISTRIBUTION SYSTEMS**

CHAPTER I

**General requirements**

Article 19

**Demand disconnection and demand reconnection**

1 All transmission-connected demand facilities and transmission-connected distribution systems shall fulfil the following requirements related to low frequency demand disconnection functional capabilities:

- a each transmission-connected distribution system operator and, where specified by the TSO, transmission-connected demand facility owner, shall provide capabilities that enable automatic ‘low frequency’ disconnection of a specified proportion of their demand. The relevant TSO may specify a disconnection trigger based on a combination of low frequency and rate-of-change-of-frequency;
- b the low frequency demand disconnection functional capabilities shall allow for disconnecting demand in stages for a range of operational frequencies;
- c the low frequency demand disconnection functional capabilities shall allow for operation from a nominal Alternating Current (‘AC’) input to be specified by the relevant system operator, and shall meet the following requirements:
  - (i) frequency range: at least between 47-50 Hz, adjustable in steps of 0,05 Hz;
  - (ii) operating time: no more than 150 ms after triggering the frequency setpoint;
  - (iii) voltage lock-out: blocking of the functional capability shall be possible when the voltage is within a range of 30 to 90 % of reference 1 pu voltage;
  - (iv) provide the direction of active power flow at the point of disconnection;
- d the AC voltage supply used in providing low frequency demand disconnection functional capabilities, shall be provided from the network at the frequency signal measuring point, as used in providing functional capabilities in accordance with paragraph 1(c), so that the frequency of the low frequency demand disconnection functional capabilities supply voltage is the same as the one of the network.

2 With regard to low voltage demand disconnection functional capabilities, the following requirements shall apply:

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- a the relevant TSO may specify, in coordination with the transmission-connected distribution system operators, low voltage demand disconnection functional capabilities for the transmission-connected distribution facilities;
  - b the relevant TSO may specify, in coordination with the transmission-connected demand facility owners, low voltage demand disconnection functional capabilities for the transmission-connected demand facilities;
  - c based on the TSO's assessment concerning system security, the implementation of on load tap changer blocking and low voltage demand disconnection shall be binding for the transmission-connected distribution system operators;
  - d if the relevant TSO decides to implement a low voltage demand disconnection functional capability, the equipment for both on load tap changer blocking and low voltage demand disconnection shall be installed in coordination with the relevant TSO;
  - e the method for low voltage demand disconnection shall be implemented by relay or control room initiation;
  - f the low voltage demand disconnection functional capabilities shall have the following features:
    - (i) the low voltage demand disconnection functional capability shall monitor the voltage by measuring all three phases;
    - (ii) blocking of the relays' operation shall be based on direction of either active power or reactive power flow.
- 3 With regard to blocking of on load tap changers, the following requirements shall apply:
- a if required by the relevant TSO, the transformer at the transmission-connected distribution facility shall be capable of automatic or manual on load tap changer blocking;
  - b the relevant TSO shall specify the automatic on load tap changer blocking functional capability.
- 4 All transmission-connected demand facilities and transmission-connected distribution systems shall fulfil the following requirements related to disconnection or reconnection of a transmission-connected demand facility or a transmission-connected distribution system:
- a with regard to the capability of reconnection after a disconnection, the relevant TSO shall specify the conditions under which a transmission-connected demand facility or a transmission-connected distribution system is entitled to reconnect to the transmission system. Installation of automatic reconnection systems shall be subject to prior authorisation by the relevant TSO;
  - b with regard to reconnection of a transmission-connected demand facility or a transmission-connected distribution system, the transmission-connected demand facility or the transmission-connected distribution system shall be capable of synchronisation for frequencies within the ranges set out in Article 12. The relevant TSO and the transmission-connected demand facility owner or the transmission-connected distribution system operator shall agree on the settings of synchronisation devices prior to connection of the transmission-connected demand facility or the transmission-connected distribution system, including voltage, frequency, phase angle range and deviation of voltage and frequency;
  - c a transmission-connected demand facility or a transmission-connected distribution facility shall be capable of being remotely disconnected from the transmission system when required by the relevant TSO. If required, the automated disconnection equipment for reconfiguration of the system in preparation for block loading shall be specified

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by the relevant TSO. The relevant TSO shall specify the time required for remote disconnection.

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**Changes and effects yet to be applied to :**

- Regulation revoked by [S.I. 2019/533 reg. 5\(b\)](#) (This amendment not applied to legislation.gov.uk. Reg. 5 revoked on the day before IP completion day by S.I. 2019/1104, regs. 1(2), 2)

**Changes and effects yet to be applied to the whole legislation item and associated provisions**

- Title 6 omitted by [S.I. 2020/1006 Sch. 2 para. 22](#)
- Signature words omitted by [S.I. 2020/1006 Sch. 2 para. 24](#)
- Annex 1 word substituted by [S.I. 2020/1006 Sch. 2 para. 25\(c\)\(i\)](#)
- Annex 1 word substituted by [S.I. 2020/1006 Sch. 2 para. 25\(c\)\(ii\)](#)
- Annex 1 word substituted by [S.I. 2020/1006 Sch. 2 para. 25\(c\)\(iii\)](#)
- Annex 1 word substituted by [S.I. 2020/1006 Sch. 2 para. 25\(c\)\(iv\)](#)
- Annex 1 word substituted by [S.I. 2020/1006 Sch. 2 para. 25\(c\)\(v\)](#)
- Annex 1 word substituted by [S.I. 2020/1006 Sch. 2 para. 25\(c\)\(vi\)](#)
- Annex 1 word substituted by [S.I. 2020/1006 Sch. 2 para. 25\(c\)\(vii\)](#)
- Annex 1 words omitted by [S.I. 2020/1006 Sch. 2 para. 25\(a\)](#)
- Annex 1 words omitted by [S.I. 2020/1006 Sch. 2 para. 25\(b\)](#)
- Annex 1 words omitted by [S.I. 2020/1006 Sch. 2 para. 25\(d\)](#)
- Annex 1 words omitted by [S.I. 2020/1006 Sch. 2 para. 25\(e\)](#)
- Annex 2 word substituted by [S.I. 2020/1006 Sch. 2 para. 26\(a\)\(iii\)\(aa\)](#)
- Annex 2 word substituted by [S.I. 2020/1006 Sch. 2 para. 26\(a\)\(iii\)\(bb\)](#)
- Annex 2 word substituted by [S.I. 2020/1006 Sch. 2 para. 26\(b\)\(iii\)\(aa\)](#)
- Annex 2 word substituted by [S.I. 2020/1006 Sch. 2 para. 26\(b\)\(iii\)\(bb\)](#)
- Annex 2 word substituted by [S.I. 2020/1006 Sch. 2 para. 26\(b\)\(iii\)\(cc\)](#)
- Annex 2 words omitted by [S.I. 2020/1006 Sch. 2 para. 26\(a\)\(i\)](#)
- Annex 2 words omitted by [S.I. 2020/1006 Sch. 2 para. 26\(a\)\(ii\)](#)
- Annex 2 words omitted by [S.I. 2020/1006 Sch. 2 para. 26\(a\)\(iv\)](#)
- Annex 2 words omitted by [S.I. 2020/1006 Sch. 2 para. 26\(a\)\(v\)](#)
- Annex 2 words omitted by [S.I. 2020/1006 Sch. 2 para. 26\(b\)\(i\)](#)
- Annex 2 words omitted by [S.I. 2020/1006 Sch. 2 para. 26\(b\)\(ii\)](#)
- Annex 2 words omitted by [S.I. 2020/1006 Sch. 2 para. 26\(b\)\(iv\)](#)
- Annex 2 words omitted by [S.I. 2020/1006 Sch. 2 para. 26\(b\)\(v\)](#)
- Art. 2(5) words substituted by [S.I. 2020/1006 Sch. 2 para. 1\(4\)\(b\)\(i\)](#)
- Art. 2(5) words substituted by [S.I. 2020/1006 Sch. 2 para. 1\(4\)\(b\)\(ii\)](#)
- Art. 3(2)(a) words substituted by [S.I. 2020/1006 Sch. 2 para. 2\(3\)](#)
- Art. 4(1)(a)(iii) word omitted by [S.I. 2020/1006 Sch. 2 para. 3\(2\)\(b\)\(i\)](#)
- Art. 4(1)(a)(iii) words omitted by [S.I. 2020/1006 Sch. 2 para. 3\(2\)\(b\)\(ii\)](#)
- Art. 4(1)(a)(ii) word omitted by [S.I. 2020/1006 Sch. 2 para. 3\(2\)\(a\)\(i\)](#)
- Art. 4(1)(a)(ii) words omitted by [S.I. 2020/1006 Sch. 2 para. 3\(2\)\(a\)\(ii\)](#)
- Art. 4(1)(b) words substituted by [S.I. 2020/1006 Sch. 2 para. 3\(2\)\(c\)](#)
- Art. 4(2)(b) words substituted by [S.I. 2020/1006 Sch. 2 para. 3\(3\)\(a\)\(i\)](#)
- Art. 4(2)(b) words substituted by [S.I. 2020/1006 Sch. 2 para. 3\(3\)\(a\)\(ii\)](#)
- Art. 4(2)(b) words substituted by [S.I. 2020/1006 Sch. 2 para. 3\(3\)\(a\)\(iii\)](#)
- Art. 4(4)(b) word omitted by [S.I. 2020/1006 Sch. 2 para. 3\(5\)\(a\)](#)
- Art. 4(4)(b) words omitted by [S.I. 2020/1006 Sch. 2 para. 3\(5\)\(b\)](#)
- Art. 6(3)(d) words omitted by [S.I. 2020/1006 Sch. 2 para. 4\(4\)\(b\)](#)
- Art. 6(3)(f) word substituted by [S.I. 2020/1006 Sch. 2 para. 4\(4\)\(c\)](#)
- Art. 19(1)(c)(i) word substituted by [S.I. 2020/1006 Sch. 2 para. 11](#)

- Art. 29(2)(f) word substituted by S.I. 2020/1006 Sch. 2 para. 12(b)
- Art. 29(2)(g) word substituted by S.I. 2020/1006 Sch. 2 para. 12(c)(i)
- Art. 29(2)(g) word substituted by S.I. 2020/1006 Sch. 2 para. 12(c)(ii)
- Art. 42(3)(a) words substituted by S.I. 2020/1006 Sch. 2 para. 13
- Art. 48(3)(b) words omitted by S.I. 2020/1006 Sch. 2 para. 14(2)
- Art. 49(2)(c) words substituted by S.I. 2020/1006 Sch. 2 para. 15