

Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (Text with EEA relevance)

PART II

OPERATIONAL SECURITY

TITLE 1

OPERATIONAL SECURITY REQUIREMENTS

CHAPTER 1

System states, remedial actions and operational security limits

Article 18

Classification of system states

- 1 A transmission system shall be in the normal state when all of the following conditions are fulfilled:
 - a voltage and power flows are within the operational security limits defined in accordance with Article 25;
 - b frequency meets the following criteria:
 - (i) the steady state system frequency deviation is within the standard frequency range; or
 - (ii) the absolute value of the steady state system frequency deviation is not larger than the maximum steady state frequency deviation and the system frequency limits established for the alert state are not fulfilled;
 - c active and reactive power reserves are sufficient to withstand contingencies from the contingency list defined in accordance with Article 33 without violating operational security limits;
 - d operation of the concerned TSO's control area is and will remain within operational security limits after the activation of remedial actions following the occurrence of a contingency from the contingency list defined in accordance with Article 33.
- 2 A transmission system shall be in the alert state when:
 - a voltage and power flows are within the operational security limits defined in accordance with Article 25; and
 - b the TSO's reserve capacity is reduced by more than 20 % for longer than 30 minutes and there are no means to compensate for that reduction in real-time system operation; or
 - c frequency meets the following criteria:
 - (i) the absolute value of the steady state system frequency deviation is not larger than the maximum steady state frequency deviation; and

Changes to legislation: Commission Regulation (EU) 2017/1485, Article 18 is up to date with all changes known to be in force on or before 11 June 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

- (ii) the absolute value of the steady state system frequency deviation has continuously exceeded 50 % of the maximum steady state frequency deviation for a time period longer than the alert state trigger time or the standard frequency range for a time period longer than time to restore frequency; or
 - d at least one contingency from the contingency list defined in accordance with Article 33 leads to a violation of the TSO's operational security limits, even after the activation of remedial actions.
- 3 A transmission system shall be in the emergency state when at least one of the following conditions is fulfilled:
- a there is at least one a violation of a TSO's operational security limits defined in accordance with Article 25;
 - b frequency does not meet the criteria for the normal state and for the alert state defined in accordance with paragraphs 1 and 2;
 - c at least one measure of the TSO's system defence plan is activated;
 - d there is a failure in the functioning of tools, means and facilities defined in accordance with Article 24(1), resulting in the unavailability of those tools, means and facilities for longer than 30 minutes.
- 4 A transmission system shall be in the blackout state when at least one of the following conditions is fulfilled:
- a loss of more than 50 % of demand in the concerned TSO's control area;
 - b total absence of voltage for at least three minutes in the concerned TSO's control area, leading to the triggering of restoration plans.

A TSO of [^{F1}the GB synchronous area] may develop a proposal specifying the level of demand loss at which the transmission system shall be in the blackout state. The TSOs of [^{F1}the GB synchronous area] shall notify this instance to [^{F2}the regulatory authority].

- 5 A transmission system shall be in the restoration state when a TSO, being in the emergency or blackout state, has started to activate measures of its restoration plan.

Textual Amendments

- F1** Words in Art. 18(4) substituted (E.W.S.) (31.12.2020) by [The Electricity Network Codes and Guidelines \(System Operation and Connection\) \(Amendment etc.\) \(EU Exit\) Regulations 2019](#) (S.I. 2019/533), reg. 1(2), **Sch. 1 para. 19(a)** (as amended by S.I. 2020/1016, regs. 1(2), 6(2)); 2020 c. 1, Sch. 5 para. 1(1)
- F2** Words in Art. 18(4) substituted (E.W.S.) (31.12.2020) by [The Electricity Network Codes and Guidelines \(System Operation and Connection\) \(Amendment etc.\) \(EU Exit\) Regulations 2019](#) (S.I. 2019/533), reg. 1(2), **Sch. 1 para. 19(b)** (as amended by S.I. 2020/1016, regs. 1(2), 6(2)); 2020 c. 1, Sch. 5 para. 1(1)

Changes to legislation:

Commission Regulation (EU) 2017/1485, Article 18 is up to date with all changes known to be in force on or before 11 June 2024. There are changes that may be brought into force at a future date. Changes that have been made appear in the content and are referenced with annotations.

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

- Art. 2(3A) inserted by [S.I. 2019/533 Sch. 1 para. 3\(5\)](#) (This amendment not applied to legislation.gov.uk. Sch. 1 para. 3(5) omitted (15.9.2020) by virtue of S.I. 2020/1016, regs. 1(2), 6(3)(a))
- Art. 3.2(168) omitted by [S.I. 2024/706 reg. 44\(a\)\(iii\)](#)
- Art. 55(d) words inserted by [S.I. 2019/533 Sch. 1 para. 44\(2\)\(b\)](#) (This amendment not applied to legislation.gov.uk. Sch. 1 para. 44(2)(b) substituted (15.9.2020) by S.I. 2020/1016, regs. 1(2), 6(3)(j))