

# Connection & Compliance processes

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## Title 2 : Requirements

- General Requirements (GR)
  - Type A power generating module : frequency stability (fs)
  - Type B power generating module : Previous + fs, rob., system restoration (sr), general system management (gsm)
  - Type C power generating module : Previous + fs, voltage stability (vs), rob., sr, gsm
  - Type D power generating module : Previous + fs, vs, rob., sr, gsm
- Requirements for synchronous power generator module
  - Type B synchronous power generator module : GR + vs, rob.
  - Type C synchronous power generator module: GR + Previous + vs
  - Type D synchronous power generator module: GR + Previous + vs
- Requirements for power park module
  - Type B: GR + vs, rob
  - Type C: GR + Previous + vs+ fs
  - Type D = GR + Previous
- Requirements for offshore power park module
  - Frequency stability
  - Voltage stability
  - Robustness
  - System restoration
  - General system management

## Title 3 Operational notification procedure for connection

- Operational notification procedure for connection of new power generating modules
  - Type A power generating module
  - Type B,C power generating module
  - Type D : EON, ION, FON, LON
- Operational notification procedure for connection of existing power generating modules
  - Identification of costs and benefits of application of rules to existing power generating modules

## Title 4 : Compliance

- Compliance monitoring
  - Responsibility of the power generating facility owner
  - Tasks of the network operator
- Compliance testing for synchronous power generating modules
  - Type B
  - Type C
  - Type D
- Compliance testing for power park modules
  - Type B
  - Type C
  - Type D
- Compliance testing for offshore power park modules
- Compliance simulations for synchronous power generating modules
  - Type B
  - Type C
  - Type D
- Compliance simulations power park modules
  - Type B
  - Type C
  - Type D

# DCC table of content

## Title 2 : Requirements

- Requirements for transmission connected (TC) facilities, TC distribution systems and distribution systems connections
  - General requirements
    - Frequency
    - Voltage
    - Short Circuit
    - Reactive power
    - Protection
    - Control
    - Information exchange
    - Demand disconnection for system defense and reconnection
    - Power quality
  - Simulation models
  - Operational notification procedure for TC facilities, TC distribution systems and distribution systems connections
    - EON
    - ION
    - FON
    - LON

## Title 3: Requirements for connection of DSR

- General Requirements
  - General provision for DSR services
  - Specific provision for DSR with Active power, reactive power & transmission constraint management
  - Specific provision for DSR with System frequency control
  - Specific provision for DSR with Very fast active power control
- Operational procedure for connection of DSR
  - Below 1000V
  - Above 1000V

## Title 4: Compliance

- Roles and responsibilities
  - Responsibilities of demand facility owner & the DSO
  - Task for the relevant system operator
- Compliance testing
  - Common provisions for compliance testing
  - Compliance testing for disconnection for system defense and reconnection of TC distribution systems
  - Compliance testing for disconnection for system defense and reconnection of TC demand facilities
  - Compliance testing of demand side response for demand facilities or closed distribution systems
- Compliance simulations
  - Common provisions on compliance simulations
  - Compliance simulations for reactive power ranges of TC distribution systems
  - Compliance simulations for reactive power ranges of TC demand facilities
  - Compliance simulations for very fast active power control of demand facilities or closed distribution systems
- Compliance monitoring
  - Compliance monitoring for TC distribution systems
  - Compliance monitoring for TC demand facilities

## Title 5

- Cost benefit analysis

## Actual

## Futur

1. Connection study
2. Connection contract
3. Realisation of the connection
  - a. EON = Energisation Operational Notification
  - b. ION = Interim Operational Notification
  - c. FON = Final Operational Notification
4. Operation of the connection
  - d. LON = FON = Final Operational Notification

# EON / ION / FON

- EON = energisation of the internal network by using the network connection
  - fulfilment of the requirements of the relevant TSO in the relevant operational procedures
  - agreement on the protection and control

## EON / ION / FON

- ION = operate the transmission connected demand facility or the transmission connected distribution system by using the network connection for a limited period of time
  - an interim statement of compliance;
  - detailed technical data with relevance to the network connection, that is defined by the connection point, as specified by the relevant TSO;
  - equipment certificates of transmission connected demand facilities and distribution system connections
  - studies demonstrating expected steady-state and dynamic performance
  - details of intended practical method of completing compliance tests

## EON / ION / FON

- FON = operate the transmission connected demand facility or the transmission connected distribution system by using the network connection
  - an itemised statement of compliance
  - an update of applicable technical data, simulation models and studies including the use of actual measured values during testing.

# Operational notification procedure

