Grid Connection European Stakeholder Committee

TSO - TSO / TSO - DSO COOPERATION IN CNC IMPLEMENTATION

Dr. Ralph Pfeiffer

Ljubljana

09. December 2016

entsoe

Reliable Sustainable Connected

Implementation of requirements related to frequency stability

- 3rd GC ESC, 08. September 2016: ENTSO-E to propose how to elaborate recommendations for frequency stability criteria taking into account the interdependencies between connection and operation code with a particular focus on TSO-TSO cooperation and stakeholder involvement
- ENTSO-E will conduct a public stakeholder workshop in Q1/2017 on requirements related to frequency stability
- Scope / objective of this workshop will include:
  - Future system challenges due to high instantaneous penetration of non-synchronous generation and consequences on dynamic system characteristics
  - TSO studies on parameters for requirements related to frequency stability
    - System inertia
    - RoCoF
    - FSM
    - LFSM-O/-U

TSO – TSO / TSO – DSO cooperation

- CNCs explicitly require cooperation:
  - RfG:
    - capacity thresholds for generator type classification,
    - LFSM-O parameters,
    - LFSM-U parameters
  - DCC:
    - low-frequency demand disconnection,
    - power quality parameters,
    - demand response - system frequency control parameters
  - HVDC:
    - automatic remedial actions,
    - loss of active power,
    - reference voltages

TSO – TSO / TSO – DSO cooperation / collaboration

- TSO – TSO collaboration is a matter of course for ENTSO-E, e.g. studies on system security / system operation / future system challenges
- ENTSO-E supports cooperation and collaboration through a platform for information exchange (Active Library)
- ENTSO recommends and encourages collaboration of TSOs and DSOs beyond the CNC obligations for coordination through several IGDs
  - Making non-mandatory requirements at European level mandatory at national level
  - Parameters of non-exhaustive requirements

Evidence of cooperation / collaboration

- Workshop, Expert Groups, IGD drafting, public consultation on IGD are clear evidence of cooperation/collaboration between TSOs, DSOs and stakeholders
- Recently, ENTSO has established two expert groups
  - Compliance monitoring
  - Fast Fault Current Injection (scope will be most likely widened to more criteria for future dynamic system performance with regard to system stability
- Workshop on CBA was held on 21. November an concluded:

  This workshop considered the IGD prepared on CBA principles and whether it warranted further development through establishment of an expert group. Of the areas of the RfG code requiring CBAs, derogations have caused the most concern. With this in mind it was felt that establishing an expert group prior to the establishment by NRAs of their derogation processes and further progress on national implementation would be premature. The detailed comments received will however be incorporated into an update of this IGD which will be developed with the workshop attendees and shared as part of the later batch of IGDs associated with the DCC and HVDC codes.


entsoe
Reliable Sustainable Connected