

Expert group: Identification of connection issues for offshore systems (EG Offshore)

Draft for discussion at the GC ESC on 22 September 2021

Chair: TBD

Vice-Chair: TBD

Commented [IT1]: ENTSO-E: Do we specify HVDC systems or leave it open?

Commented [SM(GTNP2R1): Offshore requirements should be applied for all systems & products

Commented [IT3]: ENTSO-E volunteers for Chairing the EG.

Problem Statement

The European Green Deal defines the ambitions for the EU to become climate-neutral by 2050. To reach that goal, offshore renewables are of key importance including the integration of such technologies at sea basin level in the North, Baltic, Mediterranean and Black seas, the Atlantic Ocean and the EU's outermost regions and overseas territories. To ensure the effective integration of offshore renewables a number of technical challenges still need to be considered and solved. These challenges include but may not be limited to planning standards for offshore HVDC grids, standardisation of assets / equipment, specifications of HVDC transmission, operation rules and connection requirements applying to offshore power generation modules and HVDC transmission systems connecting to onshore transmission networks.

Whereas onshore grids have seen an incremental development/improvement over the last decades, the offshore experience is much lower and we are aiming at an exponential growth of offshore generated power. This requires offshore transmission systems and products which are even more sustainable as the accessibility is limited and in some aspects there is a very harsh environment. In general, all different environmental requirements should be considered accordingly.

Commented [IT4]: ENTSO-E: the wording was borrowed by a relevant description from the EC web-site. However technologies may include storage or P2G technologies.

Should we substitute renewables with technologies or relevant technologies?

Commented [SM(GTNP5R4): I would support technologies

Target (objectives)

The objective of this first EG Offshore is to identify the areas that are relevant in the domain of connection network codes and consequently within the competence of the GC ESC. The EG shall structure the identified issues and corresponding objectives for work on substance in a subsequent phase with more detailed discussions on how those issues could be supported by relevant EU Connection Network Code (s), either by amending existing codes (e.g. NC HVDC), or drafting (a) new dedicated NC(s), or both. When identifying the issues, a first assessment and guidance may already be given, whether amendments or new code(s) are deemed favourable for each issue.

Furthermore, missing standards through out the whole process (from feasibility until operation and recycling) shall be identified. And the missing standard research shouldn't be limited to new requirements but also consider specialities of offshore (e.g. insulation coordination)

The EG is also tasked to identify all the relevant expert stakeholders, either as members or consulting parties for further engagement in the subsequent phase.

Deliverables

- Provide the ToR for the subsequent phase
- Provide a short paper with main points and observations from phase 1 (Annex to the ToR of EG Offshore – phase 2)
- Provide a list of missing standards and those to be adopted for offshore
- Identify relevant stakeholders for the identified issues

Timing

- estimated 3 months from November 2020.

Team (update XX.XX.2021)

Commented [IT6]: Tentative...

The following nominations to participate in EG Offshore – phase 1 have been received (name and association):

<i>Name</i>	<i>Organisation</i>	<i>Representation at GC ESC</i>
Mario Ndreko	TenneT DE	ENTSO-E
Ioannis Theologitis	ENTSO-E	ENTSO-E

Estimated workload

- biweekly webinars;
- commitment of 8-10 days per member.

Target audience

- GC ESC
- Relevant and/or interested stakeholders on the Connection Network Codes