

## **NETS SQSS Working Group (GSR014) – Offshore Transformer Circuit Requirements**

### **Terms of Reference**

---

**Background:** The NETS SQSS criterion (7.13.1.1) ensures that in the event of a permanent fault on a transformer, the wind farm would not be completely disconnected from the network for the duration of the replacement time. This commonly results in onshore designs to connect an offshore wind farm having two transformers, rated at 50% of the offshore grid entry point capacity, and two HV circuit breakers/bays at the onshore transmission owner's substation. The principles behind 7.13.1.1 were not believed to be intended to cover the short term loss of power infeed of the whole wind farm up to the normal infeed loss.

**Objective:** The aim of the working group is to investigate whether the current requirements for two transformers and two substation bays where offshore cables connect to the onshore network is justified or whether two transformers connected to a single bay would be sufficient.

**Scope:** The working group scope is anticipated to be as follows:

- Review of assumptions used to develop the current SQSS wording in paragraph 7.13.1.1.
- Identify the maintenance and failure rate data for the onshore connection facilities (AC and DC).
- Perform a cost benefit analysis based on generic network designs.
- Analyse the implications for each stakeholder.
- If required, propose changes to current wording of 7.13.1.1.

**Constitution:** The working group comprises of membership from National Grid (SO and TO), OFTO (Transmission Investment), Ofgem, the Crown Estate and Industry representatives (RWE Innogy and Scottish Power Renewables). The working group will be chaired by Mike Lee (Transmission Investment).

**Meetings:** The team will meet approximately monthly.

**Reporting:** The team reports to the NETS SQSS Review Group under SQSS Governance. It is intended to report by the end of May 2013.