

## NETS SQSS Review Panel – Modification Proposal

### SQSS Criteria for 220kV

Date Raised: 03.02.2015

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#### Summary

Introduction of Planning and Operational criteria for 220kV transmission assets

#### Users Impacted

##### *High*

##### *Medium*

Transmission Owners, Transmission system Users directly connected at 220kV, System Operator, Distribution Network Operators, Interconnectors.

##### *Low*

#### Description & Background

Traditionally, 220kV has not been a standard voltage on the GB onshore transmission system. The Kintyre – Hunterston subsea link, currently under construction and due to be commissioned in 2015 will be the first 220kV installation on the GB onshore transmission system. More 220kV installations are expected going forward, with a number of OFTOs preferring AC connections onto the onshore transmission system.

The SQSS currently does not specify planning or operational criteria for the onshore transmission system assets operated at 220kV. This modification proposal is to review the current version of the SQSS to include 220kV in the planning and operational criteria for the onshore transmission system.

Although 220kV at the moment seems to be mainly driven by available technology for subsea cables, the proposal is that the SQSS should not be limited to assets related to the projects currently in planning or construction – rather, the SQSS should cover all asset types currently considered in the standard.

#### Proposed Solution

It is proposed to introduce planning and operational criteria for 220kV in the SQSS. Given that the planning and operational voltage criteria for 132kV and 275kV are broadly aligned in Section 6 of the SQSS, one aspect of the proposal is to assign the same voltage criteria for 275kV to 220kV. The other aspect of the proposal is to include 220kV in the definition of the SQSS defined term '*supergrid*' on the basis that 220kV is closer to 275kV than 132kV and that 220kV is likely to be used for a number of OFTO circuits.

## Assessment Against NETS SQSS Objectives

**(i) facilitate the planning, development and maintenance of an efficient, coordinated and economical system of electricity transmission, and the operation of that system in an efficient, economic and coordinated manner;**

This modification proposal facilitates the planning, development and maintenance and operation of a coordinated and efficient system of the onshore electricity transmission through application of coordinated planning and operational criteria.

**(ii) ensure an appropriate level of security and quality of supply and safe operation of the National Electricity Transmission System;**

The proposed modification will set limits to ensure safe operation of the system in a secure manner.

**(iii) facilitate effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the distribution of electricity; and**

**(iv) facilitate electricity Transmission Licensees to comply with their obligations under EU law.**

The proposal will provide the basis upon which compliance can be measured. Currently this is defined in the SQSS for all other transmission assets. Transmission Licensees have a licence obligation to plan, develop, and maintain their systems in accordance with planning criteria set out in the SQSS. Additionally, the NETSO has a licence obligation to operate the NETS in accordance with the operational criteria set out in the SQSS.

## Impact & Assessment

### **Impact on the NETS SQSS**

- 1) The definition of the defined term 'supergrid' would need to be modified. This means all text in Section 2, Section 4, Section 5, Section 6 and the Definitions where the term 'supergrid' is used in the SQSS will have a modified meaning;
- 2) The tables in Section 6 – 'Voltage limits in planning and operating the onshore transmission system' will need to include 220kV voltage limits. These are:
  - a. Table 6.1 – Pre-fault planning voltage limits
  - b. Table 6.2 – Voltage step change limits in planning timescales
  - c. Table 6.3 – Voltage step change limits in operational timescales
  - d. Table 6.4 – Steady state voltage limits in operational timescales

### **Impact on the National Electricity Transmission System (NETS)**

No impact envisaged

### **Impact on greenhouse gas emissions**

No impact envisaged

### **Impact on relevant computer systems**

No impact envisaged

***Impact on core industry documents***

No impact envisaged

***Impact on other industry documents***

No impact envisaged

**Supporting Documentation**

Have you attached any supporting documentation: No

If Yes, please provide the title of the attachment:

**Recommendation**

The NETS SQSS Review Panel is invited to:

Progress this issue to Industry Consultation.

**Document Guidance**

This document is used to raise a Modification Proposal at the NETS SQSS Review Panel. Incomplete forms will not be processed and the Proposer may be asked to clarify any information that is not clear.

Guidance has been provided in square brackets within the document but please contact the NETS SQSS Review Panel Secretary: Nick Martin ([nick.martin@nationalgrid.com](mailto:nick.martin@nationalgrid.com)) and/or [box.SQSS@nationalgrid.com](mailto:box.SQSS@nationalgrid.com)) if you have any queries.