

Modification Summary

GCRP 13 - Thursday 9th February 2006

Modifications outstanding from previous meetings

MPID 137 - Forbidden Zones

Grid Code clause number: CC.7.3.1.1 (p)

Proposed by: ESBNG

Modification Proposal:

Issue: The current clause is ambiguous and there is no definition in the Glossary. We also want to avoid generators intentionally declaring their forbidden zones at their minimum or maximum.

The original clause states

*CC7.3.1.1 (p) Forbidden Zones: within the range between normal **Minimum Load** and **Registered Capacity**, not more than 2 specified zones each not greater than 10% of Registered Capacity.*

The proposal is to add the new text "**plus 5%**" and "**less 10%**" as added below and underlined:

*CC7.3.1.1 (p) Forbidden Zones: within the range between normal **Minimum Load** plus 5% and **Registered Capacity** less 10 %, not more than 2 specified zones each not greater than 10% of **Registered Capacity**.*

A new definition to be added for Forbidden Zone:

Forbidden Zone: "A MW range within which a **Generator** cannot operate in a stable manner due to an inherent technical limitation of the machine."

New modifications:

MPID 153 - Minimum Load Definition

Grid Code clause number: Glossary

Proposed by: ESBNG

Modification Proposal:

There is no definition for Minimum Load in the Grid Code. The new proposed definition is as follows:

Minimum Load: *Minimum MW Output a **Generator** can maintain on a continuous basis, whilst providing **System Services**.*

MPID 140 Wind Farm Power Factor Requirements

Grid Code clause number: WFPS1.6.3.1

Proposed by: Renewables Representative

Modification Proposal:

In order to avoid any confusion as to which is the reference voltage it is proposed to change the current clause *from*:

“**Wind Farm Power Stations** shall be capable of operating at any point within the **Power Factor** ranges illustrated in Figure WFPS1.4, as measured at the LV side of the **Grid Connected Transformer** (point Y in Figure WFPS1.3), for any **Voltage** at the **Connection Point** within the ranges specified in WFPS1.6.1”

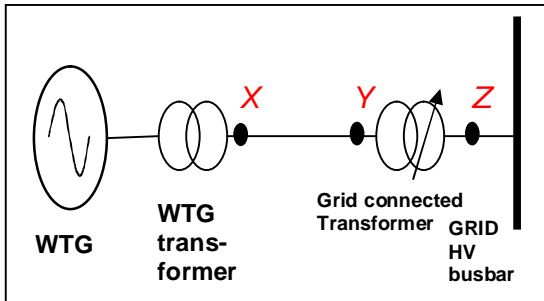


Figure WFPS1.3

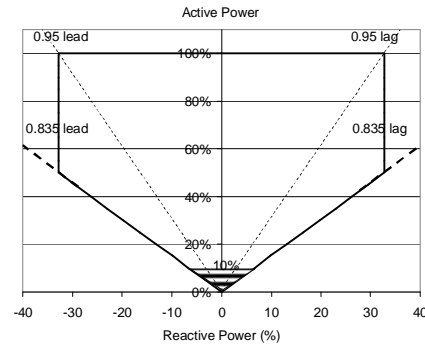


Figure WFPS1.4

....to:

Wind Farm Power Stations shall be capable of operating at any point within the **Power Factor** ranges illustrated in Figure WFPS1.4, as measured at the LV side of the **Grid Connected Transformer** (point Y in Figure WFPS1.3).

The design reference **Voltage** for the reactive power capability shall be the nominal **Voltage** at point Y.

The **Grid Connected Transformer** tap changing range must be capable of ensuring nominal **Voltage** at point Y for any **Voltage** at the **Connection Point** (Point Z) within the ranges specified in WFPS1.6.1.

MPID 148: Good Industry Practice

Grid Code clause number: Glossary/Definitions

Proposed by: ESBNG

Modification Proposal:

The Term “**Good Industry Practice**” is used 20 times in the Grid Code, however the current definition in the Glossary states “The meaning set out in the Connection Agreement”. As there is no meaning set out in the Connection Agreement and it is preferential to have a definition in the Grid Code in the first place this modification proposal is to add the following definition to the Glossary:

Good Industry Practice: *Those standards, practices, methods and procedures conforming to safety and legal requirements which are attained by exercising that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced person engaged in the same type of undertaking under the same or similar circumstances”*

MPID 149: AVR Slope for Wind Farms

Grid Code clause number: WFPS1.6.2.3

Proposed by: ESBNG

Modification Proposal:

This modification proposal is to amend the slope value setting range for the Automatic Voltage Response System for wind farms from “between 0% and 10%” to “between 1% and 10%”.

The modification is required as the value can not be set to 0% and a lower limit is required. Settings in the range 0-1% are deemed too sensitive to be of any practical value.

MPID 150: FRT for Wind Farms

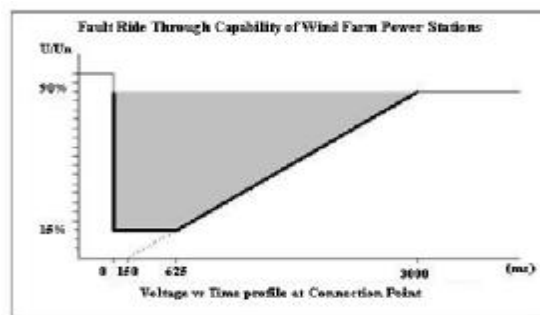
Grid Code clause number: WFPS1.1.4.1

Proposed by: ESBNG

Modification Proposal:

Clause WFPS1.4.1 Fault Ride Through Requirements currently states

WFPS1.4.1 A Wind Farm Power Station shall remain connected to the **Transmission System** for **Transmission System Voltage** dips on any or all phases, where the **Transmission System Voltage** measured at the HV terminals of the **Grid Connected Transformer** remains above the heavy black line in *Figure WFPS1.1*.



In a phase-phase fault, $V_{\text{LINE} - \text{LINE}} = 0$ while $V_{\text{PH}} \sim 0.5$ p.u. It then could be up to interpretation whether the voltage refers to the line voltage or the phase voltage.

To avoid any confusion that may arise for a phase to phase fault it is proposed to add the word **Phase** as shown underlined in the revised clause below and also add “**Phase**” before the word “**Voltage**” on the diagram in Figure WFPS1.1.

Revised clause:

WFPS1.4.1 A Wind Farm Power Station shall remain connected to the **Transmission System** for **Transmission System Voltage** dips on any or all phases, where the **Transmission System Phase Voltage** measured at the HV terminals of the **Grid Connected Transformer** remains above the heavy black line in *Figure WFPS1.1*.

A new definition for “**Phase Voltage**” is now required and this is proposed as:

“Phase Voltage: Voltage measured between the line and system neutral”.

MPID 151: nomenclature

Grid Code clause number: PC4.4.3

Proposed by: ESBNG

Modification Proposal:

The clause currently states

PC 4.4.3 Any **User** proposing to de-rate, close, retire, withdraw from service or otherwise cease to maintain and keep available for **Dispatch** in accordance with **Good Industry Practice** any **Generation Unit** or **Generation Units** with **Registered Capacity** greater than 10 MW in aggregate shall give **ESBNG** at least 24 calendar months notice of such **action**.

Section PC4.4 is entitled “**Complex Connections**”. The clause above does not belong in this section. Clause PC4.4.3 has no connection with PC4.4 Complex Connections. This proposal is to change the number for clause PC 4.4.3 to PC4.5 and give it the title “Notice Required”. This is a typo and a new name needs to be created for section PC4.5.

MPID 152: Constitution

Grid Code clause number: Constitution

Proposed by: ESBNG

Modification Proposal:

Please see separate document for proposed GCRP Constitution Changes. Some explanatory notes are included at the end of the document.

Click below for link to document

<http://www.eirgrid.com/EirGridPortal/uploads/Regulation%20and%20Pricing/MPID%20152%20GCRPConstitution%20proposed%20changes%20DRAFT2.pdf>