


Company Directive

STANDARD TECHNIQUE: SD1G/2

Communications Requirements for Parallel Generation Sites

Summary

This document sets out the options for telecommunications connections which are to be established for parallel generation connections to the WPD network

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| Implementation Date: | April 2019 |
| Approved by |  Policy Manager |
| Date: | 5 April 2019 |

All references to Western Power Distribution or WPD must be read as National Grid Electricity Distribution or NGED

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IMPLEMENTATION PLAN

Introduction

This Standard Technique details the options for telecommunications connections which are to be established for parallel generation connections to the WPD network.

Main Changes

Connections that include one or more Type B, Type C or Type D Power Generating Module now require a telecommunication link.

Impact of Changes

Telecommunication links need to be provided at connections where Type B, Type C or Type D Power Generating Modules are installed, even if the Agreed Export Capacity is less than 500kW.

Implementation Actions

Team Managers within Network Services and Telecoms responsible for staff and/or contractors involved in the design, installation, maintenance and replacement of generation connections shall ensure they made aware of, and follow, the requirements of this document.

Implementation Timetable

This document shall be implemented with immediate effect for new and substantially modified connections and for existing connections where one or more Type B, Type C or Type D Power Generating Module is installed under EREC G99.

REVISION HISTORY

| Document Revision & Review Table | | |
|----------------------------------|---|--------------------------|
| Date | Comments | Author |
| April 2019 | <ul style="list-style-type: none"> References to SURF Telecom have been replaced with WPD Telecom. Clause 2.1:- Requirements for connections that include one, or more, Type B, Type C or Type D Power Generating Module have been added. Clauses 3.2 and 3.3 relating to the choice of telecommunication service have been amended. Appendix A: Table has been updated to reflect current WPD Telecom practice. Appendix C: A reference to EREC G99 has been added. | Andy Hood / Andrew Baker |
| December 2016 | <ul style="list-style-type: none"> Clause 2.1:- Installed Capacity changed to Export Capacity Appendix A:- Generation Capacity changed to Export Capacity | Andy Hood |
| October 2016 | <ul style="list-style-type: none"> The document title has been amended so that it applies to “parallel” generation sites only. Section 2.1 which defines where communication links are required has been amended. Options for unlicensed radio have been removed GE D400 and iBox RTUs have been added to Section 4.0 and Appendix A. | Andy Hood |
| April 2016 | <ul style="list-style-type: none"> New Document | Ben Godfrey |
| | | |

1.0 INTRODUCTION

- 1.1 The number of connections being made to 3rd Party Generation Sites is increasing and the way in which the equipment can be controlled and monitored is becoming more and more critical to WPD and other interested parties.
- 1.2 This document establishes a hierarchy for the connection of generation sites to the WPD telecoms network based on their generation capacity.

2.0 CONDITIONS FOR REQUIRING TELECOMMUNICATIONS LINKS

- 2.1 A telecommunications link to the WPD network shall be installed where the connection is made at 132kV, EHV (66kV or 33kV) or HV (11kV or 6.6kV) and one, or more, of the following criteria are satisfied:

- The Agreed Export Capacity is 500kW, or more
- The Agreed Export Capacity is less than 500kW and either a:-
 - WPD soft intertrip scheme is installed (see ST:SD10B)
 - WPD active network management (ANM) scheme is installed (see ST:SD10C)
 - WPD timed scheme is installed (See ST:SD10A)
- The Customer has one or more, Type B, Type C or Type D Power Generating Modules installed that operate in Long Term Parallel mode, as defined in EREC G99.

- 2.2 The requirements for the telecommunications link are detailed in Appendix A.

3.0 CHOICE OF TELECOMMUNICATIONS SERVICE

- 3.1 Telecommunications services will be made by WPD Telecoms and classed as non-contestable with regard to the connection charge.
- 3.2 Consideration must be made to the amount of substation connectivity on each individual Poweron Fusion (POF) Front End Processor (FEP) line to which the new connection is being made.

- 3.3 All telecommunication services will be based on the most effective solution taking into account the local availability of communications infrastructure owned by or leased to WPD.

4.0 RTUs

- 4.1 WPD Telecoms currently utilise GE D20, D400 or iBox RTUs for these sites. The iBox RTU is much more compact than the D20 and D400 but cannot process as many inputs, outputs and analogues. Given this, the iBox is used at the majority of customer sites whereas D20s or D400s are commonly used at primary substations, BSPs etc.

APPENDIX A

TABLE OF TELECOMMUNICATION LINK REQUIREMENTS

| Export Capacity | WPD TELECOMS RTU* | Communications Link |
|--|---|---|
| Over 8,000kW | RTU is specified by WPD Telecoms. See Section 4.0 | Microwave or Fibre Optic based on WPD Telecoms survey of locally available owned or leased assets |
| 1,000kW to 8,000kW | | UHF Licenced Radio or Microwave or Fibre Optic based on WPD Telecoms survey of locally available owned or leased assets |
| 500kW to 1,000kW | | UHF Licensed Radio or locally available owned or leased assets |
| Under 500kW where applicable (see 2.1) | | UHF Licensed Radio or locally available owned or leased assets |

* *Note, the WPD Telecoms RTU may be interfaced with other RTU type equipment or peripherals. For example, where Ringmaster switchgear is used the SURF RTU will be connected to Schneider a T200 or T300 RTU and where a Connection Control Panel (CCP) is used to a CG Power RTU.*

APPENDIX B

SUPERSEDED DOCUMENTATION

This document supersedes ST: SD1G/1 dated October 2016 which has now been withdrawn.

APPENDIX C

ASSOCIATED DOCUMENTATION

| | |
|-----------|---|
| EREC G99 | Requirements for the connection of generation equipment in parallel with public distribution networks on or after 27 th April 2019 |
| POL: SD10 | Managing processes for alternative connections |
| ST: SD10A | Process for offering a timed connection |
| ST: SD10B | Process for offering a soft intertrip connection |
| ST: SD10C | Process for offering an active network management (ANM) connection |
| ST: TP18A | Application of generator constraint panels |
| ST: NC1AB | Basis for managing connections that potentially impact on NGET's transmission system |

APPENDIX D

KEY WORDS

Active Network management, ANM, Generation, Generator, Constraint, GCP, Telecoms, Radio, RTU, Soft Intertrip.