Grid Code Modification – GC0139

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Discussion of the defect and proposed legal text changes

Agenda	
1.	Background to Modification GC0139
2.	Proposed Changes
3.	Legal Text
4.	Implementation
6.	Next Steps Discussion
	Finish

Background to Modification GC0139

- **Open Networks Project -** key initiative to deliver Government policy set out in the Ofgem and BEIS Smart Systems and Flexibility Plan, the Government's Industrial Strategy and the Clean Growth Plan
- **Workstream 1B –** Whole Electricity System Planning & T-D Data Exchange
  - Significant penetration of DER on Distribution Networks
  - Changing generation mix connected to the NETS
  - Regional Development Programmes
  - Pathfinder Projects
- **Workstream 1B Product 4 –** Data Exchange in planning timescales
  - Data Exchange in Planning Timescales; Data Scope – Final Report
    - Schedule 5 – Enhanced Node Data (MS Excel workbook)
    - Enhanced Schedule 11 (MS Excel workbook)
  - Proposals for Implementation of Electronic Exchange of Network Planning Data
- Forward Looking Proposal – Current PC provisions adequate for parts of the networks but increasingly they are inadequate for coordinated and efficient planning.

Proposed Changes

Distribution to Transmission Data Exchange

- Full details of the sub-transmission network and any connections directly connected to the sub-transmission network
- Details of all distributed energy resource connections greater than 1MW to the distribution network and their impact on energy flows at cardinal demand points; peak demand, summer minimum demand and solar-peak/daytime-minimum demand.
- Details of all distributed energy resource greater than 1MW ‘accepted’ to be connected to the distribution network and their anticipated impact on energy flows at cardinal demand points; peak demand, summer minimum demand and solar-peak/daytime-minimum demand.
- Details of all distributed energy resource connections less than 1MW to the distribution network, aggregated by fuel type and disaggregated by substations connecting to the sub-transmission network.

Proposed Changes

Transmission to Distribution Data Exchange

- A set of models of the transmission system that represent the generation dispatch and demand at the following cardinal points:
  - Maximum fault level
  - Peak demand,
  - Summer minimum demand,
  - Solar-peak/daytime-minimum demand,
  - National high power transfer dispatch scenario, and
  - National low power transfer dispatch scenario.
- These models will be switch level models in a single boundary format and, detailing transmission asset ratings,

Legal Text

- **Planning Code (PC) –** The majority of the legal changes will be to the PC. Anticipated changes throughout the PC, including Appendix A (parts 1, 2 & 3) and Appendix B.
- **Data Registration Code (DRC) –** Minor changes to Schedule 5 and schedule 11 of the DRC.
- **Implications:**
  - The proposed modifications to the PC are intended to apply to *Network Operators* only. Much of the text applies to the general *User*. This will make modifications difficult in a document that is already a difficult read.
  - The PC has not been updated to reflect change in generator types from small, medium & large to types A, B, C & D. This will required consideration in relation to this Modification
  - Should the PC make reference to the Statement of Works process
  - New Definitions may be required to ensure requirements of the text are precise
- Unintended Consequences – the proposed changes touch on many parts of the PC so care is required to ensure there are no unintended consequences of the text/proposals. The following Code Modification should be referenced in this respect:
  - GC0096 Energy Storage
  - GC0106 Data Exchange requirements in accordance with Regulation (EU) 2017/1485

Implementation

- **Data Exchange Mechanism –** The existing method of T-D data exchange is by exchange of populated MS Excel workbooks. This makes incorporation of planning data into power system analysis software tools inefficient. This Modification requires a significant increase in the amount of data exchanged. It is therefore inappropriate to continue with the existing data exchange mechanism.
- **Energy Data Task Force (EDTF) –** The EDTF recommends that industry data should be discoverable and presumed open. It therefore needs to be considered whether the T-D data should be made publicly available in an interoperable format.
- **IEC CIM Standard & secure data transfer system –** should part of the solution for GC0139 be a requirement to exchange data to the industry standard IEC CIM format and via a secure data transfer system (ENTSO-E CGMES)?
- **Implementation Timescale –** cognisant of the above should the requirements of GC0139 be implemented in a phased manner?
- **Data Confidentiality Issues –** does the legal text need to provide network companies with legal protection against confidentiality issues both in sharing data between network companies and publicly?

Next Steps

Proposed Next Steps	
	Validate the scope of planning data as appropriate
	Review the report “Proposals for Implementation of Electronic Exchange of Network Planning Data”. Establish whether the Working Group needs to revise the timescales and costs of that report.
	Review the structure of the PC in the light of the proposed modifications.
	Propose revise legal text