European Network Codes – GB Application



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What will I cover?

Putting aside "issues" with the European Codes:

- What are our starting assumptions for GB application?
- Why is it all so complex?
- What has been considered regarding governance to take forward GB application?
- What are we doing now?

What are our starting assumptions?

- Even though the ENCs have direct effect, changes will be required to the GB commercial and regulatory framework to reflect the obligations and requirements in the ENCs;
- A consistent approach with regards to principles is required across the gas and electricity regimes;
- GB stakeholders must be engaged in the process;
- There will remain (current and new) elements of the GB framework which go beyond those required in the ENCs;
- Elements of the existing GB framework will remain given that some ENCs will not be retrospectively applied

Why is GB application complex?

- The following needs to be considered for all European Network Codes (ENCs):
- Length of the implementation period;
- Potential requirement to coordinate with adjoining TSOs (and NRAs);
- The extent to which the ENCs are high level so require conversion or interpretation into the GB context;
- How much of the ENC is subject to discretion at a Member State level;
- Whether there is a provision within the ENC for a cost benefit analysis (CBA) to be undertaken and whether one needs to be undertaken or not;
- Consideration where GB already has more stringent rules in place;
- Consideration where the application requires subsequent ENCs to be implemented in order to facilitate full enforcement;
- Range of legal instruments which require amendment.

Why is GB application complex? nationalgrid (continued)

Specifically for RfG:

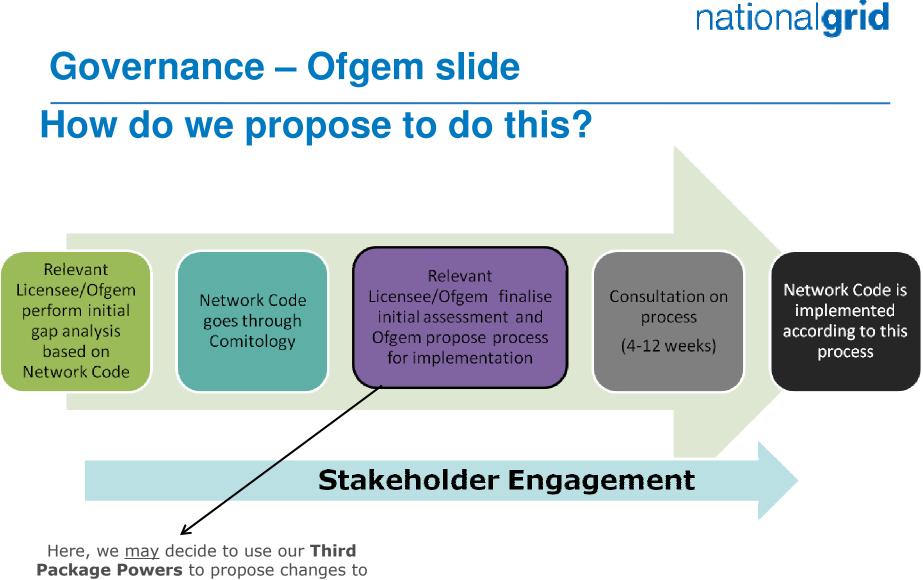
- Applies to Power Generating Modules down to 800W and introduces different thresholds of users to those in the GB Grid Code
- Unlike many of our European neighbours, we have detailed rules already in place

Why is GB application complex? - types of obligation



	Mandatory Requirement (Directly applicable)	Non Mandatory - Principles defined	Non Mandatory – Parameters defined
New Requirement	Article 10 (2) (b) – Limited Frequency Sensitive Mode – Under Frequency applies to all Type C Power Generating Modules	Article 16 (2)(a) – Provision of a Synthetic Inertia Facility	Article 10 (2) (b) – Limited Frequency Sensitive Mode – TSO can define the frequency threshold and Droop.
Existing Requirement – currently met	Article 11 (2)(a) - Voltage Range	Article 10 (6)(f) - Earthing Arrangements of the Neutral Point at the Network Side of a Step Up Transformer	Article 8 (1)(e) - Output Power with falling frequency – TSO to define requirements within range (currently met for Medium and Large in GB)
Existing Requirement - amendment required	Article 9 (3) – Fault Ride Through – Voltage duration profile and shape fully specified and different from GB Grid Code	Article 10 (6) (c) – Simulation Models – TSO can request electromagnetic transient simulations where justified.	Article 9 (3) – Fault Ride Through – Parameters to be used are to be defined by TSO (voltage duration length and range different to GB Grid Code)
New for Category of User*	Article 8 (1) (c) - Type A Units are required to satisfy the Limited Frequency Sensitive Mode of operation requirements for over frequencies (currently does not apply to all categories of generator)	Article 9 (5)(d)(2) – The Relevant Network Operator in co-ordination with the Relevant TSO shall define the contents of information exchange and the precise list and time of the data to be facilitated (RFG also applicable to Small and embedded)	Article 8 (1) (e) – Type A units are required to satisfy power output with falling frequency with the parameters being defined by the TSO (not currently met for Small in GB)

* Not covered by GB Grid Code



industry codes, licences and other agreements.

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Next steps?

- Taking RfG as an example, working through options of how to apply in GB
 - E.g. Start a "new" Grid Code, replicate ENC requirements alongside existing requirements etc
- Capture and discuss with Ofgem and other licensees
- Work up more detailed proposals for later discussion