

Grid Code Alternative Form

GC0117 Alternative Request 3:

Improving transparency and consistency of access arrangements across GB by the creation of pan-GB commonality PGM requirements

Overview: This alternative proposes to change the Registered Capacity of Medium Power Stations to a value of 10 – 100MW. The alternative includes updates to enable Licence Exempt Embedded Medium Power Stations to be instructed in the Balancing Mechanism via the Network Operator.

Proposer: Antony Johnson – National Grid ESO

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Guidance for Alternative Proposers

Who can raise an Alternative? Any CUSC or BSC Party, or Citizens Advice can raise an Alternative Request in response to the Workgroup Consultation.

How do Alternative Requests become formal Workgroup Alternative Modifications?
The Workgroup will carry out a Vote on Alternatives Requests. If the majority of the Workgroup members or the Workgroup Chair believe the Alternative Request will better facilitate the Applicable Objectives than the current version of the Code, the Workgroup will develop it as a Workgroup Alternative Modification.

Who develops the legal text for Alternatives? ESO will develop the Legal text for all Workgroup Alternative Modifications and will liaise with the Alternative Proposer to do so.

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What is the proposed alternative solution?

The original proposal seeks to rationalise the exiting GB arrangements for the connection of new Power Stations, such that there is a common definition of Small, Medium (where appropriate) and Large Power Stations. The original proposal promotes removing any regional differences across GB and having one consistent value of Large Power Station which would for Power Stations with a Registered Capacity of 10MW and above and Small Power Stations with a Registered Capacity of less than 10MW. All Large Power Stations are required to provide the necessary structural, scheduled and real time data the capability to be instructed in the Balancing Mechanism.

Under the current Grid Code arrangements in England and Wales, Embedded Medium Power Stations can be treated in one of two ways, namely the Generator i) applies for a Generation Licence Exemption and they are classed as a Licence Exempt Embedded Medium Power Station (LEEMPS) or ii) they sign CUSC and BSC, apply for Transmission Entry Capacity (TEC) and would come under the Balancing Mechanism (BM) arrangements of the wholesale market.

For Embedded Medium Power Stations which apply for TEC, they are in the BM and therefore the ESO has full visibility and control over them. For Generators in respect of Licence Exempt Embedded Medium Power Stations, they do not sign CUSC though there are obligations on Network Operators to ensure that Generator supplies (via the Network Operator) static electrical data. There is also a requirement to ensure the Network Operator satisfies appropriate technical requirements required in the Grid Code Connection Conditions and European Connections. Requirements for Operational Metering are specified in the Bilateral Agreement between the ESO and Network Operator. Generators in respect of Licence Exempt Embedded Medium Power Stations do not sign the CUSC and are not party to the BM.

This proposal is to introduce Medium Power Stations across the whole of GB. The proposal suggests they have a Registered Capacity of 10MW or more and less than 100MW and the same obligations on Licence Exempt Embedded Medium Power Stations in England and Wales apply. In addition it is also proposed that Licence Exempt Embedded Medium Power Stations are party to the BM with instructions being issued from the ESO to the Network Operator and the Network Operator would then issue those instructions to the Generator. This would ensure a degree of controllability in an environment being increasingly dominated by smaller renewable plants connected to Distribution Networks. Any confidential data would need to be submitted directly from the Generator directly to the ESO with all non confidential data would be via the DNO.

What is the difference between this and the Original Proposal?

Unlike the original proposal where there are direct arrangements between the ESO and Large Power Stations, this proposal achieves the same type of functionality but the concept would now rely on the Embedded Medium Power Station submitting the necessary data only once the relevant Network Operator and the Network Operator would then submit that data to the ESO. In addition as there is a Balancing Mechanism interaction all non confidential instructions would be issued from the ESO to the DNO and from the DNO to the Generator. This has the benefit of greater coordination between the ESO and DNO unlike the original where there is often the difficulty of the ESO issuing instructions to the Generator and the DNO are often blind to the issued instructions and the subsequent issues this can cause on the DNO's network.

What is the impact of this change?

The impact of this change is the following:-

- 1) Medium Power Stations would be introduced across the whole of GB. The Registered Capacity would be 10MW or greater and less than 100MW. For Large Power Stations in the North of Scotland there would be little change other than instructions and data flows would be to and from the Network Operator rather than directly from the ESO. Licence Exempt Embedded Medium Power Stations would need to be in the BM and therefore submit the full suite of data expected from BM parties. In the ESO's experience Bilateral Embedded Large Licence Exempt Agreements (BELLA's) have limited benefit, many of which had to be converted to Bilateral Embedded Generation Agreements (BEGA's). That said under this new arrangement there would be no requirement for future Licence Exempt Embedded Medium Power Stations to apply for Transmission Access Rights and hence TEC.
- 2) Medium Power Stations introduced into the South of Scotland would affect what would have traditionally been Small Power Stations with a Registered Capacity of between 10 – 30MW. Going forward these plants will have to have the same requirements a LEEMPS in England and Wales plus the additional BM capability but there would be no Transmission access rights.
- 3) In England and Wales, future Licence Exempt Embedded Medium Power Stations would have to follow the existing LEEMPS arrangements in addition to the additional BM functionality. For those Power Stations in England and Wales who traditional would have been Small, they will now be classed as Medium and have to meet the LEEMPS requirements and satisfy the requirements of the BM.
- 4) For DNO's there would be an increase in the Compliance requirements though this is already a requirement of G99. That said with an increase in the number of Medium Power Stations (ie those with Registered Capacities of between 10 – 50MW) there would be an increase in the number of agreements between the ESO and DNO.
- 5) The advantage of this proposal is the ESO can have greater visibility and control over Smaller Embedded Generation and this would be co-ordinated with the DNO which builds on the Open Networks work.
- 6) Embedded Generators who traditionally supplied data to the ESO and DNO will now only have to supply the data once.
- 7) There would be additional cost to Network Operators in managing the additional instructions from the ESO to Generator and the need for them to have appropriate communications and instructor facilities.
- 8) The solution streamlines the process and ensure equitable treatment to all Generators across GB which was seen as the primary defect.
- 9) The solution also maximises on the benefits realised through the European Network Codes.
- 10) It is acknowledged that this is an expensive option both from a Network Operators point of view and mandating Smaller Generators to be in the BM.

Proposer's Assessment against Grid Code Objectives

Relevant Objective	Identified impact
(a) To permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity	As original proposal
(b) Facilitating effective competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity);	As original proposal
(c) Subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole;	As original proposal
(d) To efficiently discharge the obligations imposed upon the licensee by this license and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency; and	As original proposal
(e) To promote efficiency in the implementation and administration of the Grid Code arrangements	As original proposal

When will this change take place?

Implementation date:

This modification should be implemented as soon as is practicable as agreed within the Workgroup

Implementation approach:

To be agreed within the Workgroup

Acronyms, key terms and reference material

Acronym / key term	Meaning
BEGA	Bilateral Embedded Generation Agreement
BELLA	Bilateral Exemptible Large Licence Exempt Generator Agreement
ESO	National Grid Electricity System Operator

Reference material:

Full legal text has been provided to support this solution.