

GC0117: Improving transparency and consistency of access arrangements across GB by the creation of a pan-GB commonality of Power Station requirements

08 August 2023

Online Meeting via Teams

WELCOME



Agenda

Welcome

Objectives and timeline

Actions review

Potential consequential changes

Compliance responsibilities

Legal Text

Any Other Business

- Clarify process under the Original Proposal where the generator goes from small to large due to a substantial modification
- Workgroup Report

Next Steps

Workgroup Membership

Role	Name	Company
Proposer	Garth Graham	SSE
Workgroup Member	Mike Kay	Electricity North West
Workgroup Member	Richard Woodward	National Grid Electricity Transmission (NGET)
Workgroup Member	Chris Marsland	AMPS
Workgroup Member	Isaac Gutierrez	Scottish Power Renewables
Workgroup Member	Graeme Vincent	SP Energy Networks
Workgroup Member	Alan Creighton	Northern Powergrid
Workgroup Member	Richard Wilson	UK Power Networks
Work Group Member	Paul Youngman	Drax
Work Group Member	Antony Johnson	National Grid ESO
Workgroup Member	John Lucas	Elexon
Workgroup Member	Tim Ellingham	RWE
Workgroup Member	Andrew Akani	Western Power Distribution
Workgroup Member	Roddy Wilson	SHE Transmission
ESO Rep	David Halford	NGESO

Code Modification Process Overview



Expectations of a Workgroup Member

Contribute to the discussion

Be respectful of each other's opinions

Language and Conduct to be consistent with the values of equality and diversity

Do not share commercially sensitive information

Be prepared - Review Papers and Reports ahead of meetings

Complete actions in a timely manner

Keep to agreed scope

Your Roles

Help refine/develop the solution(s)

Bring forward alternatives as early as possible

Vote on whether or not to proceed with requests for Alternatives

Vote on whether the solution(s) better facilitate the Code Objectives

Terms of Reference

Workgroup Term of Reference

- a) Implementation and costs;
- b) Review draft legal text should it have been provided. If legal text is not submitted within the Grid Code Modification Proposal the Workgroup should be instructed to assist in the developing of the legal text;
- c) Consider whether any further Industry experts or stakeholders should be invited to participate within the Workgroup to ensure that all potentially affected stakeholders have the opportunity to be represented in the Workgroup. Demonstrate what has been done to cover this clearly in the report
- d) Consider EBR implications
- e) The current transmission and generation characteristics in Scotland compared to those in England and Wales and whether the rationale for the thresholds being set at the current levels still applies given the current and projected generation composition and transmission infrastructure;
- f) Cross code impacts (BSC, CUSC and DCode) and impact on EBR;
- g) Consider any emerging thinking from the Open Network project;
- h) Any interaction with generator licencing thresholds or requirements;
- i) The impacts for stakeholders including NGESO, iDNOs, TOs, DNOs and generators;
- j) Implications for new connectees in relation to data exchange, planning, market engagement and any other areas of change;
- k) The implications associated with implementing any changes retrospectively so that they apply to existing connectees rather than just for new connectees; and
- l) The implementation options together with the associated costs and benefits.

Timeline for GC0117

Stage	Dates	Comments
Workgroup 19	08/08/2023	
Workgroup 20	Potentially 13/09/2023	Based on voting as of 01/08/2023
Workgroup Report to Panel	18/10/2023	
Post Workgroups		
Code Administrator Consultation	30/10/2023 - 06/12/2023	
Draft Final Modification Report to Panel	17/01/2024	
Final Modification Report to Panel to check Votes	29/01/2024	
Final Modification to Ofgem / Appeals Window opened	06/02/2024	
Implementation Date	TBC	

Action Review

Action number	Workgroup Raised	Owner	Action	Comment	Status
70	WG16	DD/DH	Layout what the CBA is seeking to address against the aims of the modification; the costs that will flow from the changes to industry parties	Need to look at the potential number of extra generators falling under the 10MW proposal	Open DH has asked the question to the FES team will update next week.
78	WG18	ML	Reach out to Aggregators for representation on Workgroup	N/A	Open Reached out twice awaiting response
79	WG18	GG/TJ/JL/DH	Discuss with Ofgem whether any consequential modifications need to be presented at the same time as GC0117 or can follow after a decision has been made on the Grid Code modification.	N/A	Open Awaiting return from holidays
80	WG18	GG	Consider updating Original Proposal to incorporate data requirements	N/A	Open Meeting to be held 3/08/2023
81	WG18	AC	Contact SHET to investigate arrangements and their views	N/A	Open
82	WG18	SK	Provide analysis and narrative to the Workgroup	N/A	Propose to close circulated on 24/07/2023
83	WG18	TJ/DH/SK	Investigate whether qualitative analysis could be completed to show whether there are any benefits of the ESO receiving planning data down to 1MW.	N/A	Open Meeting to be held 02/08/2023



Potential consequential changes

ELEXION

**BSC Impacts of Grid Code Modification
GC0117**

8 August 2023

Summary of BSC Impacts

As discussed at Workgroup meeting 18, the potential BSC impacts of GC0117 are as follows:

BSC Section	Summary of Required Change	Proposed or WACM?
K2.1.1 – this BSC section defines which Metering Systems are required to register in CMRS (rather than SMRS).	Require Metering Systems for Large Power Stations to register in CMRS, if constructed or substantially modified on or after DDMMYY (even if they are Exemptable).	Proposed only (as question of how to handle EELPS will not arise under the WACM)
K3.1.2B & K3.1.4 – these BSC sections allow generating units and demand Boundary Points to be aggregated into a single CVA BM Unit, provided their capacity is no larger than a Small Power Station.	Potential options include: <ol style="list-style-type: none">1. Leave the current limits unchanged (by replacing the “Small Power Station” reference with a hard-coded 10 / 30 / 50 MW limit)2. Amend the legal text to follow GC0117 principles i.e. harmonization across GB, but non-retrospectively3. Amend the legal text to harmonise across GB, but applied retrospectively	Proposed and WACM

We are seeking views from the GC0117 Workgroup on the preferred option for amending K3.1.2B and K3.1.4B. Note that the decision on this ultimately lies with the Proposer of the BSC Modification (and any Workgroup).

BSC Sections K3.1.2B and K3.1.4

These BSC sections were introduced by Modification P364 ('Clarifying requirements for registering and maintaining BM Units'), implemented on 27 June 2019.

K3.1.2B allows generating units to be combined into a single CVA BM Unit, provided that they are subject to common control, and their total capacity is no larger than a Small Power Station. In practice we believe it is mostly used by:

- Gas / diesel reciprocating engine BM Units; and
- Battery storage (although in many cases they could register as a single BM Unit under the rules for Power Park Modules, without relying on K3.1.2B).

K3.1.4 allows a Transmission-connected customer with multiple Boundary Points to register a single CVA Demand Unit, provided the total capacity is no larger than a Small Power Station. In practice we believe it is mostly used by:

- Offshore Wind farms that want to aggregate all their LV assets into a single demand BM Unit; and
- Rail industry sites with two Transmission connections.

What was the intent of P364?

- GC0117 was raised during the P364 Assessment Procedure, so the P364 Workgroup was able to give some thought to the interaction between the two (but without knowing the details of the GC0117 solution).
- The P364 Workgroup decided to reference “Small Power Station” (rather than hard-coding a 10 / 30 / 50 MW limit), on the basis that it made sense for the BSC limit on aggregation to remain aligned with the Grid Code definition of Small Power Station. However, the P364 Workgroup did not know the detail of the GC0117 solution.
- We believe some change to K3.1.2B and K3.1.4 will be needed, because the GC0117 definition of Small Power Station relies on Grid Code definitions of “**Purchase Contract**” and “**Substantial Modification**” which are only defined for Power Stations.

Options for amending BSC sections K3.1.2B and K3.1.4

Option	Advantages	Disadvantages
1. Leave the current limits unchanged (by replacing the “Small Power Station” reference with a hard-coded 10 / 30 / 50 MW limit)	Keeps the scope of the BSC Modification narrow, and limited to direct consequential changes from GC0117 (which may make it faster to progress and easier to approve).	Potentially represents a change from the thinking of the P364 Workgroup.
2. Amend the BSC legal text to follow GC0117 principles i.e. harmonization across GB, but non-retrospectively.	Consistent with view of P364 Workgroup that the BSC limit should remain aligned with the Grid Code definition.	BSC Workgroup will have to address potentially complex issues not considered under GC0117 i.e. what it means for a BM Unit to be constructed or substantially modified (for demand sites and collections of generating units).
3. Amend the legal text to harmonise across GB, but applied retrospectively	BSC Modification is simple to draft.	Inconsistency with GC0117 principles is potentially difficult to justify. Impact on / uncertainty for existing BM Units (who would need to reconfigure their BM Units or apply for non-standard BM Units).



Compliance Responsibilities

Implications of 10MW Large threshold for compliance

The existing division of labour between DNOs and NGESO is that NGESO undertake Grid Code compliance on all directly connected power stations and all embedded large power stations.

In the short term, NGESO wish to agree with DNOs that where a small or medium power station has elected to have a BEGA (ie accede to the CUSC and become active in the balancing market), the G99 compliance will be undertaken by the DNO as normal, and that the few additional Grid Code requirements (largely related to data and market communication requirements) will be assessed by NGESO. In isolation this is probably not unreasonable – and NGESO are bringing this to the 01 June ITCG.

However, if large in future becomes 10MW, do we:

- persist with the status quo, ie NGESO do all compliance activities at Large power stations (apart from the interface and other protection compliance, and anything else that is DNO network derived, such as ANM),
- adopt the approach (similarly to the proposed formal BEGA approach) where the DNO does the whole of Grid Compliance (save for where NGESO needs direct involvement for data etc)?

Initial considerations of which party is best placed to assess compliance

Grid Code compliance undertaken by DNOs:

Pros	Cons
Most of the compliance would be with a single party (the DNO).	Specific data and comms still needs NGESO involvement.
DNOs already undertake most Grid Code compliance by virtue of G99 compliance.	Extension of DNOs' LEEMPS-like responsibility for Grid Code compliance to a much greater scope of Grid Code issues, and to a larger number of power stations.
Easier to integrate EON, ION and FON process.	Possible for subtle differences in approach between different DNOs.
	DNOs still cannot deal with any requirements of the BEGA
	DNOs would have licence responsibility for G Code compliance

Grid Code compliance undertaken by NGESO:

Pros	Cons
NGESO have direct control of Grid Code Compliance, and would be responsible for all compliance issues, including those in the BEGA, save local and interface protection issues. Interface protection could be done by NGESO as the DNO's agent.	DNOs still need to issue EONs and perform local compliance issues (eg ANM).
NGESO have the in-depth technical expertise.	
NGESO are better able to operate consistently across GB.	

Or compliance could be undertaken by a third party acting under contract for the DNO and/or NGESO

Legal Text

The ESO have made some amendments to the Power Station definitions based on their discussions with Elexon:

Extracts from the Glossary and Definitions – Large Power Station

Large Power Station	<p>A Power Station is</p> <p>(a) <u>A Power Station owned and/or controlled by the same Generator who had concluded Purchase Contracts for its Main Plant and Apparatus before DDMMYY and which is</u> directly connected to:</p> <ul style="list-style-type: none">(i) NGET's Transmission System where such Power Station has a Registered Capacity of 100MW or more; or(ii) SPT's Transmission System where such Power Station has a Registered Capacity of 30MW or more; or(iii) SHETL's Transmission System where such Power Station has a Registered Capacity of 10MW or more; or(iv) an Offshore Transmission System where such Power Station has a Registered Capacity of 10MW or <u>more</u>; <p><u>or,</u></p>
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