

GC0148: Implementation of EU Emergency and Restoration Code Phase II – Addressing the Authority Send Back

Why did the Authority Send back GC0148?

On 24 January 2023, the Authority sent back GC0148¹ in accordance with GR22.11 and 22.12 and directed the following:

- **Deficiencies of Final Modification Report**
 - Information received by the Authority after the FMR submission that Aggregators may not be able to satisfy some of the requirements placed on them by the Proposal.
 - If the Proposal was approved in its current form, it is likely that Aggregators would be in breach of their obligations under the Grid Code.
- **The Authority's Expectations**
 - Updates to the legal text need to enable all relevant parties to comply with the new provisions.
 - Changes need only be made to the sections of legal text in the Proposal which were updated in order to comply with Article 42 of the NCER.

It was noted that an industry participant had written to the Grid Code Review Panel 25 January 2023 setting out some matters of concern regarding the Send back letter; on 14 March Ofgem confirmed to the Grid Code Review Panel Chair that legal text could be revised following the decision to Send back and that there was not an intention to prescribe derogation which were the points which the Grid Code Panel had requested clarity on.

Further to this the Authority Rep confirmed to the GC0148 Workgroup in March^[1] that the named signatory on the Send back letter has the necessary authority to issue these decisions on behalf of the Authority.

This Send Back arose from an issue that the ESO (Electricity System Operator) was advised of by some stakeholders (i.e. Virtual Lead Parties / Aggregators) and informed Ofgem of in November 2022. The ESO's email to Ofgem outlining the situation can be found in Annex 1 of this report.

What approach was agreed at Grid Code Panel to address this?

Grid Code Panel on 26 February 2023 agreed next steps following Send back on 24 January 2023:

- They noted that the Authority are directing the Final Modification Report and Legal Text to be revised and resubmitted;

¹ [download \(nationalgrideso.com\)](https://nationalgrideso.com)

- They agreed that this needs to be assessed by a Workgroup (*there is no Workgroup Consultation, or Workgroup Report and no further Workgroup Alternatives can be raised*);
- They agreed the Workgroup's Terms of Reference; and
- They agreed (following the assessment by the Workgroup) that a Code Administrator Consultation is needed to be run before it is re-presented to Panel for Recommendation Vote.

Agreed Terms of Reference to address Send Back

- Identify and clarify the issues regarding critical tools and facilities affecting parties (specifically Aggregators) to comply with the provisions in the Network Code on Emergency Restoration (NCER).
- Propose solutions, and the associated legal text, to resolve these issues.
- Review the proposed changes to ensure there are no unintended impacts to the previous solution.

The Workgroup met on 09 March 2023 and 15 March 2023 to address these Terms of Reference and these discussions and conclusions are set out below:

Identify and clarify the issues regarding critical tools and facilities affecting parties (specifically Aggregators) to comply with the provisions in the NCER.

In the GC0148 FMR and Legal Text submitted to Ofgem on 12 October 2022, to comply with [Article 42: Tools and facilities \(2\)](#), [Article 23: Design of the restoration plan \(4\)](#) & [Article 2: Scope \(e\) of the NCER](#) and [Article 24: Availability of TSO's means, tools and facilities \(1\) of the System Operations Guideline \(SOGL\)](#) a definition of *Critical Tools and Facilities* was included into the Glossary and Definition of the Grid Code; and obligations on Users in respect of Critical Tools and Facilities were included in both the Connection Conditions and European Connection Conditions.

During the Workgroup discussions, post Send back, it was clarified that not all Aggregators are Virtual Lead Parties (VLP), but all VLPs are Aggregators. Those which are not VLPs carry out services for the ESO and DSOs (Distribution System Operation) and do not participate in the BM (Balancing Mechanism) and so are not *BM Participants* in the context of the use of that term in the proposed GC0148 legal text.

NCER Article 42 (2) refers to Article 23 (4) which links into the definition of Significant Grid Users in Article 2 (e)² where Aggregators are deemed to fall under the scope of the NCER and as part of the solution in GB would fall under the scope of Significant Grid User(s) as provided for in Appendix A of the System Restoration Plan.

² "providers of redispatching of power generating modules or demand facilities by means of aggregation and providers of active power reserve in accordance with Title 8 of Regulation (EU) 2017/1485"

Within the proposed Critical Tools and Facilities definition in the GC0148 legal text submitted to the Authority in October 2022, Aggregators were captured through the inclusion of Virtual Lead Parties.

“Apparatus and tools required in relation to Black Start:

[...] b) In the case of Generators, HVDC System Owners, DC Converter Station Owners, Defence Service Providers, Restoration Service Providers and Virtual Lead Parties:

- i) Tools for monitoring their Plant and Apparatus;
- ii) The ability to control, protect and monitor their Plant and Apparatus necessary for Black Start including as applicable primary Plant, switchgear, tap changers and other auxiliary equipment and to ensure the safe operation of Plant and personnel; and
- iii) Control Telephony as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5. [...]”

Whilst not owning assets, Aggregators enable and exercise some control over smaller assets (allowing them to participate in the markets) including PV (Photovoltaic / solar), battery storage, EVs (Electric Vehicle) and HP (Heat Pumps) both domestic and commercial.

The number of assets and the volume of energy traded through Aggregators is broad, with their portfolios of aggregated assets potentially including millions in the near future and beyond. The Workgroup acknowledged that in the future Aggregators were expected to continue to grow.

It was understood by the Workgroup that Aggregators already have provisions in place to monitor Plant and Apparatus they own, especially equipment at their control point as well as control telephony as required under CC.6.5.1 – CC.6.5.5 and ECC.6.5.1- ECC.6.5.5.

Therefore, the ability to control, protect and monitor Plant or Apparatus, irrelevant of size, necessary for Black Start was identified as the issue to ensure they were complying with the obligations set out in the System Restoration Plan. The financial cost to provide every asset site with mains-independent communications (e.g. a standby generator or UPS/battery and satellite communications) to meet this obligation was believed, by the Aggregator Representatives in the Workgroup, to be too large to provide a reliable estimate, they also highlighted concerns around additional environmental costs. As such a timeframe for compliance was not predicted.

Additionally, whilst the Aggregators have a measure of control of the assets that they aggregate, they do not own those assets, and concerns were raised that placing such obligations in relation to these assets on Aggregators would be a barrier to participation in the Aggregator market due to the cost burden to customers.

Propose solutions, and the associated legal text, to resolve these issues.

Having identified that the ability to control protect and monitor Plant and Apparatus necessary for Black Start within the definition of Critical Tools and Facilities as the root of the issue for Aggregator compliance against the original proposed GC0148

solution, the Workgroup agreed that BM Participants and VLPs should be captured in a separate paragraph within the Critical Tools and Facilities definition. This would allow VLPs to be excluded from the provision to have resilient mains independence of the control of their contracted assets.

The Workgroup discussed whether rules apply equally to all Significant Grid Users (SGU), and how there must be allowances for differences because of the inherent differences. The EU connection network codes (Restoration for Generators, DCC and HVDC) recognise that different technologies and sizes of Plant have different capabilities and are therefore subject to different requirements. A Workgroup member clarified that it should be equal as far as possible but that the ESO determines which SGUs that have responsibilities within System Restoration Plan (including in the context of Critical Tools and Facilities). A Workgroup member noted that in order to ensure a level playing field that assets, be they associated with an Aggregator or not, of a similar (MW) size and technology type should have the same obligations.

The Workgroup discussed whether there needed to be a differentiation between the diverse types of VLP and Aggregators within a black start scenario, but it was agreed that by specifying the differences between the obligations for Black Start Contract control points versus other non-contracted plants would be sufficient.

Whilst not expressly related to the Aggregator issue but to avoid future confusion; the Workgroup updated the omission of 'and the relevant Transmission Licensee' Control Engineers' to the end of ECC 7.9.b.

Review the proposed changes to ensure there are no unintended impacts to the previous solution.

The Workgroup agreed that the below table would support Aggregators understanding of the implications of the proposed (post Send back) revised obligations depending on their connection date.

	Critical Tools and Facilities ³	Control Point Staffing
BMs including VLPs with signed CUSC Contract signed before XXXX ⁴ and no Mod App	Not Applicable	24x7 (unless relieved under CC/ECC 7.9)
BMs including VLPs with signed CUSC Contract after XXXX ³ and no Mod App	Yes in accordance with CC/ECC.7.10.2 (unless relieved under CC/ECC 7.9)	24x7 (unless relieved under CC/ECC 7.9)
BMs including VLPs with signed CUSC Contract pre XXXX ³ who sign Mod App after XXXX ³	Yes in accordance with CC/ECC.7.10.2 (unless relieved under CC/ECC 7.9)	24x7 unless relieved under CC/ECC 7.9)

³ Critical Tools and Facilities are defined in the Grid Code Glossary and Definitions

⁴ XXXX is the date of approval of GC0148. The requirement to comply would be 12 months after XXXX.

BMs including VLPs with signed CUSC Contract after XXXX ³ who sign Mod App after XXXX ³	Yes in accordance with CC/ECC.7.10.2 (unless relieved under CC/ECC 7.9)	24x7 (unless relieved under CC/ECC 7.9)
Agreed Black Start Contract ⁵	Yes in accordance with CC/ECC.7.10.1	24x7

The Workgroup agreed that the proposed post Send back changes to the Glossary and Definitions, Connection Conditions and European Connection Conditions were applicable across GC0148, WAGCM1 and WAGCM2.

The Workgroup discussed the need to be mindful of how the proposed post Send back GC0148 legal text interacts with the proposed GC0156 solution and legal text; working on the premise that the GC0148 would need to be approved and implemented ahead of GC0156 (or sequentially 'on the day' with it).

Annexes

Annex	Information
Annex 1	ESO email to Ofgem dated 16 November 2023
Annex 2	Proposed Legal Text

⁵ Note: GC0156 proposes to change 'Black Start Contract' to 'Restoration Contract' which are those for Anchor or Top-Up services (as defined in GC0156).