

Grid Code Alternative Form

GC0147 Alternative 1: Compensation for Embedded Generators subject to emergency disconnection

Overview: This alternative sets out that compensation as detailed in the CUSC and DCUSA is to be payable to embedded generators that are affected by DNO implementation of emergency instructions received from the ESO as described in the GC0147 original solution.

To avoid there being a period following implementation of GC0147 (if this alternative is selected) but before compensation arrangements are put in place, provisions are indicated to capture the data associated with any event and apply arrangements retrospectively in the unlikely event of the 'last resort' being used in the interim.

Proposer: Rob Wilson, NGESO

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What is the proposed alternative solution?

The proposed solution adds two clauses to the original as follows:

BC2.9.2.7 In the case of BC2.9.1.2 (f), upon implementation of an **Emergency Instruction** by a **Network Operator** to carry out **Embedded Generation Control** the relevant provisions of the **DCUSA** and **CUSC** relating to compensation to an **Embedded Power Station** subject to such **Embedded Generation Control** shall apply. The data associated with any such event will be communicated to **The Company** by the **Network Operators** implementing an **Embedded Generation Control** instruction as set out under OC6B.5.11 and will be retained by **The Company** until any such compensation arrangements have been fulfilled.

OC6B.5.11 Each **Network Operator** will supply to **The Company**:

- a) an estimate of the **Active Power** output reduction achieved, in MW, at the time of implementation for each Power Station where **Embedded Generation Control** is implemented;
- b) the time **Embedded Generation Control** is implemented; and
- c) the time when the **Network Operator** confirms to the **Generator** that they can resume normal operations.

This information shall be supplied within a week of implementing the **Embedded Generation Control Instruction**.

What is the difference between this and the Original Proposal?

The basis of clause BC2.9.27 noted above was discussed for inclusion in the original proposal and was included in the draft legal text that accompanied the workgroup consultation. As the proposer of the original, the ESO will now remove the clause from the original but by raising this alternative will ensure that both options are available.

Other than the clauses above this alternative is identical to the original.

What is the impact of this change?

Compensation has probably been the biggest topic discussed by the workgroup. As the proposer of the original solution for GC0147 National Grid ESO is mindful of the sensitivity of the issue and the need to mitigate business risks for embedded generators, and also the discussion around whether compensation is a requirement of the Clean Energy Package article 13.7.

Whilst it is the ESO's view that compensation is only a requirement of the CEP for parties with firm access agreements and is therefore not applicable to generators that are not part of the BM, and which hold connection agreements with the DNOs that are subject to de-energisation of their connection points for a range of conditions as set out in the Standard

Connection Terms, to allow the workgroup to progress we have raised this alternative such that the workgroup is able to conclude and seek a decision from the Authority. Other views in the workgroup are that the provisions of the Clean Energy Package in this respect do apply.

It is set out in the original solution that an Emergency Instruction would only be used by the ESO as a last resort in an emergency and once all other commercial means were exhausted. Some parties, principally the ESO and network operators, feel that compensation does not feel compatible with a last resort situation and is not payable for equivalent demand control actions. Better routes to achieve compensation would therefore be to participate in the BM or in any other commercial service that is created as a successor to ODFM. Other members of the workgroup feel that compensation is required to maintain a level playing field since BM participants are paid for Emergency Instructions as if a BOA had been accepted.

As long as a sufficient volume of generation was available for the ESO to instruct through a commercial route it would be extremely unlikely, as found during 2020, that the last resort of an emergency instruction would be reached. The inclusion of a priority order in the original GC0147 solution also means that those parties that would find it difficult to participate in a flexible service (such as if part of an inflexible industrial process or where safety concerns of disconnection remain) would be at the bottom of the list for disconnection making any impact on them less likely again.

The 'last resort' arrangements under GC0147 are required to be in place before the low demand periods anticipated in May 2021. The Proposer estimates that it is unlikely that the modifications that could be required to the CUSC, DCUSA and BSC to embody compensation arrangements could be achieved in time to line up with this and therefore this alternative also sets out that data on any event that occurs after implementation of GC0147 shall be captured and shall be addressed once any compensation arrangements have been completed.

The likelihood of an event requiring the use of 'last resort' arrangements in May 2021 is considered to be very low. The ESO has not currently identified a need for the ODFM service that was used in 2020 to avert the use of the last resort, however a replacement for this will also be developed in 2021 if this estimate should change, along with the ESO continuing to encourage stakeholders to participate in wider BM access.

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	Positive/Negative/None: None
(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	Positive/Negative/None: None

on terms which neither prevent nor restrict competition in the supply or generation of electricity);	
(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;	Positive/Negative/None: Positive
(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	Positive/Negative/None: Negative
(e) To promote efficiency in the implementation and administration of the Grid Code arrangements	Positive/Negative/None: None

As with the original solution, a usable solution in a last resort emergency situation lessens the risk of any impact on security of supply during very low demand periods and has a clear positive impact therefore on objective (c).

Arguably by allowing for compensation there is a small positive impact on (b) in facilitating competition but since an emergency instruction is a last resort to be used only on the exhaustion of all commercial alternatives (and it is hoped that it will never be used), so the impact to users will be very small.

There is a greater negative impact on (d) as by requiring further arrangements to be codified in the CUSC and DCUSA this is a less efficient solution when there are other mechanisms for compensation (participation in the BM or in any commercial service that may replace ODFM) that it would be preferable to use.

When will this change take place?

Implementation date:

As per original

Implementation approach:

In terms of the differences to the original, it is possible that further modifications would be required to be made to the CUSC, DCUSA and BSC to detail compensation arrangements. This would be achievable if not straightforward and as set out in this alternative could be applied retrospectively to any applicable previous incidents using the data captured.

Acronyms, key terms and reference material

Acronym / key term	Meaning
ODFM	Optional Downward Flexibility Management

