

Public

FREQUENTLY ASKED GENERATOR ESRS COMPLIANCE QUESTIONS AND ANSWERS

NESO is an independent public corporation at the centre of Great Britain's energy system, taking a whole-system view to ensure everyone has access to reliable, clean and affordable energy. To mitigate the high-impact, low-probability risk of a Total System Shutdown, classified in the National Risk Register for its severe economic and societal consequences, DESNZ issued the Electricity System Restoration Standard (ESRS) in 2021. The ESRS requires the system in Great Britain to have sufficient capability by 31 December 2026 to restore 60% of national demand within 24 hours across all seven Restoration Regions and 100% within five days.

To facilitate compliance with ESRS, the grid code GC0156 was modified and this led to consequential modification of other grid code. In 2025, NESO conducted four webinars to communicate key requirements for secondary generator participation during system restoration events. These webinars were designed to enhance understanding of restoration requirements and guide participants through compliance activities. This document addresses frequently asked questions from generators regarding grid code requirements and compliance.

Q1. Is DRC schedule 16 compliance applicable to generators that are not classified as Restoration Contractors?

Ans: Yes, schedule 16 is now applicable to all CUSC parties and needs to be completed by CUSC Parties and Restoration Contractors.

Q2. For projects currently undergoing modifications or with connection dates scheduled post ESRS implementation date, is the requirement to comply with these regulations still applicable?

Ans: Yes, it is still applicable. Your new connection date or modification date would be post the ESRS implementation date and the new requirements will form part of the compliance process.

Q3. If a generator does not possess self-start capability, and does not have the necessary diesel generators or backup fuel supply to start from a complete power outage, and there are currently no plans to implement such a system, do they still have to provide compliance?

Ans: Yes, although there is no requirement for your plant to have self-start capabilities or a Restoration Contract, please note CC/ECC7.10 and CC/ECC.7.11 is applicable to all GB and EU code users. If a total or partial shutdown occurs, the plant must safely shut down without endangering personnel or equipment. Resilience measures should also allow for safe resumption and restart once supplies return. Schedule 16, Part 1 allows documentation of any factors affecting start times after an outage, while Schedule 16, Part 3 lists required activities for compliance before 31 December 2026.

Q4. Are projects that are subject to EU Code User regulations, rather than GB regulations, still required to meet these compliance requirements?

Ans: Yes - CC.7.11.1 CC.7.11.2 and CC.7.11.3 are mirrored in ECC7.11.1 ECC7.11.2 and ECC7.11.3

The requirements of ECC.7.11.1 and ECC.7.11.2 shall apply during a period of total loss of supplies to **The Company's** operational sites or an **EU Code User's Site** or **Restoration Contractor's** site for up to 72 hours. **EU Code Users** and **Restoration Contractors** shall confirm to **The Company** that the total loss of supplies to their **Site** for a period of up to 72 hours shall not result in damage to **Plant** and **Apparatus** such that it would then be unable to operate upon restoration of electrical supplies to the site.

Q5. If a company does not currently own any generation assets, would these compliance requirements still be applicable?

Ans: Yes – This is applicable to all GB and EU Code Users. If you do not have any assets that fall under these categories as defined in the Grid Code, then this will not be applicable to you. Your BCA will also confirm what requirements will apply including 0 MW assets.

Q6. Are small generators with less than 30MW required to comply with the grid code GC0156

Ans: A Generator is caught by the requirements of the Grid Code if:

- The Generator is directly connected to the transmission network (irrespective of being Small, Medium or Large)
- The Generator is Large (even if Embedded)
- The Generator owns and / or operates an Embedded Medium Power Station and applies for TEC and has a BEGA agreement.
- The Generator is a BM Participant

If your generator falls under any of the above, you will be obliged by the requirements of CC/ECC3.1 and required to provide a week 24 submission including DRC Schedule 16 . Also note that Power Station size depends on location. Large Power Stations in England and Wales are those with a Registered Capacity of 100MW and above. For SPT a large Power Station is one with a Registered Capacity of 30MW and above and in SHET a Large Power Station is one from 10MW and above. Note for Generators who own and operate Small Embedded Power Stations who are BM Participants they will be caught by the requirements of CC/ECC 6.5, 7.9, 7.10 and 7.11 which includes Critical Tools and Facilities.

Q7. Are interconnectors meant to comply with PCA.5.7?

Ans: Yes. As detailed in PC.A.5.7, the data in DRC Schedule 16-page 2 part 1 is required from parties with HVDC Systems and DC Converters which includes interconnectors. OC5.7.4 also applies to all User's and Restoration Contractors (including Interconnectors) which links back to the requirement to complete DRC Schedule 16.

Q8. Are Synchronous Condensers required to meet the grid code requirements?

Ans: 0MW assets, in this case synchronous compensators are governed by their BCA rather than the grid code. If the site's BCA specifies that 72-hour resilience is required for critical tools and facilities, then these requirements would need to be met by December 31, 2026.

Q9. Please clarify how the 31 December 2026 implementation date applies to HVDC interconnector projects that are currently in development, particularly where the contracted connection date is after the implementation deadline, such as in 2028 or later?

Ans: If your connection date and updated connection date would be post the ESRS implementation date, the new requirements will form part of your connection compliance. You would then need to be compliant with all applicable Assurance activities by your connection date.

Q10. Does the requirement for a compliant submission apply exclusively to projects that are currently operational, or does it also extend to those that are under development or not yet commissioned?

Ans: It is applicable to all built sites, design phase, under construction and future connections. 31 December 2026 is the implementation date and after this date any existing and to be connected sites will need to meet the new requirements as specified in the Grid Code and Bilateral Agreement.

Q11. If a power station has not yet reached its final investment decision and is not expected to be commissioned until after 2026, is it appropriate to respond to compliance requests as "Not Applicable" at this stage?

Ans: You can reply it is not yet operational, however, the requirements will form part of your compliance checklist to be complete prior to energisation.

Q12. Does the grid code requirement also apply to OFTO assets, considering that these assets are not parties to the CUSC?

Ans: Provided that any offshore wind farms have concluded purchase contracts before 5th February 2025, (for both Offshore Transmission assets and wind farm assets which is captured under the Generator Build Process or OTSDUW as defined in the Grid Code) there is no requirement for them to have 72 hour resilience unless they have a signed restoration contract. The Control Point would however require 72 hour resilience (as this is expected to be onshore) but not the remote facilities offshore. The reason for this is that Offshore Systems were never considered to be part of an Offshore Local Joint Restoration Plan. Hence it does not make sense for the generation to have critical tools and facilities if they are not available on the Offshore TO Network whilst also acknowledging the retrofitting of existing Offshore assets would be prohibitively expensive unless of course a conscious decision has been taken by the Offshore Generator and OFTO to provide a Restoration Contract.

Going forward however, as Offshore Generation will be a key component of the future generation mix, and hence essential for restoration, it is essential that future offshore TOs and Offshore Generators have a restoration capability built in – hence the 2025 date.

Q13. Does DRC Schedule 16 part i and part iii apply to Small Generators, or are they exempt from these requirements?

Ans: Schedule 16 part i and iii are applicable to all CUSC party generators including those who own and operate Small Power Stations.

For Part i you would supply your plant cold start times 12, 24, 36, 48 and 72 hours from plant tripping (ie at the point of loss of supplies) through a total or partial system shut down to the restoration of site supplies. For part iii, if your plant is not a restoration contractor then you need only fulfil the CUSC parties Assurance activities.

Q14. Please clarify the definition of "total loss of supply"? Does this mean the loss of both Distribution Network Operator (DNO) supply and transmission grid supply?

Ans: Total Shutdown : Yes A total shutdown is the situation existing when all generation has ceased and there is no electricity supply from External Interconnections and, therefore, the Total System (ie Transmission, Distribution and Interconnector infeed into

the GB System) has shutdown with the result that it is not possible for the Total System to begin to function again without The Company's directions relating to System Restoration.

Partial Shutdown: The same as a Total Shutdown except that all generation has ceased in a separate part of the Total System and there is no electricity supply from External Interconnections or other parts of the Total System to that part of the Total System and, therefore, that part of the Total System is shutdown, with the result that it is not possible for that part of the Total System to begin to function again without The Company's directions relating to System Restoration.

Q15. Are non-embedded customers caught by the requirement of the grid code taking from the fact that they are not classed as generators?

Ans: Yes, as a non-embedded customer (ie a User), you are now required to submit Schedule 16 part iii as per GC0156 requirements (where applicable).

Here legal text referencing this:

*All **Users** and **Restoration Contractors** are required to confirm annually they comply with the applicable requirements of OC5.7. In the case of **Generators, HVDC System Owners, DC Converter** owners, **Non-Embedded Customers**, and **Network Operators** this confirmation shall be provided in their Week 24 submission...*

The Data and registration code Schedule 16 part iii captures the specific Assurance activities. These are aligned to 31st December 2026, when you will need to demonstrate compliance.

Please also note under the Grid Code Glossary and definitions the requirements for Non-Embedded Customers:

e) In the case of **Non-Embedded Customers**:

- i) Tools for monitoring their **System** including but not limited to, alarms and real time system operation;
- ii) The ability to control, protect and monitor those assets necessary for **System Restoration** including switchgear, tap changers and other network equipment including where available 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.

Q16. Please provide further guidance on the requirements and expectations relating to Local Joint Restoration Plans as referenced in the code.

Ans: As a User, the requirements of a Local Joint Restoration Plan (LJRP), only apply to Restoration Contractors for whom separate contracts exist. An LJRP is a local Joint Restoration Plan, this is a multiparty agreement between the relevant Transmission Owner, Distribution Network Operator, the NESO and Restoration Contractors.

A Restoration contract is one that is awarded to a party to either perform as an Anchor Plant (Self-start capability) or top up plant within the LJRP.

An LJRP only includes parties that are captured within in the LJRP and have agreed and signed the agreement, there is a tendered process for this, if your company has not signed an agreement you will not be a Restoration Contractor and requirements related to Restoration Contractors will not be applicable. For further information about restoration contracts, visit: [Restoration Services | National Energy System Operator](#)

Q17. Is Quick Re-synchronisation applied only to Restoration Contractors or EU Generators in respect of a Type C and Type D Power Generating Module.

Ans: Quick Re-synchronisation capability applies to all EU Generators which own and/or operate a Power Station comprising Type C and Type D Power Generating Modules irrespective of whether they have a Restoration Contract – see clause **ECC.6.3.5.6** and **OC5.7.2.5**. Type A – 800W – 1MW, Type B 1MW – 10MW, Type C 10MW – 50MW (all connected below 110kV), Type D – 50MW and above or connected at or above 110kV. To be clear these requirements only apply to EU Generators (ie those caught by the requirements of the European Connection Conditions (ECCs) not GB Generators caught by the requirements of the Connection Conditions).

Q18. Is it anticipated that Automatic Logging Devices, such as the Electronic Dispatch Logging system, will maintain full operational capability and remain accessible alongside Control Telephony during periods of partial or complete grid shutdown?

Ans: NESO provide the EDL System which has the same level of reliability and redundancy as Control Telephony which includes the 72-hour mains resilience capability and communications infrastructure, however operation of EDL needs to be maintained and be available at the User's Control Point.

Control Telephony – NESO confirmed that the phone line for the Control Telephony would be provided by the NESO in coordination with the transmission Licensee up to the control point, and it is the site's responsibility to ensure the cross-site wiring is in place. For User's with one control point which then controls several assets – eg where one control point controls several wind farms, solar parks and batteries, NESO will install the control telephony and EDL to the control point (with the Generator installing the cross site wiring) but it is the Generators responsibility to install the comms from the Control Point to the Generators assets so the Generator is able to control its assets in accordance with the instructions given by the ENCC

Q19. Is it reasonable to expect that public landline services, such as those provided by "Openreach" (formerly BT), will continue to operate reliably during partial or total grid shutdowns, and what implications might this have for sites that depend on these data communication links for remote operation?

Ans: NESO advises that Generators cannot assume data link resilience from public communications providers unless a specific contract has been agreed with them which guarantees supplies for grid shutdown or power failure scenarios. Users should contact their provider to discuss options for meeting Grid Code requirements (see **ECC/CC 7.10**).

Q20. Are all power stations required to comply with the new grid code provisions for resilience—specifically, ensuring critical facilities and tools remain operational for at least 72 hours following a partial or full grid shutdown—even if they do not have mandatory service agreements?

Ans: If there is no CUSC Contract then the requirements would not apply. However, it is a mandatory requirement for all generating plant which is directly connected or is part of a Large Power Station (even if embedded) to have a CUSC Contract and hence caught by Grid Code. In this situation then the requirements of Grid Code **CC3.1/ECC.3.1** applies which also includes BM Participants. These requirements would also necessitate the need to have Critical Tools and Facilities.

Q21. Are generating units that hold STOR contracts expected to maintain a state of readiness and be available to provide services as soon as the grid system is being restored and external power supply to the site has been re-established?

Ans: If there is a non-BM plant (eg not transmission connected or part of a Large Power Station) which does not have a CUSC Contract but has a commercial contract such as STOR or fast start, there would be no requirement to meet the requirements of the Grid

Code unless the terms of the commercial contract state that specific restoration obligations of the Grid Code apply. If the plant has a Restoration Contract, then specific requirements of the Restoration Contract will apply which generally will be over and above Grid Code requirements. For other plants which do not have a Restoration Contract but have a commercial contract of some description with the NESO (and there is no obligation to meet the requirements of the Grid Code) you only need to meet the requirements of the Commercial Contract.

Q22. What accommodations can be made if long lead times for equipment lead to installations being completed after December 2026 in regard to CMP398 claims?

Ans: From 31st December 2026, no more claims will be accepted.

Q23. Is it permissible to submit claims to NESO for costs incurred on a project before the works are fully completed and commissioned?

Ans: Formal claims will be submitted ex-post and so Incurred costs only as per the legal text.

Q24. Is it permissible to source equipment and contractors through pre-existing procurement frameworks to expedite project delivery, and does NESO require submission of multiple competitive quotes even when such frameworks are utilised?

Ans: Each claim is on a case by case and so long as necessary, reasonable, efficiently-incurred and proportionate, there is no text requiring a tendering process, however in order to demonstrate that costs were efficiently-incurred, good practice will as usual in this industry include getting more than one quote for any significant investment; the assessors will expect to see the competing quotes that were not accepted, and some analysis/documentation of why the accepted quote was chosen (it can be the case that a cheaper quotation is not thought credible to deliver and meet the need given its content and the tenderer's past experience and activities).

Q25. Can replacement of old equipment be reimbursed through CMP398 if it improves the reliability of the site's critical tools?

Ans: Each claim is on a case by case and so long as necessary, reasonable, efficiently incurred and proportionate, however as per the guidance, claims need to include engineering assessments of the existing compliance level.

Q26. Do costs associated with design and concept engineering fall within scope for the reclaim process? Especially given that these costs are only incurred in the process to ensure the compliance with ESRS.

Ans: The cost recovery mechanism is for Capex costs only.

Q27. If Synchronous Condenser have commenced the compliance process, and all relevant DRC schedules are currently being completed in preparation for their first UDFS upload. Given that the requirement for black-start capability has been removed from the project connection agreement with NESO, which specific sections of DRC 16 are required to be completed?

Ans: The Grid Code does not specifically define the requirements on synchronous compensators and as such the requirements would be specified in the Connection Agreement and / or commercial contract. Where the plant connects directly to the transmission system, the requirements of CUSC would apply and so a Connection Agreement would exist. However, the Grid Code does not specifically define the requirements on zero MW assets such as Synchronous Compensators and therefore any specific Restoration requirements (including Critical Tools and Facilities for example) would be specified in the Bilateral Agreement.

Q28. What are the specific requirements for governor settings under Grid Code clause CC.6.3.7(g), and could you clarify what is meant by the term "can be switched to frequency control only with no load influence during the early stages of system restoration whilst in island operation"?

Ans: To confirm, **CC.6.3.7(g)** does not apply as this only relates to Restoration Contractors. On the other hand, **CC.6.3.7(h)** does apply as it relates to Generating Units and DC Converters.

All NESO need confirmation of (even as a non-Restoration Contractor) is that in the post Local Joint Restoration Plan (LJRP) / Distribution Restoration Zone (DRZP) phase – ie this is when Restoration Contractors / Black Start Stations have been used to start and establish small power islands) in that when these smaller power islands are subsequently interconnected, the governor systems of non-restoration contracted plant (ie non-Black Start Plant) will be sufficiently robust so that they will not cause the generator to become unstable. Although the power system in the post LJRP/DRZP phase will be more than limited small power islands, they will still be quite fragile and subject to quite substantive load and frequency changes. We need confirmation that under this scenario, that any sudden changes in load in the power island do not cause instability of the generator. NESO doubt there would be if the generator is operating at a fixed MW output and only in frequency responsive mode, but we need confirmation from the generator that it is robust under this mode of operation.

Q29. Under the requirements of CMP398, is it permissible for generators to claim reimbursement for costs incurred in bringing their sites into compliance with ECC.7.10.6? Additionally, if a cyber security assessment determines that upgrades or replacements to control and communications systems are necessary to comply with the NIS Regulation, would the associated expenses be eligible for cost recovery from NESO?

Ans: CMP 398 was created to address costs for GC0156 requirements, focusing on 72-hour resilience (**ECC/CC 7.11**). **ECC/CC 7.10.1, 7.10.2**, and **7.10.3** are excluded as they were covered by **GC0148** and should already be implemented. **ECC/CC 7.10.6** is recoverable, but evidence must show how the generator met requirements before the claim.

Q30. Will there be reliable daily delivery of fuel oil (e.g. for emergency diesel generator) during partial or full grid shutdown?

Ans: NESO recommends that sites avoid relying on daily fuel deliveries for emergency generators, as transport disruptions (together with other systems – eg communications, road networks etc) may occur. Instead, sites should consider onsite diesel storage for emergency diesel generators (EDGs). CMP 398 provides coverage for the costs associated with onsite fuel storage for EDGs.

Q31. Are Medium Embedded Power Stations that participate in the Balancing Mechanism required to comply with the 72-hour resilience requirements?

Ans: In GB, Medium Power Stations only exist in England and Wales and are those with a Registered Capacity of 50MW or greater but less than 100MW. A Generator who owns and operates an Embedded Medium Power Station (ie connected to the DNO) which has a CUSC (Connection and Use of System Code) Contract (ie a Bilateral Embedded Generation Agreement (BEGA)) will need to satisfy the restoration requirements. Under these arrangements the Generator would be bound by the requirements of the Grid Code as applicable to Medium Power Stations and would also be in the Balancing Mechanism. Under these arrangements the Medium Power Station would be caught by the Restoration requirements and require 72-hour resilience and the necessary Critical Tools and Facilities. However a Generator who owns and operates a Licence Exempt Embedded Medium Power Station (LEEMPS) will not be bound by the requirements of the CUSC and only have to meet a subset of requirements of the Grid Code though obligations in the Distribution Code. That said a LEEMPS would not need to meet the 72 hour resilience requirements as they have no contact or direct contractual relationship with NESO.

Q32. Does participation in the Balancing Mechanism automatically require all power stations, regardless of size, to comply with the mandatory 72-hour resilience standard?

Ans: If a Power Station is participating in the Balancing Mechanism, then it would be signed up to CUSC and Grid Code and have to meet the Restoration requirements. See also the response to question 6 above.

Q33. In relation to the Quick Re-Synchronisation test, would a loss of mains event such as when a facility experiences a supply interruption but maintains control system operation via backup power for the required duration be sufficient evidence to satisfy assurance requirements for the test?

Ans: A generator report from an event like this would be good proof, provided that during the event they were disconnected from the system and able to reconnect in the required time frame. The Generator would need to demonstrate compliance with Grid Code clause **ECC.6.3.5.6**

