



GC0117

Overview of DNOs' concerns

4 October 2023

High level overview

1. Legacy Transmission Focus:
 - a) System frequency management & Boundary Flow Management.
 - b) Achieved by managing output Large Power Stations.
2. Legacy Distribution Focus:
 - a) DNO system constraint management.
 - b) Traditionally achieved by reinforcement, but increasingly by managing the output from Small Power Stations and modulation of demand via flexibility service contracts, ANM schemes.
3. Legacy general approach (setting Scotland aside) was for NGENSO to manage Large Power Stations and for DNOs to manage Small (embedded) Power Stations.
4. Changing Power Station Categorisation changes these legacy positions (or at least extends the scope from Scotland to England and Wales).
 - a) This may well be a reasonable direction of travel and NGENSO has demonstrated the benefits to NGENSO.
 - b) The implications associated with the interface between NGENSO and the DNO needs to be understood.
 - c) The implications for the DNOs needs to be understood specifically in the context of the transition to DSO.

Implications – Connection Process

1. What is the effect on the connection queue and queue management in relation to the distribution connection queue and the transmission connection queue. What arrangements may need to be in place for a transitional period?
2. What is the effect on the queue and queue management? Particularly the interaction between the transmission queue and distribution queue, and the implications for customers currently in one of the two queues?
 - a) How might these points align with the Queue Management initiatives from the Strategic Connections Group?
 - b) Have the proposals been discussed with the Strategic Connections Group reviewing connection queues?
3. There is a need to consider the connection application process for embedded Large Power Station connections post GC0117 as the change could allow generators to connect and receive constraint payments straight away whereas all existing accepted offers have requirement to wait until transmission reinforcement is complete.
4. Large Power Stations would need to apply for a BEGA (BELLA's won't be available) from NGENSO and also connection to the DNO. There could be a formal existing connection application process that could be followed (e.g. as in Scotland) – but volumes would increase.
 - a) Are NGENSO connections team geared up to accommodate the new volumes?
 - b) This will affect two of the three relevant TOs (NGET and SPT – no change in SSEN-T) who actually undertake the connection design process and issue a TOCO (TO Construction Offer) to the ESO – are TO connections team geared up to accommodate the new volumes?
5. Implications for the Statement of Works process - as Large embedded Power Stations fall outside the scope of the SoW process. The volumes of connections subject to SoW may reduce, but there may be other SoW/CUSC implications as there will now be contracts directly between the ESO and generators as well as between the generator and the DNO (and of course changes to the BCA between the ESO and the DNO to manage.

Implications – Technical

1. The primacy rules associated with instructions from NGENSO and DNOs would need to be codified so that an embedded large generator was clear about which conflicting instruction should be followed. There should be co-ordination with the primacy rules being developed in Open Networks.
 - a) How would an existing / new ANM scheme work with an embedded 'new Large' power station?
 - b) How do Regional Development plans work with an embedded 'new Large' power station?
 - c) How would the (joint) Strategic Connections Group initiative re Delegated Technical Limits (and the associated Visibility (via ICCP) and Control arrangements) work with an embedded 'new Large' Power Station?
2. Are there any implications for Distribution Restart as Large embedded generators who are Restoration Contractors may be more like generators participating in a LJRP and will be a CUSC party.
3. ESO tripping to DNO generators, N-3 for thermal issues and new discussions starting for tripping in timeframes to deal with stability.
4. There are over 60 references to Large in the CUSC. What are the unintended consequences of changing the threshold? The initial suggestion is that there may not to many consequences for the BSC as the BSC doesn't distinguish between Large, Medium and Small instead the distinction was between Exemptable and Licensable, but there should be a proper review. Are there any implications for other codes?
5. Are there other codes that reference Large Power Stations?

Implications – Operational

1. What are the practical implications of NGENSO issuing BM instructions to embedded large generators.
 - a) What volume of BM instructions could reasonably be envisaged per day / year?
 - b) What opportunity does the DNO control engineer have to influence the BM instructions?
 - c) Are the existing NGENSO and DNO arrangements scalable?
 - d) What other practical control room implications are there? (SSEN input)?
2. What might the implications of GCode BC1.6.1 be re Operational Planning?
 - a) Can the BC1.6.1 arrangements be applied to management of real time constraints?

Implications – Planning

1. Large Power Stations have obligations to provide planning timescale data to NGENSO as part of their week 24 obligations. There is a need to be clear about the additional work for smaller generators and also be mindful of any increase in operational timescale data exchange.
 - a) Given that the proposal is not retrospective and hence an existing 15MW power station would be treated differently than a new 15MW power station, is there a need for DNOs and NGENST to keep track of the connection date and share week 24 data differently depending on the 'connection date' or the date of any substantial modification.
 - b) There would need to be a common interpretation of a substantial modification between DNOs and NGENSO.
 - c) How will such dates be tracked consistently between DNOs and NGENSO?
 - d) Is there a need to update the Schedule 11 proformas in the PCA to reflect this?
2. Are there any implications associated with being categorised as a High Priority SGU?
3. How might NGENSO issuing instructions to embedded power stations influence the 'fortuitous' DG security contribution as calculated under EREC P2 / EREP 130?