

WELCOME

GSR029

Review of Demand Connection Criteria to Align with EREC P2/7

Meeting 11

10 November 2023

Online Meeting via Teams

Agenda

Topics to be discussed	Lead
Welcome	Chair
Review of Actions Log	Chair
Review of Terms of Reference	Chair
Proposer's Presentation	Fiona Williams
AOB & Next Steps	Chair

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

Workgroup Membership

Role	Name	Company
Proposer	Fiona Williams	NGESO
Member	Alan Creighton	Northern Powergrid
Member	Andrew Hood	Western Power
Member	Gary Loudon	Electricity North West
Member	Graeme Vincent	SP Energy Networks
Member	Le Fu	NGET
Member	Matthew White	UK Power Networks



Review of Actions Log

Milly Lewis – ESO Code Administrator

Action	WG Raised	Owner	Action	Due by	Status
5	Workgroup 2	TO Reps	TOs to provide feedback on the impact assessment for group demand using Method 1 and/or Method 2 (depending on the site)		Open
7	Workgroup 2	TO Reps	TOs to assess the contribution from large power stations using the methodology in EREP 130 and compare with current practice to understand the impact for change		Open
23	Workgroup 5	BA	Check Elexon data to assess significance of BM actions	Next WG	Insignificant - Proposed to close
29	Workgroup 8	CCG	Put together list of questions for Market Services from previous meetings notes/Summaries	Workgroup 9	No longer required – Propose to close
30	Workgroup 8	CL/BA	Address Alan’s comments to ICL	Workgroup 9	Meeting has taken place – Propose to close
31	Workgroup 8	WG	Consider how Gross Demand could be calculated	Workgroup 9	Open
34	Workgroup 8	CL/BA	Clarify position of Transfer Capacity in the spreadsheet and consider if it needs to be upfront	Workgroup 9	Update to be given in meeting - Proposed to close
37	Workgroup 9	Proposer	To have further conversations with ICL with regards to AC comments and BA question	Workgroup 10	Meeting has taken place – Propose to close
39	Workgroup 10	CCG	Contact Chris McCann about sharing the slides for the DCUSA modification	Workgroup 11	Included in WG11 papers - Proposed to close
40	Workgroup 10	WG	Write a problem statement considering the future forecast Demand and the historic Demand	Workgroup 11	Open
41	Workgroup 10	SQ	Put together the equation for Group Demand	Workgroup 11	Included in WG11 papers - Proposed to close
42	Workgroup 10	WG	Provide wording for redefining PCA 4.3.2 a)	Workgroup 11	Open
43	Workgroup 10	WG	Provide feedback on the Proposer document	Workgroup 11	Open
44	Workgroup 10	BA/FW	Nominate themselves for the DCUSA Workgroups	Workgroup 11	Nominated Proposed to close
45	Workgroup 10	GL	Provide an example of the historic vs future Demand	Workgroup 11	Open
46	Workgroup 10	GV	Check that there is a common-sense approach to the license	Workgroup 11	Verbal update to be given

EREC P2/8 Group Demand as a Formula

$$p_{\text{Group Demand}} = \max \left(f_{\text{ToUT}} \left(f_{\text{NOPs}} \left(f_{\text{CLP}} \left(f_{\text{distortion}} \left(P_{\text{Measured}} + P_{\text{Latent}}, t_{\text{sampling}} \right), t_{\text{restoration}} \right) \right) \right) \right)$$

Where:

1. $p_{\text{Group Demand}}$ is the scalar value **Group Demand** for the period under consideration.
2. P_{Measured} is the time series **Measured Demand** for the period under consideration of summated demand measured at the normal (network) infeed points to the network for which **Group Demand** is being assessed.
3. $P_{\text{Latent}} = P_{\text{Latent Distributed Generation}} + P_{\text{Latent Demand Side Response}} + P_{\text{Latent Electricity Storage}}$
4. $P_{\text{Latent Distributed Generation}}$ is the demand that would appear as an increase in **Measured Demand** if the **Distributed Generation** was not operating.
5. $P_{\text{Latent Demand Side Response}}$ is the demand that would appear as an increase in **Measured Demand** if the **Demand Side Response** was not implemented.
6. $P_{\text{Latent Electricity Storage}}$ is the demand that would appear as an increase in **Measured Demand** if the **Electricity Storage** was operating differently.
7. $f_{\text{distortion}}$ is a function to correct for data granularity implications, i.e. distortion or aliasing caused by the sampling interval t_{sampling} being too long to capture all peaks.
8. f_{CLP} is a function to correct for **Cold Load Pickup** when demand is reenergised after an interruption of duration $t_{\text{restoration}}$.
9. f_{NOPs} is a function to correct for the effect of **Network Operator** price signals.
10. f_{ToUT} is a function to correct for the effect of **Suppliers'** time of use tariffs.

From https://en.wikipedia.org/wiki/Time_series: In mathematics, a time series is a series of data points indexed (or listed or graphed) in time order. Most commonly, a time series is a sequence taken at successive equally spaced points in time. Thus it is a sequence of discrete-time data.

Terms of Reference

Workgroup Term of Reference

Consider whether the guidance provided in EREP 130 for assessing the security contribution to the distribution system is suitable for assessing the security contribution to the transmission system

Consider the option to review the analysis undertaken by Imperial College London when developing EREP 130

Given the materiality of typical BESS installations, provided specific guidance on the assessment of BESS demand on the transmission system and assessing the security contribution from it (noting that the security contribution from a BESS is not included in the scope of EREP 130)

Consider if there are any alternative proposals

Consider if there are consequential changes to other codes, such as the Grid Code in relation to planning data,



Update from Proposer

Fiona Williams– ESO



AOB / Next Steps

Milly Lewis – ESO Code Administrator

Timeline

Activity	Date	Objective
Workgroup 10	22/09/2023	Proposer feedback
Workgroup 11	10/11/2023	Further discussion on proposal
Workgroup 12	10/01/2024	Finalise Workgroup Consultation document
Workgroup Consultation	25/01/2024-15/02/2024	Workgroup Consultation (15 working days)
Workgroup 13	05/03/2024	Discuss consultation responses, refine solution and legal text
Workgroup 14	08/04/2024	Hold Workgroup vote, Finalise Workgroup Report and Legal text
Workgroup Report to Panel	30/04/2024	Workgroup report issued to Panel (5working days)
Post Workgroups		
Code Administrator Consultation	13/05/2024- 10/06/2024	
Draft Final Modification Report to Panel	02/07/2024	
Final Modification to Ofgem / Appeals Window opened	23/07/2024	