

EREC P28 Workgroup

MINUTES

Meeting – Wednesday 17th July 2024, 10:00 – 12:00

MS Teams Meeting

ATTENDEES	INITIAL	COMPANY
Nataliia Myrhorodska	NM	ENA
Joseph Weston	JW	NPg
Veronique Martre	VM	UKPN
Peter Twomey	PT	ENWL
Mark Kent	MK	SPEN
Gary Eastwood	GE	Threepwood
Afshin Pashaei	AP	NGET

APOLOGIES

Wayne Oxborough	WO	NGED
Mark Friese	MF	SPEN
Milana Plecas	MP	SPEN
Saad Khan	SK	GTC
Rula Sha	RS	SSEN

MEETING NOTES AND ACTIONS

LEAD

Agenda item 1. Welcome and acceptance of agenda		NM
Members were welcomed to the meeting, and the agenda was agreed.		
Actions	None	
Agenda item 2. Review of previous actions		NM
NM led the group through the actions from the previous meeting, each action and approach was discussed in detail as follows. Actions not specified are completed. The ongoing actions are listed below.		
Action 3.3	NM provided an update regarding engagement with Stakeholders. Engineering team waiting for an invitation from the ENA BESS WG to promote the EREP 28 Stakeholders engagement.	NM
Action 6.5	No operational data has been received from BESS parties as yet. VM noted that engagement with Stakeholders is very important as they are the owners of their data information.	ALL
Action 6.7	No movement – action ongoing. PT will try to find Response contract data sent last year and forward to ENA.	PT
Action 7.1	The examples are outlined in the draft, discussion is ongoing.	ALL
Action 8.1	AP took the action under his responsibility. Action ongoing.	AP
Action 8.2	To clarify the action purpose and to send request to AP. No movement – action ongoing.	AP
Action 8.3	No movement – action ongoing. JW will try to find relevant BESS controller contact details and will forward to the WG.	JW
Action 9.4	There were two responses provided. One was from Matthew Porter and from Steve Somerville from Aurora Power. Collate responses to Stakeholder Response document and share with P28 WG.	NM
Agenda item 3. Discussion on Draft_v2 of EREP 28		GE

GE gave a short brief of the Draft_v2 of EREP 28 development. It was mentioned that NPg with Aurora Power is working on guidance development for the BESS assessment. When the guidance will be ready JW will share with WG.

Post meeting note.

JW circulated NPg's latest guidance on BESS requirements in relation to ENA Engineering Recommendation – EREC P28 Voltage Fluctuations Assessment among the members for commenting.

It was discussed the Draft_v2 of EREP 28. The authority of approving for publication needs to be clarified.

Post meeting note.

As EREP 28 is intended to provide guidance on the application of EREC P28 to the assessment of installations and EREC P28 is listed in Annex 1 of the Distribution Code the EREP 28 should be approved for publication by the Distribution Code Review Panel (DCRP).

GE raised issues that might need to be discussed further by the WG:

1. 6.2 Discuss the application of RVC to BESS assessment. In practice BESS does not produce RVC other than transformer energisation.

The WG had no objections to the statement that in practice BESS does not produce RVC other than transformer energisation.

2. 7.5.1 and 7.5.3.4 Discuss application of P28 assessment to Frequency Response (FR) services. Should Dynamic Containment operation outside the 49.5Hz to 50.5Hz band be considered response to a fault condition or should it be outside 49.8 to 50.2 Hz as previously suggested by NGED?

This issue needs to be commented by NGESO on whether BESS providing Dynamic Containment Frequency Response can be exempt from P28 compliance when responding to a system frequency event which is more than 0.2 Hz outside nominal frequency of 50 Hz – i.e. is this classed as an abnormal system fault condition? The general view expressed by the WG was that it should not be exempt.

3. 7.5.8 Further information is required on how coincident voltage changes should be assessed?

GE noted that at the moment we don't have enough data to give very clear guidance on how coincident voltage changes should be assessed.

JW pointed out that lower voltage busbars might have a significant voltage step change caused by BESS connected at higher voltage levels. JW supposed that the coincidence occurs sometimes (not always) but the impact of larger BESSs on higher voltage can be really quite significant. So it is hard to put appropriate wording into the document.

The WG agreed to put this out in the document. The modellers, consultancies that are doing very detailed modelling of very large BESS would comment on this. PT paid attention to the point that it is very important to get more comment and evidence.

4. 7.6 Discussion about system inertia and how to future proof P28 assessments for lower system inertia.

The foreseeable reduction of system inertia issue outlined in the EREP 28 was discussed in the meeting.

PT advised to add a reference to the ESO document that expects (forecasting) reduction in system inertia.

All members agreed that system inertia is going to reduce in the future and EREP 28 wording should cover NGESO planned reduction strategy. AP kindly agreed to find out how NGESO treat future reductions of system inertia in P28 compliance studies.

5. 9.1 Last para: Do members assess the inverters themselves from a flicker perspective?

GE noted the EREP 28 requirement that the inverters themselves should be checked for their own flicker severity. DNO members confirmed that in practice the installer would submit compliance information against those standards and it's right to make sure that compliance of the inverter flicker itself is provided. PT pointed out that this is a requirement of EREC G99.

6. 9.3 Discussion about step voltage change definition and not necessarily being in steady state. Also the concept of a rolling window before the tap-changer operates (see Figure 6).

When BESS are providing frequency response the voltage is changing in a period of time and would cause a problem. In relation with the above Threepwood and NPg are recommending to set assessment of voltage changes within the observation window when the TAP changer operates for a power change.

AP advised to produce detailed system study methodology for assessing step voltage changes caused by BESS operation. The methodology aims to navigate the Customers how to demonstrate the results of voltage change assessment. GE took an action together with AP to develop the methodology for assessment.

MK raised the issue – how to determine the POC where the worst voltage change might be and which POC should be assessed.

Threepwood and NPg believes that when BESS is operating in frequency response the full power swing itself does not occur but if the BESS is providing other services or if it's acting in its arbitrage mode it can go from full export to full import unless the operator prevents it from doing so. If the applicant can provide evidence and data that shows that the BESS can't do 100% power swing then the DNO will consider it.

The WG considers it appropriate to impose obligations on the Customers to comply with some sort of protection/limitation agreements as a part of sufficient connection agreement and that any changes to the obligations by the customer will require reassessment.

Post meeting note.

NGESO visibility of restrictions in DNO's connection agreement has been discussed on the EU NC SG:

b) *NGESO visibility of restrictions in DNO's connection agreement*

Had previously agreed to come up with a list of restrictions for BESS in connection agreements, and if these are similar across the network operators, this can then be included as a standard part of the ENA portal.

Action - All to discuss with commercial colleagues to propose restrictions for an annex, with a title common across all DNOS, to each DNO's connection agreement.

No movement since last meeting. This issue will be included to the next EU NC SG meeting scheduled on the 04/09/24.

Action 10.1	To share the NPg guidance for the BESS assessment with WG After publication	JW
Action 10.2	To clarify the authority of approving for publication Next meeting	NM

Commented [GE1]: Natalia - these actions might be better numbered 10.1, 10.2 etc. This reflects the actions come from Meeting No. 10 of the WG and will avoid confusion with the actions still open from previous meetings.

Action 10.3	Comment on whether BESS providing Dynamic Containment Frequency Response can be exempt from P28 compliance when responding to a system frequency event which is more than 0.2 Hz outside nominal frequency of 50 Hz – i.e. is this classed as an abnormal system fault condition? Next meeting	AP
Action 10.4	How NGESO treat future reductions of system inertia in P28 compliance studies? Next meeting	AP
Action 10.5	To liaise with NGESO representatives to be join in the EREP 28 WG. 30.08.24	AP
Action 10.6	To develop the methodology for DNO's step voltage changes assessment caused by BESS operation Next meeting	GE/AP
Agenda item 4. Next steps		ALL
<p>The WG did not discuss the following issues:</p> <p>9.3 Discussion about the improbability of full power swings for BESS solely providing FR services. Discuss stacked services. Is it acceptable for smaller power swings to be accepted?</p> <p>9.3.2 Do any DNOs implement fast tap settings? Should they be implement to assist with BESS P28 compliance?</p> <p>9.3.3.1 Discussion about how to treat impact of step voltage change for different power factors and control mode.</p> <p>9.4 Discuss the suitability and extent of the examples.</p> <p><u>Next steps is:</u></p> <p>All members to take into account the issues listed above and provide own approaches in the next meeting.</p> <p>All members to read through the EREP 28 draft and provide comments by 30th of August.</p> <p>GE believes that in the next meeting WG should agree if the EREP 28 is ready for involvement Stakeholders for commenting.</p>		
Action 10.7	To work out approaches to undiscussed issues listed above Next meeting	ALL
Action 10.8	To read through the EREP 28 draft and provide feedback 30.08.2024	ALL
Agenda item 5. AOB		
None were raised.		

Actions	None	
Agenda item 5.	Next meeting	NM
The group agreed to have the next workgroup meeting in mid-September, NM to circulate poll to determine the date.		
Actions 5.1	Review timing of the next meeting and arrange.	NM

ACTIONS LIST

3.3	Engage with Stakeholders at the next ENA led BESS workgroup. Q3 2023	NM
6.5	Engagement with BESS parties for operational data request 28/07/23	ALL
6.7	Engage with NGESO for Response contract data 25/08/23	PT
7.1	Consider examples from P28 for inclusion in Annex section of EREP 27/10/23	ALL
8.1	Liaise with NGESO on engagement with the WG 01/12/23	AP
8.2	Confirm use of P _{st} CAD modelling in Stakeholder Responses 22/12/23	AP
8.3	Forward relevant BESS controller contact details to group 22/12/23	JW
9.4	Collate responses to Stakeholder Response document and share with P28 WG. Before next meeting	NM
10.1	To share the NPg guidance for the BESS assessment with WG After publication	JW
10.2	To clarify the authority of approving for publication Next meeting	NM
10.3	Comment on whether BESS providing Dynamic Containment Frequency Response can be exempt from P28 compliance when responding to a system frequency event which is more than 0.2 Hz outside nominal frequency of 50 Hz – i.e. is this classed as an abnormal system fault condition? Next meeting	AP
10.4	How NGESO treat future reductions of system inertia in P28 compliance studies?	AP

Commented [GE2]: See my previous comment about renumbering 10.1, 10.2 etc.

	Next meeting	
10.5	To liaise with NGESO representatives to be join in the EREP 28 WG. 30.08.24	AP
10.6	To develop the methodology for DNO's step voltage changes assessment caused by BESS operation Next meeting	GE/AP
10.7	To work out approaches to undiscussed issues listed above Next meeting	ALL
10.8	To read through the EREP 28 draft and provide feedback 30.08.2024	ALL
10.9	Review timing of the next meeting and arrange.	NM