

# Meeting summary

## Grid Code Development Forum – 7 February 2024

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<b>Date:</b> 07/02/2024	<b>Location:</b> MS Teams
<b>Start:</b> 09:00	<b>End:</b> 09:45

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### Participants

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Attendee	Company	Attendee	Company
Terry Baldwin	National Grid ESO (Chair)	Isaac Gutierrez	Scottish Power
David Halford	National Grid ESO (Tech Sec)	Atle Rygg	Equinor
Aleem Abid	National Grid ESO (Presenter)	Ross Strachan	EDF Renewables
Xiaoyao Zhou	National Grid ESO (Presenter)	Andrew Larkins	Sygensys
Ife Garba	National Grid ESO	Alan Creighton	Northern Powergrid
Mike Kay	P2 Analysis	Callum Henderson	SSE
Graeme Vincent	SP Energy Networks	Cahir O'Neill	ESB
Garth Graham	SSE	Mireia Barenys	Lightsource BP
Benjamin Marshall	SSE		

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### Agenda and slides

A link to the Agenda and Presentations from the February GCDF can be found [here](#)

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### GCDF

***Please note: These notes are produced as an accompaniment to the slide pack presented and provide highlights only of discussion themes and possible next steps.***

#### Meeting Opening – Terry Baldwin (GCDF Chair) & David Halford (GCDF Tech Sec), NGENSO

The meeting was opened, with an overview of the agenda items that will be covered.

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## **Presentation: Presentation: Guidance Notes for System Oscillation Assessment of Inverter Based Resources (IBRs) – Aleem Abid and Xiaoyao Zhou, NGESO**

A presentation was given on the guidance notes prepared by the Electricity System Operator (ESO) to describe to Users on how to demonstrate the appropriate damping performance of Inverter Based Resources (IBRs) against potential system oscillations. These Guidance Notes specify a set of small signal studies which should be carried out by Users as part of the connection compliance process to ensure the safe operation and stability of the transmission system.

The Guidance Note can be found [here](#)

### Discussion themes / Feedback

It was asked if when referencing the Grid Code in relation to EMT Simulations, that the actual reference to the section of the Grid Code is included?

*The presentation will be updated to include this reference.*

In relation to EMT Simulations and step change studies, are you able to specify the specifics in terms of the actual requirements?

*The actual test parameters can be found in the Guidance Note.*

It was asked if the actual link to the Guidance Document could be amended in the presentation?

*The correct link has been added to the presentation which has been uploaded to the GCDF webpage.*

It was noted that Guidance Notes can be found in different areas within the ESO website, and we need to ensure that different versions of the same Guidance Notes are not located in different areas within the website.

*This is something we will look to review to ensure there is clarity for users who need to access these Guidance Notes.*

It was asked if the reference to the overshoot 5% limit detailed in the presentation, was introducing new obligations that are not included within the Grid Code?

*This reference is taken from an already published compliance document, so is not looking to introduce new obligations.*

It was mentioned that issues with regards to phase steps are not clear within the Grid Code and was raised in the Grid Code Working Group regarding clarification of fault ride through, and currently there is no clear definition of the requirements are for fault ride through and phase steps.

In relation to Small Signal Injection Studies, is the thinking around pure positive sequence injection or a more sophisticated approach?

*The Guidance is in relation to the positive sequence approach, but we are open to any other means that demonstrates compliance.*

It was asked what the differences are between small signal injection studies and active frequency scans as they appear to be two different ways of characterising plant in the frequency domain when looking for positive resistance?

*The injection studies will be performing injections from zero to 100 Hertz by time domain with active frequency scans would also be by time domain but cover subsynchronous, near-synchronous and super-synchronous up to 2.5 kilohertz so covers a wider range of frequencies.*

It was noted that guidance of this nature is very helpful, but in terms of the test scenarios discussed, how would a developer now that they have performed these correctly e.g., a developer could provide a study report to the ESO which is deemed as not good enough. Is there anyway a step-by-step process could be provide in order to eliminates these potential issues?

*Its also important for the developer to have early conversations with compliance engineer to understand the expectations and ensure all parties are clear on the requirements. We are working with the compliance engineers to ensure they have the correct training in order to help developers with these types of questions.*

On the methods of frequency scan or small signal injections, would you accept that these studies are completed purely in frequency domain and not using PS Scan as this is a huge model and is time consuming to run each case which could be in the frequency of hundreds of times?

*We are happy to have further discussions in terms of alternative methods which could present the same results.*

## AOB

The Chair noted to the attendees that an STC Modification [CM094 - Amendment to Bi-annual estimate provisions](#), had been granted urgency by The Authority and the Workgroup Consultation will be published on Friday 9<sup>th</sup> February. The dates for the 2024 GCDF sessions are available on the [GCDF webpage](#)

Attendees were reminded that the GCDF can be used by any industry party to present potential Grid Code changes and future agenda items are welcomed.

The Chair thanked the attendees and presenters for their contributions and closed the meeting.

**The next GCDF will be held on the 6<sup>th</sup> March 2024 with the 28<sup>th</sup> February 2024 being the deadline for agenda items and presentations.**

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## Action Item Log

Action items: In progress and completed since last meeting.

ID	Agenda Item	Description	Owner	Notes	Target Date	Status
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