

Meeting summary

Grid Code Development Forum – April 2022

Date:	06/04/2022	Location:	MS Teams
Start:	09:00	End:	11:00

Participants

Attendee	Company	Attendee	Company
Rob Wilson (RW)	National Grid ESO (Chair)	Sean Gauton	Uniper UK
David Halford (DH)	National Grid ESO (Tec Sec)	Grace March	Sembcorp
Jonathan Barcroft	National Grid ESO (Presenter)	Priyanka Mohapatra	SP Energy Networks
Lois Milner-Elkharouf	Arup (Presenter)	Serdar Kadam	Andritz Hydro
Simon Evans	Arup (Presenter)	Kyran Hanks	Waters Wye Associates
Vicky Allen	National Grid ESO (Presenter)	Martin Aten	Uniper Energy
Jennifer Groome	National Grid ESO	Julie Richmond	Scottish Power
Stephen Baker	National Grid ESO	Paraic Higgins	ESB
Isla Martin-Abel	National Grid ESO	Ann Beverley	Drax
Ayman Attya	National Grid ESO	Paul Youngman	Drax
Alexander Aristodemou	National Grid	Isaac Gutierrez	Scottish Power
Christopher Smith	National Grid	Ruth Kemsley	EDF Energy Renewables
Alan Creighton	Northern PowerGrid	Graeme Vincent	SP Transmission

Agenda and slides

A link to the Agenda and Presentations from the April GCDF can be found here

<https://www.nationalgrideso.com/electricity-transmission/calendar/grid-code-development-forum-gcdf-06042022>

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 – Rob Wilson, NGENSO

RW opened the meeting providing an overview of the agenda items for discussion.

Virtual Energy System (VES) – Jonathan Barcroft, NGENSO / Lois Milner-Elkharouf & Simon Evans, Arup

The VES Team presented an introduction to the Virtual Energy System with its aims to develop an ecosystem that will integrate digital twins (models and data) from organisations across electricity and gas; from generation through networks to consumption; and in future linking into related sectors. Progress on this project was shared with participants along with the next steps.

Discussion themes / Feedback

It was explained the group that the definition of a “Digital Twin” is that’s it a digital replica of the physical built world. So, it’s the digital model connected to the real world by observations and data, and those individual digital twins will represent each component in the power system. So, we’ll have digital twin that represents their distribution network for example, a digital twin which is models and data that represents transmission system and each of those need to be able to connect and operate in parallel. These are the components that form the Virtual Energy System with the VES being the connection between each of those components in a digital sense. The project is currently in Work Package 3 which is looking to demonstrate a common framework in relation to how Digital Twins could be connected

It was asked whether the team is engaged with areas like Smart DCC in relation to the Smart Meter rollout and whether the VES would have any interactions in this space?

There have been some early conversations with Smart DCC to understand how we work together and what the capabilities are on both sides.

From a generator point of view, it was asked what type of information the VES Project would be looking for to assist them? Is this technical, operational, strategic information etc?

The team confirmed that it could be a combination of various sources of information, but essentially, they are keen to speak to any parties that could be a possible future user and would benefit from having visibility of data across the energy sector.

It was asked how this would be different from the ESO Data Portal or the Balancing Mechanism Reporting Service (BMRS) which has historical, real time and forecasted information and would the VES capture real time generator information?

The project team confirmed that they are aware of various data portals that exist now with the VES to act as the “Glue” that links up those data sets and how different organisations can share data in way that can be consumed by others while doing this in as near to real time as possible.

Would we anticipate the VES creating new data?

Yes, there is an opportunity to develop new and innovative services and solutions that will create and use new sets of data and help to accelerate further into the future of the energy system.

It was asked that if generators provided the required data and more visibility of their assets, what could be the potential benefits for the generators e.g., improved operability?

There could be several benefits which include identifying areas for new investment where there could be capacity for new generation and identifying the best areas for those and helping to manage the operability challenge in terms of efficiently scheduling maintenance. The VES would enable information to be shared through a common interface which could allow a network operator to maximise the capability of their assets. From an Electricity System Operator, it could help to improve the understanding of flexibility and capability of assets.

What is the difference between a Digital Twin and the network models that network operators already have?

A Digital Twin is not dissimilar in many ways to a model or simulation, and we see it as a digital representation of a physical asset process system. What makes a Digital Twin different to an existing model or simulation is that you have feedback and insight, and decisions can be derived against this digital information which then allows you to make an intervention or a change in the physical world where you can deliver an outcome.

It was asked what are the next steps and what outputs will we be seeing?

A key factors report will be published in the next few weeks and following that a report on the demonstrator and the proposal of how this will be built in the Alpha environment. A “show and tell” event is being held on the 9th April and the slides from this session will be available on the project page on the Smarter Networks portal.

It was suggested that the project team return to the GCDF in the coming months with further updates.

More information on the VES can be found at [here](#) and interested parties can sign to the mailing list at <https://subscribers.nationalgrid.co.uk/h/d/911280CFF8080395>

Whole System Technical Code – Vicky Allen, NGESO

The WSTC Team shared have a brief overview of the project to date and shared an update with regards to current progress in respect of engagement with the Industry and the next steps in respect of project scoping papers which will be presented to the Steering Group on the 16th March.

Discussion themes / Feedback

The team welcome further participation in the Steering Group and all of the related material can be found on the dedicated ESO webpage which can be found [here](#).

It was noted that in relation to code consolidation, the view of the Steering Group is that we should not be progressing with consolidation until the Energy Code Reform outcomes are clearly understood

It was asked if the project will be paused while the outcomes of the ECR are being fully understood?

The project team will continue to move forward in terms of the digitalisation of the codes as there is no reason why we should not push ahead with this. Digitalisation should help users to get more from the codes and aligns with what is happening in order industry codes than have been or are in the process of being digitalised

AOB

The Chair thanked the attendees and presenters for their contributions and in closing the meeting reminded everyone that the GCDF is an open forum and agenda items are invited from all parties.

Next GCDF will be held on the 4th May with the 26th April being the deadline for agenda items and presentations.

Action Item Log

Action items: In progress and completed since last meeting

ID	Month	Agenda Item	Description	Owner	Notes	Target Date	Status
	September	Minimum Short Circuit Levels	Ensure GCDF is updated with regards to progress on developing a proposal to include in the ESO System Operability Framework (SOF) paper	BA		On-going	Open