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Customer Connections *Agora*
17 May 2022

Agenda

Introduction

The pre-application process and proposals – Emma Hart

Connections Compliance Process – Biniam Haddish

Q&A

Any questions please enter them in the chat. If we are unable to answer today we will provide a response at a future Agora.

May Agora presented by

Rebecca Yang

England and Wales Generation Manager



Introduction

The Customer Connection Agora's look to:

Provide an opportunity to learn about a variety of subjects from Connection Processes, Connections related Code and Policy Changes , Network Operability, Operational Compliance, Security Statements Cancellation Charges, and more.

Increase the visibility of the Electricity Customer Connections team to our customers, stakeholders, and the wider electricity market.

Electricity Customer Connections provide updates via a short presentation as well as encouraging engagement and interaction via a monthly Question and Answer segment.

Customer Seminars

19th May - Glasgow

20th July - Warwick

17th October - London



Glasgow



Warwick



London



Upcoming Events and Previous Agora's

Electricity Customer Connections Events webpage now live

<https://www.nationalgrideso.com/industry-information/connections/customer-connection-events>

Previous monthly agora's

Watch the video presentations by pressing the play icon where available or download the slides using the link below each image.



April 2022

Customer Portal overview



March 2022

Queue Management update

Emma Hart

Senior Connections Contract Manager

England and Wales Onshore Generation

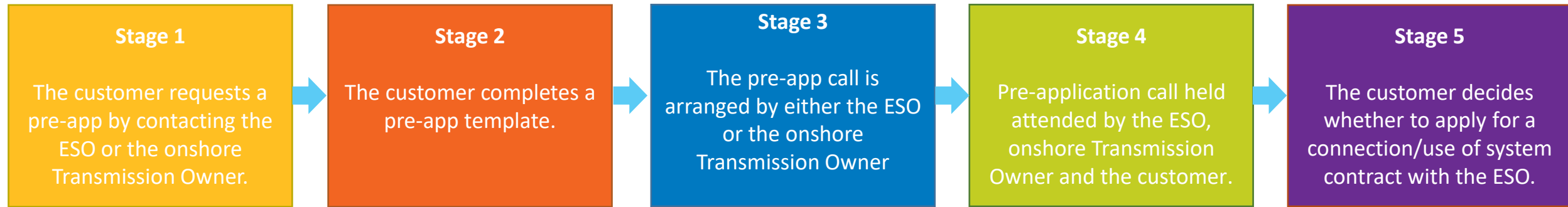
The lead for the Pre-Application co-ordination and future state development.



Pre-Application Process

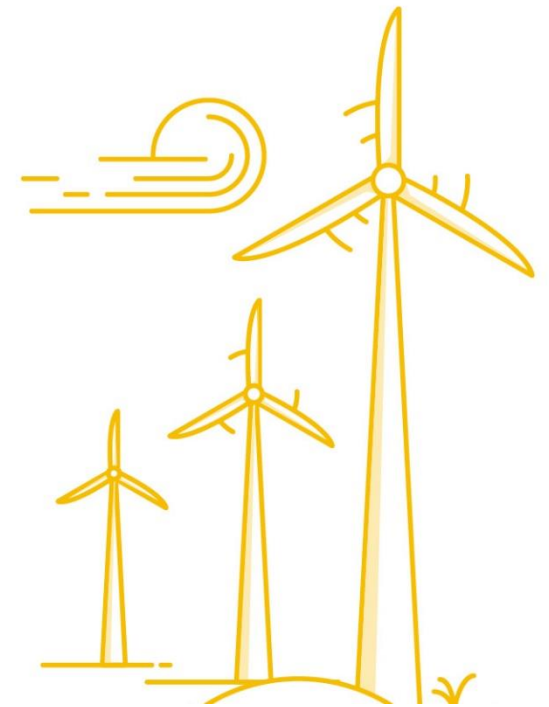


Current Process

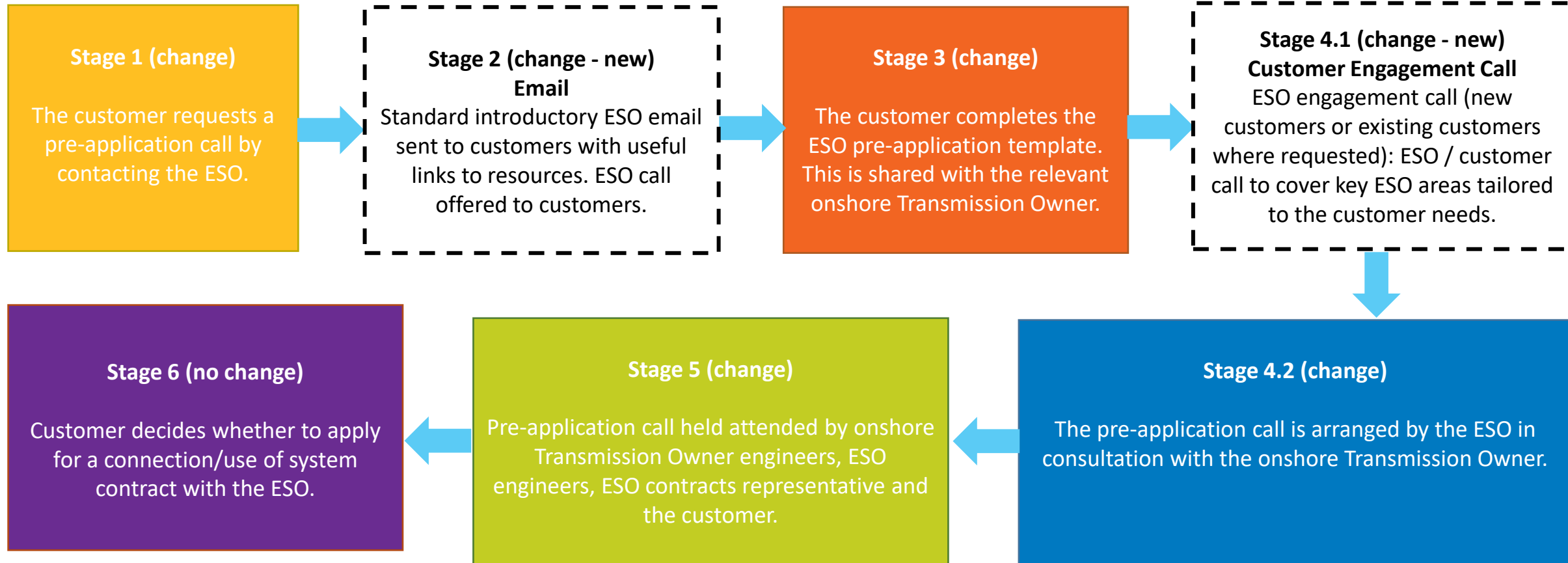


Issues with the current process

- Process inconsistencies across the three onshore Transmission Owner areas creates an inconsistent customer experience
- Roles and responsibilities between the ESO and the onshore Transmission Owners are not always clear to customers
- Customer queries for the ESO may not be answered effectively and timely due to insufficient time allocated on pre-application calls and the technical driven nature of the calls
- Customer queue times currently result in long lead in times (up to two months waiting time)



Proposed Process Changes



We welcome your comments and suggestions on the new process.

The pre-application process for offshore applications will be reviewed as part of the Offshore Transmission Network Review (OTNR) / Holistic Network Design (HND)

Proposed Next Steps

1. Stakeholder and Customer Engagement to seek views of those affected by the changes and utilise the feedback to refine the proposed process (completed by early June 2022)
2. Finalise the revised process (June 2022)
3. Implement the revised process on a trial basis (anticipated to be July 2022)
4. Process review – 6 months after 'go live'

Connections Team Lead:

Emma Hart, Senior Connections Contract Manager
Emma.Hart@nationalgrideso.com

Biniam Haddish

Electricity Connections Compliance Manager

Leading the Electricity System Operators work to manage and ensure that users connection to the UK Transmission Network complies with the relevant Grid Code connection requirements and contractual framework.

Biniam is also responsible for implementing changes of the existing NGENO Connections Compliance process and ensuring it is robust and fits the code modifications.





Connections Compliance Process

Contents

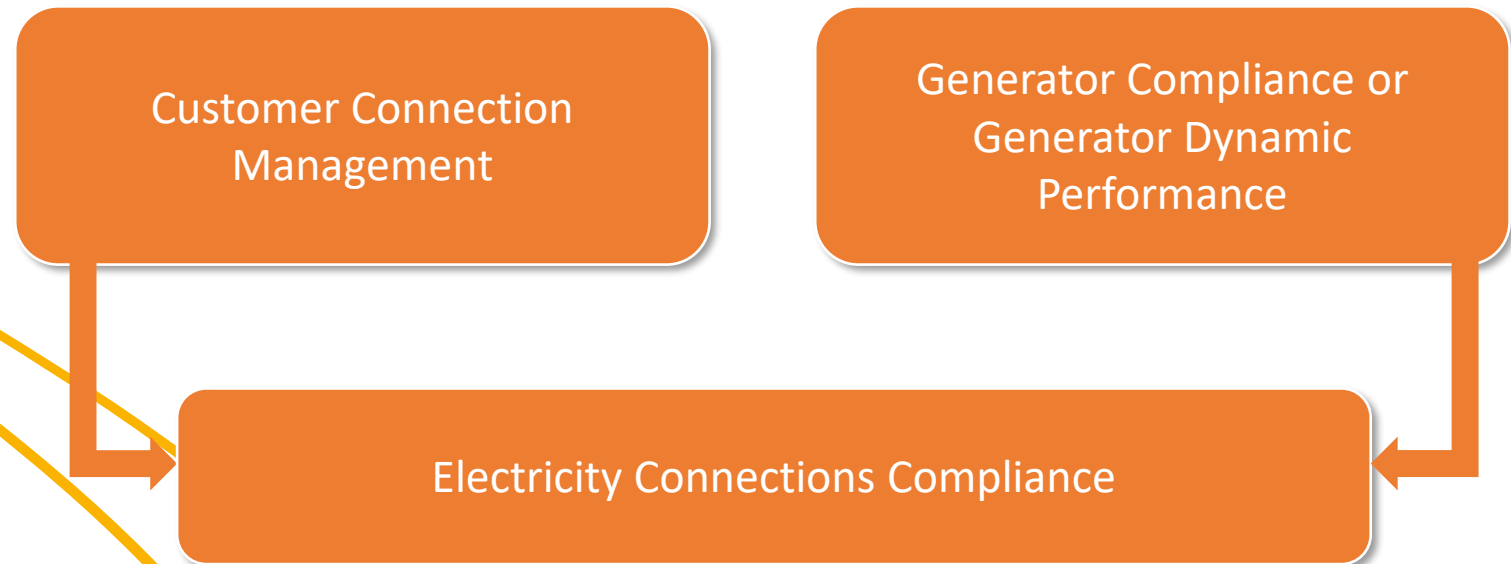
- Compliance Team
- Compliance Process
- Elexon Process
- BMU Registration Process
- GC0151 FRT Non Compliance Process
- Upcoming Initiatives and Challenges



Compliance Team

Electricity Connections Compliance team is responsible for supporting users and network operators in going through the Compliance Process. If you have an agreement with NGENSO, you will have certain Grid Code compliance obligations to satisfy prior to becoming operational.

The Compliance Process normally starts around 12 months before commissioning and near to the end of construction. There are many steps within the Compliance Process, all of which once complete will enable NGENSO to issue you with an Operational Notification Certificate.



Grid Code Compliance

Why do we do it?

- License Condition C14
- Connection & Use System Code
- Grid Code

Key Stakeholders

- External – Generators, Manufacturers, OFTO
- Internal – Commercial, Data, Operations

Who does it?

- Connection Compliance Team
- Engineering Compliance Team contact looks after all technical issues associated with the generating unit /PPM

Grid Code Compliance

All Large Power Stations in Great Britain

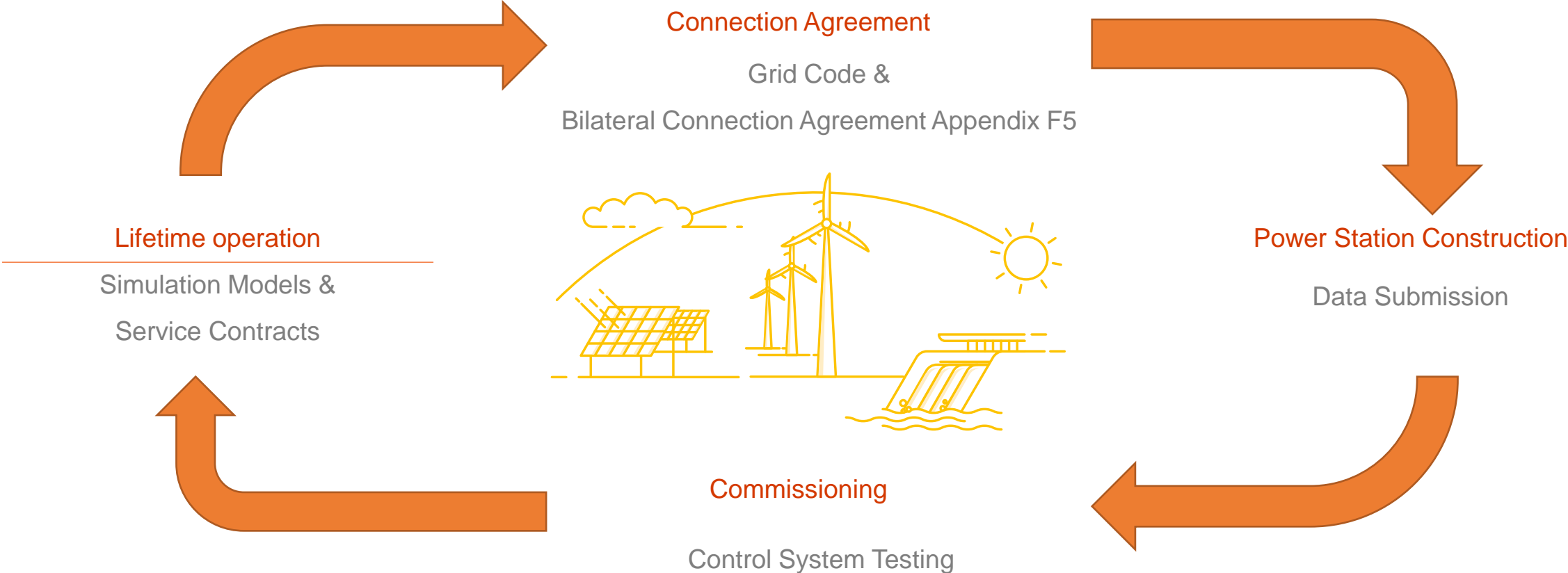
- 10MW in SHET area
- 30MW in SP area
- 100MW in England and Wales

All generation technologies

- Coal, Oil, Gas
- Diesel, CHP, Biomass
- Nuclear, Wind, Tidal
- Solar, HVDC, Batteries



The Compliance Process



Becoming Operational

Process to is set out in the Grid Code

- **“European Compliance Processes”** or “ECP”
- **“Compliance Processes”** or “CP”

Status managed by “Operational Notifications”

- **Energisation** – permission for passive connection
- **Interim** – commissioning and requiring the demonstration of compliance
- **Final** – demonstrated compliance
- **Limited** – requiring a new demonstration of compliance on an existing power station

Compliance Process - Lifetime

Generators notify NGENSO when they make changes likely to effect performance

- Frequency and Voltage Control Systems
- Main plant modifications e.g. rotor changes
- Changes to Capability e.g. MW or MVAR
- Changes to commercial services

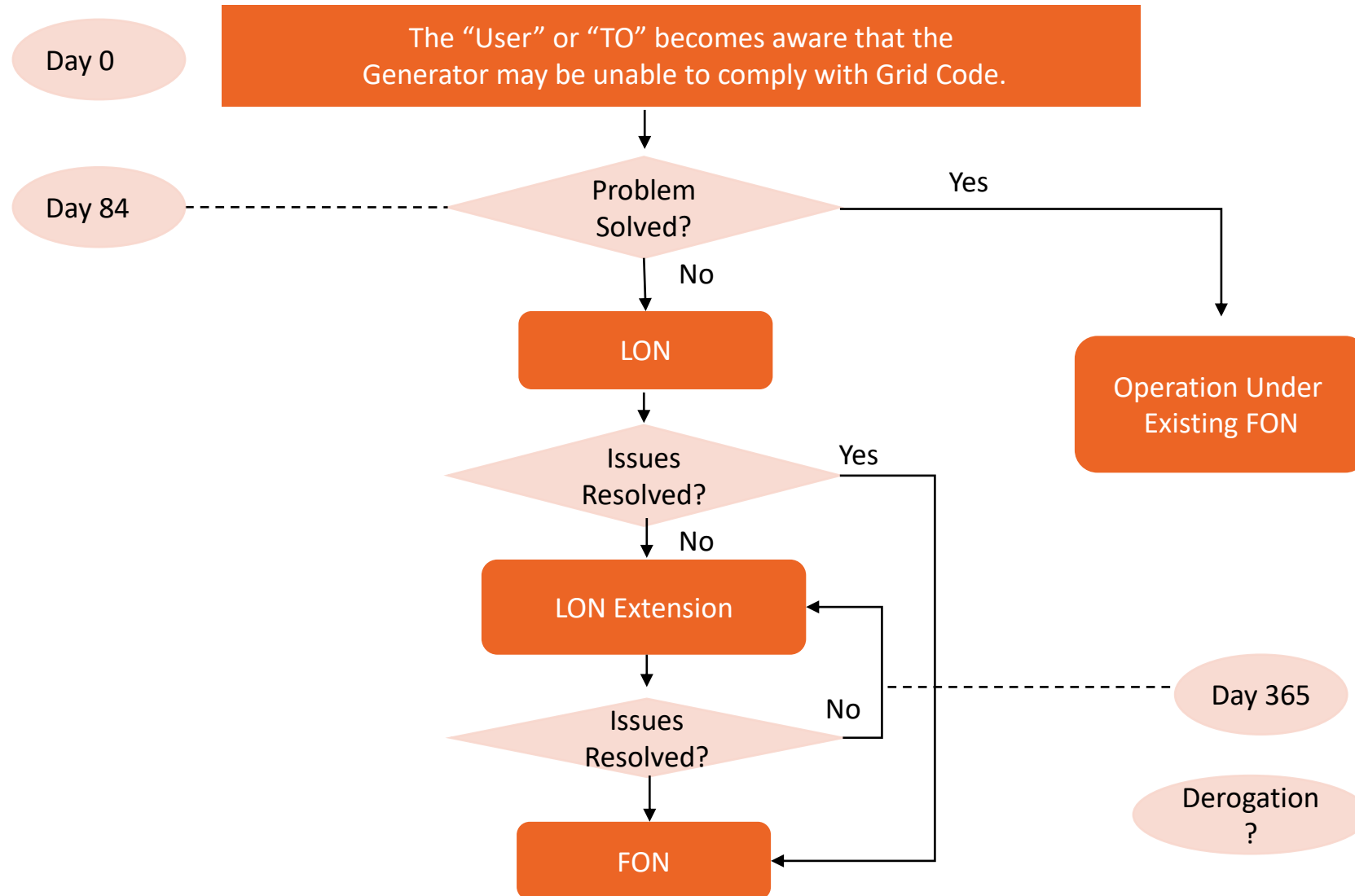
Problems picked up by NGENSO or User monitoring

System Incidents

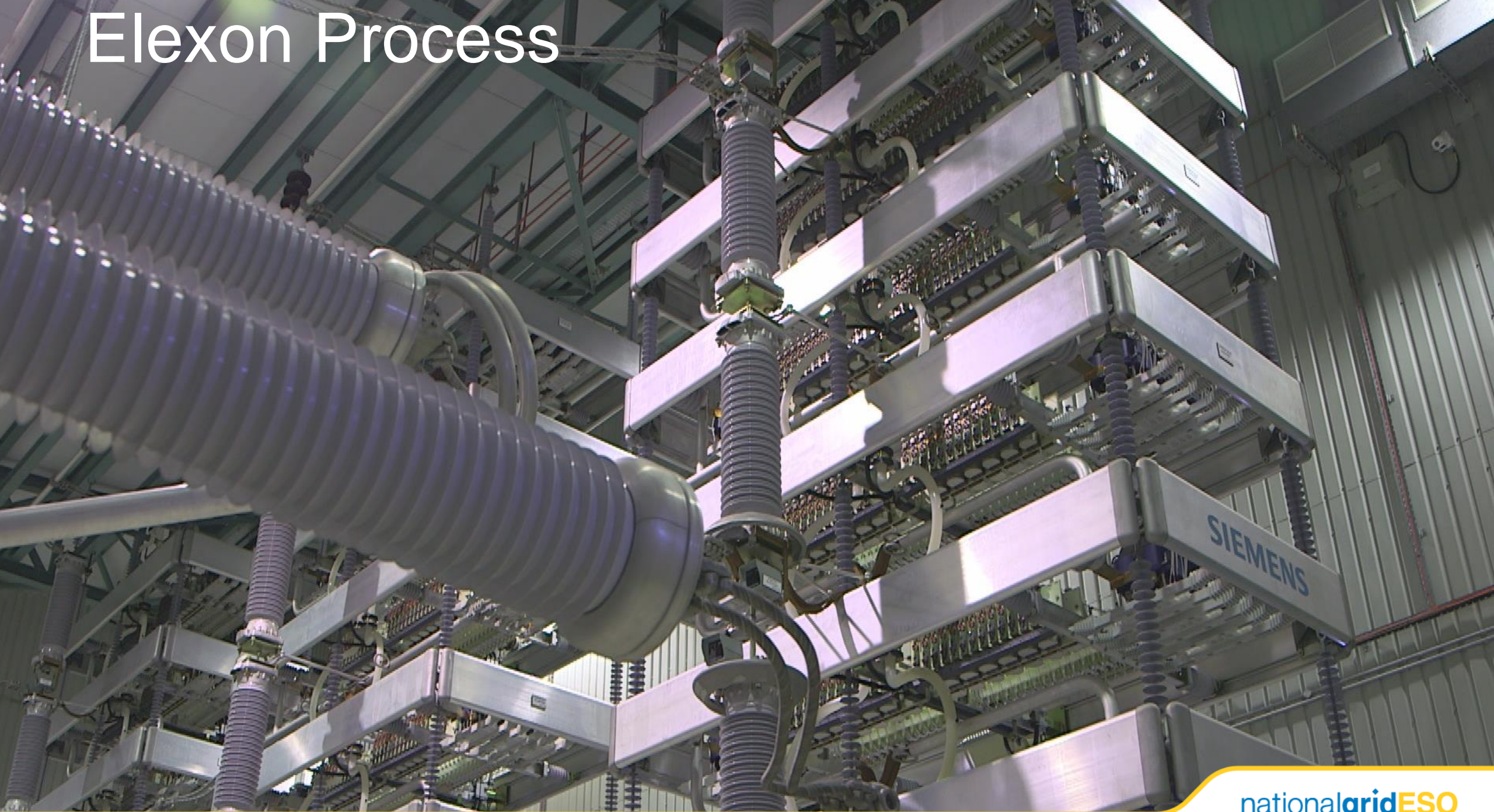


Operational Notifications Existing Connections

There is a different process to follow if the “User” or “TO” becomes aware that the Generator may be unable to comply with Grid Code.



Elexon Process



Elexon – Settlement Metering and Boundary Point Registration

Contact email : bm.unit@elexon.co.uk

- Elexon to provide the forms
- Settlement Metering to be installed
- Aggregation rules and Meter Technical Details to be provided to Elexon
- Proving tests of the settlement metering to be carried out



Boundary Point Registration

- NGENSO to complete BSCP25_5.1 (Aggie Gwozdz)
- KLD (Key Line Diagram) to be provided to Contract Compliance Manager (ESO), the diagram needs to clearly show the location of the meters and the boundaries
- Associated Meter IDs will be provided by BM team (ESO) to the User following the BM Registration

Confirmation to be provided to ESO:

- Is this Boundary Point the only Boundary Point or Systems Connection Point at this site?
- If the site is also a GSP is this a Shared GSP?
- Will the Boundary Point Metering System be located at the Boundary Point? (Is dispensation required?)
- What is the Point of connection of Plant and Apparatus to the Transmission System?

BMU Registration Process



Registration Process

- Customers emails with interest of registering on BM
- ID created, reg form with ID sent to customer – also customer registers with Elexon and ourselves in parallel.
- Once form is sent back, reviewed, signed and we have the BSCP15 form from Elexon, we can start process.
- Units need: Working operational metering, working EDL and EDT (if they are using) and to be registered in SPICE, CRM and EBS.
- If unit is using EDL (Control Point) then the unit will need to be uploaded into bi-monthly SORT Static.



GC0151 FRT Non Compliance Process

Fault Ride Through Incident Management

Multiple FRT issues – February to April 2021

6 or 7 fault events

30+ generators failed to ride through faults

Letter to Industry – May 2021

Process for asking for declaration of compliance

Asking Users to self restrict if doubt over compliance

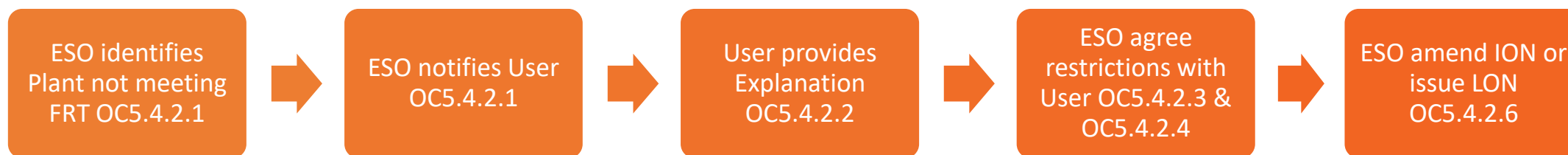
GC0151 Modification – raised July 2021

Raised by SSE Renewables as Urgent

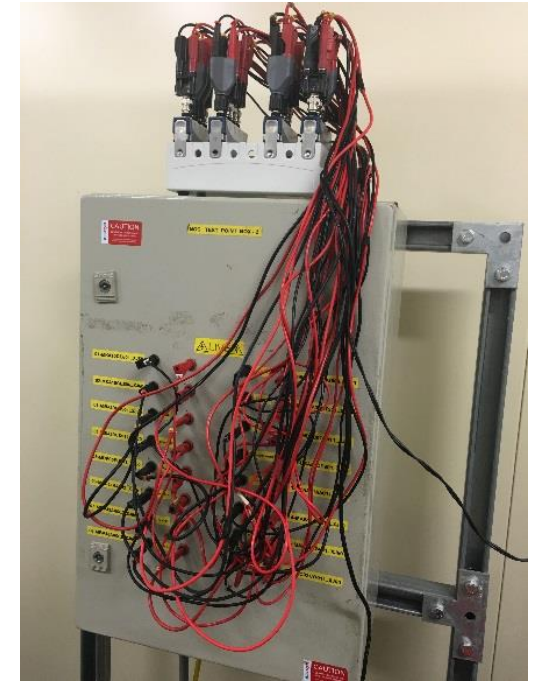
GC0151 ESO Alternative – approved 6 November 2021

<https://www.ofgem.gov.uk/publications/gc0151-grid-code-compliance-fault-ride-through-requirements>

FRT Processes from GC0151



Upcoming Initiatives and Challenges



Upcoming initiatives and challenges

As a team we are continually aiming to improve the service we provide to you as our customers. We have a number of initiatives that we aim to bring in 2022 to support this. Some of these initiatives are as follows:

Upcoming Initiatives

- Review of our internal processes and Documentation processes
- Further enhance the customer connection experience

Challenges the team is Facing

- Not getting test data in the correct format
- Model sharing and NDA issues
- UDFS submission Process not being followed correctly (under review)
- Not being informed about key changes in projects

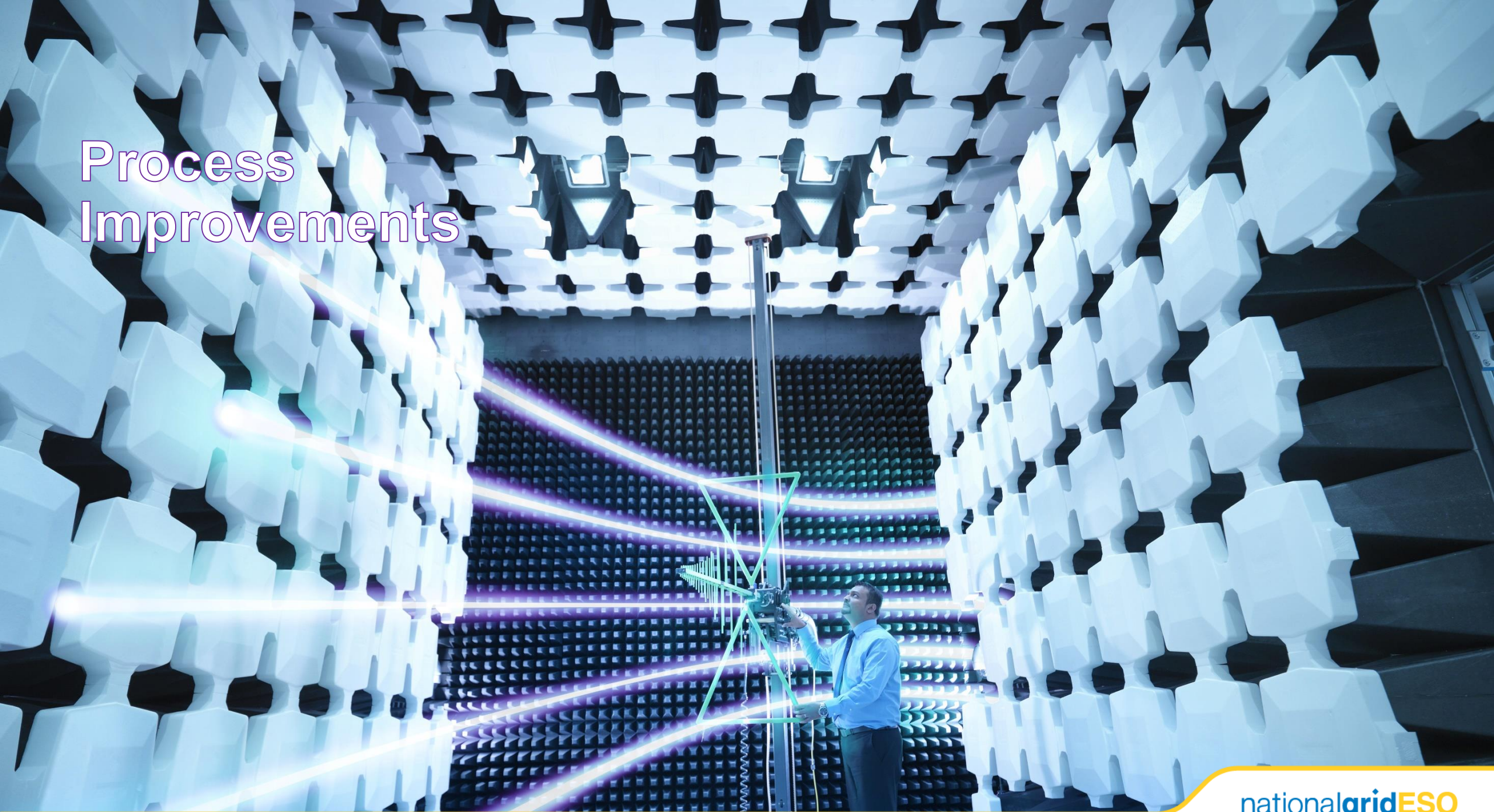


Further information on NGENSO website under Grid Code; Associated Documents

- Guidance Notes for Synchronous Generator Developers
- Guidance Notes for Power Park Developers
- Guidance Notes for HVDC Converter Station Developers



Process Improvements



Grid Code Technical Requirement for Small BEGA

- The technical requirements should be agreed between the EU Code User and host Distribution Network Operator through the G99 process.
- The User provides the evidence of G99 Compliance via UDFS process.
- NGESO may request additional relevant evidence of Grid Code (CC/ECC.6.5) and contractual (Appendix F) requirements.
- For data provision NGESO will follow DRC.6.2 of the Grid Code which clearly specifies that small BEGA only needs to provide DRC Schedule 8.
- SOP and Compliance statement Draft

Data Provision - DRC Requirements

DRC.6.2 The **Schedules** applicable to each class of **User** are as follows:

<u>User</u>	<u>Schedule</u>
Generators with Large Power Stations	1, 2, 3, 4, 9, 14, 15, 16, 19
Generators with Medium Power Stations (see notes 2, 3, 4)	1, 2 (part), 9, 14, 15, 19
Generators with Small Power Stations directly connected to the National Electricity Transmission System	1, 6, 14, 15, 19
Generators undertaking OTSDUW (see note 5)	18, 19
All Users connected directly to the National Electricity Transmission System	5, 6, 9
All Users connected directly to the National Electricity Transmission System other than Generators	10,11,13,17
All Users connected directly to the National Electricity Transmission System with Demand	7, 9
A Pumped Storage Generator , a Generator in respect of one or more Electricity Storage Modules and an Externally Interconnected System Operator and Interconnector Users	12 (as marked)
All Suppliers	12
All Network Operators	12
All BM Participants	8
All DC Converter Station owners	1, 4, 9, 14, 15, 19



Connections Compliance Process

Q&A

Feedback



Please ask any questions in the meeting chat

nationalgridESO

Please take the time to give us some feedback on today's Agora



Thank you

Next Customer Connections Agora

15 June 2022

Please ask any questions in the meeting chat

nationalgridESO