

# WELCOME

## GC0156

# Implementation of the Electricity System Restoration Standard

Meeting 6

20 September 2022

Online Meeting via Teams

**nationalgrid**ESO

# Agenda

Topics to be discussed	Lead
Welcome	Chair
Review of Actions Log	Chair
Updates from Subgroup Discussions	Sade Adenola
Updates on Legal Text Drafting	Tony Johnson / Mike Kay
Terms of Reference <ul style="list-style-type: none"><li>Look through/check progress</li></ul>	Chair
AOB & Next Steps	Chair



# Members / Alternates & Observers

Role	Name	Representing
Chair	Banke John-Okwesa	Code Administrator (ESO)
Technical Secretary	Milly Lewis	Code Administrator (ESO)
Proposer	Antony Johnson	NGESO
Proposer	Sade Adenola	NGESO
Workgroup Member	Abdi Osman	NGV Interconnectors
Workgroup Member	Alan Creighton	Northern Powergrid
Workgroup Member	Alastair Frew	Drax Power Station
Workgroup Member	*Andrew McLeod	Northern Powergrid
Observer	Andrew Larkins	Sygensys
Workgroup Member	Andrew Vaudin	EDF Energy
Observer	Audrey Ramsey	NGESO
Workgroup Member	Bill D'Albertanson	UK Power Networks
Workgroup Member (Alternate)	Brad Kent	NGET
Workgroup Member	Brian Morrissey	SSEN Distribution
Workgroup Member	Cefin Parry	Northern Powergrid
Workgroup Member (Alternate)	Chanditha Udalagama	NGV Interconnectors
Workgroup Member	Colin Foote	SP Energy Networks
Workgroup Member	*Daniel Randles	Electricity North West Ltd
Workgroup Member	David Adam	SP Energy Networks
Workgroup Member	Dozie Nnabuife	NGESO
Workgroup Member	Eric Leavy	SP Energy Networks
Observer	Eva Shamu	NGESO
Workgroup Member	Garth Graham	SSE Generation
Workgroup Member (Alternate)	Gavin Anderson	Electricity North West Ltd
Workgroup Member	*Graeme Vincent	SP Energy Networks
Workgroup Member	Grace March	Sembcorp
Workgroup Member	Graz Macdonald	Waters Wye
Workgroup Member	Gwyn Jones	Western Power Distribution
Workgroup Member	Howard Downey	SP Energy Networks

\*Lead / voting member

Role	Name	Representing
Observer	Ben Kuchta	NGET
Workgroup Member (Alternate)	John Costa	EDF Energy
Workgroup Member (Alternate)	Lisa Waters	Waters Wye
Observer	Mark Bingham	NGET
Observer	Mark Holland	Scottish & Southern Electricity Networks Transmissions
Observer	Mark Jones	NGESO
Workgroup Member	*Michelle Macdonald	Scottish & Southern Electricity Networks Transmissions
Observer	Mike Kay	Distribution Code Administrator
Observer	Neha Gupta	NGESO
Observer	Neil Sandison	Scottish & Southern Electricity Networks Transmissions
Workgroup Member	Nikhil Singh	NGET
Observer	Paul Murray	Scottish & Southern Electricity Networks
Workgroup Member (Alternate)	Paul Youngman	Drax Power Station
Workgroup Member	Peter Couch	Joint Radio Company Limited
Workgroup Member	Priyanka Mohapatra	Scottish Power
Workgroup Member	*Richard Poole	NGV Interconnectors
Workgroup Member (Alternate)	Richard Wilson	UK Power Networks
Workgroup Member	Robert Longden	Eneco Energy Trade BV
Workgroup Member (Alternate)	Ross Strachan	Scottish Power
Workgroup Member	Tolu Esan	Electricity North West Ltd
Authority Representative	Christopher Statham	Ofgem

## 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



# Timeline

Banke John-Okwesa – National Grid ESO Code Administrator

# Timeline for GC0156

Milestone	Date	Milestone	Date
Proposal Presented to Panel	24 February 2022	Workgroup 10 – Review updated WG report and legal text following consultation responses, finalise solution(s) and legal text	31 January 2023
Workgroup 1 – Understand / discuss proposal and solution, review and agree on Terms of Reference and Timeline, agree next steps	26 April 2022	Workgroup 11 – Agree that Terms of Reference have been met, Review Workgroup Report and hold Workgroup Vote	21 February 2023
Workgroup 2 – Review high level options and legal text, consider outputs from related modifications (such as GC0148)	19 May 2022	Workgroup Report issued to Panel	23 March 2023
Workgroup 3 – Recap of GC0148 and Distributed Re Start, Subgroup ToR, Review of high level solutions / options	16 June 2022	Panel sign off that Workgroup Report has met its Terms of Reference	30 March 2023
Workgroup 4 – Review draft legal text, finalise scope and function of subgroups, develop solution(s)/options, identify/asses any possible alternative solutions	14 July 2022	Code Administrator Consultation	03 April 2023 – 03 May 2023
Workgroup 5 – Develop solution(s)/options, subgroup outputs, conclude on preferred options / consider and agree on alternatives	18 August 2022	Draft Final Modification Report (DFMR) issued to Panel	17 May 2023
Workgroup 6 - Develop WG consultation questions, progress of draft legal texts, subgroup updates, assess alternatives (if applicable)	20 September 2022	Panel undertake DFMR recommendation vote	25 May 2023
Workgroup 7 – Refine WG consultation report, review subgroup reports, review legal texts, agree alternatives	20 October 2022	Final Modification Report issued to Panel to check votes recorded correctly (5 working days)	29 May 2023 – 02 June 2023
Workgroup 8 – Finalise Workgroup Consultation, finalise draft legal text	10 November 2022	Final Modification Report issued to Ofgem	05 June 2023
Workgroup Consultation (15 Working Days)	21 November 2022 – 09 December 2022	Ofgem decision	TBC
Workgroup 9 – Review/assess consultation responses	17 January 2023	Implementation Date	10 working days after Ofgem decision



# Review of Actions Log

Banke John-Okwesa – ESO Code Administrator



## Actions

For the full action log, [click here](#).

Action Number	Workgroup raised	Owner	Action	Comment	Due by	Status
15	WG3	DNO Workgroup Members	Provide feedback/learnings from the impact of recent storms	BM taken action to update in WG5	WG4	Open
17	WG3	MK	Update on linked Distribution Code Modification		WG4	Closed
19	WG4	SA	Share BEIS direction to the ESO on ESRS document with Workgroup		Ahead of next ESRS SG	Closed
20	WG4	SA	Share and escalate the collated concerns on the back of the demand definition with the Steering group		Ahead of next ESRS SG	Closed
21	WG4	TJ	Set up call with Tendering Team to discuss Ts&Cs regarding Northern Tender and share with industry parties		WG5	Closed
22	WG4	TJ	Update slide 7 based on feedback and share ESRS overview slide previous		WG5	Closed
23	WG4	AC/TJ	Work through with those which have commented on Distributed Restart legal text		WG5	Closed
24	WG4	TJ	Start developing ESRS including Distributed Restart legal text		Ongoing	Open
25	WG4	BJO	Understand Cross Code Impacts and manage with CUSC and STC rep		WG5	Closed
26	WG5	GG	Summarise and circulate AC summary		ASAP	Open
27	WG5	NG	Send invite to Future Networks to Generator Workgroup Members		ASAP	Open
28	WG5	TJ	Feedback further meetings with Tendering Team		WG6	Open
29	WG5	TJ	Share draft legal text with MK for DCode review		WG6	Open
30	WG5	AF	Send drafting email on frequency control with Distributed ReStart		WG6	Open
31	WG5	BJO/TJ	Work together to build a draft legal text diary sessions		WG6	Open
32	WG5	SA	Confirm to BEIS that 60% of transmission demand will re-stabilise the electricity grid		ASAP	Open



## Action 15: Impacts of Storms - Feedback from SSEN

We found that during recent storms a number of generators self-despatched once supplies had returned, we saw that with around 30% of small generation sets. In addition to that a further 25%-30% were either contacted or made contact with out control centre. The remaining took slightly longer to start due to needing site attendance, replace batteries or dry out wind turbines.



# Updates from Subgroups

Sade Adenola – National Grid ESO



## GC0156 Subgroup Members

	Communication Infrastructure	Future Networks	Assurance Framework	Markets & Funding Mechanisms
SP Energy Networks	Howard Downey	Graeme Vincent / Eric Leavy	Graeme Vincent	-
Independent	Mike Kay	Mike Kay	Mike Kay	-
SSE Generation	Garth Graham	Garth Graham	Garth Graham, Andrew Colley	Garth Graham
SSE Transmission	Mark Dunn	Mark Holland / Paul Swan	Michelle MacDonald	David <u>Boyland</u>
Northern Powergrid	Cefin Parry	Alan Creighton Andrew McLeod	Andrew McLeod, Alan Creighton	-
Sygensys	Andrew Larkins	Andrew Larkins	-	-
ENWL	Tolu Esan	Gavin Anderson, Tolu Esan	-	-
Joint Radio Company Ltd	Peter Couch	Peter Couch	-	-
NGET	Nikhil Singh & Mark Bingham	Nikhil Singh, Bradley Kent, Arash Rakhshafar	Nikhil Singh, Bradley Kent, Richard Woodward	Nikhil Singh, Thomas Charton, Arash Rakhshafar
ESO	Sade Adenola, Tony Johnson, Mark Jones, Neha Gupta, Dozie Nnabuife, Svetlana Afanasyeva, Llewellyn Hoenselaar	Sade Adenola, Tony Johnson, Mark Jones, Neha Gupta, Dozie Nnabuife, Svetlana Afanasyeva	Sade Adenola, Tony Johnson, Mark Jones, Neha Gupta, Dozie Nnabuife	Sade Adenola, Tony Johnson, Mark Jones, Neha Gupta, Dozie Nnabuife, Roopkamal Phull, Steve Miller, Llewellyn Hoenselaar
Diamond Transmission	-	Joel Matthews	-	-
<u>Elexon</u>	-	-	-	Nick Rubin
Western Power	Andrew Baker, Phil <u>Ridgen</u>	-	-	
Scottish Power	Priyanka Mohapatra	Priyanka Mohapatra	Priyanka Mohapatra	Priyanka Mohapatra
Drax	-	Alastair Frew	-	Paul Youngman

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# Updates on Legal Text Drafting

Tony Johnson & Mike Kay



# Summary

- GC0148 Update
- Terms and Conditions
- Grid Code Drafting Progress Update
- Code Drafting Next Steps
- Related Work

# GC0148 Update

- The Code Administrator Consultation opened on 3 August 2022 and closed on 5<sup>th</sup> September 2022
- Verbal update to be provided

# EU Terms and Conditions

- Short and long term approach discussed with the GC0156 Workgroup on 18<sup>th</sup> August
- Discussions also held with BEIS and Ofgem on 18<sup>th</sup> August
- Further meeting held with Ofgem on 25<sup>th</sup> August
- The issues have been raised with the Tender Team and ways forward have been forwarded to the ESO legal team for a view
- Verbal Update of current status to be provided

# GC0156 – Grid Code Drafting – Progress Update

- The current sections of the Grid Code are well developed
  - Glossary and Definitions
  - Planning Code
  - Connection Conditions
  - European Connection Conditions
  - Operating Code 5
  - Operating Code 9
- The legal drafting has been forwarded to Mike Kay for consideration to be given to the Distribution Code drafting
- CATOs have currently been excluded from the drafting as this is expected to be picked up as part of the CATO work which is due to be raised at the GCRP in September



# GC0156 – Glossary and Definitions

- The updates to the Glossary and Definitions includes the following key features
  - Removal of the term Black Start and related terms
  - Introduce the concept of Anchor Plant and related terms
  - Introduce the concept of Top Up Restoration Plant and related terms
  - Introduce the necessary and applicable definitions for Distributed Re-Start developed as part of the GC0148 work
  - Ensure equal treatment of Anchor Plant and Top Up Restoration Plant irrespective of being Transmission or Distribution Connected or part of a Local Joint Restoration Plan or Distribution Restoration Zone Plan
  - Provide clarity on the definition of Restoration Service Provider

# GC0156 – Planning Code

- The updates to the Planning Code includes the following key features
  - The main changes relate to PC.A.5.7 (currently drafted as Black Start Related Information)
  - Removal of the term Black Start and related terms
  - Build on the comments introduced through GC0148 including those developed for Distributed Re-Start
  - Include information relating to the supply of data from Network Operators relating to the establishment of Distribution Restoration Zones

# GC0156 – Connection Conditions

- The updates to the Connection Conditions includes the following key features
  - Removal of the term Black Start and related terms
  - Builds on the comments introduced through GC0148 including Critical Tools and Facilities
  - Builds on the additions developed for Distributed Re-Start including the comments received as part of the GC0148 Workgroup Consultation
  - Introduce requirements for Restoration Offshore
  - Amend the provisions relating to System Restoration – CC.6.3.5
  - Make provisions for Assurance requirements – CC.7.11 (new Section)
  - Make provision for a new standard for a Distribution Restoration Control System (DRZC)
  - Make provisions for the technical requirements in a new Appendix (Appendix 8) covering those common elements that would currently form part of the Black Start Contract or Anchor Restoration Contract or Top Up Restoration Contract

# GC0156 – European Connection Conditions

- The updates to the European Connection Conditions includes the following key features
  - Mirror the requirements and features of the Connection Conditions
  - Build on the changes introduced through GC0148 in particular those relating to storage
  - Note the treatment of Black Start / System Restoration in the ECC's is quite different to those in the CC's and the drafting reflects this.



# GC0156 – Operating Code 5

- The updates to the Operating Code 5 includes the following key features
  - Removal of the term Black Start and related terms
  - Builds on the additions developed for Distributed Re-Start including the comments received as part of the GC0148 Workgroup Consultation
  - Seeks to provide some rationalisation and avoid duplication as Anchor Plant and Top Up Plant are broadly the same irrespective of being Transmission or Distribution Connected
  - Drafting still needs to address the house keeping change to OC5.7.1(b)(i) which is a correction that needs to be addressed following the implementation of GC0108 (EU Code: Emergency & Restoration: Black start testing requirement) noting that OC5.7 is now significantly different

## GC0156 – Operating Code 9

- The updates to the Operating Code 9 includes the following key features
  - Removal of the term Black Start and related terms
  - Builds on the additions developed for Distributed Re-Start including the comments received as part of the GC0148 Workgroup Consultation
  - Recognises a significant change in structure of OC9 to reflect Distribution Restoration Zones
  - Seeks to provide some rationalisation and avoid duplication as Anchor Plant and Top Up Plant are broadly the same irrespective of being Transmission or Distribution Connected
  - Some further work is required to see if any specific requirements need to be explicitly defined in respect of Offshore Transmission Licensees

# GC0156 – Code Drafting – Next Steps

- Continue to develop the Grid Code drafting in line with the Workgroup discussions and those raised as part of the GC0156 Workstreams
  - Further areas of development include but are not limited to
    - Operating Code 2
    - Balancing Code 2
    - Other consequential sections including the Data Registration Code
    - Remove all references to Black Start
- Further consideration needs to be given to Offshore and the interaction with the tender process

## GC0156 – Related Work

- Once the Grid Code drafting is more clearly established the following work is also required
  - Updates or creation of any related Relevant Electrical Standards (eg Distribution Restoration Control Systems)
  - Consideration of other Code Mods – eg STC, SQSS, CUSC and BSC
  - System Defence Plan, System Restoration Plan and Test Plan
  - It is assumed Embedded Offshore Transmission Systems (ie Offshore Transmission Systems connected to DNO's) will form part of an LJRP not a DRZP
  - Further consideration needs to be given to System Synchronisers.



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# Terms of Reference

Banke John-Okwesa – ESO Code Administrator

# AOB / Next Steps

Banke John-Okwesa – ESO Code Administrator

# GC0156 Legal Text Review Group

- Finalise volunteers and meeting dates

- Review draft legal text / discuss solutions
- Draft Workgroup Consultation questions
  - Consider Alternative Proposal(s)
    - Subgroup Reports
- Workgroup Consultation Draft Report