

# WELCOME

## GC0155

# Clarification of Fault Ride Through Technical Requirements

Meeting 5

23 August 2022

Online Meeting via Teams

**nationalgrid**ESO

# Agenda

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## Topics to be discussed

**Lead**

**Welcome**

Chair

**Review of Actions Log**

Chair

## ESO Updates

- Design Limits for Temporary Overvoltages (TGN288)

BA/FW

## Terms of Reference

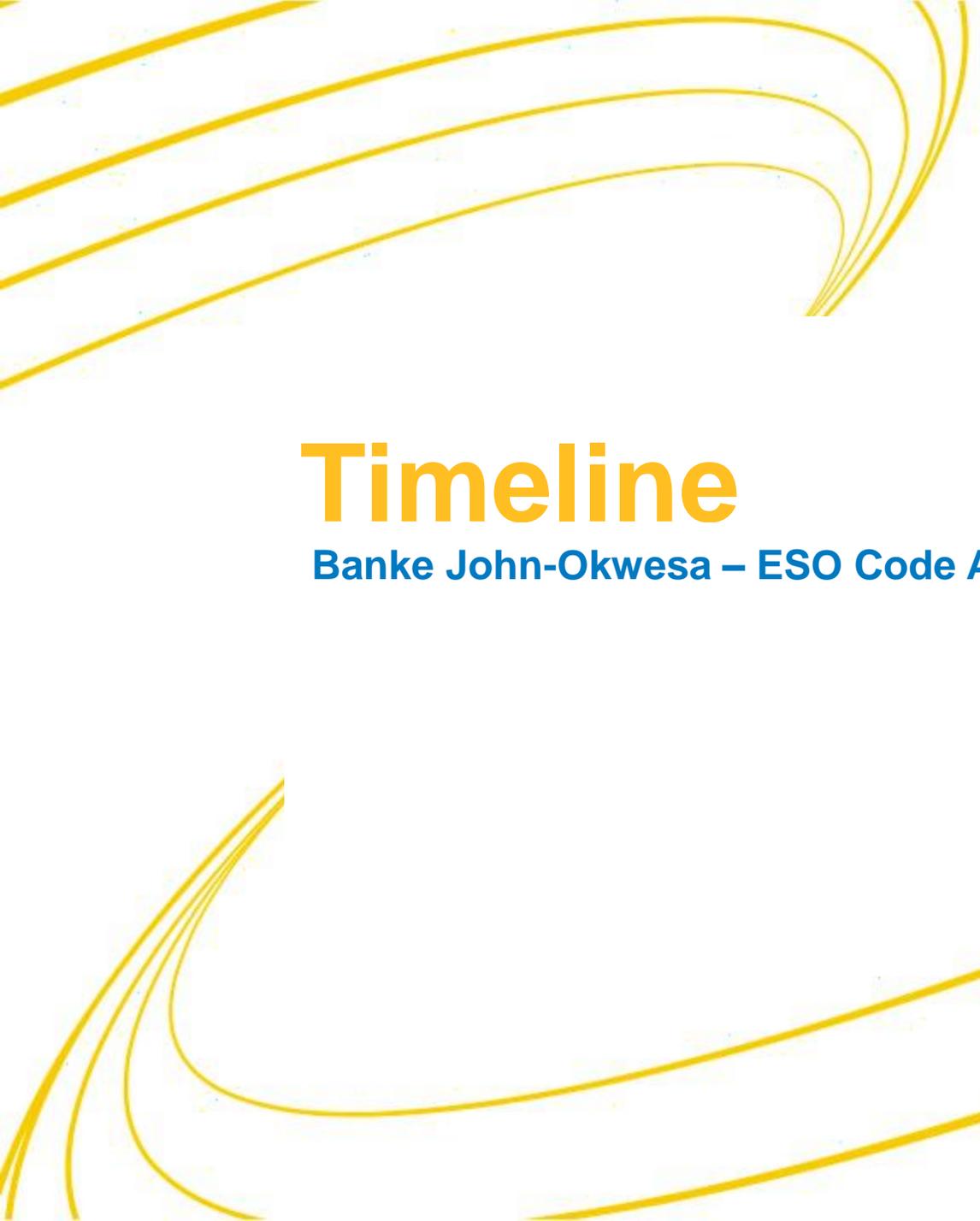
- Progress Check

**AOB & Next Steps**

Chair

# Members / Alternates & Observers

Role	Name	Representing
Chair	Banke John-Okwesa	Code Administrator (ESO)
Technical Secretary	Ruth Roberts	Code Administrator (ESO)
Proposer	Terry Baldwin	NGESO
Workgroup Member	Alan Mason	Oceanwinds
Workgroup Member	Alan Creighton	Northern Powergrid
Workgroup Member	Alastair Frew	Drax Power Station
Workgroup Member	Andrew Larkins	Sygensys
Workgroup Member	Andrew Vaudin	EDF
Workgroup Member	Bieshoy Awad	NGESO
Observer	David Griffiths	RWE Generation UK, RWE Renewables
Observer	Fiona Williams	NGESO
Workgroup Member	Forooz Ghassemi	NGET
Workgroup Member	Frank Martin	Siemens
Workgroup Member	Fraser Norris	SSE
Workgroup Member	Garth Graham	SSE Generation
Workgroup Member	Isaac Gutierrez	Scottish Power
Observer	Mike Kay	Independent
Workgroup Member	Nicola Barberis Negra	Orsted
Observer	Owen Curran	Siemens
Workgroup Member	Priyanka Mohapatra	Scottish Power
Workgroup Member	Ryan Tumilty	SSE
Workgroup Member	Sean Gauton	Uniper Energy
Workgroup Member	Tim Ellingham	RWE Generation UK, RWE Renewables
Workgroup Member (Alternate)	Julie Richmond	Scottish Power
Workgroup Member (Alternate)	Martin Aten	Uniper
Workgroup Member (Alternate)	Sridhar Sahukari	Orsted
Workgroup Member (Alternate)	Tobias Siepker	Siemens
Authority Representative	Shilen Shah	Ofgem



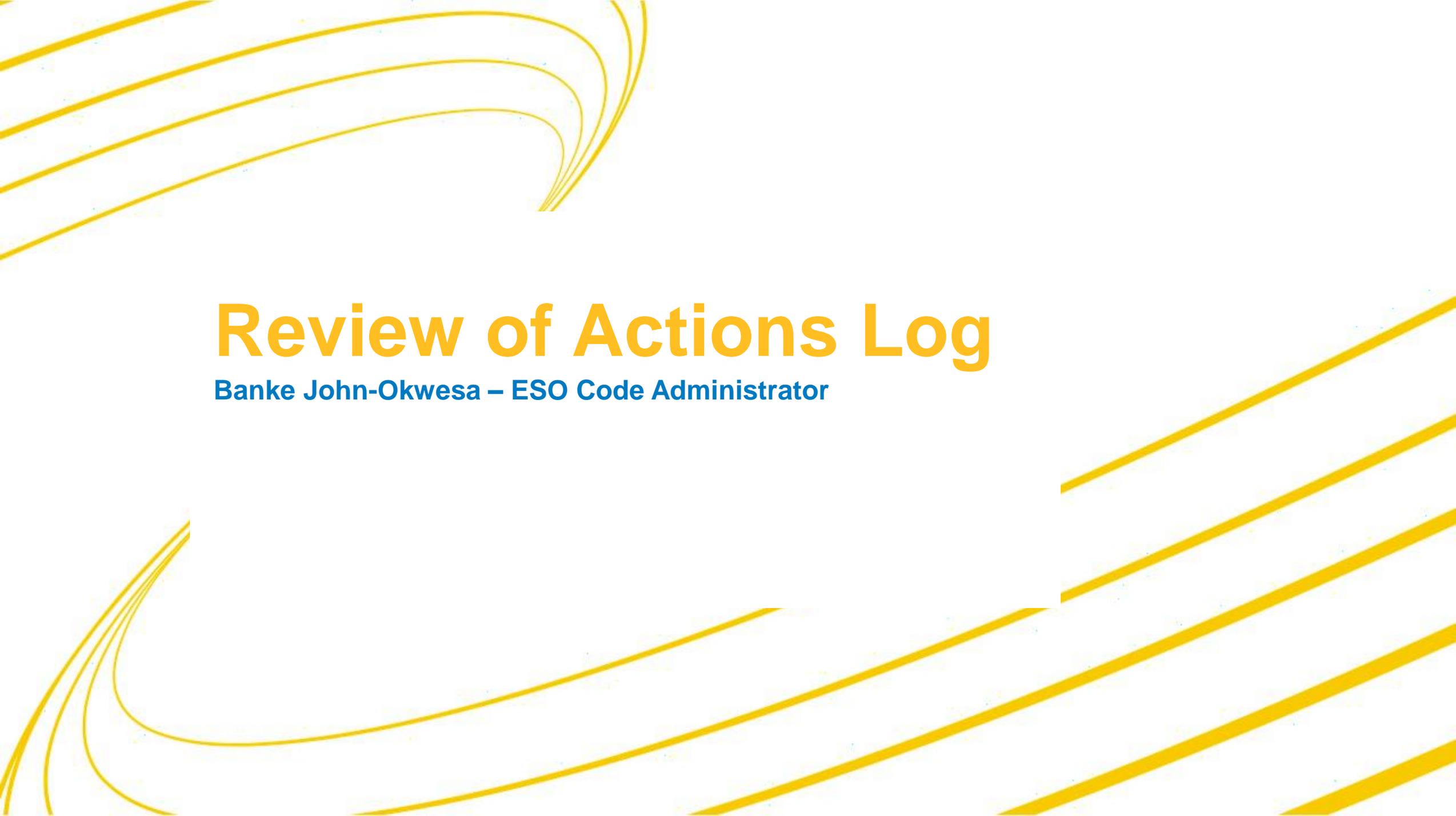
# Timeline

Banke John-Okwesa – ESO Code Administrator



# Timeline for GC0155

Milestone	Date	Milestone	Date
Proposal Presented to Panel	16 December 2021	Workgroup 10 – Finalise solution(s) and legal text, agree that Terms of Reference have been met, Review Workgroup Report and hold Workgroup Vote	14 March 2023
Workgroup 1 – Understand / discuss proposal and solution, note the scope and identify any possible alternative solutions, agree timeline and review terms of reference, agree next steps.	10 February 2022	Workgroup Report issued to Panel	22 March 2023
Workgroup 2 – Refresher: review and agree timeline and Terms of Reference, Review/Develop solution(s) and legal text, identify/assess possible alternatives.	07 June 2022	Panel sign off that Workgroup Report has met its Terms of Reference	30 March 2023
Workgroup 3 – Develop Solution(s), review of legal text and alternatives	05 July 2022	Code Administrator Consultation	07 April 2023 – 07 May 2023
Workgroup 4 – ESO to present plan and next steps re Definition of Overvoltage Requirements following a Fault, agree on the proposed plan	25 July 2022	Draft Final Modification Report (DFMR) issued to Panel	17 May 2023
Workgroup 5 – Review / assess on-going work on Overvoltage requirements	23 August 2022	Panel undertake DFMR recommendation vote	25 May 2023
Workgroup 6 – Review / assess ongoing work on Overvoltage requirements	07 September 2022	Final Modification Report issued to Panel to check votes recorded correctly (5 working days)	29 May 2023 – 02 June 2023
Workgroup 7 – Finalise Overvoltage requirements, consider / finalise alternatives, draft consultations questions	15 November 2022	Final Modification Report issued to Ofgem	06 June 2023
Workgroup 8 – Finalise consultation questions, review consultation report	19 January 2023	Ofgem decision	TBC
Workgroup Consultation (15 Working Days)	30 January 2023 – 17 February 2023	Implementation Date	10 working days after Ofgem decision
Workgroup 9 (Post Workgroup Consultation) – Review / assess Workgroup consultation responses and Workgroup Report.	28 February 2023		



# Review of Actions Log

Banke John-Okwesa – ESO Code Administrator

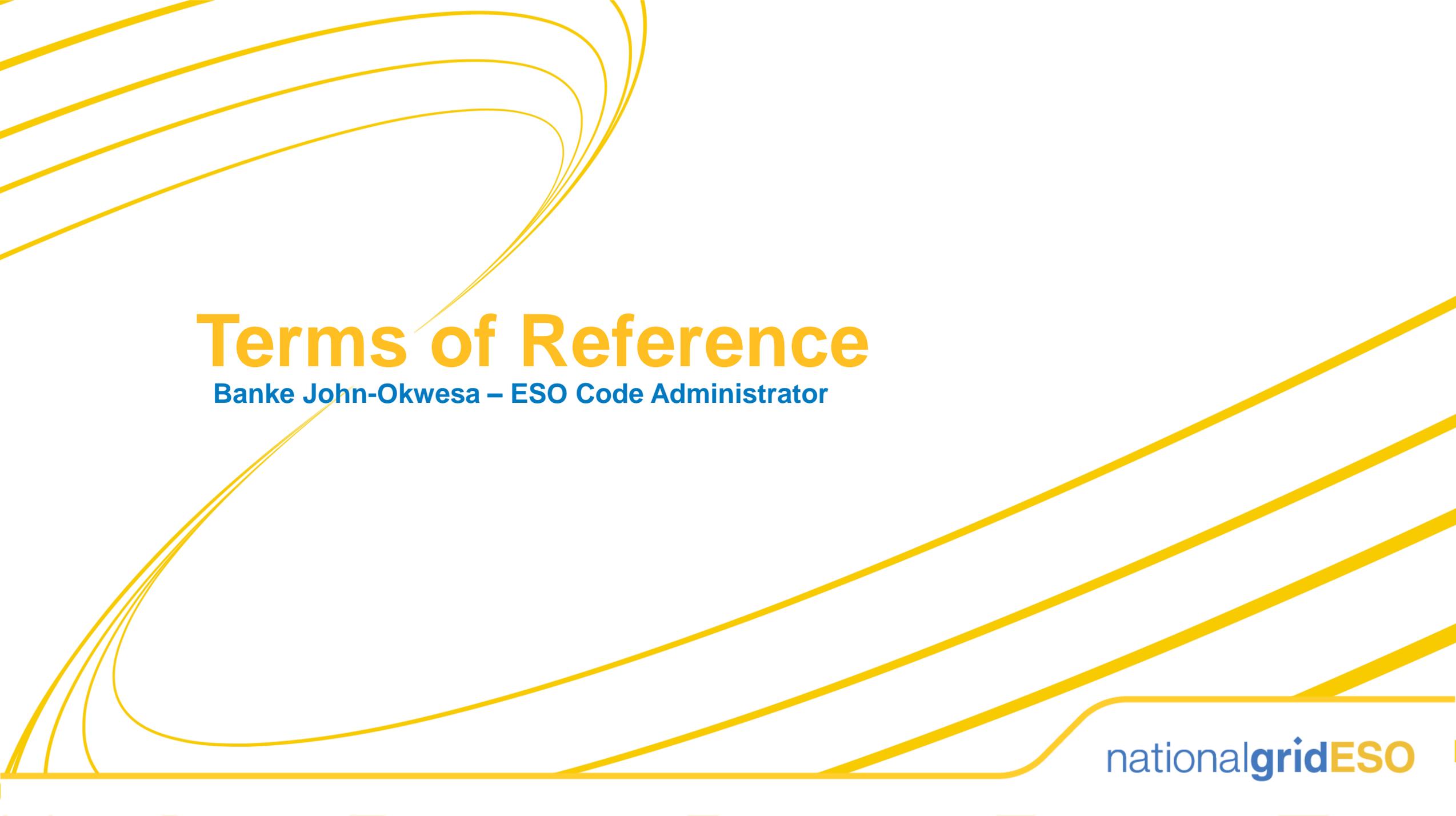
## Actions Log

Action Number	Workgroup raised	Owner	Action	Comment	Due by	Status
14	WG3	BA/TB	To produce a plan and timelines required for additional work to add overvoltage requirements following a fault into this modification		25 <sup>th</sup> July 2022	Closed
15	WG3	All	For all the Workgroup members to send Bieshoy the issue and what they feel need to be considered in defining overvoltage requirements.		25 <sup>th</sup> July 2022	Closed
16	WG4	All	Workgroup members to respond to ESO Questionnaire to determine plan for additional requirements		5 <sup>th</sup> August 2022	Open
17	WG4	BA/FW	Consolidate comments received, check those requirements that can/cannot be included and provide update.		23 <sup>rd</sup> August 2022	Open
18	WG4	BA	Reach out to manufacturers to get their views		23 August 2022	Open

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# ESO Updates

Bieshoy Awad / Fiona Williams - NGESO

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# Terms of Reference

Banke John-Okwesa – ESO Code Administrator

# GC0155 – Terms of Reference

Workgroup Term of Reference	Location in Workgroup Report
a) Implementation and costs;	
b) Review draft legal text should it have been provided. If legal text is not submitted within the Grid Code Modification Proposal the Workgroup should be instructed to assist in the developing of the legal text; and	
c) Consider whether any further Industry experts or stakeholders should be invited to participate within the Workgroup to ensure that all potentially affected stakeholders have the opportunity to be represented in the Workgroup. Demonstrate what has been done to cover this clearly in the report	
d) Consider Electricity Balancing Regulation (EBR) implications	
<p>e) Minor changes and clarifications to the existing Grid Code Fault Ride Through (FRT) requirements specifically but not limited to consideration of the following areas:</p> <ul style="list-style-type: none"> <li>i. Clarify instances where User plant is required to trip in order to clear transmission system faults</li> <li>ii. Amending requirements for generating maximum reactive current during faults where these may be unachievable for some generators</li> <li>iii. Amending post-fault active power requirements to consider whether generators at low load may have greater levels of oscillation than permitted</li> <li>iv. To consider clarifying and or defining requirements for over-voltage following a fault</li> </ul>	
f) Identify and address any cross code impacts on other codes especially Distribution Code (e.g. G99 requirements)	TBC

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# AOB & Next Steps

Banke John-Okwesa – ESO Code Administrator