Joint European Stakeholder Group

Tuesday 11 May 2021

Meeting 57

1. Welcome & Introductions

Garth Graham

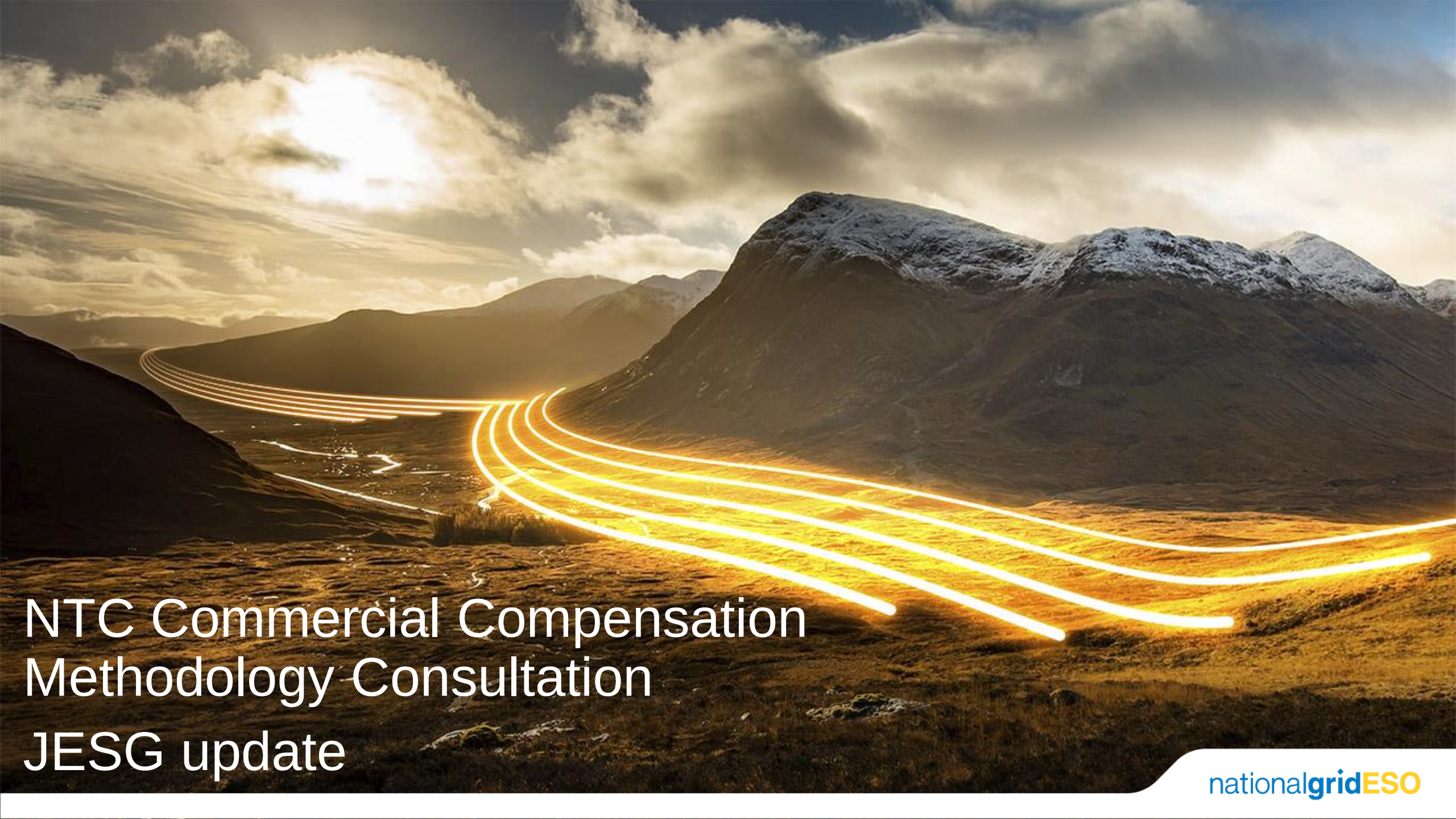
Independent Chair

Agenda

	Title	Lead	Time
1.	**Welcome & Introductions**	Chair	10:00 - 10:05
2.	**NTC Update**	Claire Huxley, NGESO	10:05 - 10:10
3.	**TCA Technical Working procedures**	Camille Gilesnan, NGESO Osaaf Syed, NGESO	10:10 - 10:20
4.	**Grid Code/SQSS Mod update**	Nisar Ahmed, NGESO	10:20 - 10:25
5.	**Update on the Cost Benefit Analysis**	Mark Duffield, NGV Nils Teipel, BritNed	10:25 - 10:55
6.	**Next steps on development of policy position for cost allocation**	Catherine Contiguglia, Ofgem	10:55 - 11:00
7.	**Update on SOGL A118/119 interconnector ramping**	Louise Trodden, NGESO	11:00 - 11:05
8.	**Review of Actions log**	Andrew Hemus, Tech Secretary	11:05 - 11:10
9.	**Future Meeting Dates & Agenda Items**	Andrew Hemus, Tech Secretary	11:05 - 11:10
10.	**Stakeholder Representation**	Chair	11:10 - 11:15
11.	**Any Other Business**	All	11:15 - 11:30

2. NTC Update

Claire Huxley, NGESO



NTC Commercial Compensation Methodology Consultation

JESG update

nationalgridESO

NTC Commercial Compensation Methodology Consultation

nationalgridESO

Overview

A commercial compensation methodology has been developed for occasions when NGESO reduces capacity on interconnectors for system security reasons. The methodology seeks to ensure the correct commercial arrangements, and is independent of the capacity calculation methodology.

The consultation focuses on the **commercial compensation methodology only.** There have been discussions as part of this methodology development regarding clarifications on how interconnector capacity is manages and the regulatory obligations that underpin it.

Background

The output from the tool for managing interconnector capacity is called Net Transfer Capacity and covers both intraday and day ahead and allocated and unallocated capacity.

This is classified as a non-frequency ancillary service. This requires a derogation from the license condition C28 as it is not market-based.

The commercial compensation methodology is independent of the capacity calculation methodology which will be developed under the new TCA. Previously this was captured under CACM.

Current ways of working

A range of actions are considered to support alleviating a system security issue. ITLs are one of these actions.

NGESO use Intraday Trading Limits (ITLs) to limit unallocated capacity to manage system issues such a RoCoF, thermal constraints or margin**.** Cross border trades are used by NGESO to manage allocated flow on interconnectors. Once a trade is placed on an interconnector, NGESO may also place an ITL on that interconnector to ensure the trade will not be reversed by subsequent market activities.

Prior to the application of an ITL, alternative actions will have been considered as part of the process for alleviating the RoCoF risk, thermal issues or margin. During the evaluation process, if alternatives are either not available or are not sufficient to solve the system issue, NGESO will consider application of an ITL. For example; in the case of managing a RoCoF risk possible alternative actions include:

- Reduce size of largest credible losses – this can be done through Balancing Mechanism actions, trading, contractual options (e.g. de-loading) or emergency actions.
- Hold more/enough response – this is often infeasible currently with traditional dynamic response as system frequency can react quicker than response can deliver. This would mean that frequency response services would not be able to contain a large loss if used on their own.
- Increase system inertia – this is not always feasible, as this involves synchronising multiple CCGTs in a short amount of time and when it is feasible, it is often significantly uneconomic.

Implementation of the commercial compensation methodology

In collaboration with GB interconnectors, a commercial compensation methodology has been developed.

As we have experienced a change in regulation and market conditions, it has been agreed that the NTC restriction process will apply to:

1. Intraday, unallocated capacity for Channel Interconnectors (table 1/box 4 within the Commercial Compensation Methodology) and Irish Interconnectors (table 2/box 2). Note the difference in tables is due to the different types of auctions that take place (explicit vs. implicit).
2. Day ahead, unallocated capacity for NSL (table 3, box 2 within the Commercial Compensation Methodology)

Day ahead (both allocated and unallocated capacity) for channel and Irish interconnectors will not be subject to NTC restrictions until further analysis can be provided on the socio-economic impact. It is the intention, once this analysis has been conducted, that the commercial compensation methodology will also apply to the (very rare) situation where allocated capacity is restricted (i.e. the situations outlined in the TCA).

NSL is due to go live in Oct 2021 with a day ahead only auction, and therefore is subject to a slightly different implementation plan.

The commercial compensation methodology will be used once it has been approved through a C16 process, a derogation under License Condition C28 has been approved and the methodology has been incorporated into IOPs.

Development of enduring arrangements

Capacity calculation and congestion management methodologies are being developed under the TCA. The commercial compensation methodology is independent of these, and can be adapted to any changes that do occur i.e. as new market coupling arrangements are brought online. The principles of the methodology will remain e.g interconnectors are kept cost-neutral.

Frequency Risk and Control Report (FRCR) will fundamentally change how frequency is managed in the GB. It is forecasted that NTC reduction will happen far less frequently.

Commercial Compensation Methodology

These tables represent the different coupling arrangements that exist across GB borders currently, and therefore each table references the relevant mechanism for clarity. The principles of the commercial methodology are consistent across the different coupling arrangements.

Matrix for explicit DA, and explicit ID

For example, IFA, BritNed, NEMO, IFA2

Matrix for implicit ID

For example, Moyle and EWIC

Matrix for implicit DA

For example, NSL

Timing of NTC & type of capacity affected	Restricted capacity that is allocated (but only unnominated long term*)	Unallocated capacity restricted	Allocated capacity restricted (including FTRs)	Unallocated capacity restricted	Allocated capacity restricted	Unallocated capacity restricted
Capacity management feeds into Day Ahead auctions (i.e. before FD)	(1) See relevant Access Rules	(4a) Net capacity revenue loss/gain calculated from unrestricted marginal price (4b) For 0MW auctions; the rolling quarterly calculated, directional, median or mean (lower of) marginal price	N/A	N/A	N/A	(2) Where practicable, the difference in congestion rent from a re-run of the coupling algorithm without restriction OR, the loss adjusted, market spread adjusted for increased scarcity by 'correction factor'
Capacity management feeds into Intraday auctions (i.e. after FD, before ID auction opening)	(3) Net imbalance charge from both markets	(4a) Net capacity revenue loss/gain calculated from unrestricted marginal price (4b) For 0MW auctions; the rolling quarterly calculated, directional, median or mean (lower of) marginal price	(3) Net imbalance charge from both markets	(2) Where practicable, the difference in congestion rent from a re-run of the coupling algorithm without restriction OR, the loss adjusted, market spread adjusted for increased scarcity by 'correction factor'	N/A	N/A

Indicative Timeline

Activity	Date
Consultation open	6th May
Consultation close	2nd June
Comments from consultation incorporated into methodology & published on NGESO website	18th June
C16 Consultation open	21st June
C16 consultation close	19th July
NGESO review industry comments	2nd Aug
Submit C16 to OFGEM	2nd Aug
Implement the methodology via IOPs	Sept onwards

Next Steps

Consultation is open and we would love to receive your feedback!

Link to consultation documents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3. TCA Technical Working procedures

Camille Gilesnan & Osaaf Syed, NGESO

NGESO TCA Update – Working Arrangements & Technical Procedures

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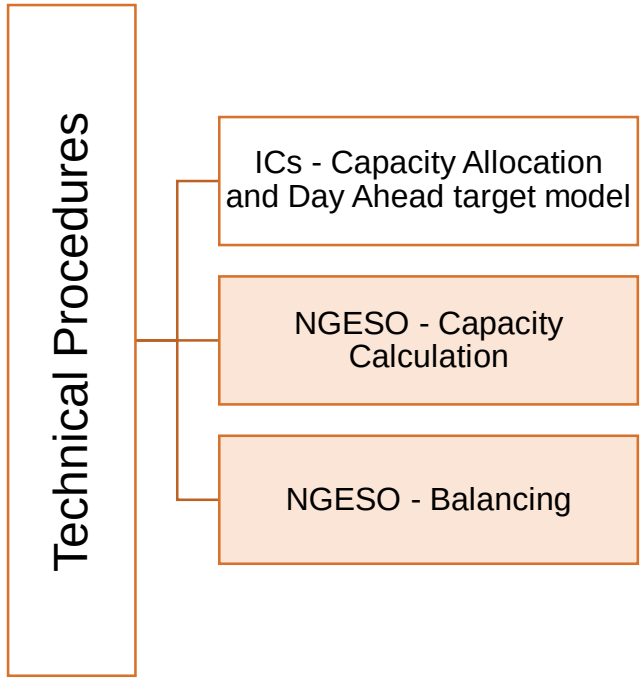
TCA Workstreams within National Grid ESO

EU-UK TCA Cooperation

- NGESO Lead – Cross-border & EU Team, Market Development

TCA Technical Procedures for Electricity Trading Arrangements



Technical Procedures Required for Electricity Trading Arrangements

Overview

- We are in the process of developing a new relationship with the European Union under the EU-UK Trade and Cooperation Agreement (TCA). The TCA describes a number of processes to develop new working arrangements **and technical procedures** to coordinate with Europe.
- Over the last few months NGESO has been assessing the technical procedures required and the priority of these procedures
- Activities outlined below do not include the day ahead target model activities

Activities Completed to date

Month	Activity
Jan to Feb	Gap analysis on the T&Cs/ methodologies/ procedures that need to be updated or re-written in line with the TCA and Statutory Instruments
March to April	Engaged with BEIS and OFGEM to understand technical procedures required for the Electricity Trading Arrangements (next slide)
April	High level plan for technical procedures required for the Electricity Trading Arrangements

Technical Procedures Required for Electricity Trading Arrangements - Priority Areas

Procedure	Lead	Support	What does it look like? What does it cover?	Timeframe for entry into operation
Capacity Calculation	• UK (NGESO to lead for UK) and EU TSOs	• NGESO will need support from interconnectors, connecting TSO, ENTSOE etc	• Current assumption is that it could look a bit like the CACM framework, but not necessarily. • Needs to hit all the areas mentioned in the TCA • Scope of this work is outlined in the TCA and TSO letters (Annex 2)	• Feedback received to date is that this technical procedure should run in parallel with the day ahead LVC procedure (which is required **April 2022**)
Capacity Allocation and Day Ahead target model	• UK (ICs to lead for UK) and EU TSOs	• NGESO to support	• Allocation of capacity across all timeframes • The Day Ahead arrangements are the priority • For other timescales UK/EU TSOs have been requested to propose timescales for the development of the technical procedures for the remaining timeframes • Scope set out in TCA Annex ENER-4 and TSO letters	• April 2022 for day ahead technical procedure • Other timeframes TBC
Balancing	• UK (NGESO to lead for UK) and EU TSOs	• NGESO will need support from the interconnectors, connecting TSOs, BM and Non BM parties, ENTSOE etc	• What is the requirement • What product/products do we need for efficient cross-border balancing	• Timeframe to be proposed by EU and UK TSOs (dependences on TERRE and MARI to be investigated)
Other Procedures Required	• Specialised Committee to provide recommendations	• NGESO, Interconnectors, connecting TSOs, ENTSOE, BM and Non BM parties and other industry participants etc	• Other aspects of the TCA	• TBC

Technical Procedures Required for Electricity Trading Arrangements

Next Steps

Timeframe	Activity
May 2021	Continue initial internal impact assessments and optioneering for balancing and capacity calculation technical procedures.
May 2021	Start engagement with UK and EU TSOs and ENTSOE to discuss plan for technical procedures and amend as necessary. NB - Plan should be in line with high-level timings set out in the TCA and TSO letters.
June 2021	Share with industry a detailed plan/timeline of tasks for technical procedures
June 2021	Start external workgroups with industry to come up with a solution for technical procedures required
*August 2021	For the day ahead capacity calc, if this is required for April 2022 in parallel with LVC, this procedure should be submitted by August to the regulatory authorities for their opinion (TCA article ENER.19)
*November 2021	For the day ahead capacity calc, if this is required for April 2022 in parallel with LVC, this procedure and the regulatory opinions should be submitted by November to the Specialised Committee

4. Grid Code/SQSS Mod update

Nisar Ahmed, NGESO

Welcome to Codes homepage & Modification tracker document links

- https://www.nationalgrideso.com/industry-information/codes
- https://www.nationalgrideso.com/document/159906/download

5. Update on the Cost Benefit Analysis

Mark Duffield, NGV & Nils Teipel, BritNed

EU-UK Trade and Cooperation Agreement:

New Day Ahead Trading Arrangements

The EU-UK Trade and Cooperation Agreement

Trade and Cooperation Agreement

Energy

Electricity Trading over Interconnectors

Regulation Fundamentals

- No Discrimination
- No Transmission Charges

New Trade Arrangements

- TSOs to develop
- Day Ahead to apply from Apr 2022

TSO and Regulatory Cooperation

TSOs

- Replace ENTSO's
- Security of Supply

Regulators

- Replace ACER
- Market Transparency (REMIT)

North Sea Grid Cooperation

- Restore North Sea Energy Cooperation Group
- Multipurpose projects
- Maritime planning
- Support framework and finance

Other Areas

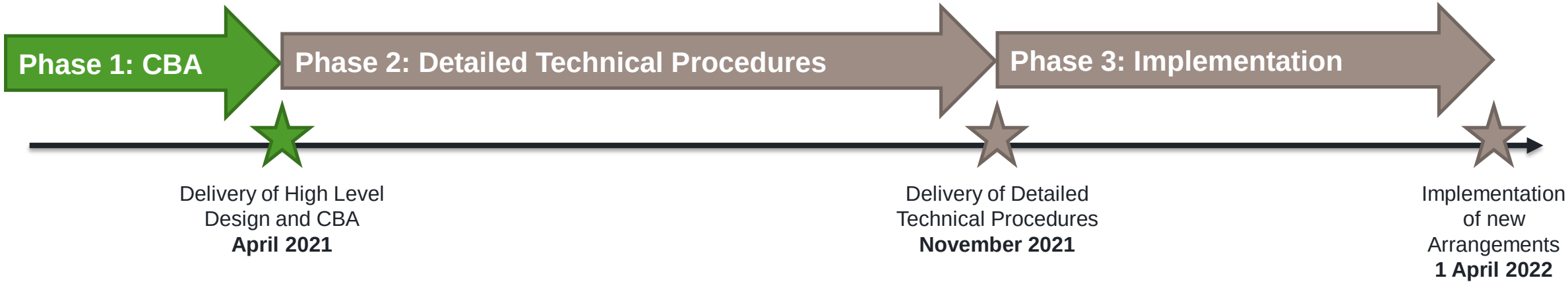
- Tariff & Quota Free Trade in Goods
- Transport
- Fisheries
- Union Programmes
- Social Security
- Law enforcement & Judicial cooperation
- Movement of People

New EU-UK Governance

- Partnership Council (Ministerial Level)
- Specialised Committee for Energy (TBC)
- Replacements for ACER and ENTSOe/g

Delivery of New Electricity Trading Arrangements across Interconnectors

- UK interconnector TSOs and EU TSOs responsible for developing these arrangements:
- Three parts to the work:
  1. Develop a High Level Design and Cost Benefit Analysis of the High Level Design all based upon the concept in the Trade Agreement termed “Multi-Regional Loose Volume Coupling” (MRLVC)
  2. Develop Detailed Technical Procedures to implement the High Level Design and seek regulatory opinions
  3. Following approval from the Specialised Technical Committee for Energy, to implement the approved mechanism



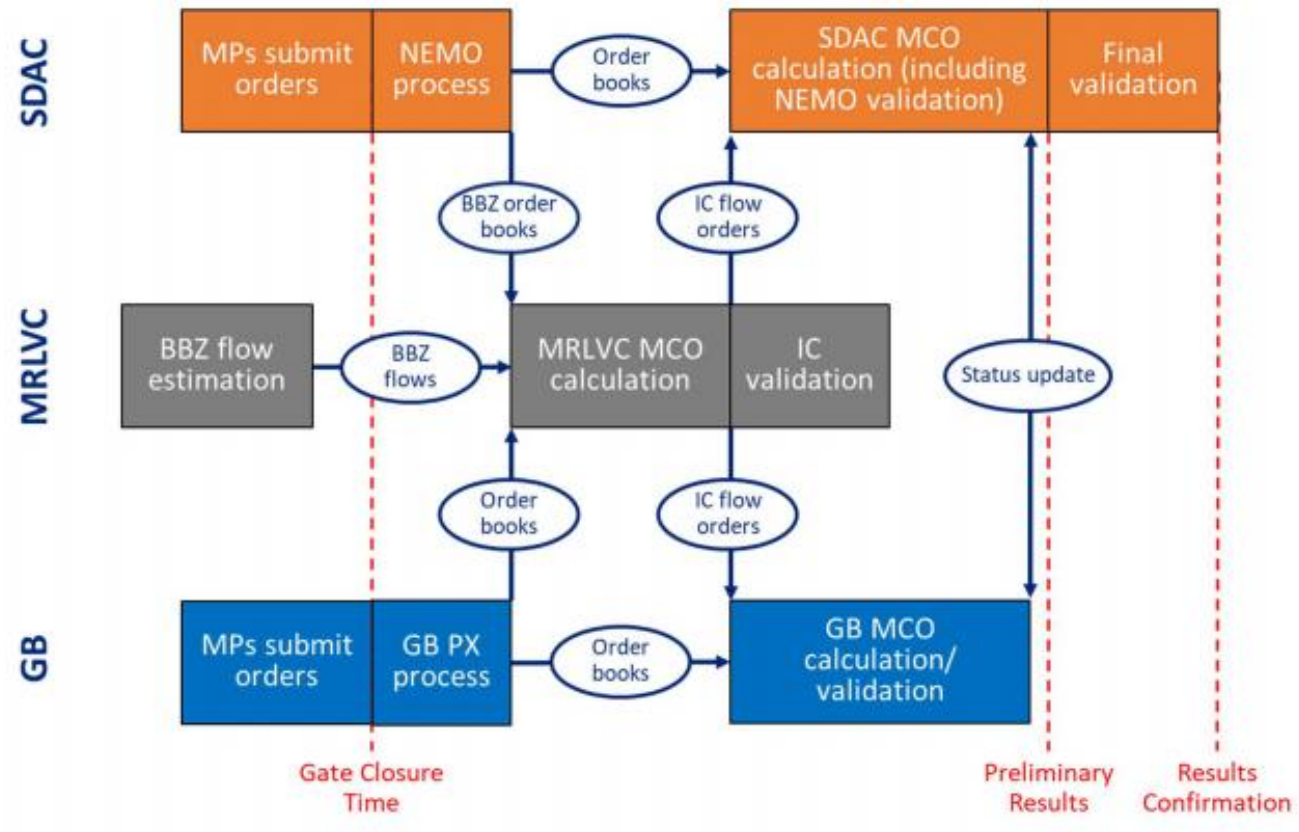
- UK and EU TSOs (led by NGV) contracted with CEPA for delivery of the Cost Benefit analysis back in mid-February 2021

EU-UK Trade and Cooperation Agreement: Energy CBA

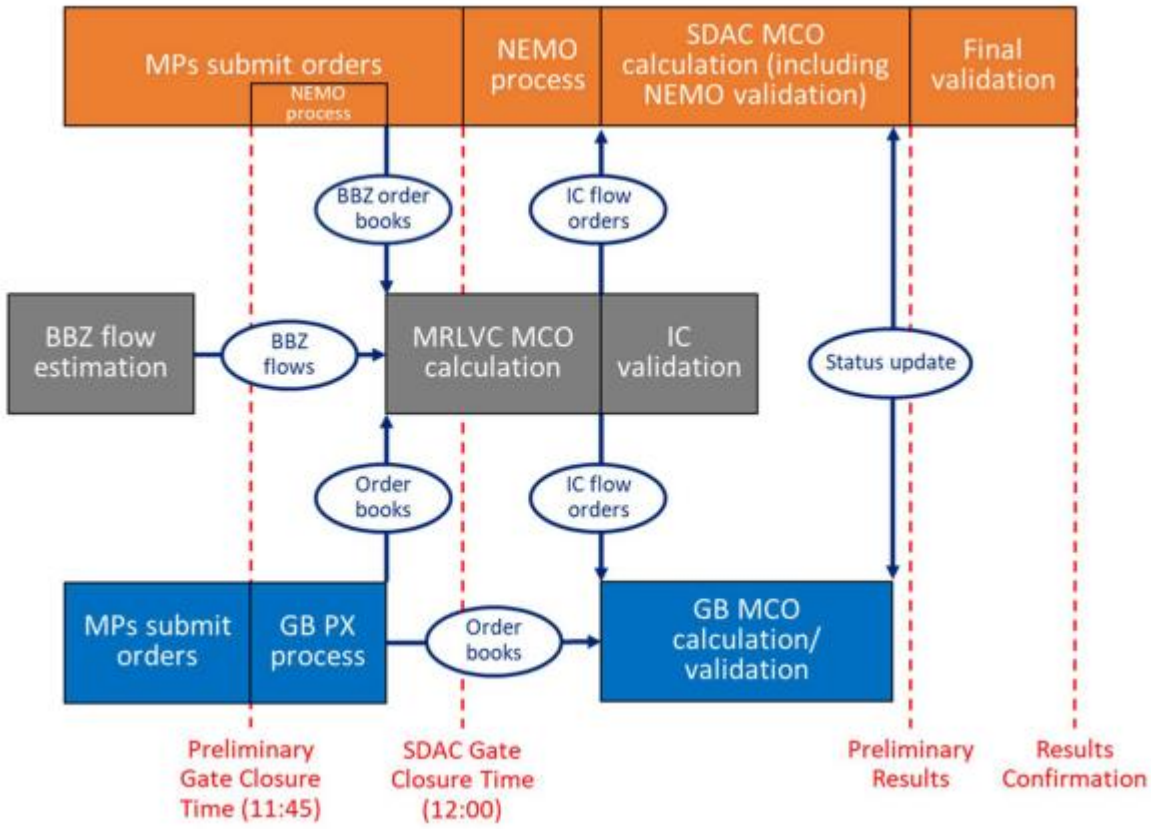
- The CBA looked at the high level design contained within Annex ENER-4 of the Trade & Cooperation Agreement. The key constraints in that design being:
  - **Data restrictions.** MRLVC only has access to order book data for the UK and for the bidding zones directly connected to the UK. It is required to use a forecast for expected commercial flows between bordering bidding zone (BBZs – i.e. connected to the UK) and the rest of the IEM.
  - **MRLVC should be a specific process/algorithm and distinct from SDAC.** This rules out operationally integrating the MRLVC and SDAC matching processes. Our understanding is that this does not prohibit the use of Euphemia software in MRLVC.
- This has led to two key high level design variations being assessed:
  - The use of **Common Order Books**
  - The use of **Preliminary Order Books**
- Common to either approach is:
  - The existence of a **single GB price**
  - MRLVC-determined flows **used as price taking orders** (PTOs) in SDAC and in GB.
  - MRLVC **PTOs are firm**, at least for SDAC, with appropriate fallback procedures in case of operational problems.
  - MRLVC **support existing order types** currently available in SDAC (e.g. complex orders).

EU-UK Trade and Cooperation Agreement: Energy CBA

- **Common Order Books**



- **Preliminary Order Books**



Structure of CBA and HLD

- **Review of Historical Implementations**
- **Comparing “As-Is” against two MRLVC designs**
  - Qualitative and Quantitative Analysis
- **Assessment against a range of criteria**
  - e.g. Welfare, Revenues, Environmental Benefits, Ease and Cost of implementation/Operation, Complexity, Impact on existing processes, etc..
- **CBA identified a number of aspects for consideration, that are critical to a “good” MRLVC solution**
  - e.g. Bordering Bidding zone estimation accuracy, impacts on SDAC, necessity for common order books for MRLVC and SDAC, critical impacts on implementation timelines
- **Additional design variations also included for consideration to mitigate challenges identified in CBA**
- **CBA should be considered an aid for parties to consider next steps, not a definitive answer**
  - This was by design, due to: limited time available to perform the CBA analysis, necessity for both qualitative and quantitative considerations, and the range of design options being dependent on the willingness to adapt existing processes

EU-UK Trade and Cooperation Agreement: Energy CBA

Key Results of the CBA:

- A well designed MRLVC is able to offer improved economic welfare compared to the counterfactual if the following conditions are met

- On technical implementation level it will require:
  - Using common order books for MRLVC and SDAC in order to minimise flows against price difference
  - A highly accurate BBZ (Bordering Bidding Zone) forecast to estimate the flows from non-adjacent bidding zones
  - A bid matching process protecting the Interconnectors and markets from flows against price direction
  - Limiting timing/process impacts on SDAC in order to maintain its stability to not increase decoupling risks
    - Likely requiring either an earlier gate closure time for SDAC, or later publication time for SDAC results

- Additionally it will require:
  - Single GB price and full GB DAM volumes available to MRLVC (to be arranged outside the scope of the LVC works)
  - Same product set in SDAC and MRLVC
    - Includes complex orders and ideally re-uses EUPHEMIA
  - New governance structures and arrangements for UK (SDAC engagement, BBZ flow forecaster,GB DAM MCO, Shipper, NEMOs)

EU-UK Trade and Cooperation Agreement: Energy CBA

- **Next Steps: UK TSOs endorse the findings of the CBA**, so immediate next steps are to start work on the Detailed Technical Procedures with the EU TSOs while continuing to involve industry participants, the UK government, European Commission and UK and EU Regulators to deliver those in a timely manner.
- CEPA has a number of recommendations in establishing this work:
  - Establish **MRLVC project**.
  - Develop and test the **BBZ flow forecast methodology**.
  - Establish the scope for implementing a common order book MRLVC that is **consistent with the operational needs of SDAC** (EU NEMOs and TSOs).
  - Consider and develop possible enhancements and mitigation measures to the MRLVC design, such as:
    - Assess and design measures to **mitigate sub-optimal flows** resulting from errors in BBZ flow forecasts.
    - Review how the design may need to **evolve to support future needs** – e.g. hybrid projects in the North Sea.
  - Running new simulation model analyses to test specific high-priority questions (where such analysis cannot wait until the availability of the BBZ forecast methodology), such as the addition of **NeuConnect (GB-DEU) & Celtic (SEM-FRA).**
- Coordinate with the TSO Cooperation workstream on other complementary activities – e.g. development of Capacity Calculation Methodologies
- Coordinate with Relevant Electricity Market Operators on the assessment & delivery of a single GB day ahead price

EU-UK Trade and Cooperation Agreement: Energy CBA

- **Feedback:** All Documentation and how to respond may be found online on each of the UK TSOs websites and also on the ENTSOe website:

  - BritNed: https://www.britned.com/news/cost-benefit-analysis-loose-volume-coupling/
  - EirGrid: https://www.eirgridgroup.com/customer-and-industry/interconnection/
  - ElecLink: http://www.eleclink.co.uk/eleclink-news-downloads.php#
  - IFA: https://ifa1interconnector.com/notices/consultation/
  - Moyle: http://www.mutual-energy.com/uk-tsos-publish-cost-benefit-analysis-on-loose-volume-coupling/
  - Nemo Link: https://www.nemolink.co.uk/brexit-news/uk-tsos-publish-cost-benefit-analysis-on-loose-volume-coupling/
  - ENTSOe: https://consultations.entsoe.eu/markets/cost-benefit-analysis-of-multi-region-loose-volume/consult_view/

- UK TSOs would welcome any and all feedback on the CBA and its contents ideally by **17 May 2021**

6. Next steps on development of policy position for cost allocation

Catherine Contiguglia, Ofgem

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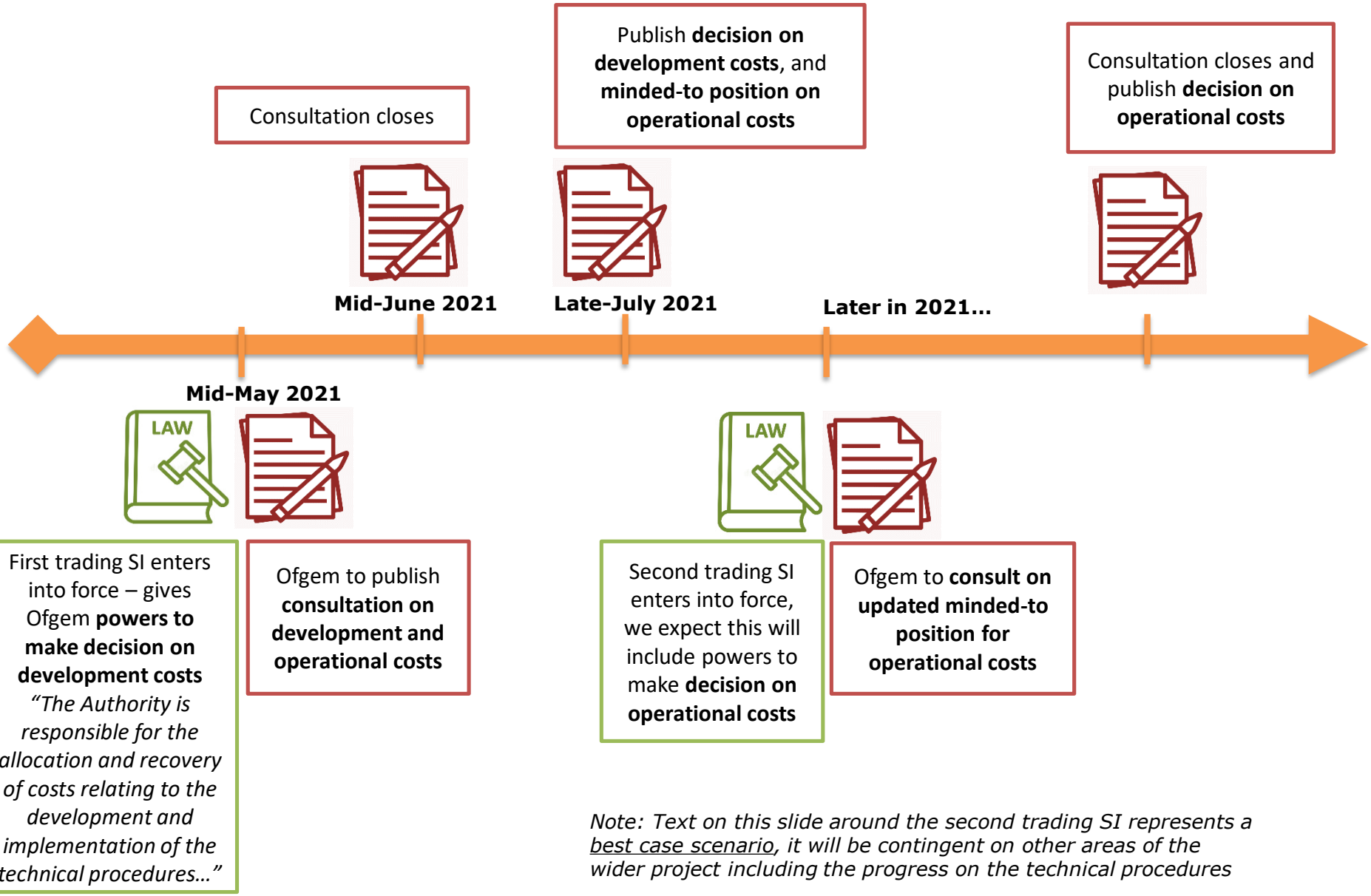
Cross Border Trading Working Group Meeting

Ofgem Update on TCA Cost Allocation and Sharing

OFG1161

Holly MacDonald
06/05/2021

Indicative Timelines and Process



Note: Text on this slide around the second trading SI represents a best case scenario, it will be contingent on other areas of the wider project including the progress on the technical procedures

ofgem Making a positive difference for energy consumers

Ofgem is the Office of Gas and Electricity Markets. We are a non-ministerial government department and an independent National Regulatory Authority, recognised by EU Directives. Our role is to protect consumers now and in the future by working to deliver a greener, fairer energy system.

We do this by:

- **working with Government, industry and consumer groups to deliver a net zero economy at the lowest cost to consumers.**
- **stamping out sharp and bad practice, ensuring fair treatment for all consumers, especially the vulnerable.**
- **enabling competition and innovation, which drives down prices and results in new products and services for consumers.**

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7. Update on SOGL A118/119 interconnector ramping

Louise Trodden, NGESO

Incorporation of SOGL Article 119 and ramping requirements into the Grid Code

JESG

nationalgridESO

Why are we looking at interconnector ramping now?

GB Compliance Requirement - Requirements placed upon GB from the SOGL Methodology* (Article 119 – see Annex 1).

These requirements have been retained in GB law via the Statutory Instruments (see Annex 2). Implementing this component of SOGL started in 2017 (when SOGL entered into force) and must now be completed to achieve compliance.

Operational Drivers – The control room already face operational challenges from the current IC ramping arrangements. With an increased number of ICs coming onto the network (5 continental IC by 2022) current IC ramping arrangements will not remain viable (potential full swing of over 12GW at a rate of change of 500MW/min).

This would significantly influence the services needed to manage the system.

*published here. *This document has been approved by Ofgem for mapping to the codes*

SOGL Article 119- Interconnector ramping

Completed	Next Steps
April – Met with IC to raise awareness of this topic to ensure their engagement in wider industry discussions	May- Review in full feedback from IC meeting and GCDF meeting. Endeavour to update at the next GCDF meeting
May- Attended GCDF to share with industry the requirements that we have placed upon us, and gain feedback	Summer- Set up a meeting to review suggestions with industry and discuss (most likely prior to workgroups)
We have sent surveys to those who attended both sessions for feedback	Goal is to raise a modification formally and commence workgroups to fully develop a solution. Potential is to have a modification for IC ramping to address SOGL and another to consider wider BMU ramping
	Mapping tables and operational methodologies to be reviewed to ensure no amendments are required –eg: NGET references. Ensure that the mapping tables are reflective of the SI to aid decision making at Ofgem.

8. Review of Actions log

Andrew Hemus
JESG Technical Secretary

JESG Standing items

ID	Topic	Lead Party
S1	Continue to review the membership of the JESG and engage additional industry parties where appropriate.	JESG Chair
S2	Prepare a commentary / comparison document between the Network Code and the existing GB arrangements at appropriate stages in the Code development for each Network Code.	NGET / Ofgem / BEIS
S3	Share any intelligence about how other member states are approaching demonstrating compliance through information gained from other government departments, regulators or parent companies.	BEIS / Ofgem / Industry parties with European parent companies

JESG Open Actions

ID	Topic	Lead Party	Status	Update
117.	JESG to be updated on SQSS and Grid Code Modifications	NGESO	Open	NGESO Technical Code team representative to be invited to future JESG meeting to update JESG.
131.	GB Interconnectors Capacity Calculation Methodology (NTC) Wider Policy Queries – 4) Better understanding on the potential impact on BSUoS and wider impacts on the wholesale market.	Claire Huxley (NGESO)	Open	Currently being progressed at two weekly meetings with interested parties.
132.	Update of the Grid Code changes for ramping as part of SOGL A118/119	Claire Huxley (NGESO)	Open	To be discussed in May at the Grid Code Development Forum (GCDF) with a Grid Code modification to be raised shortly afterwards.

9. Future Meeting Dates & Agenda Items

Andrew Hemus
JESG Technical Secretary

Future JESG Meetings

- As always registration is required and will be opened through the JESG Weekly updates.
- Stakeholders are invited to put forward agenda items for the forthcoming JESG meetings:

Date	Proposed Agenda Items
Tuesday 8 June	
Tuesday 13 July	

10. Stakeholder Representation

All

11. AOB