

Joint European Stakeholder Group



Thursday 21 September 2017
Meeting 24

WebEx

Agenda

ID	Title	Lead	Time
1	Welcome & Introductions	Chair	10:00 -10:05
2	CACM Methodologies, Inc. Recent Submission of the Capacity Calculation Methodologies	Rob Selbie National Grid	10:05 - 10:20
3	Data Exchange GB Modifications and Methodology Update	Rob Selbie National Grid	10:20 - 10:35
4	Regulatory assessment of the Capacity Calculation Methodologies	Thomas Jones (Ofgem)	10:35 - 10:50
5	GC0100/101 Workgroup Consultations	Rob Wilson (National Grid)	10:50 - 11:00
6	Review of Actions log	Heena Chauhan (JESG Technical Secretary)	11:00 -11:10
7	Future Meeting Dates & Agenda Items	Heena Chauhan (JESG Technical Secretary)	11:10 -11:20
8	Stakeholder Representation	Chair	11:20 -11:30
9	Any Other Business	All	11:30 -11:40

1. Welcome & Introductions

Barbara Vest

Independent Chair

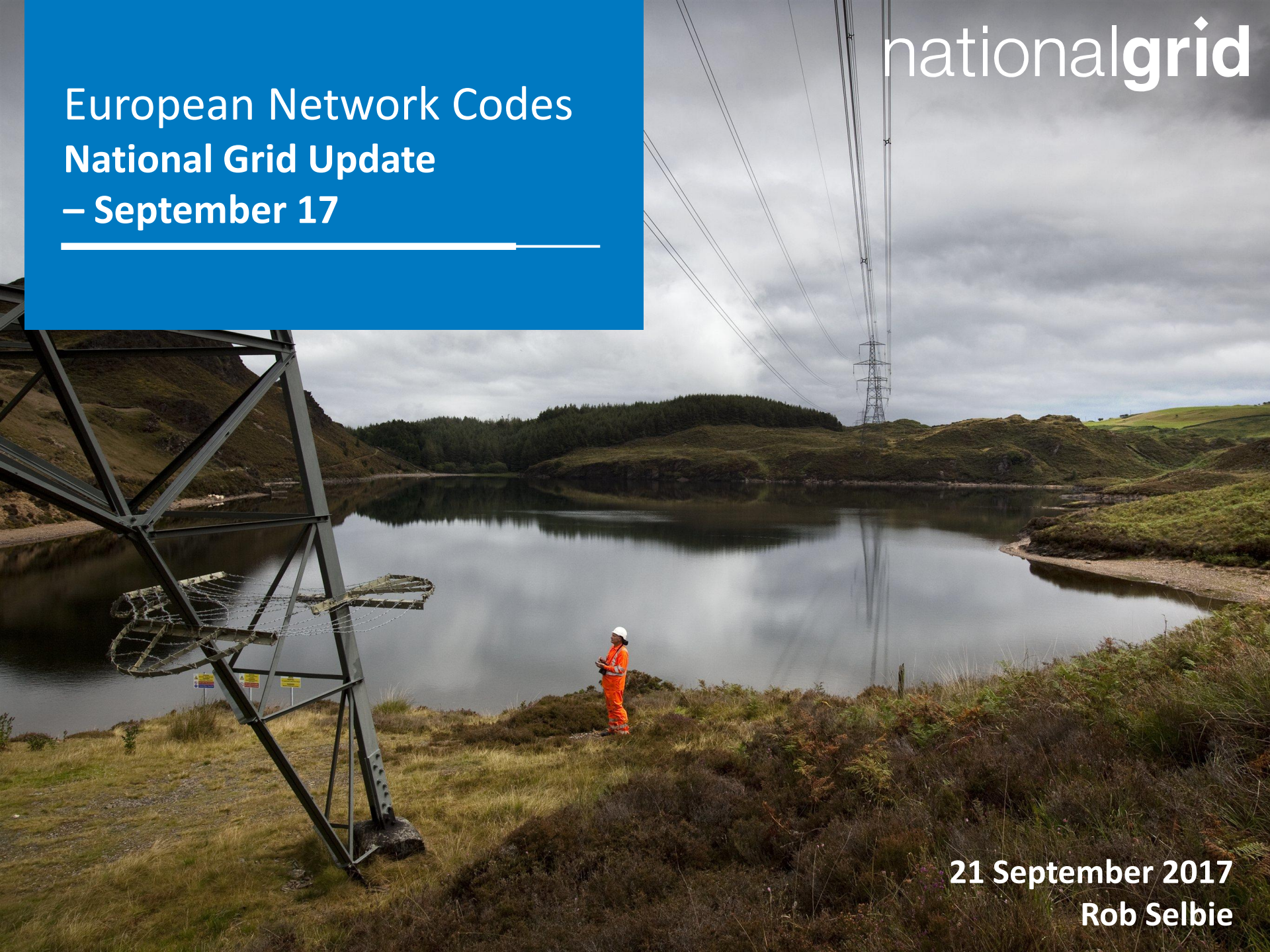
2. CACM Methodologies, Inc. Recent Submission of the Capacity Calculation Methodologies

Rob Selbie

National Grid

European Network Codes National Grid Update – September 17

nationalgrid



21 September 2017
Rob Selbie

**CACM METHODOLOGIES, INC.
RECENT SUBMISSION OF THE
CAPACITY CALCULATION
METHODOLOGIES**

CACM: Overview of all TSOs' tasks

Approved

- Capacity calculation regions
- Day-ahead firmness deadline
- Common Grid Model/ Generation and Load Data Provision Methodology

Under NRAs' approval

- Cross-zonal intraday capacity pricing
- Capacity Calculation Regions amendment request
- Intraday cross-zonal gate opening and gate closure times (*)

Under ACER approval

- Congestion Income Distribution

Upcoming tasks

- Scheduled exchanges methodologies (**)

*: submitted after amendment request
**: depending on the NRAs' guidance

Update on submitted methodologies/ proposals

Amendment request to the determination of CCRs

- All TSOs' proposal for including the BZ border between BE-GB into Channel CCR
- Process followed in accordance with Art. 9(13) of the CACM
- Proposal submitted to all NRAs in mid-July

Congestion Income Distribution

- Decision on the methodology to be taken by ACER
- Decision expected by October 2017

Update on submitted methodologies/ proposals

Cross-zonal intraday capacity pricing (CZIDCP)

- The proposal has been amended following the comments received in the public consultation
- One pan-European intraday auction (IDA) is currently foreseen to take place at 22:00 day-ahead.
- For those regions who wish to open the date for the ID market before this time (at this stage Nordic and Hansa), * it is allowed to have separate opening auctions.
- Additional changes to the Proposal mainly editorial or due to consistency reasons.
- All TSOs' proposal submitted to all NRAs in mid-August

* Hansa, Nordic refer to Capacity calculation Regions (CCRs) as defined by ACER decision;

http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Pages/Individual-decision.aspx

Update on submitted methodologies/ proposals

Intraday cross-zonal gate opening and gate closure times

- NRAs requested amendments to the proposal in mid-June
- As a first step, a GOT is proposed for each CCR
 - Nordic at 15:00 market time day-ahead.
 - Hansa at 18:00 market time day-ahead
 - Core, Italy North, Greece-Italy, South-west Europe, South-east Europe, Channel at 22:00 market time day-ahead.
 - Ireland and United Kingdom at 18:30 market time day-ahead.
 - Baltic at 18:00 market time day-ahead.
- One harmonised GOT on EU level to be defined at later stage
- GCT is set to 60 minutes before real time for all bidding zone borders with the exemption of the bidding zone border Estonia-Finland (EE-FI)

Channel region = IFA and BritNed
IU region = EWIC and Moyle

References to Capacity calculation Regions (CCRs) as defined by ACER decision;

http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Pages/Individual-decision.aspx

Regional Capacity Calculation Methodologies

- Two separate methodologies;
 1. Channel (IFA, BritNed and Nemo Link)
 2. IU (EWIC and Moyle)
- Methodologies changes in light of consultation feedback;
 - Clarity on Maximum Permanent Technical Capacity definition to include IC outages
 - New article for CNTC justification
 - New article for transparency/publication
- Regional TSO methodologies were submitted to NRAs 17 September

3. Data Exchange GB Modifications and Methodology Update



Rob Selbie
National Grid

SO GL entry into force

- The Transmission System Operation Guideline (SOGL) entered into force 14 September 2017
- The final text can be found here;

<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R1485>

- Many SOGL deliverables are triggered from the entry into force date, including data exchange.

Data Exchange Methodology

- *All TSOs are required to develop a proposal for the **key organisational requirements, roles and responsibilities (KORRR)** in relation to data exchange by 6 months after entry into force (**14 March 2018**).*
- A stakeholder workshop on data exchange was held by ENTSO-E in June 2017
- *A public consultation is planned 1 Nov – 1 Dec 2017. (This will coincide with the SOGL CGM methodology consultation period).*
- *A second workshop will be organised by ENTSO-E during this consultation period on 14 Nov 2017*
- The proposal will be submitted for approval by **all NRAs**

Data Exchange Methodology

- The feedback from the stakeholder was assessed during July and August showing that the main concerns for the stakeholders related to:
 - clarity of the drafting;
 - coordination with the DSOs according to SO GL Article 40(7);
 - duplication of data provision by SGUs;
 - applicability to existing/new SGUs.

Data Exchange - GB code changes

- Potential changes to the Grid Code were identified in workshops held earlier in the year (under GC0095).
- These changes will be reviewed alongside the new KORRR methodology before the modifications can be raised.
- Current intention is to be able to raise modifications shortly after the KORRR consultation period.

COORDINATED SECURITY ANALYSIS

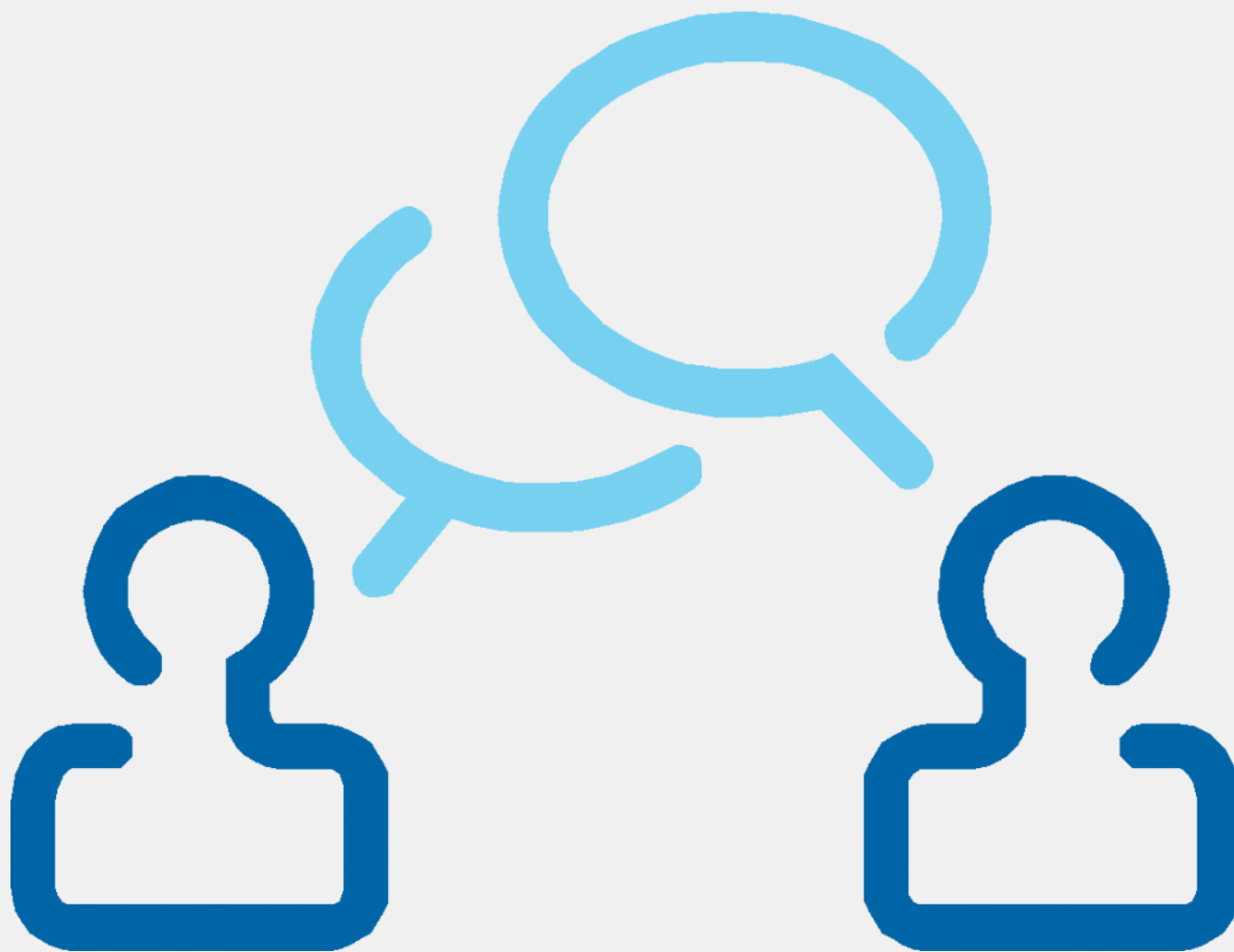
COORDINATED SECURITY ANALYSIS

Methodology for coordinating operational security analysis, cf. SO GL Article 75(1)

Methodology for assessing the relevance of assets for outage coordination, cf. SO GL Article 84(1)

- ENTSO-E are hosting a stakeholder workshop 28 September 2017
- The formal public consultation period is planned for March 2018.
- TSO deadline for submission to all regulators September 2018.

Feedback & questions



4. Regulatory assessment of the Capacity Calculation Methodologies



Thomas Jones
Ofgem

CACM Capacity Calculation Methodologies

Presentation to JESG

Thomas Jones
September 2017

Thomas.Jones@ofgem.gov.uk

ofgem

Aim of today

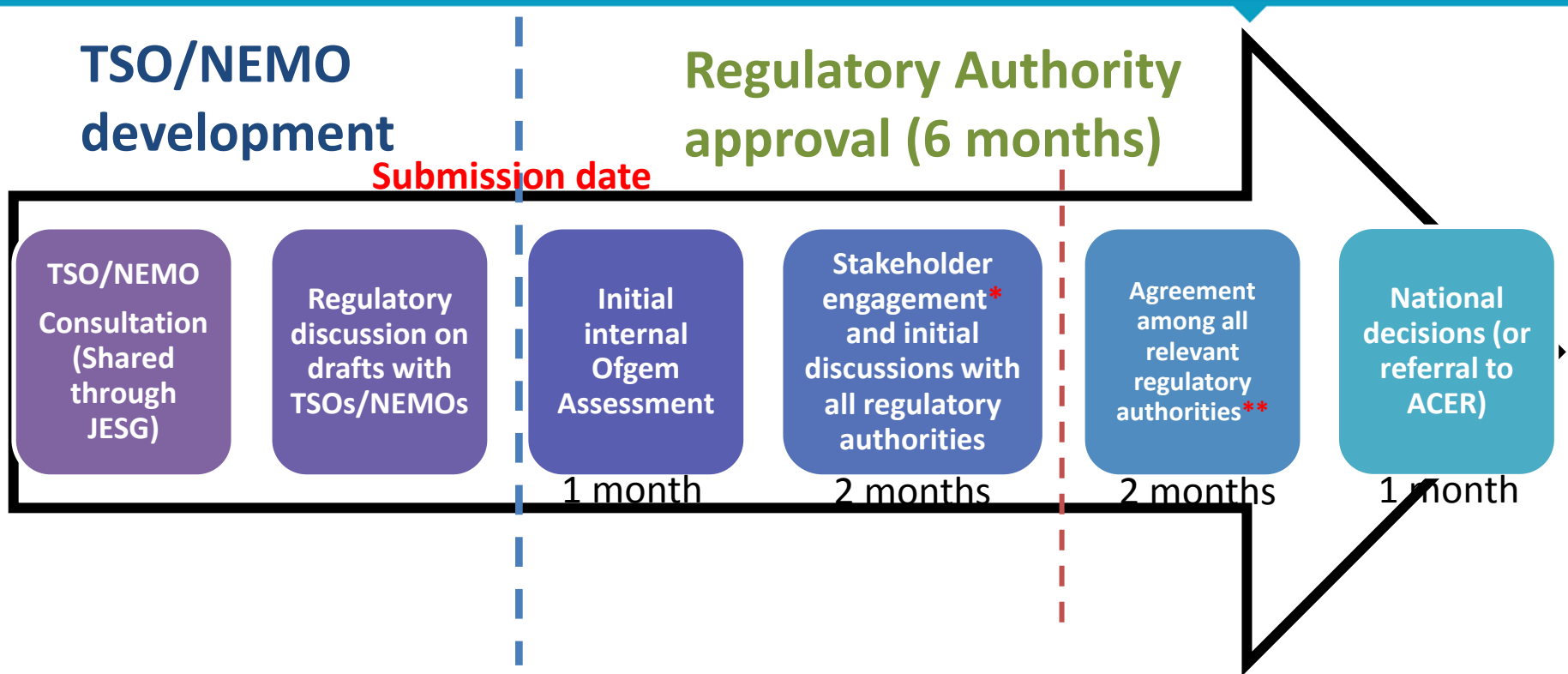
- Overview of TSO proposals
- Timeline for assessments
- Summary of areas that Regulatory Authorities feedback during TSO consultation
- Any initial feedback from JESG

Two proposals submitted to regulators for Capacity Calculation Methodologies, in each Capacity Calculation Region (CCR):



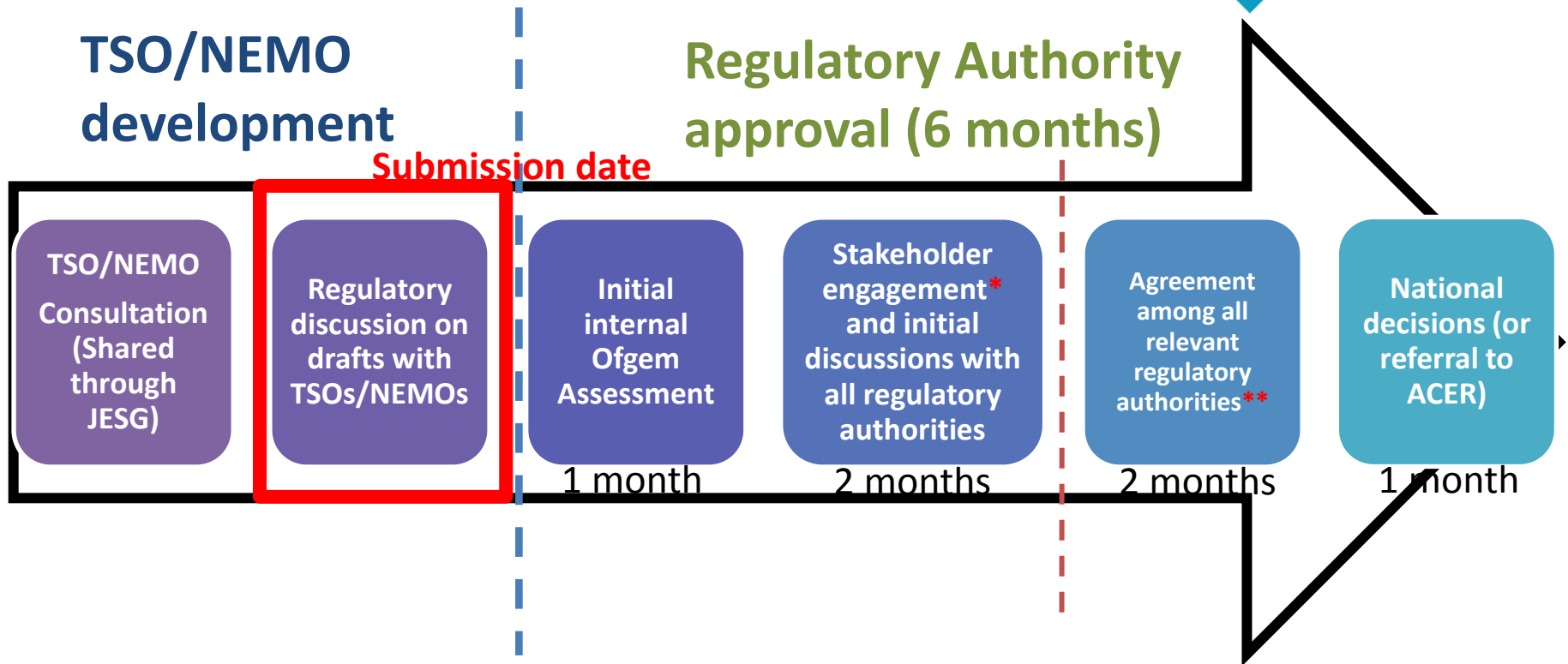
Proposals should be made available on the [Proposals and Methodologies](#) page on the NGET website.

Recap: Indicative Regulatory Authority Approval Process



* Through JESG, we may also consult on proposals in line with our Consultation Guidance.

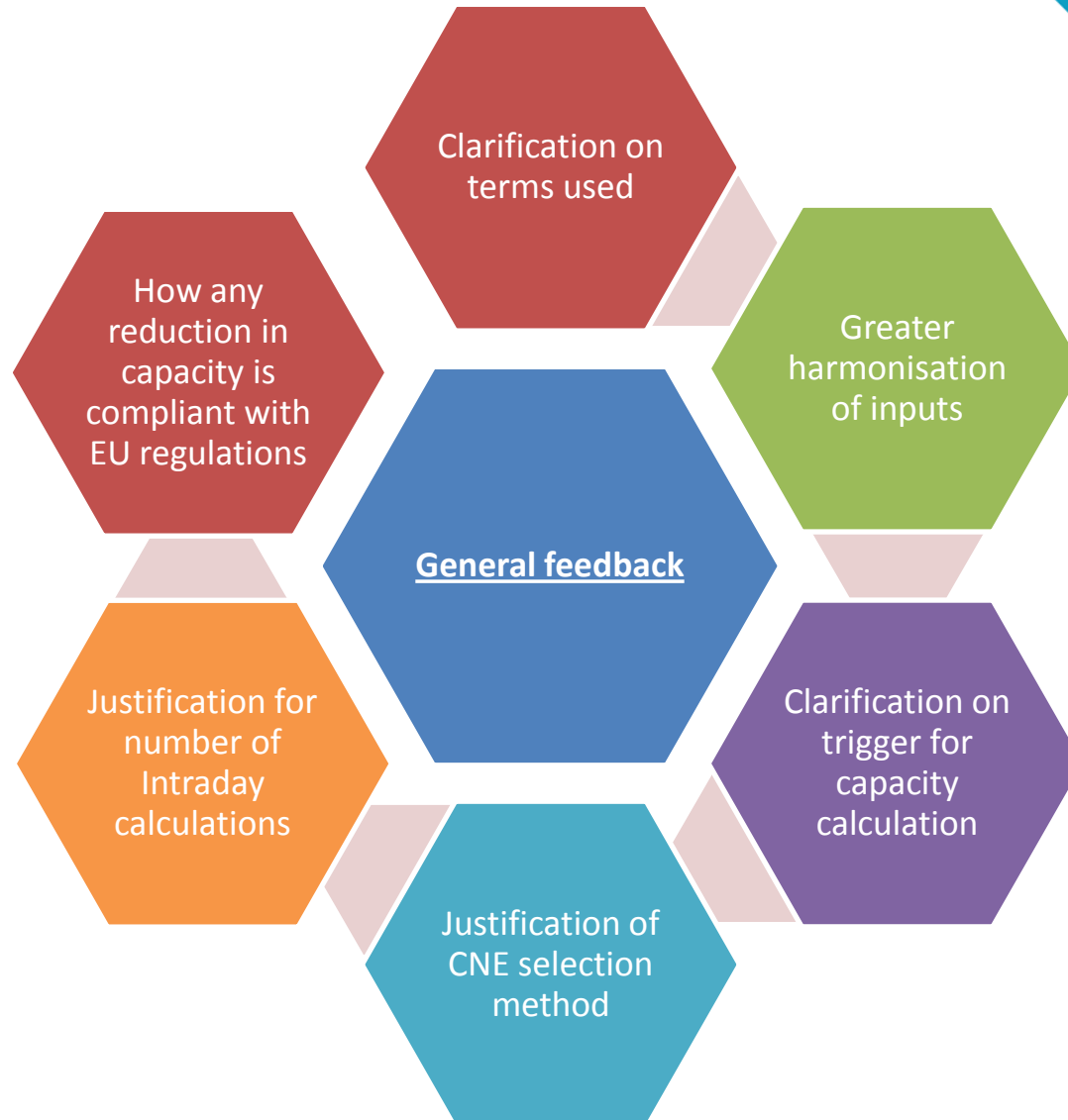
** This may be done bilaterally in the case of regional decisions, or through the 'Energy Regulators' Forum' (ERF), established by regulators for the purpose of seeing unanimous agreement on terms, conditions and methodologies that require agreement among all regulators authorities under the guidelines.



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Feedback from Regulatory Authorities



Next steps

- Looking for stakeholder views:
thomas.jones@ofgem.gov.uk
- Ofgem to complete assessments and seek agreement from other relevant Regulatory Authorities on positions
- National decisions due by March 2018

Ofgem is the Office of Gas and Electricity Markets.

Our priority is to protect and to make a positive difference for all energy consumers. We work to promote value for money, security of supply and sustainability for present and future generations. We do this through the supervision and development of markets, regulation and the delivery of government schemes.

We work effectively with, but independently of, government, the energy industry and other stakeholders. We do so within a legal framework determined by the UK government and the European Union.

5. GC0100/101 Workgroup Consultations



Rob Wilson
National Grid

Connection Network Codes: Workgroup Consultations



Sept 2017
Rob Wilson

Implementation Packaging of Code Mods

Grid Code Modifications:

- **GC0100** - Banding, Fault Ride Through and Fast Fault Current Injection (RfG, HVDC)
- **GC0101** – Voltage / Reactive and Frequency (RfG, HVDC)
- **GC0102** – System Management and Compliance (RfG, HVDC and DCC)

(all jointly with Distribution Code)

- **GC0104** – Transmission Connected Demand, Demand Side Response (DCC)

Workgroup Consultations – GC0100 & GC0101

Opened on 11 Sept – responses invited by COP on 2 Oct

GC0100 - Banding, Fault Ride Through and Fast Fault Current Injection (RfG, HVDC)

<http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/Modifications/GC0100/>

This modification sets out:

- Scope and applicability of the RfG, DCC and HVDC requirements for GB users
- Sets the four type (A-D) MW banding levels for GB, as required in RfG
- Sets the GB Fast Fault Current Injection parameters, as set out in RfG
- Sets the GB Fault ride through requirements, as set out in RfG and HVDC

Workgroup Consultations – GC0100 & GC0101

Opened on 11 Sept – responses invited by COP on 2 Oct

GC0101 – Voltage / Reactive and Frequency (RfG, HVDC)

<http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/Modifications/GC0101/>

This modification sets out:

- Voltage & Reactive requirements in GB, as required in RfG and HVDC; and
- Frequency requirements in GB, as required in RfG and HVDC

Alternatives – GC0100 RfG Banding

- Maximum levels are drafted into the code by synchronous area
- Evidence is required for any setting – there is no default!
- For GB we need to find the right balance between generator costs and operational benefit
- Options included in consultation:

Type	Maximums	NGET Proposal
A	800W – 1MW	800W -1MW
B	1-50MW	1-10MW
C	50-75MW	10-50MW
D	75MW	50MW+

(and connection at >110kV defaults to type D)

- Harmonisation with other member states is a consideration

Alternatives – ‘More stringent’ argument

- Will be raised as an alternative to every proposal
- Questions in consultations

Banding - background

Introduction to RfG Banding – Type A

- A basic level necessary to ensure capability of generation over operational ranges with **limited automated response** and **minimal system operator control**.
- Type A ensure that there is no large-scale loss of generation over system operational ranges, minimising critical events, and include requirements necessary for widespread intervention during system-critical events.

Overview of technical requirements:

- Operation across a range of frequencies
- Limits on active power output over frequency range
- Rate of change of frequency settings applied (likely to be at least 1Hz/sec)
- Logic interface (input port) to cease active power output within 5 secs

Introduction to RfG Banding – Type B

- Type B provides for a wider range of **automated dynamic response**, with greater resilience to more specific operational events.
- They ensure an automated response to alleviate and maximise dynamic generation response to system events.

Overview of technical requirements

- Type A, plus...
- Ability to automatically reduce power on instruction
- Control schemes, protection and metering
- Fault Ride Through requirements
- Ability to reconnect
- Reactive capability (synchronous Power Generating Modules only)
- Reactive current injection

Introduction to RfG Banding – Type C

- Provide for a refined, stable and highly controllable (real-time) dynamic response, aiming to provide principle ancillary services to ensure security of supply
- These requirements cover all operational network states with consequential detailed specification of interactions of requirements, functions, control and information to utilise these capabilities

Overview of technical requirements:

- Type A-B, plus...
- Active power controllability
- **Frequency response**
- Monitoring
- Automatic disconnection
- Optional Black start
- Reactive capability (Non-synchronous)
- Stable operation anywhere in operating range
- Pole slipping protection
- Quick resynchronisation capability
- Instrumentation and monitoring requirements
- Ramp rate limits
- Simulation models

Introduction to RfG Banding – Type D

- Requirements specific to higher voltage connected generation with an impact on entire system control and operation
- They ensure stable operation of the interconnected network, allowing the use of ancillary services from generation Europe-wide.

Overview of technical requirements

- Type A-C (latter band parameters take precedence when requirements overlap), plus...
- Wider Voltage ranges / longer minimum operating times
- Synchronisation on instruction
- Fault Ride through

4. Actions log

Heena Chauhan

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/ DECC
S3	Share any intelligence about how other member states are approaching demonstrating compliance through information gained from other government departments, regulators or parent companies	DECC / Ofgem / Industry parties with European parent companies
S4	Stakeholders are requested to provide specific examples of inconsistent or problematic definitions in the Network Codes to Ofgem (natasha.z.smith@ofgem.gov.uk).	All Stakeholders
S5	Cross GB Codes ENC Changes Coordination. Step 1 engage Code Administrators, highlight to code leads	Code Administrators and JESG Technical Secretary

JESG Open Actions

ID	Topic	Lead Party	Status	Update
63	NGET to speak with ENA around GB Implementation plan and validation of modification packages	NGET	Ongoing	Update will be provided at a future JESG
67	Confirm if the XBID User Group is still running and who the contact is for this group.	NGIC	Open	Central project - Go live will be Q1 2018. GB – Q3
68	HC to facilitate with EirGrid to attend a future meeting to provide an update on interconnectors	EirGrid	Open	
69	Ofgem to confirm what the enduring elements of HAR are at the next JESG, for example boiler plate conditions.	Ofgem	Open	Thomas Jones will provide an update via weekly update or at next JESG
70	To send a link to the Code Administrators meeting minutes for inclusion in the weekly JESG update	Jemma Williams - ELEXON	Open	ELEXON will circulate to JESG 20/07 - These will be sent to HC and issued out via the newsletter
71	JB to review the discharging of obligations in Article 56 and check how this aligns with existing Grid Code requirement and report back at a future JESG	James Bradley, National Grid	Open	

6. Future Meeting Dates & Agenda Items

Heena Chauhan
JESG Technical Secretary

Future JESG Meetings (London)

- 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
Thursday 19 October 2017	
Thursday 23 November 2017	
Tuesday 12 December	

7. Stakeholder Representation

All

8. AOB