

Transmission Charging Methodologies Forum



8th March 2017

Welcome

Jon Wisdom

Today's Forum

Modifications and CUSC Panel Update

SO/TO Modification

CMP264/5 – Ofgem minded to position

Charging Review Update

GC0086 Open Governance

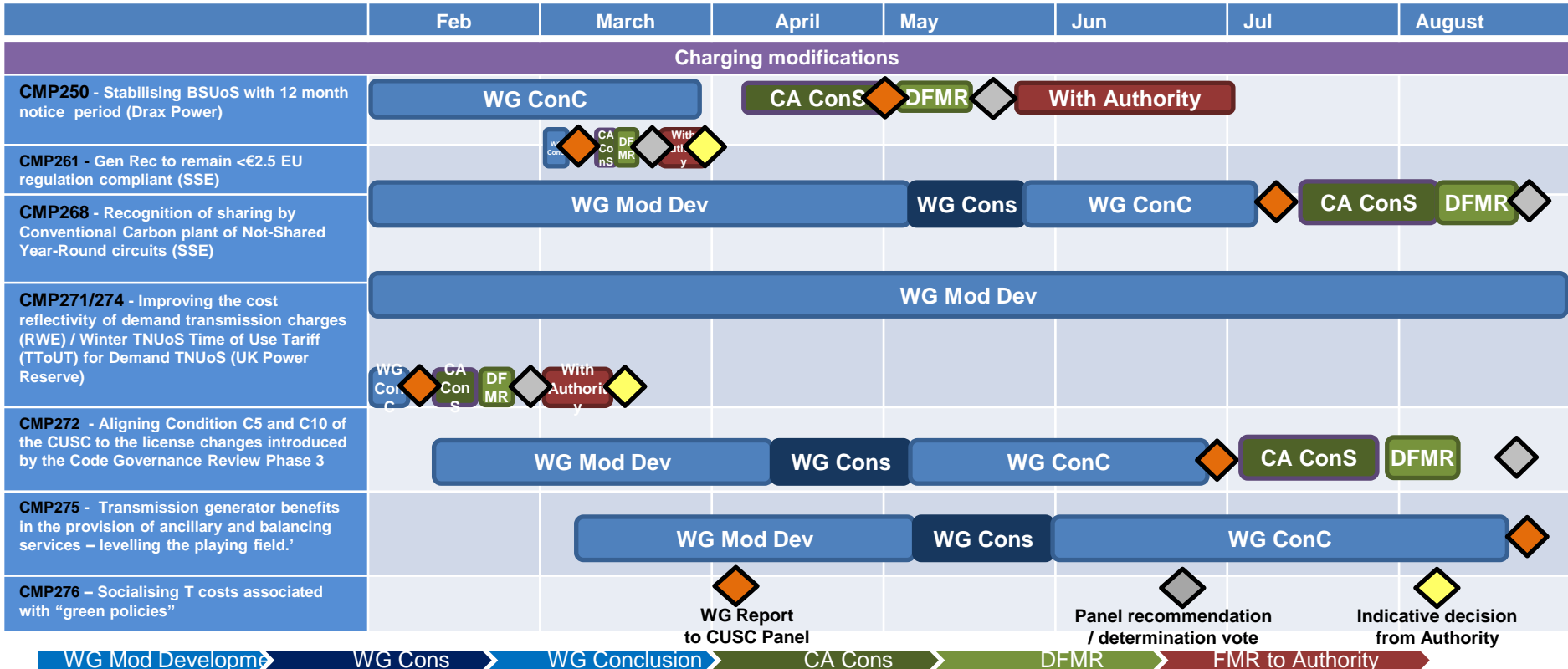
TSO/DSO Charging

Modifications and CUSC Panel Update

Ryan Place

Current CUSC Modifications

WG - Workgroup
 ConS - Consultation
 WG ConC - Workgroup Conclusion
 CA - Code Administrator Consultation
 DRMR - Draft Final Modification Report



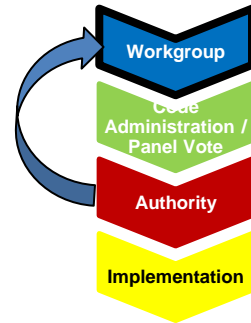
With Authority, awaiting decision – please refer to the following link for further information:
https://www.ofgem.gov.uk/system/files/docs/2016/12/indicative_decision_dates_for_modification_with_ofgem.pdf

CMP251 - Remove error margin cap on TNUoS compliance with EU (British Gas)

CMP264/265/269/270 - Embedded Generation Triad Avoidance Standstill (Scottish Power)/Gross charging of TNUoS for HH demand where embedded generation is in Capacity Market (EDF)
Plan on a Page and other CUSC Panel related material can be accessed using the following link: <http://www2.nationalgrid.com/uk/industry-information/electricity-codes/cusc/Panel-information/>

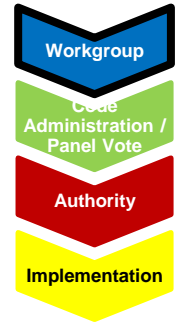
Ofgem decisions since last TCMF

- The Authority have decided to send **CMP261 ‘Ensuring the TNUoS paid by Generators in GB in Charging Year 2015/16 is in compliance with the €2.5/MWh annual average limit set in EU Regulation 838/2010 Part B (3)’** back for two reasons which are listed below:
 - Issues with the consistency of the legal text when compared with the options discussed in the Final Modification Report.
 - Clarity on whether the options submitted reimburse the right Users the right amount of the alleged overcharge.
- The Panel have agreed to send this back to Workgroup under accelerated timescales, which includes two Special CUSC Panel Meetings in March.
- The Urgency decision on CMP276 **‘Socialising TO costs associated with "green policies”’** is currently pending and an Authority response should be received in the next few working days.



CUSC Panel Votes

- **CMP272 ‘Aligning Condition C5 and C10 of the CUSC to the license changes introduced by the Code Governance Review Phase 3’**
 - This proposal was raised by National Grid.
 - CMP272 seeks to implement the license changes to the CUSC arising from Ofgem’s Code Governance Review (Phase 3). In particular;
 - Introducing the ability for the Authority to raise a CUSC Modification following the end of a SCR;
 - introducing the ability for the Authority to end a SCR;
 - Introducing the ability for the Authority to lead an end to end CUSC SCR Modification;
 - Backstop Direction.
- At the February CUSC Panel Meeting the Panel members unanimously agreed that the Original was better than the Baseline.
- The Final Modification Report will now be issued to the Authority for decision.



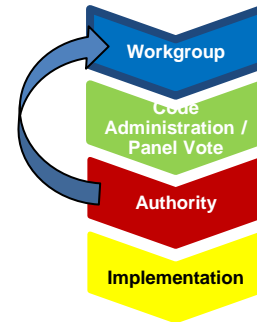
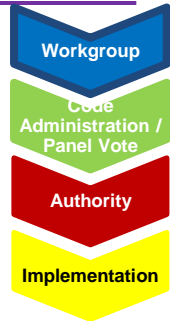
Ongoing modification proposals

CMP250 'Stabilising BSUoS with at least a twelve month notice period'

- CMP250 aims to eliminate BSUoS volatility and unpredictability by proposing to fix the value of BSUoS over the course of a season, with a notice period for fixing this value being at least 12 months ahead of the charging season.
- Raised by Drax. (Cem Suleyman)
- Proposal being further developed by Workgroup.
- Contact Heena Chauhan for further information.

CMP268 'Recognition of sharing by Conventional Carbon plant of Not-Shared Year-Round circuits'

- CMP268 proposes to change the charging methodology to more appropriately recognise that the different types of "Conventional" generation do cause different transmission network investment costs, which should be reflected in the TNUoS charges that the different types of "Conventional" generation pay.
- Raised by SSE. (John Tindal)
- Proposal being further developed by Workgroup.
- Contact Christine Brown for further information.



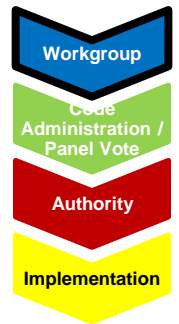
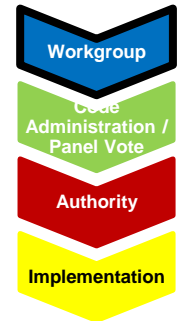
Ongoing modification proposals

■ **CMP271 'Improving the cost reflectivity of demand transmission charges'**

- CMP271 aims to improve the cost reflectivity of demand transmission charges. It is proposed that the transmission charging methodology should include a Peak Security demand tariff levied at Triad, a Year Round demand tariff and revenue recovery levied on year round supplier demand.
- Raised by RWE. (Bill Reed).
- Proposal being further developed by Workgroup.
- Contact Christine Brown for further information.

■ **CMP274 'Winter TNUoS Time of Use Tariff (TToUT) for Demand TNUoS'**

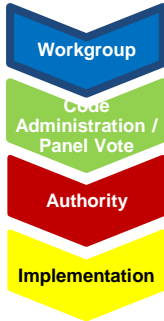
- CMP274 aims to improve the cost reflectivity of demand transmission charges. It is proposed that the transmission charging methodology should include a Winter Weekday Time of use demand tariff which reflects the existing Demand Residual element of the existing methodology so that revenue recovery is levied over a longer period of assessment.
- Raised by UK Power Reserve. (Marlon Dey)
- Proposal being further developed by Workgroup.
- Contact Christine Brown for further information.



Given the overlap in the issues to be discussed as part of these two modifications, the Workgroup meetings will be arranged on the same day and are being progressed following a normal timetable.

Ongoing modification proposals

- **CMP275 ‘Transmission generator benefits in the provision of ancillary and balancing services – levelling the playing field.’**
- CMP275 seeks that a principle of financial mutual exclusivity is introduced to prevent BM units from accessing multiple sources of duplicate and overlapping revenue from ancillary services on the same asset.
- This proposal has been raised by UK Power Reserve Ltd requesting urgency. On 6 February, the Authority decided to support the CUSC Panel’s recommendation to reject urgency for this proposal and it will now be developed following a standard timetable.
- The first Workgroup took place on 15 February 2016.
- Proposal being further developed by Workgroup.
- Contact Caroline Wright for further information



Code Governance Team – who to contact

- For **CUSC** related matters contact Heena Chauhan:
 - Email: cusc.team@nationalgrid.com / Phone: 07818 356637
- For **Grid Code** related matters contact Ellen Bishop:
 - Email: Grid.Code@nationalgrid.com / Phone: 07976 947513
- For **STC** related matters contact Lurrentia Walker:
 - Email: STCTeam@nationalgrid.com / Phone: 07976 940855
- For **SQSS** related matters contact Taran Heir:
 - Email: box.SQSS@nationalgrid.com / Phone: 07977 433974
- For **JESG** related matters contact Christine Brown
 - Email: box.europeancodes.electricity@nationalgrid.com / Phone: 07866 794568

SO/TO Modification

Steve McAllister

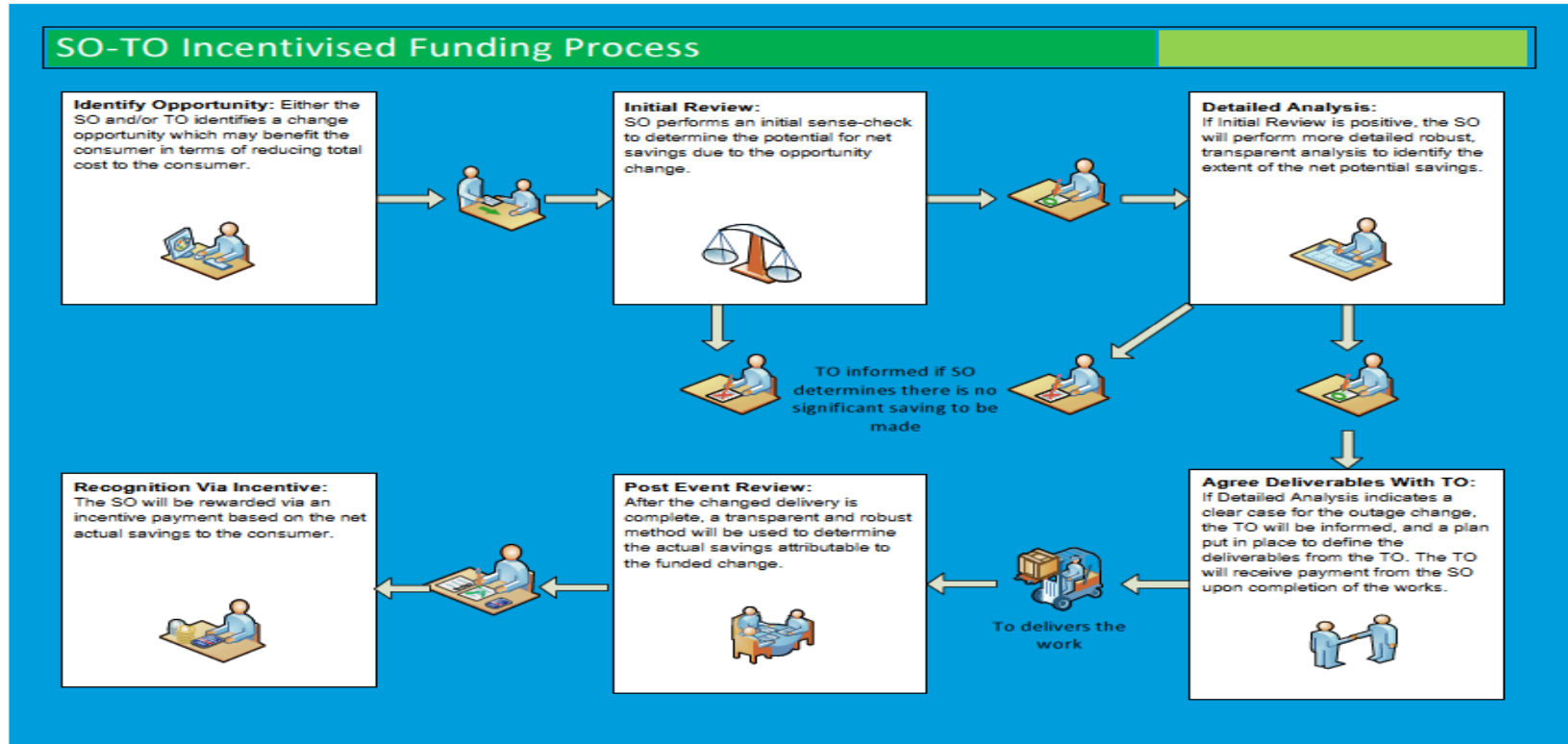
SO – TO Incentivised Funding Mechanism License Condition

8th March 2017

Background

- *“The relationship between NGET and the TOs is becoming increasingly important with strong interdependencies between the two. However, there is a gap in the current arrangements where the TO could incur increased expenditure to reduce overall system costs.”*
- *“At present, there is no mechanism through which NGET can fund the TO for carrying out works which lead to overall system cost savings. For example, the TO could build a temporary tower so as to maintain a circuit operational when upgrading a section of the network, or add an additional shift of work to minimise the outage period.”*

Process Overview



New Special License Condition 4J

- Establishes the value of SO to Scottish TOs Cost Allowance
- Places obligation on NG to produce quarterly reports on use of funding
- Establishes incentive mechanism for part of the allowance

Value of Allowances

- Main components:
 - Outage changes (OC), as per existing STCP 11.3, used by the SO to compensate the TO for changes to the TO works plan instigated by the SO, eg. recalling a circuit due to changing system considerations.
 - Value £1.1mn in 09/10 prices, approx. £1.4mn today
 - Commercial Operational Services (COS) is a new allowance. Incentivises the SO and TO to work together to deliver works differently to reduce overall cost of system, eg. install a temporary bypass circuit to alleviate a constraint-causing outage. STCP 11.4 being drafted.
 - Value approx. £1.4mn

Value of Allowances (cont'd)

- Main components (cont'd):
 - Joint Works Projects (JW):
 - The cost of a Commercial Operational Service proposal > COS yearly value (eg. £1.4mn).
 - Works cannot be funded elsewhere.
 - Must provide value to consumers > costs.
 - SO submits a sanction paper to Ofgem to include: forecast costs and savings; methodologies of how costs and savings are calculated; evidence that the project cannot be funded through other mechanisms (eg. RIIO); support from independent third party review.
 - The Authority will decide on sanctioning the project, and the level of costs allowed to be recovered.

Value of Allowances (cont'd)

- Main components (cont'd):
 - Incentive payment
 - The Authority will determine the level of payment based on the end of year report submitted by the SO.
 - Payment set at sharing factor of 10% of savings demonstrated, capped/collared at \pm £1mn

Reporting

- Quarterly reporting to be published on NG website by 1st July, 1st Sept etc.
- Report must include:
 - Detail of all works undertaken for all categories (OC, COS, JW)
 - Include forecast and actual costs; forecast and actual savings; robust methodologies to cover these items, eg. full detail on any counterfactual used to state savings. Consider making any models used available to Ofgem (eg. spreadsheets/Plexos)
 - Detail of all commercial works rejected where the cost or savings of such works estimated > £25k
 - Can exclude confidential data if approved by Ofgem

Reporting (cont'd)

- End of Year Commercial Operational Services and Joint Works report:
 - Contains information on Commercial Operational Services and Joint Works, *NOT* Outage Changes
 - Submitted by 1st July 2018
 - Has been put out to consultation by NG for 28 days
 - Consultation includes: methodologies used to calculate costs and savings; explanation of actions considered and taken by the SO
 - All responses must be included in report, and NG 'must have regard to stakeholder views'
 - Accompanied by statement from independent expert's opinion on:
 - Investigation on projects and costs in the report
 - Appropriateness of original outage plans
 - The Authority will use the report to decide on the level of incentive payment NG receives

Cost Recovery

- OC expenditure incurred via STCP 11.3 recovered in same way as currently via BSUoS
 - Costs billed across all settlement periods
- New term COS to be recovered in same way as OC term
 - Billed across all settlement periods
- In the event JW is used, billing will also be spread across all settlement periods

Outage Cost Adjusting Event

- Current process will still apply to OC term:
 - If the SO spends more or less than the £300k 'outage threshold amount' around the OC allowance (approx. £1.4mn) we need to inform Ofgem as per usual process (eg. if OC spend is < £1.1mn or > £1.7mn) in order to utilise IONT term (money returned via BSUoS)
- For new COS term, the SO needs to inform Ofgem when spend is less than the allowance, to utilise IONT term. SO is not permitted to spend more than the allowance via self governance.
 - Note that the JW term gives the opportunity to spend > £1.4mn on an individual project

CMP264/265 - Ofgem minded to position

Rob Marshall

CMP 264/265 - Ofgem minded to position

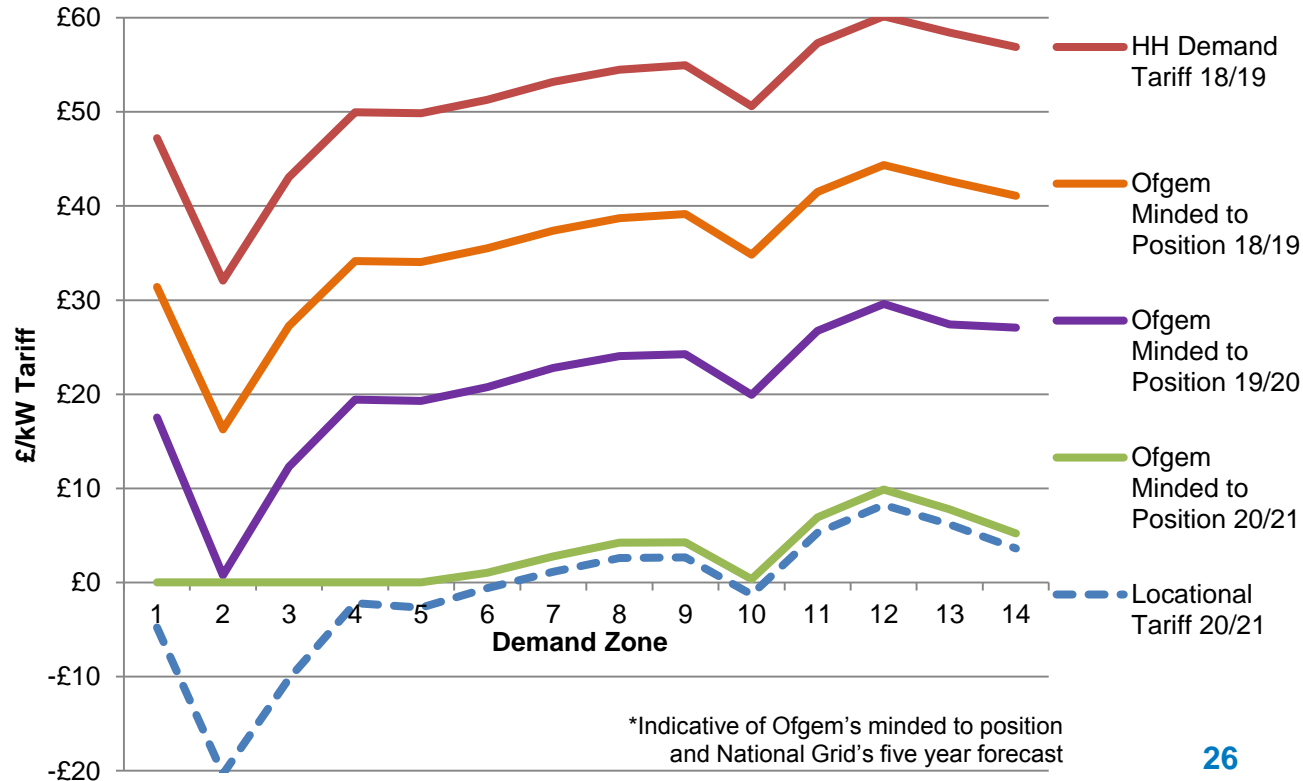
- On March 1st Ofgem issued their minded to position on CMP 264/265
- Their findings were:
 - A number of the solutions better facilitated the CUSC objectives; competition and cost reflectivity in particular
 - Competition is best facilitated by non-discriminatory arrangements
 - Cost reflectivity is best reflected by payments equal to the avoided reinforcement of GSPs as cost reflective
 - A 3 year phased introduction from 2018 to 2020 allows generation dispatch behaviour to adapt
- Minded to position is WACM 4

CMP 264/265 - Ofgem minded to position

■ WACM 4:

- Uses the locational element of the demand tariff as its basis (year round + peak security)
- Adds the value of avoiding reinforcement at GSP – last estimated by National Grid as £1.62/kW in 2013/14 prices
- Floors any negative values at £0/kW

Indicative embedded export tariffs 2018-19*



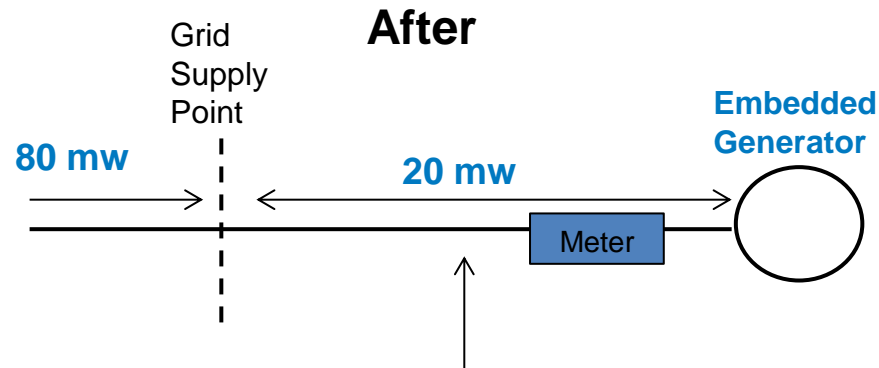
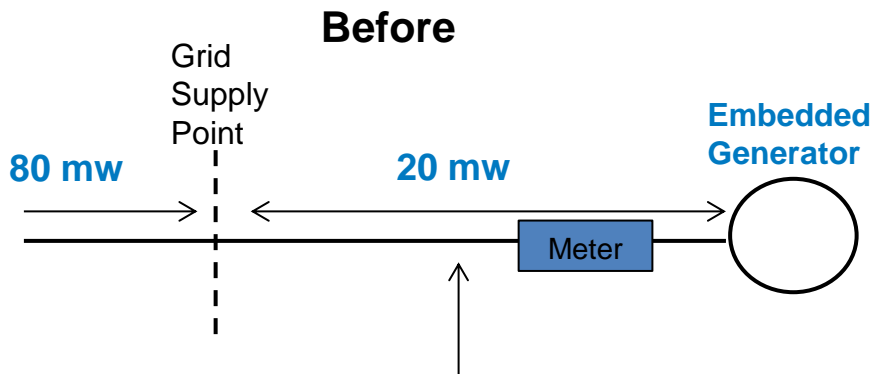
CMP 264/265 - Ofgem minded to position

- Who does this affect?
 - Embedded generators with export meters directly metering the generation will be paid the embedded export tariff (Locational + ~£1.62)
 - Embedded generators that also has demand before the export meter will continue to reduce demand TNUoS liabilities (Locational + ~£52.24)
- Next steps:
 - Ofgem are consulting on their minded to position
 - Closing date for responses is 10th April 2017

Consultation on CMP264 and CMP265 minded to decision and draft Impact Assessment

CMP 264/265 minded-to position: Indicative charging example

If out of 100 mw, a supplier takes 80mw from Tx generation and 20mw from Dx generation...



Suppliers' TNUoS liabilities are reduced by embedded generators through:

the locational element + the demand residual.

e.g. in demand zone 8 (Midlands) the TNUoS supplier liability is reduced by £67.20/kW (forecast tariff 2020/21)

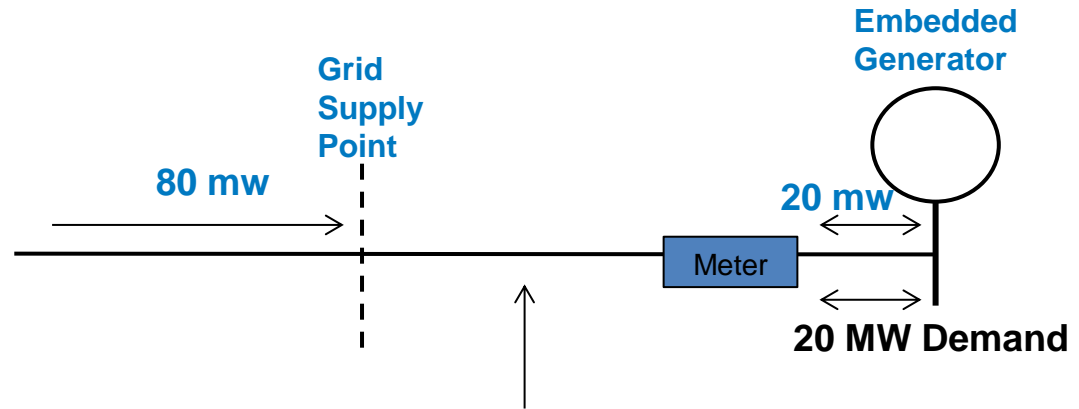
Suppliers' TNUoS liabilities are reduced by embedded generators through:

the locational element + the GSP avoidance cost

e.g. in demand zone 8 (Midlands) the TNUoS supplier liability is reduced by £4.22/kW (forecast tariff 2020/21)

CMP 264/265 minded-to position: Indicative charging example

CMP 264/ 265 does not affect embedded generators that share their export meter with demand.



Suppliers' TNUoS liabilities are reduced by embedded generators through:
the locational element + the demand residual.

e.g. in demand zone 8 (Midlands) the TNUoS supplier liability is reduced by
£67.20/kW (forecast tariff 2020/21)

Charging Review Update

Jodie Cartwright /Rob Marshall

Agenda

- Charging review steps
 - Address immediate distortions
 - Targeted Charging Review, and
 - Future Strategic Assessment
- Interdependencies and the scope of the TCR
- Stakeholder forum thoughts
- Questions

The Drivers for Change in Charging



Market Developments

Regulatory developments including evolution of European arrangements



Distributed Generation

Increased penetration of distributed energy sources



Smart & HH Metering

New consumer technologies



Facilitating Flexibility

Demand side response, energy storage, DSO



Predictable Charges

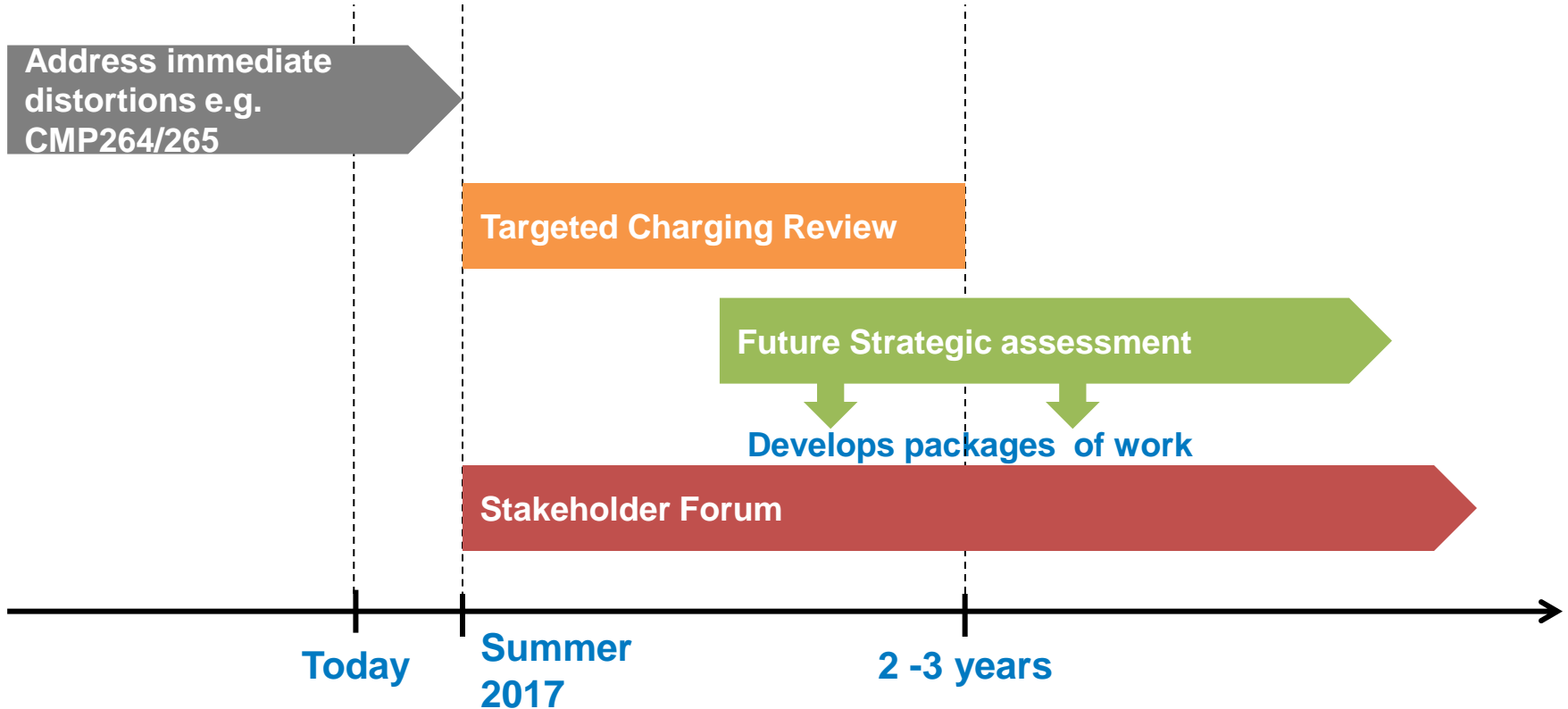
Improving our forecasts and removing volatility



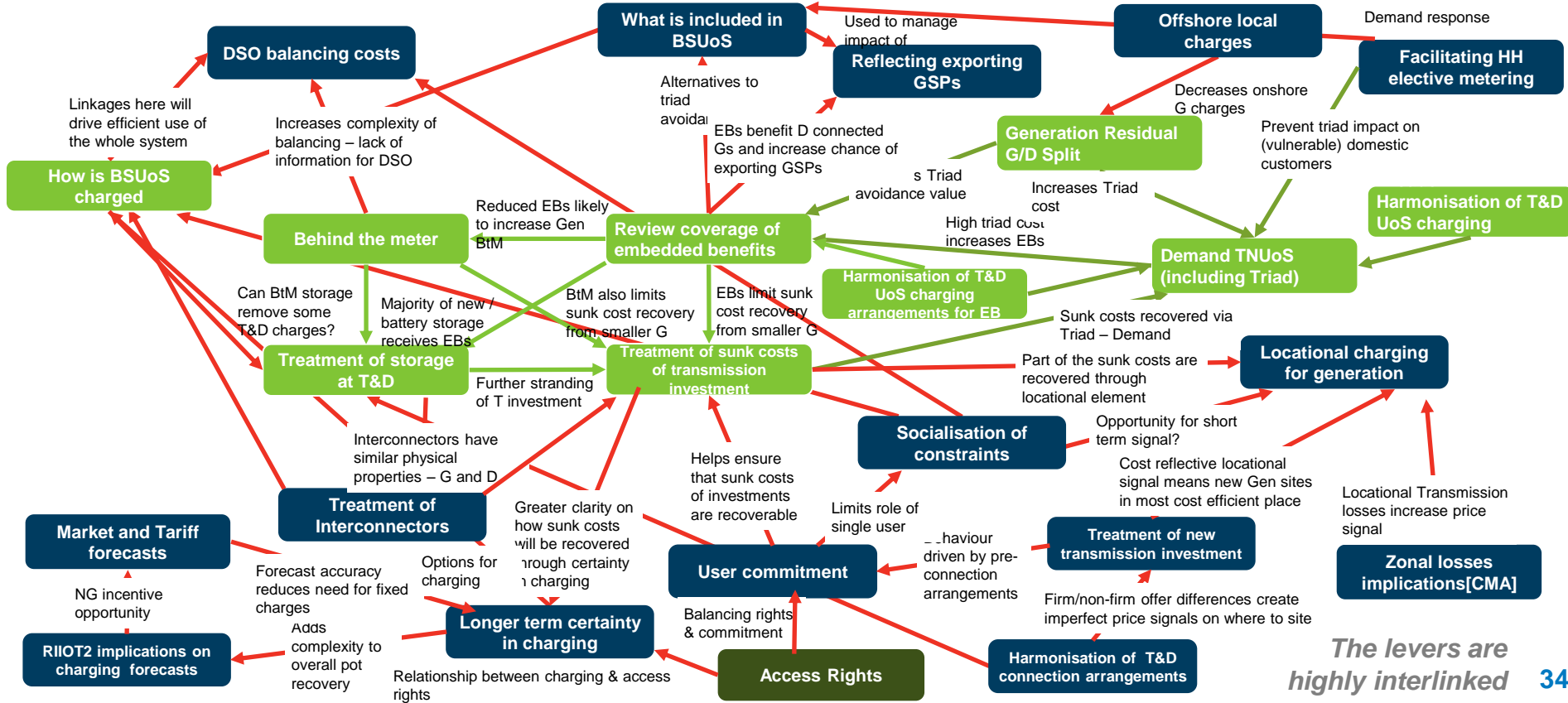
Reflecting Sunk Costs

Ensuring recovery of revenue in a fair manner from users

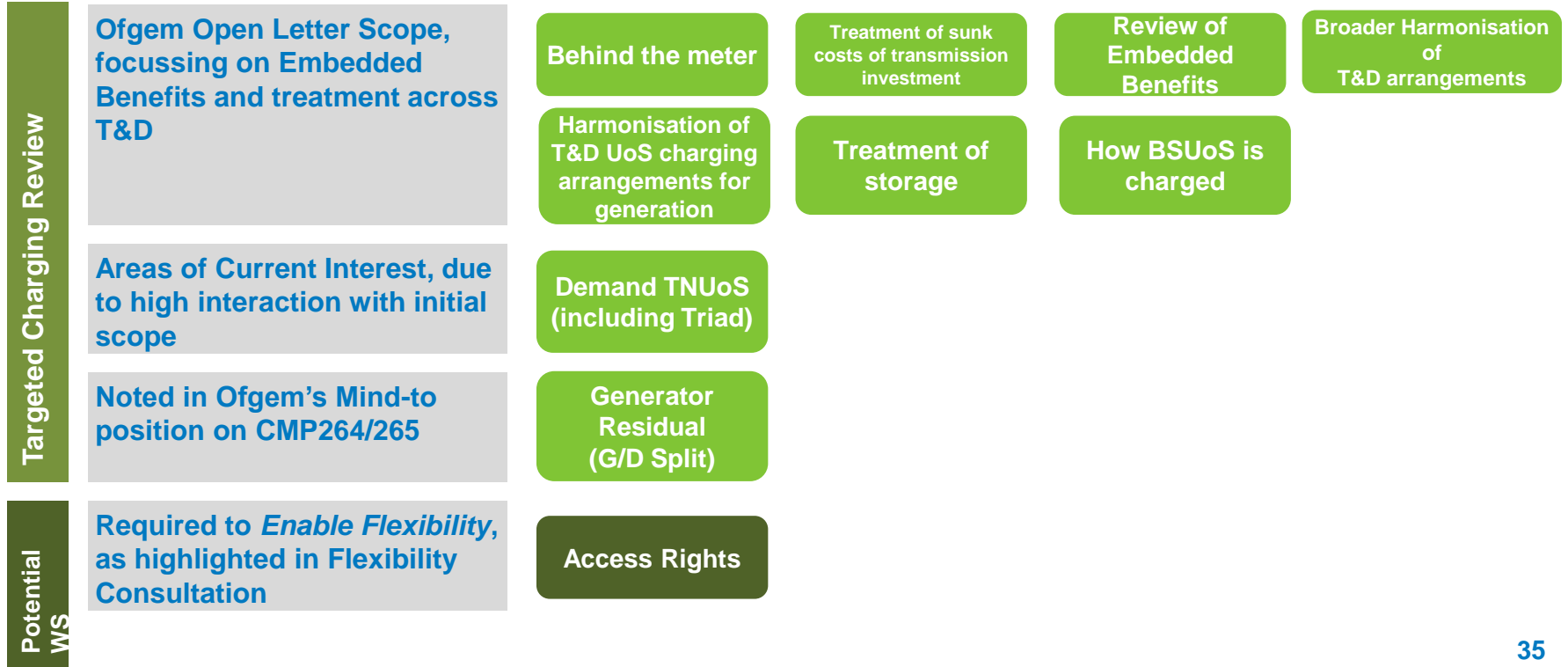
Elements of a Charging Review



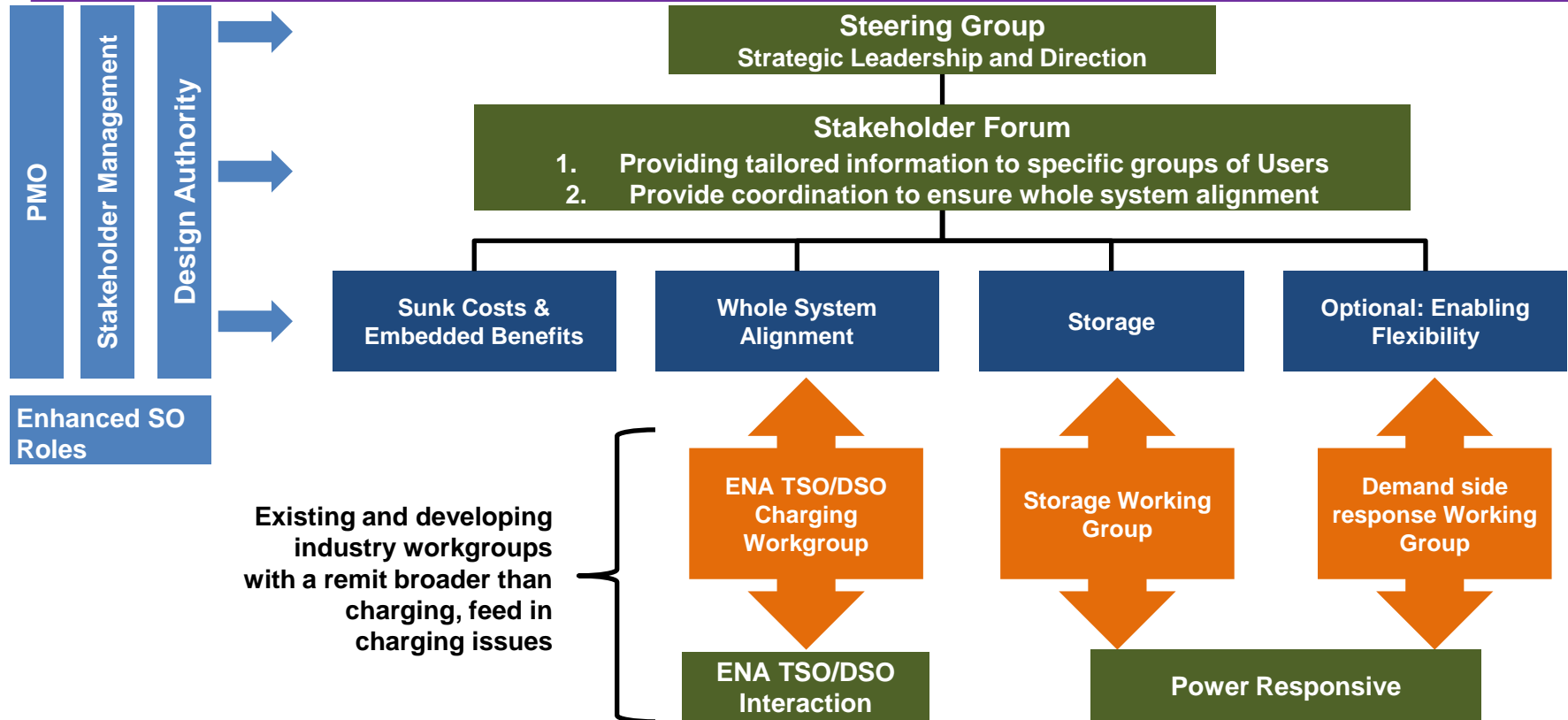
Interdependencies of a targeted charging review



Potential TCR Scope



Stakeholder forum thoughts



GC0086 Open Governance

Ryan Place

Grid Code Modification

GC0086

Open Governance



March 2017

Grid Code Modification – GC0086

Open Governance – What does it mean?

Authority approval of modification GC0086, means **change** to Grid Code to introduce open governance. The changes include:

- **enabling participants** other than National Grid Electricity Transmission (NGET) to **formally propose code modifications**, including **alternatives**;
- a **revised Grid Code Panel membership** and **election process**;
- the appointment of an **independent Panel chair**, subject to Ofgem approval;
- the introduction of a **Self-Governance** process;
- provision of a **Panel recommendation** (or, in the case of self-governance, a decision) on **code modifications**;
- a **revised Significant Code Review (SCR) process** to **reflect** recent licence changes under **CGR3**
- a **process for urgent modifications**.

Grid Code Modification

Key Points

- Panel Composition/Elections.
- Who can raise Mods.
- New way of working.

Grid Code

Who will be the Voting Grid Code Panel Members?

Role	Number of Seats	Number of Alternates	Elected/Appointed
National Grid Electricity Transmission (SO)	1	1	Appointed
DNO	2	2	Appointed by DNO's - Industry Codes Technical Steering Group (ITCG)
Supplier Representative	1	1	Elected
Offshore Transmission Owner (OFTO) or Interconnector	1	1	Elected
Onshore TO	1	1	Elected
Generator	4	2	Elected
Consumer	1	1	Appointed by Citizens Advice and Citizens Advice Scotland
Other	1	1	Appointed by Chair or Authority (optional)
Total Votes	12		

Grid Code

Who are the Non Voting Grid Code Panel Members?

Role	Number of Seats	Elected/Appointed
Chair	1	Casting Vote only if independent, no vote if National Grid Chair
Panel Secretary	1	
Code Administrator	1	
Ofgem	1	
BSC Panel Representative	1	
Workgroup Chair (GCDF Chair)	1	
Total	6	

Grid Code

What is the Panel Representative Election Process?

Role outline of a Panel Member to be sent out	3 March 2017
Invitation to industry to nominate candidates	3 March 2017
Closing date for nominations	17 March 2017 - 17:00hrs
Circulation of Grid Code candidates and voting papers	22 March 2017
Voting papers to be submitted to the Code Administrator	By 5 April 2017 - 17:00hrs
Grid Code election results published	10 April 2017
Code Administrator to prepare and submit Election Report to the Authority	14 April 2017

Grid Code

Who can propose a change to Grid Code?

A proposal to modify the Grid Code may be made:

- a) by **any User**; any **Authorised Electricity Operator liable** to be **materially affected** by such a proposal; the **Citizens Advice** or the **Citizens Advice Scotland**; or
- b) by the **Grid Code Panel** (Under GR.25.5); or
- c) by the **Authority**:
 - i. following publication of its **Significant Code Review conclusions**; or
 - ii. under **GR.17**; (*The Authority may develop a **Authority-Led Modification** in respect of a Significant Code Review, in accordance with the procedures set out in this GR.17*)
or
 - iii. in order to **comply with or implement the Electricity Regulation** and/or any relevant legally binding **decisions** of the **European Commission** and/or the **Agency**.

Grid Code

Workgroup, a new way of working

- To align approaches between the Grid Code Panel and Workgroup, and deliver in **an efficient, economical and expeditious** manner, all Grid Code **Workgroups** and the **Grid Code Development Forum** (GCDF) will be aligned to take place on **a single day**.
- In order to facilitate this change all **pre-reading material** will be circulated for comment **5 working days prior to the meeting**.
- The **Code Administrator** will Chair and provide a Technical Secretary for the GCDF and Workgroup as **back to back meetings on one day**.
- The expectation for **all** Workgroup Members will be to have **completed pre-reading** in order to focus discussion on industry participants queries of the Proposed Modification Solution.
- The **Workgroup Report** content will be **owned and developed** by all **Workgroup Members** with the expectation that the **Proposer will lead** on developing their **solution** and associated **legal text**.

Grid Code

What are the Key Changes?

Proposer Ownership

- The proposer owns their modification and only the proposer can change the modification
- All modifications shall be submitted on the Grid Code Modification Proposal template and should include proposed Legal Text
- Proposers represent their modifications through the Panel and any Workgroups

Modifications

- Any party can raise a modification to meet the Grid Code Objectives (appendix 1).
- There are four types of modifications: Urgent, Self-Governance, Standard and Fast Track Modifications
- Alternative modifications can be raised

Grid Code Panel

- Up to 12 Voting Members – cross energy industry representation
- Up to 6 Non Voting Members
- Monthly meetings to account for the increase of modifications

Workgroup

- Workgroups can be up to a maximum of six months
- Workgroups will develop the Proposal (including the Report) and any alternatives
- The expectation will be the Proposer leads on developing both solution and legal text
- Workgroups and GCDF will be combined and meet on a fixed day every month

Grid Code

Contact Information

- A full version of the slides can be found online at <http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Grid-code/Grid-Code-Development-Forum/>
- If you would like further general information in relation to Open Governance, or how you may be affected please email: grid.code@nationalgrid.com

Grid Code

Appendix 1 – Grid Code Objectives

- i.** to permit the development, maintenance and operation of an efficient, coordinated and economical system for the transmission of electricity; Neutral
- ii.** to facilitate competition in the generation and supply of electricity (and without limiting the foregoing, to facilitate the national electricity transmission system being made available to persons authorised to supply or generate electricity on terms which neither prevent nor restrict competition in the supply or generation of electricity); Neutral
- iii.** subject to sub-paragraphs (i) and (ii), to promote the security and efficiency of the electricity generation, transmission and distribution systems in the national electricity transmission system operator area taken as a whole; and Neutral
- iv.** to efficiently discharge the obligations imposed upon the licensee by this license and to comply with the Electricity Regulation and any relevant legally binding decisions of the European Commission and/or the Agency.
- v.** to promote efficiency in the implementation and administration of the Grid Code arrangements.

Break



TSO/DSO Charging

**Rob Marshall, National Grid /
Paul McGimpsey, SPEN**

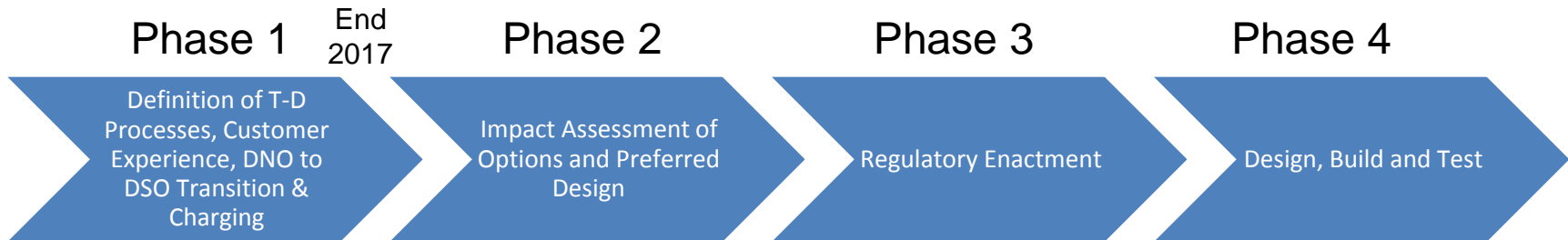
The Voice of the Networks

**Energy
Networks
Association
TSO-DSO Project**



TSO-DSO Project Introduction

- In December Energy Networks Futures Group & ENA Board (Business Leaders) gave their commitment to a long-term project to be led by ENA to progress the transition of DNOs to DSOs, provide clarity to the interface between DSOs & TSOs and improve the customer experience.
- First Phase to deliver in 2017
- Expect Second Phase in 2018 and then beyond to ED2/T2

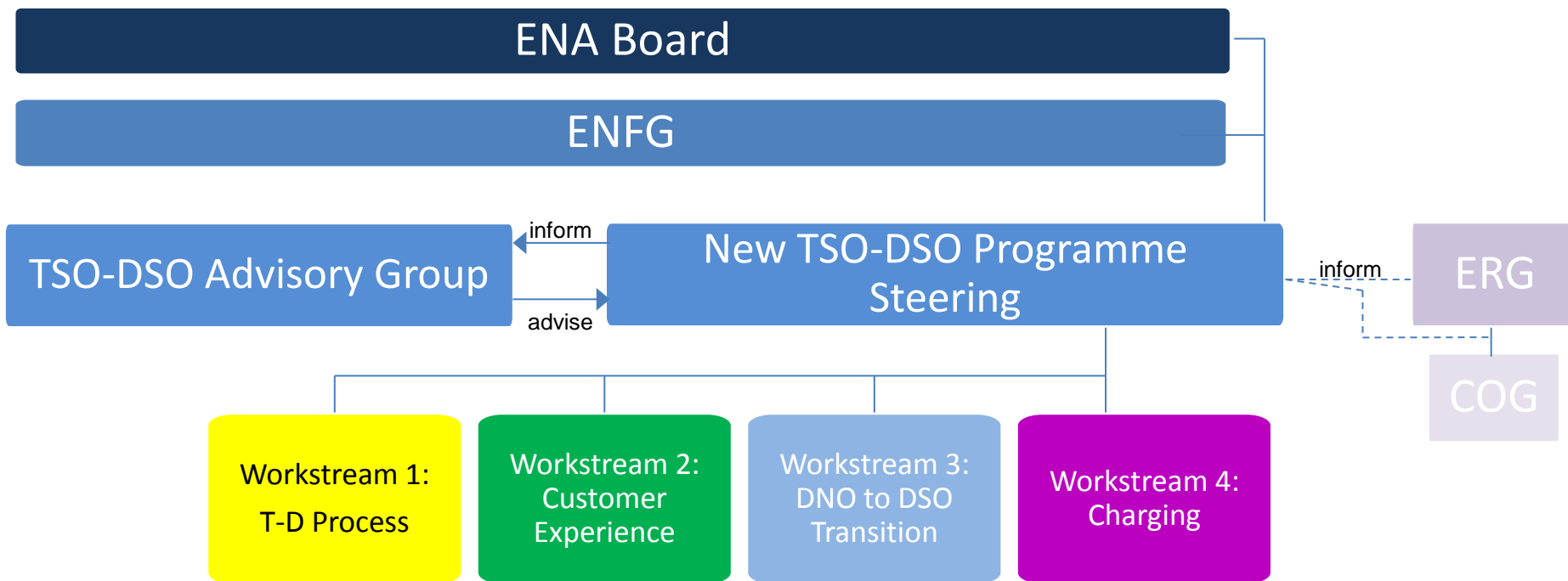


TSO-DSO Project Objectives

The objectives of the TSO-DSO Project for the first phase of work in 2017 are to:

1. Develop improved ***T-D processes*** around connections, planning, shared TSO/DSO services and operation
2. Assess the gaps between the ***experience our customers*** currently receive and what they would like and identify any further changes to close the gaps within the context of 'level playing field' and common T & D approach
3. Develop a more detailed view of the required transition from ***DNO to DSO*** including the impacts on existing organisation capability
4. Consider the ***charging*** requirements of enduring electricity transmission/distribution systems

Governance and Hierarchy



Develop appropriate whole-system price signals for the TSO-DSO transition.

- Consider charging requirements of an enduring electricity T/D system with purpose of facilitating a market place between producers & consumers.
- Develop understanding of the drivers of cost and benefits in delivering charging requirements.

Group Objectives

1. To think strategically & holistically about the current charging arrangements, developing a route map to enable the industry to move towards an enduring, evolving charging structure.
2. To build on the work already carried out by the TDI Taskforce, extending the original objective to develop short, medium and long term solutions.
3. Establish key network charging principles i.e. cost-reflectivity, simplicity etc.
4. To consider how current charging arrangements impact customers who connect at distribution level and how these arrangements impact on the transmission network.
5. To understand entitlements customers have in return for charges.
6. To consider the T-D interface to ensure equality in charging and remuneration of TSO/DSO services such that customers and flexibility providers are presented with a level playing field whilst ensuring whole system cost reflectivity (rather than focusing on individual licensed parties) to deliver the best value for customers.

Short-term – by June 2017

1. Identify problems caused for customers through the interaction of current charging arrangements across Transmission and Distribution on customers
2. Capture the root causes of these problems.
3. Establish the level of commonality that might be required to resolve identified root causes and deliver project and workstream objectives/goals.
4. Develop recommendations including - overview of current industry charging reviews, proposals to solve issues identified, implications to existing arrangements and steps needed to implement, recommendations for a charging framework (focused on connection and Use of System charging), identification of quick wins.

Medium-term – by December 2017

5. Recommendations to Ofgem : Smart tariffs, flexible connection services, ancillary services pricing; identify requirement for (cross sector/industry) working groups to progress long-term deliverables.

Long-term Products potentially 2018-2020

6. Strategic Review – Whole System Pricing
7. Consider proposals to change the governance around changes to the methodologies

Workstream 1: T-D Process Scope

- Investment Planning processes (processes that result in either capital or opex investment decisions for network businesses)
- Operational Planning processes (capturing operational planning, real time, balancing and settlement)
- Develop whole system investment and operational Planning Processes/models
- Review development of ancillary services across GB
- Develop approach for the co-ordination of transmission and distribution constraints in an operational timeframe
- Develop whole system commercial agreements for Active Network Management with distributed generators
- Review and update SoW to take into account TSO DSO project scope and developments

Workstream 2: Customer Experience

Scope

- Customer Journey Maps for Connections & Service Provision
- Short Term Improvements –make early improvements to processes for connection and service provision.
- Updated Connection Arrangements - Agree and implement changes to network access arrangements (Bilateral Connection Agreements) for DER. Explain the different connection offers available to customers and the impact that these can have on them
- Service Provision Improvements
- Customer Journey Maps for Changes to Legacy Arrangements
- Emergency Events Customer Journey Maps
- Customer Information Requirements –improvements to the information that is provided to support network access and service provision.
- Ensure that agreed improvements to customer experience are taken forward in other workstreams.
- Complete ongoing work to improve Statement of Works process.

Workstream 3: DNO to DSO

Transition Scope

1. DSO Transition Roadmap - a roadmap to deliver transition to DSO in the short, medium and long term
2. DSO Functional Requirements
3. Model for DSO - model for DSO with some options set out for governance models which will allocate DSO functions to system roles and responsibilities
4. DSO Market Model Options Comparison & Evaluation - an assessment of the risks/benefits for power system users, customers and industry participants
5. Trials to Support DSO Definition – if necessary definition and initiation of trials to test different market models and/or any gaps in the existing evidence base to support decisions to define market models (across different regions and Network Operators)

AOB

Next Meetings

April

12

Wednesday

May

10

Wednesday

June

14

Wednesday

Will be an 1030am start unless otherwise notified.

We value feedback and comments

If you have any **questions** or would like to give us **feedback** or share **ideas**, please email us at:

cusc.team@nationalgrid.com

Also, from time to time, we may ask you to participate in surveys to help us to improve our forum – *please look out for these requests*

Close

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