Transmission Charging Methodologies Forum

9th February 2017

nationalgrid

Welcome

Today's Forum

Current Modifications & Progress

CUSC Panel Update

Future of the System Operator

CMP275 – Transmission Generator Benefits

Proposal - CMP276

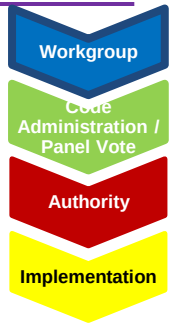
Modifications Update

John Martin

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.



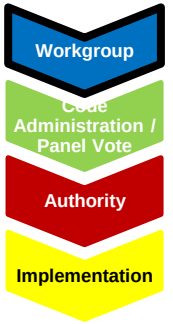
CMP268 ‘Recognition of sharing by Conventional Carbon plant of Not-Shared Year-Round circuits‘

- 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 pays, ideally ahead of the December Capacity Auction.
- 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.

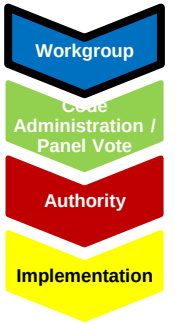
- **CMP274 'Winter TNUoS Time of Use Tariff (TToUT) for Demand TNUoS'**
  - CMP274 aims to improve the cost reflectivity of demand transmission charges. It is proposed that the transmission charging methodology should include a Winter Weekday Time of use demand tariff which reflects the existing Demand 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

- **CMP272 'Aligning Condition C5 and C10 of the CUSC to the license changes introduced by the Code Governance Review Phase 3'**
  - 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.
  - This proposal was raised by National Grid.
  - Proposal developed by Workgroup, due to be reviewed at CUSC Panel in February 2017 to progress to Code Administration Consultation.

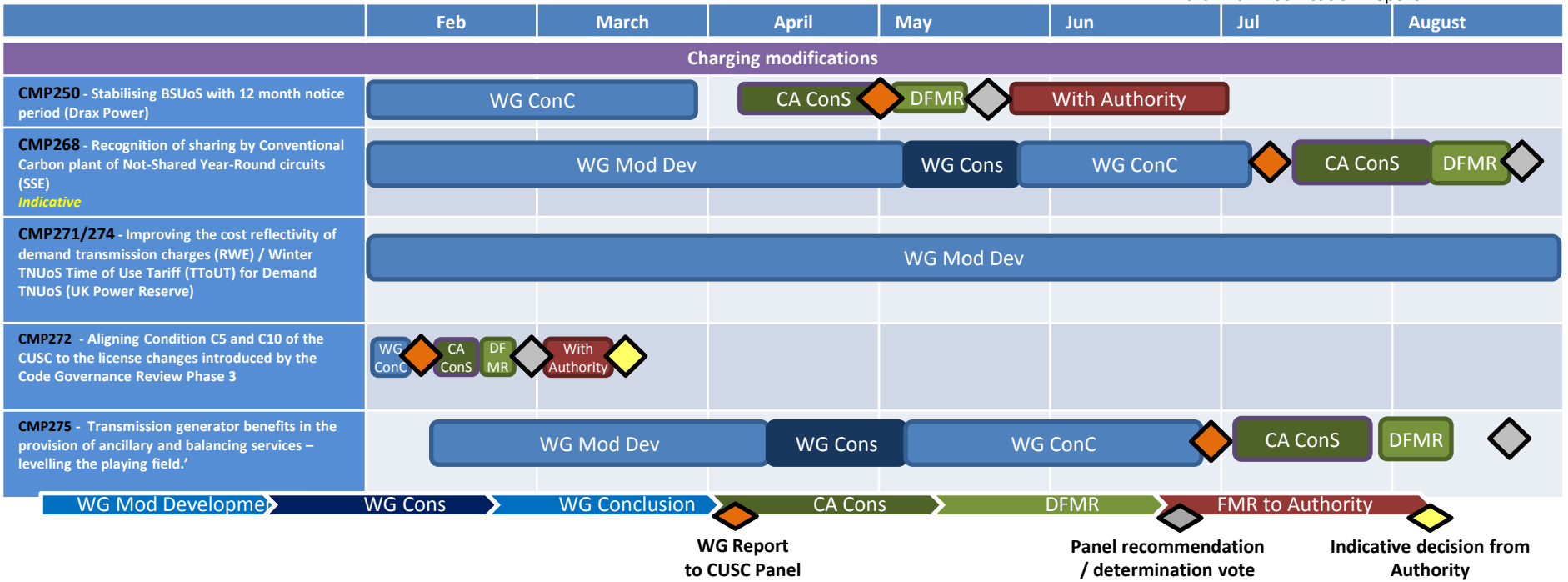


New modification proposals

- **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.
- Request for nominations to join the Workgroup closes 10 February 2017, with the first Workgroup meeting due to take place 15 February 2016.

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)

CMP261 - Gen Rec to remain <€2.5 EU regulation compliant (SSE)

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/

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

Future Arrangements for the System Operator

Joseph Donohoe

Future Role of the System Operator Programme

Webinar Link for Future Role of the SO

The content on Future of the SO delivered at TCMF on 9th February is the same as the content delivered in a webinar for industry participants on the Arrangements for the future of the System Operator on 8th February by Charlotte Ramsay, Programme Director, Future of the System Operator Programme, and Lloyd Griffiths, Programme Director Legal separation Programme. A link to the webinar follows:

https://uknationalgrid.webex.com/uknationalgrid/ldr.php?RCID=94649828aa78e81c161305a5522ac5cd

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CMP275 – Transmission Generator Benefits

Ian Tanner, UKPR

CMP275

Transmission Generator Benefits in the Provision of Ancillary and Balancing Service

What is the defect?

Currently some BM units can access revenue streams from multiple balancing or ancillary services that overlap in their scope, this gives them a competitive advantage through over compensation when taking part in the provision of Ancillary Services auctions as they are able to undercut other BM and non BM units through accessing duplicate Ancillary Service payments.

- **Market Distortion**

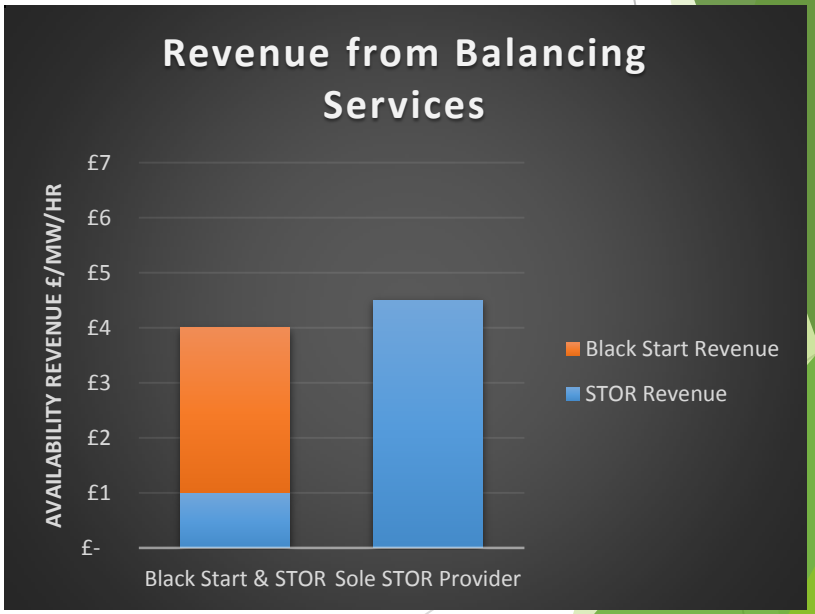
Some parties able to undercut others in the tendering and provision of balancing and ancillary services by using duplicate revenue streams to cross subsidise themselves. This is especially disruptive when some ancillary or balancing services are restricted to only certain types of asset (namely transmission connected units) or where negotiations are not carried out though an open tender process which is the case for Black Start.

- **Inefficient despatch decisions**

Where this distortion exists on utilisation pricing as is the case with Fast Start this can lead to unintended costs being levied upon the market by National Grid though actions it is taking in the BM.

- **Cost to the end consumer**

Both of the above issues are potentially leading to the over rewarding of certain generating assets and as such are responsible for a negative outcome both in terms of allowing economic tenders on a level playing field as well as in the total costs the end consumer is exposed to through duplicate payments for services.



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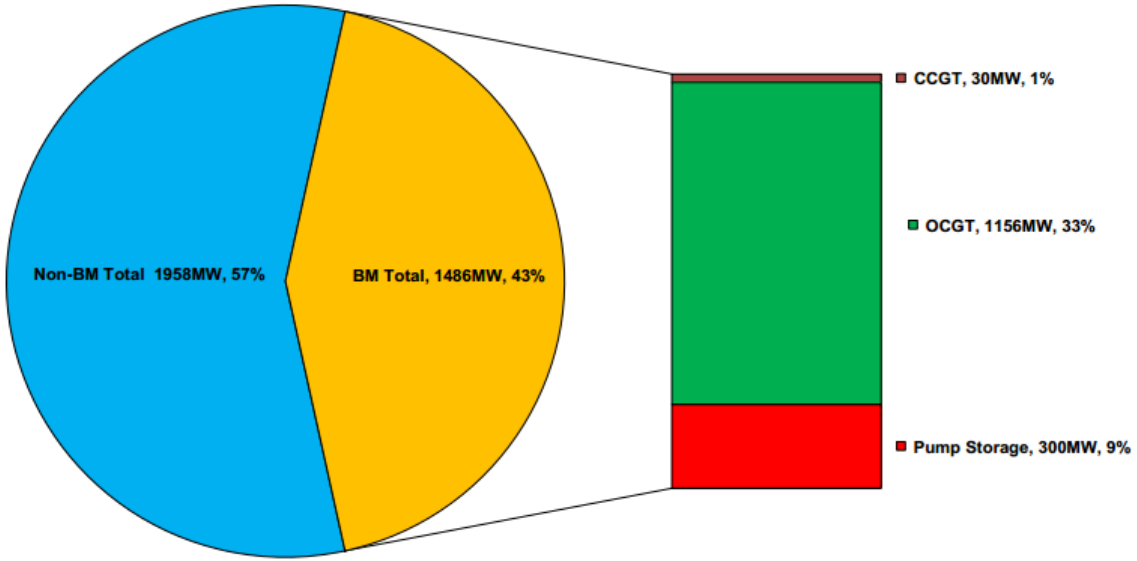
How much is affected?

The scope of what generation is impacted by this modification is to some extent concealed by the bilateral nature of the Black Start product, however a significant proportion of the STOR market is comprised of OCGT units (1156MW) that potentially are tendering into Black Start Revenue to supplement their STOR Revenue, we believe this to represent some 750MWs of generation capacity.

Figure 2: All STOR Providers – Fuel Type Composition of BM STOR Providers – Season 8.5



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What can be done about it?

As part of this CUSC modification we propose that a new section should be introduced under section 4.4 of the CUSC that implements a principle of financial mutual exclusivity for BM Units in receipt of multiple sources of ancillary services revenue. The core of this concept should be that both the availability and utilisation streams of revenue for balancing and ancillary services should net off so as to prevent duplicate revenue being paid to providers. National Grid would subsequently introduce this as a component of future tender rounds on all eligible ancillary services.

We identify that Black Start and other such schemes offer vital services to National Grid and do genuinely impose additional costs on participants providing them, this is why we have proposed a solution based on netting of revenue rather than of mutual exclusivity.

We welcome National Grids view on the best methodology for the implementation for this modification but believe a simple additional clause in section 4.4 of the Charging Principles could achieve the stated aim of preventing this distortion throughout the entire ancillary and balancing market.

Charging Objective A

This modification will address the benefit being enjoyed by some BM Units that are able to access duplicate revenue streams for the same asset and as such enjoy a competitive advantage over comparable assets that do not enjoy such an advantage. This will improve competition in the market as well as reducing the cost to the end consumer through the removal of its current payment for the same service multiple times.

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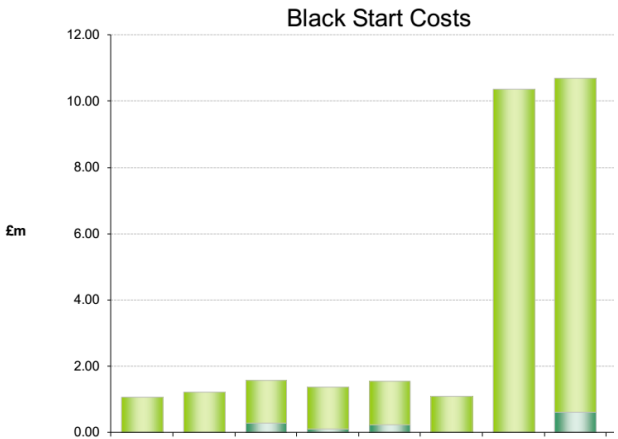
Savings to the end consumer?

The exact relationship between Black Start units taking part in other balancing and ancillary services is hidden by the bilateral nature of these relationships, however with the sharp spikes in the Black Start cost of provision of services there is a strong growth in the cost to the end consumer.

We believe that the consumer could see significant savings resulting from a reduction in double payment for the provision of services at these assets and with a potential budget of £43.5m from just these two services there is a large material impact on the end consumer as well as other parties that could see significant reductions



	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16
Black Start Contract costs (£m)	1.06	1.22	1.28	1.25	1.31	1.08	10.37	10.10
Other Black Start Costs (£m)	0.00	0.00	0.30	0.12	0.24	0.00	0.00	0.61

	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16
Fast Start	0.27	0.31	0.36	0.31	0.35	0.30	0.32	0.38

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Urgency

One of the largest elements of the defect we have identified is the disruption it causes to the level playing field of STOR and other balancing service tenders with some participants able to take account of significant other revenue streams

As these tenders are run on a set time table this provides an operational deadline where the implementation of this modification would have the maximum benefit. It is likely unfeasible to achieve a system change in time for STOR TR32 but though our requested urgency status we believe it would be possible to achieve a change in time to impact STOR TR33.

Tender Round	Tender Milestones					
	ITT Pack Published	Framework Agreements Deadline	Market Day	Results Day	Market Report Published by	Service Start Date
TR31	16-Dec-16	06-Jan-17	13-Jan-17	24-Feb-17	24-Mar-17	01-Apr-17
TR32	21-Apr-17	19-May-17	26-May-17	07-Jul-17	11-Aug-17	21-Aug-17
TR33	14-Jul-17	04-Aug-17	11-Aug-17	15-Sep-17	20-Oct-17	30-Oct-17

A) It has significant commercial impact upon both the Transmission Company, industry parties and customers.
B) The Modification Proposal is linked to an imminent date-related event in that many ancillary services are due for tender which would propagate the defect further if unaddressed.

Proposal - CMP276

John Harmer, Alkane

CUSC Modification Proposal CMP276

TCMF 9th/CUSC Panel 10th February 2017

Summary

- Defect is the material competitive distortion that is resulting from current and rising TNUoS demand residual

- Defect is caused by
  - Significant Tx system investment made necessary to take remote renewable and new nuclear generation to demand
  - EU Directive 2009/714/EC €2.50/MWh cap on generator contribution to Tx costs

- Mod is intended as alternative to CMP264, 265 and 271
  - Cannot be WACM to above three owing to restrictive defect definition
  - e.g. CMP271 explicitly excludes changes to Tx generation charges
  - Attempts to address root cause and limit/eliminate competitive distortions

- Positive impact assessed against all five Applicable CUSC Objectives (Charging)

Key Features

- Retains net metering for transmission charging
  - Historically net metering considered the most appropriate for use of transmission system
  - Smaller industry data flows (and no new ones required)
  - No major changes required to Elexon systems/BSC
  - Limited change required to supplier systems
- Achieves fair and equitable competitive position
  - Embedded generation, exporting or “behind the meter”, and DSR treated exactly the same as demonstrated they have same impact on transmission system
  - Embedded Benefit differential with Transmission connected generation is reduced to analytically supported level
  - Assists international competitive position of all UK generation whilst remaining in compliance with 2009/714/EC
- Cost Reflective
  - No artificial cap/floor on locational signals from Transport and Tariff Model
- Future Proof Charging Structure
  - Values of three charging elements can be flexed over time

Proposed Demand TNUoS Structure

- Retain “Triads” but set demand residual at positive of largest negative locational value arising from Transport and Tariff Model
  - Lowest demand locational charge is zero (non negative) without artificial floor (exactly as WACM7 supported by NG at CUSC Panel)
  - Highest charge in 2020/21 forecast to be £30.41/kW (London)
  - Compare with £79.94/kW (London) if no change made
- Increase negative Tx Generator residual by setting EU Cap at €0/MWh
  - Offshore/remote Tx generators pay onshore Tx generators
  - Forecast 2020/21 generator residual of -£15.19/kW in 2020/21
  - “Genuine” embedded benefit previously estimated by NG to lie in £6.50-£7.25/kW range
  - Reasonable relative competitive position between Tx and Dx generators achieved
- Remaining Tx cost recovery by two new simple charge elements
  - A per (demand) meter charge – cannot form an embedded benefit
  - A flat per kWh charge – would be an embedded benefit supporting baseload CHP generation so encouraging this GHG beneficial form of production

Setting values of new charging elements

- A per meter charge disproportionately impacts low demand consumers
  - Domestic consumers pay more for benefit of connection to system
  - Could be overcome by a “size of meter” charge, but…
  - …this means new data flow and objective of proposer is simplicity
  - Possible to consider a size of meter related charge in future

- Set charge values so typical domestic user indifferent to status quo
  - Use Ofgem recommended demand and energy values for typical domestic user
  - Indicates £36.50/kW per meter charge (10p/day)
  - Per MWh energy charge required to be £5.61/MWh to give NG required revenue

- Who is affected?
  - Smaller I&C customers who do not Triad manage should benefit materially
  - Large industrial/smart meter users who are Triad responsive may pay more
  - Consumers overall pay less

Benefits

- Ease of implementation
  - Simple easy to understand charging elements
  - No new Elexon information requirement
  - Minimal changes to supplier systems, PPAs, etc.
  - Quick and low cost to industry
  - Staged implementation possible through “step down” to new level
- Removal of all existing distortions in competitive positions
  - DSR, behind the meter and exporting Dx generation treated the same as now
  - Reduction in differential to Tx generation to an analytically supported level
  - Improved/optimised international competitive position
- Cost reflective to industry / cost reduced to consumers overall
  - No artificial constraints on locational signals
  - A per meter charge removes embedded benefit entirely
  - A per kWh charge recognises system benefits of Dx baseload generation
  - Delivered energy costs to SMEs reduced improving their own business competitiveness

AOB

Next Meetings

March	April	May
8	12	10
Wednesday	Wednesday	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*