Transmission Charging Methodologies Forum and CUSC Issues Steering Group

Meeting 91

12 December 2018

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Welcome

Jon Wisdom

National Grid ESO

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Housekeeping

- Fire alarms
- Facilities
- Red lanyards

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Today's agenda

No.	Before lunch	No.	After lunch
1	Introduction, meeting objectives and review of previous actions	5	Balancing Services Charges Task Force
2	TNUoS Tariffs Q&A	6	Transmission Generator Residual and 838/2010 Compliance
	TCMF		**CISG**
3	Code modifications update	7	Reactive Power Roadmap update
4	Targeted Charging Review update	8	Review of ESO credit cover requirements
	Lunch	9	AOB and close

Action Item Log

Action items: In progress and completed since last meeting

ID	Month	Agenda Item	Description	Owner	Notes	Target Date	Status
17	Nov-18	Introduction, meeting objectives and review of actions	To get confirmation on the year revenue will be recovered and the basis of assessment.	TA	This is regarding the increase in TO costs in relation to CACM licence changes.	Dec-18	In-progress
6	Dec-18	AOB	Make enquiries re missing website content specifically in relation to previous mods (TCMF members asked to advise when they come across any additional missing content).	RT	All archived modifications now available on the ESO website.	Oct-18	Complete
15	Aug-18	Loss of Mains Protection Update	Find out whether LoMs change would have any impact on Black Start	GS	A response was given at Sept TCMF - GS to clarify question with GG	Nov-18	Complete
16	Sep-18	CAPM Cost Recovery	Ofgem to confirm who will assess the increase in TO costs in relation to CACM licence changes	Ofgem	TA confirmed that Ofgem will perform this assessment.	Nov-18	Complete

TNUoS Draft Tariffs – Q&A

Tom Selby
National Grid ESO

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Code Modifications update

Joseph Henry,

National Grid ESO

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New modifications at workgroup

No new modifications raised at November Panel

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Modifications at workgroup (1/2)

Mod	Latest update	Next WG date	Next meeting
CMP280/ CMP281	Two WGs held: CMP280 proceed with a storage only solution CMP281 solution developed. Workgroup Reports to Panel in near future	7/8 January	WG11
CMP285	Code Admin consultation to be released by 12 December 2018	TBC January 2018	WG7
CMP286/ CMP287	Liaising with the proposer to discuss the contents of the WG Consultation, proposed to be published in late November / early December	TBC	WG7
CMP288/ CMP289	Liaising with the proposer to amend the report prior to WG Consultation proposed, to be published in December	TBC	WG8
CMP291	WG decoupled from GC0117	TBC – likely to be January 2018	WG3
CMP292	WG held 5 December 2018. Consultation to be published before 21 December 2018	TBC – January 2018	WG2

Modifications at workgroup (2/2)

Mod	Latest update	Next WG date	Next meeting
CMP295	WG2 held on 17 October, with good progress made. Aiming to consult after the next workgroup scheduled for 19 December 2019	19 December 2018	WG2
CMP298	WG1 held 2 October, discussed diagrams produced by the proposer to support the modification, with the next meeting intended to further discuss	11 December 2018	WG2
CMP300	Quoracy has been achieved – the first meeting to 'Kick Off' will be scheduled, with WG in January 2019	TBC January 2019	Kick Off
CMP303	WG held in Glasgow on 29 and 30 October. The Alternate modification proposals were discussed alongside the scope of the original proposal. Further analysis is required to progress the modifications; WG arranged for 20 December, WG Consultation shortly thereafter	20 December 2018	WG4
CMP304	WG2 held 15 November 2019. Second WG to be arranged in January 2019	TBC January 2019	WG2
CMP306	Kick Off meeting held on 7 December 2018. WG to be held on either 23 January or 31 January 2019	23/31 January 2019	WG1
CMP308	Kick Off meeting held 4 December 2018. First Workgroup scheduled for 18 December 2018	18 December 2018	WG1

Authority Decision updates

Authority Decisions

- CMP293 and CMP294 - National Grid Legal Separation - approved for implementation

Pending Authority Decisions

- None

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Dashboard - CUSC

New Modifications	In-flight Modifications	Modifications issued for workgroup consultation	Modifications issued for code admin consultation
0	24	0	0

Workgroups held (November)	Authority Decisions	Modifications on hold
6	2	5

Questions

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ofgem Making a positive difference for energy consumers

Targeted Charging Review: TCMF

12 December 2018

Overview of the Targeted Charging Review

- Overview
    - Overview of the targeted charging review
    - TCR and related work
    - What we are consulting on

Aim of the session: To update TCMF on the Targeted Charging Review.

- The Targeted Charging Review (TCR) is one of a number of Ofgem initiatives to ensure regulatory and commercial arrangements help deliver the benefits of the changing energy system. It complements access reform, RIIO2, and the Smart Systems and Flexibility Plan.
- It aims to reduce the harmful distortions caused by the current charging arrangements and ensure residual charges are more fairly distributed.
- Under our current arrangements, both of our leading options result in a potential net system benefits to 2040 in the range of £0.8bn to £3.2bn and benefits to consumers as a whole in the range of £0.5bn to £1.6b.
- The removal of the non-locational Embedded Benefits results in consumer savings of between £4.5 to £6bn.
- We have undertaken this modelling assuming that that the Capacity Market is in place with the current policy framework laid out in the Capacity Market Regulations (2014 as amended). We will take into account any developments in the framework ahead of our final decision.

We are consulting on the proposed decisions in the TCR and welcome views by 4 February 2019. This is a consultation and not a decision.

Why reform residual network charging framework?

We think that residual network charges should be reviewed in order to reduce harmful distortions, and so that everyone pays a fair share.

What is the problem:

- The current charging framework for recovering the costs of building, maintaining and operating our electricity networks is designed for a system with very different characteristics to that we have today.
- The existing approach to reflecting the costs of the electricity networks in the charges people pay is becoming increasingly problematic and the changes in how the networks are used mean that the issues with the existing charging structure are likely to become worse over time.
- Ofgem is therefore taking action to address this and to ensure that network charging works in the interests of current and future consumers as a whole.

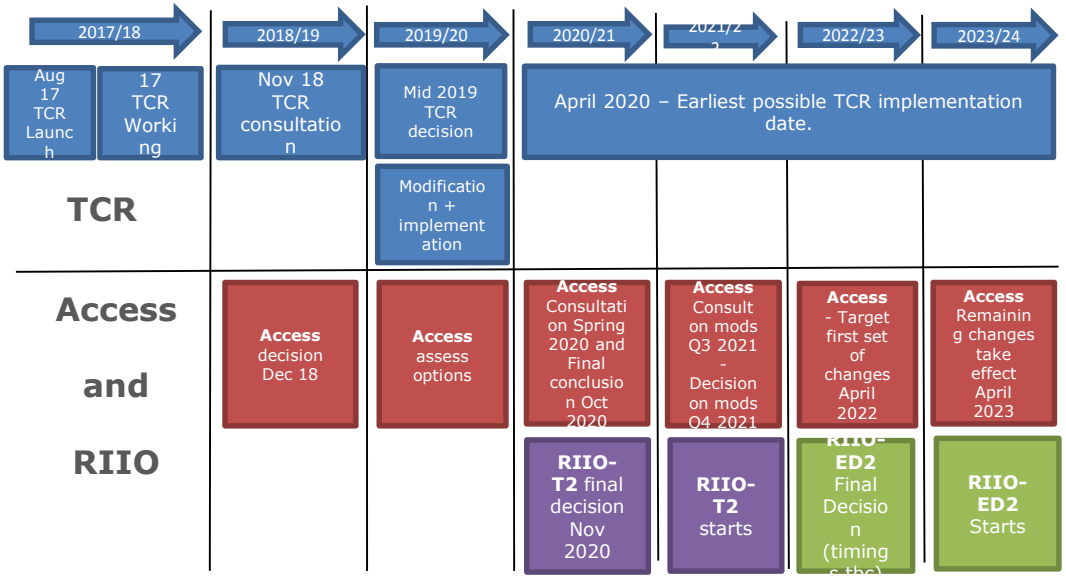
Under the current system, we believe:

- Some users may make decisions based (in part) on residual charges, and pay lower charges as a result, although their actions have not reduced the total level of costs which need to be recovered.
- The increase in availability and affordability of smaller scale generation means that some consumers can more easily reduce their net demand.
- The current way that residual charges are set creates some incentives that could lead to a more expensive system overall.
- Current residual charges fall increasingly on groups of customers who are less able to take action.

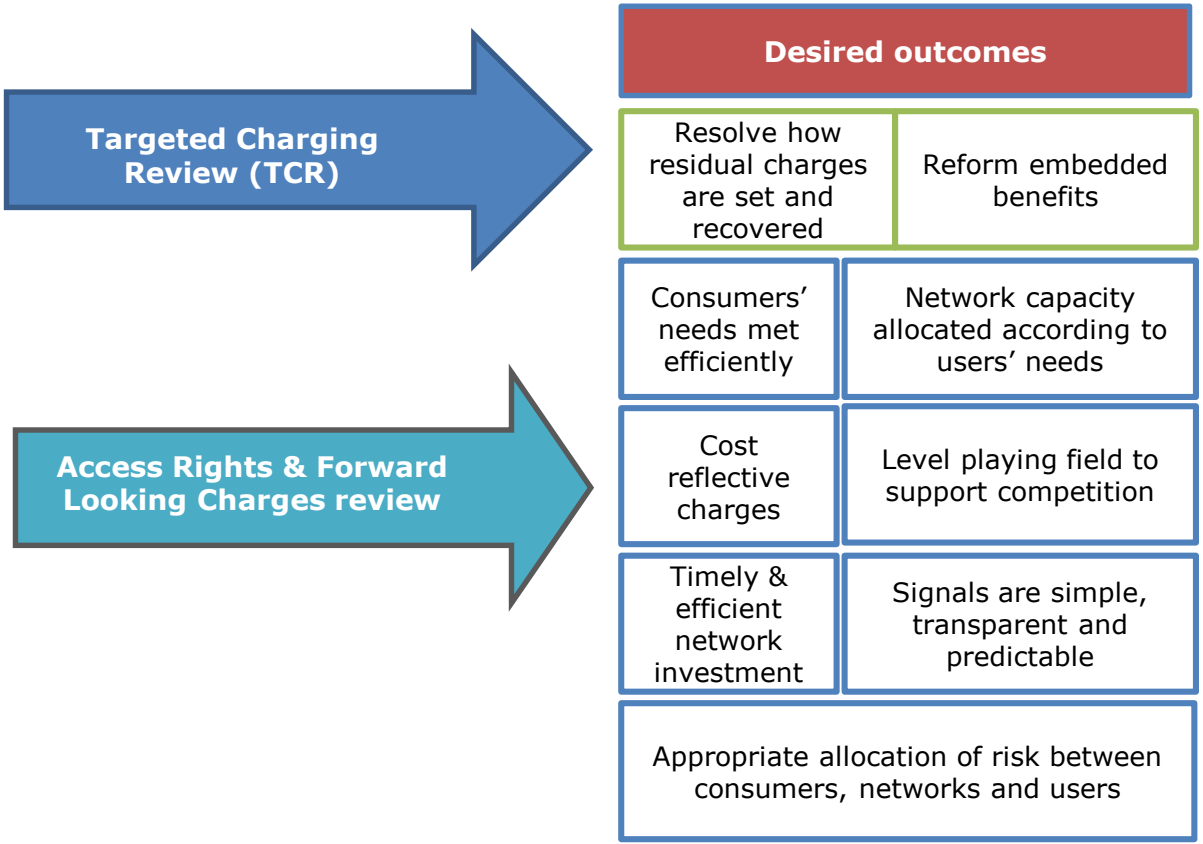
TCR and related work

TCR and interaction with other Ofgem projects

We are reviewing the charging framework holistically; working closely with the Electricity Network Access and RIIO project teams to ensure a consistent approach is taken to the different reforms underway across the energy system.

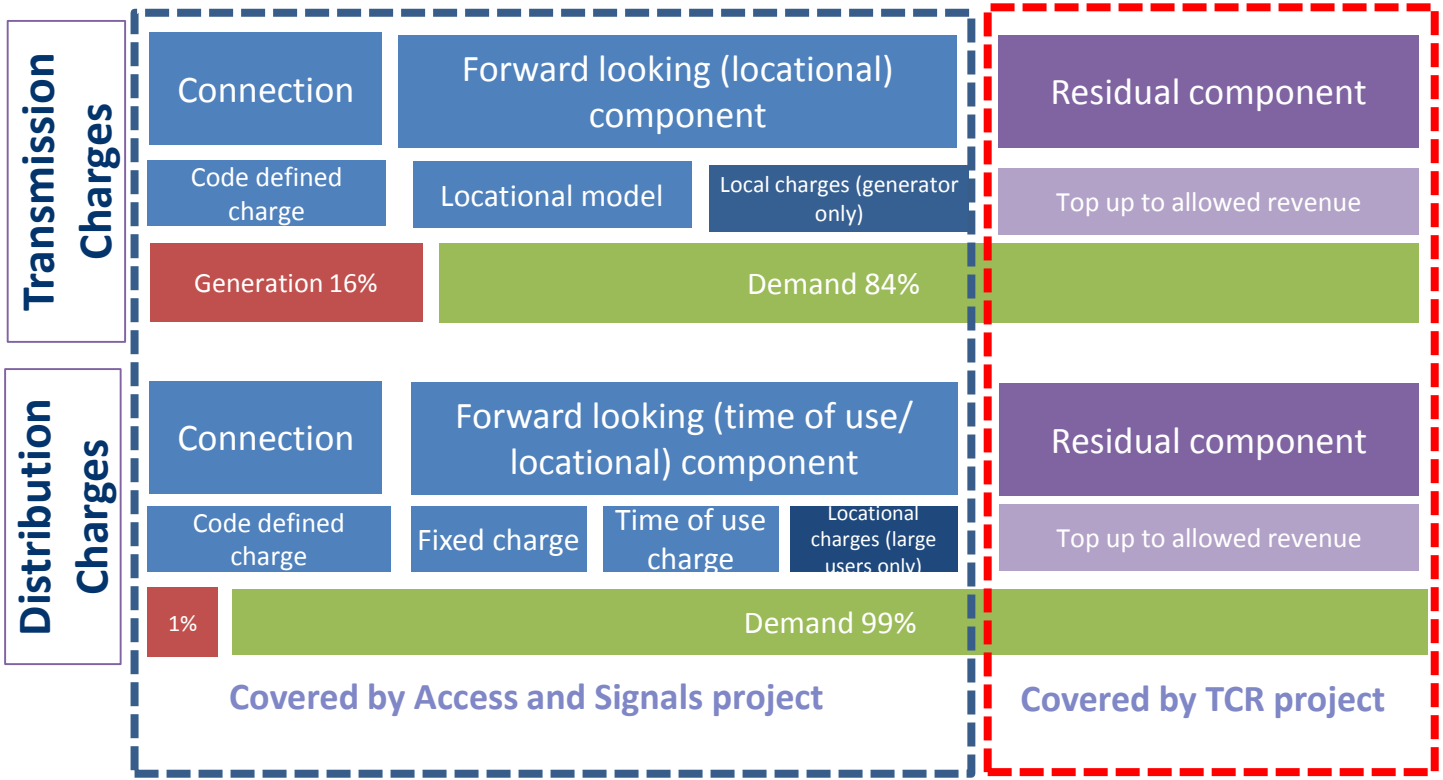


Objectives of the TCR and the Electricity Network Access projects

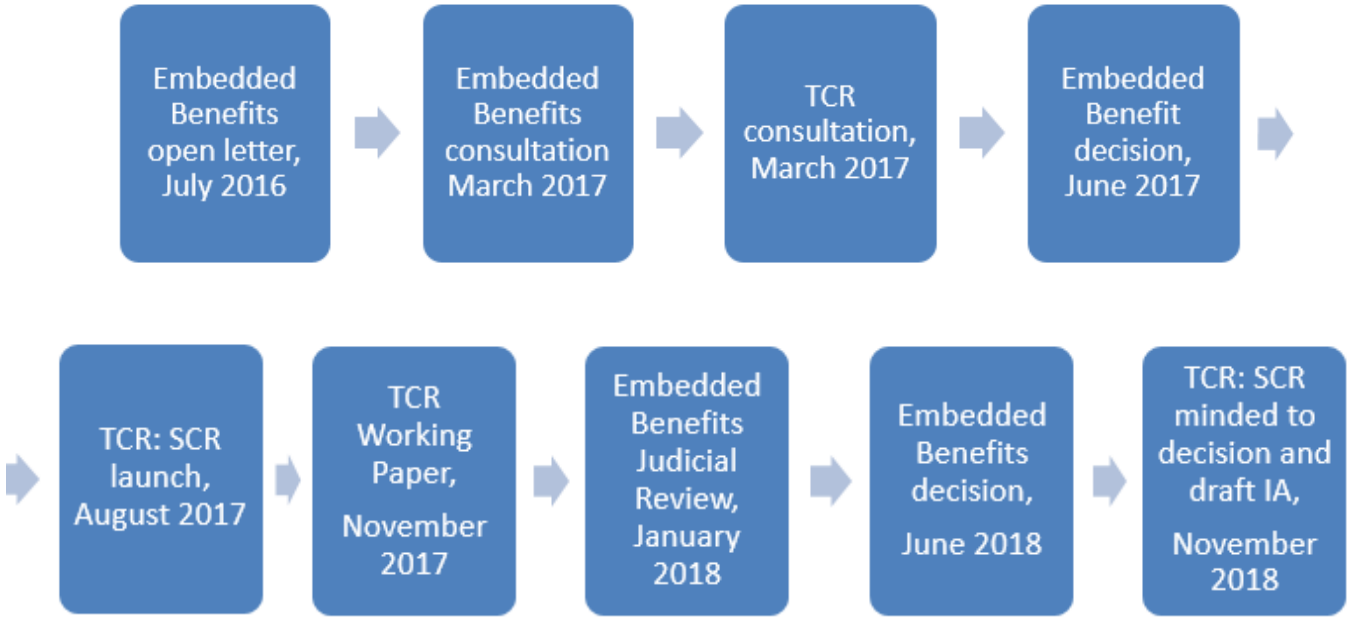


Recap – Charging components: a reminder

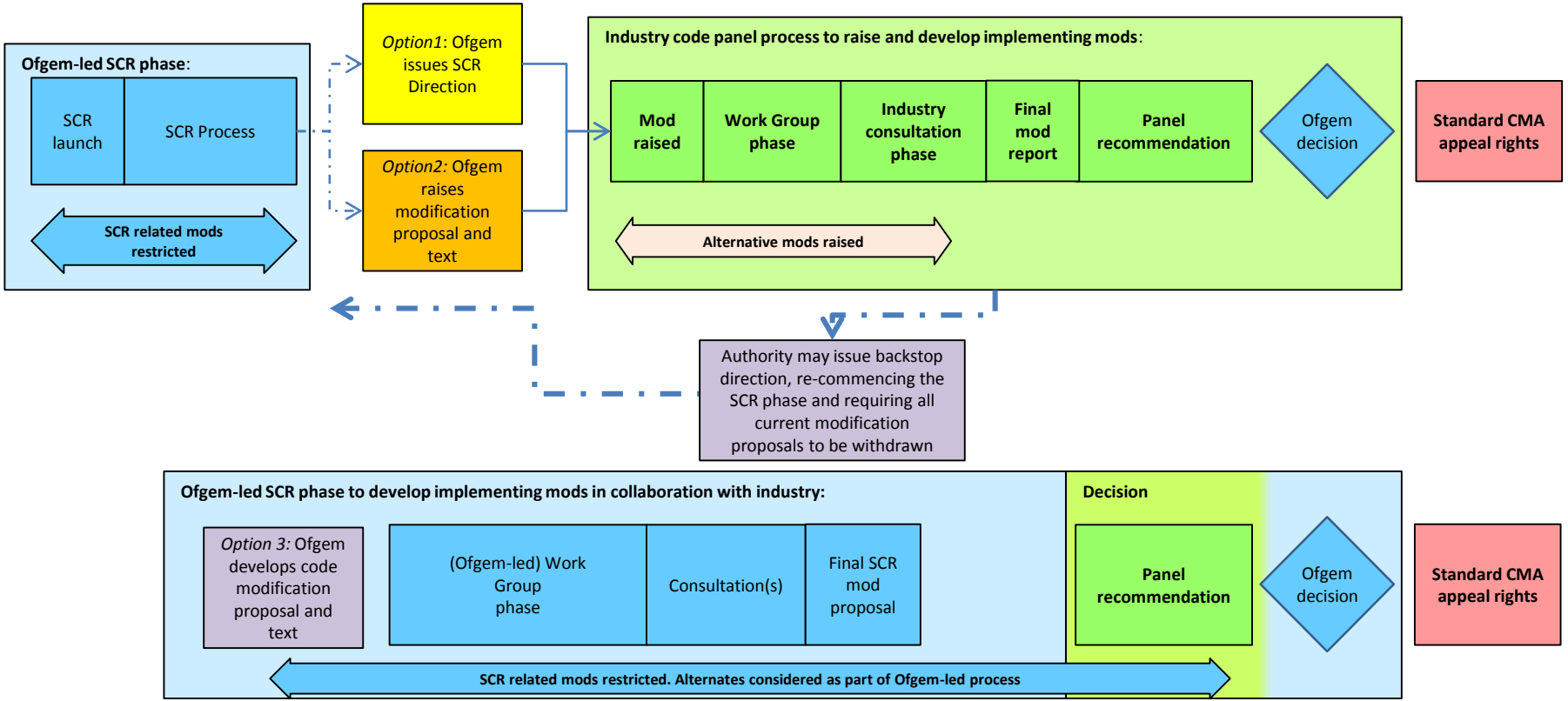
Network and SO charges c.£10bn/yr - roughly 50% connection/ forward-looking and 50% residual/cost recovery charges



The TCR to date



SCR process



https://www.ofgem.gov.uk/system/files/docs/2016/06/scr_guidance.pdf

Consulting on our leading options

Our lead options for residual charges

- Our lead options are **Fixed** and **Agreed Capacity** (deemed and fixed for smaller users).

Option	Justification	Allocation approach		Charge basis	
A) Fixed	There is a strong theoretical underpinning for fixed charges Allocation is based on an easily measurable quantity, and updates annually for segments.	**Small users**	Allocated based on net volumes in segment.	Small **users**	Fixed charge
Fixed charge is calculated for each user segment, defined by Line Loss Factor Classes. The allocation between segments is based on total segment metered volume (net).		**Large users**		**Large** users	
B) Agreed Capacity	Ex ante capacity charges for larger users allow for more differentiation and fewer boundary effects. Reduces distributional impact by deeming capacity for small users.	**Small users**	Allocated based on deemed capacities, with bands for domestics and small businesses.	**Small users**	Fixed charge
For those larger users which have agreed capacity, a charge is calculated directly. Deemed capacities are set for domestics and smaller non-domestics.		**Large users**	Allocated based on agreed capacities.	Large **users**	Agreed capacity charge

Remaining Embedded Benefits

Embedded Benefits (EB) are defined as:

- the **treatment of 'Smaller Embedded Generators' (SEGs) as 'negative demand' in relation to transmission charges**, where:
  - **Smaller** means generators below 100 MW in size
  - **Embedded Generator** means a generator connected to the Distribution networks rather than Transmission
  - **Negative demand** means that output from SEG have historically been treated as reductions in demand (akin to warmer weather or energy efficiency) from the perspective of demand for electricity from the Transmission system
  - **Transmission charges** means Transmission Use of System (TNUoS) and Balancing System Use of System (BSUoS) charges

We propose:

- Aligning Transmission Generator Residual charges with our recent decision (CMP261) – **this will effectively set TGR to zero and remove the current disbenefit to SEG**
- **Remove the BSUOS embedded benefit for SEG**.

- This follows on from our decisions on CMP261 and Embedded Benefits.
- This will remove the largest remaining non-locational embedded benefits.

- Our consultation period is now open and we invite you to respond to our minded to position consultation by 4 February here.

- If you have any future queries please contact TCR@ofgem.gov.uk.

Balancing Services Charges Task Force

Mike Oxenham
Electricity Market Development Manager
National Grid ESO

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Task Force Background and Wider Context

- Ofgem published their TCR minded to decision consultation and draft impact assessment on 28 November including a letter announcing an ESO led task force under the Charging Futures arrangements.

- With regard to Balancing Services Charges, the TCR envisages Partial BSUoS Reform or Full BSUoS Reform and with differing implementation timescales, subject to consultation.

- The Task Force will inform the direction of balancing services charges based on assessing whether: (i) there is value in seeking to improve cost-reflective signals through BSUoS, or (ii) BSUoS should be treated as a cost recovery charge.

- The Task Force will build upon work done to date by ESO with stakeholders and will need to also be mindful of other relevant work related to Balancing Services Charges.

ESO Workshop and Webinar Output Summary

- A total of 77 stakeholders attended across these events which we held in October 2018 - we presented some initial analysis and gathered stakeholder feedback.

- Stakeholder views were that BSUoS is currently good at socialising operational costs but less good at driving behaviours to minimise operational costs. Stakeholders then generally agreed that the aim of BSUoS should be to socialise operational costs with a mixed view on whether it should aim to drive behaviour to minimise operational costs.

- Stakeholders generally also seemed to prefer simplicity to cost-reflectivity with there being mixed views on the preferred charging time interval e.g. such as per Settlement Period.

- The output from these workshops and the webinar will be provided in greater detail at the Charging Futures Forum for further discussion and will lead into the first Task Force so that the Task Force can be informed by (and then build upon) analysis undertaken by ESO.

Task Force Timing and Deliverables

Based on the Ofgem letter and the draft Terms of Reference the Task Force will:

Deliverable	Date
Assess the extent to which elements of the charge **currently** provide a forward-looking signal which influences behaviour	February 2019
Assess the **potential** for existing elements of the charge to be charged more cost reflectively and hence provide better forward-looking signals	March 2019
Assess the **feasibility** of charging any potentially cost reflective elements of the charge on a forward-looking basis	April 2019 (Draft Report)
Assess the **feasibility** of the candidate charges to influence user behaviour and so identify extent elements which should considered cost-recovery	May 2019 (Final Report)

The above timetable will allow Ofgem to consider the task force output alongside feedback to their TCR minded to position consultation and prior to Code Modifications (if any) being raised.

Task Force Creation

- ESO will Chair the Task Force as well as being the Task Force Secretariat. Ofgem will be a Task Force member and we are seeking interested and experienced industry parties.

- Task Force members will be appointed in line with the draft Terms of Reference prior to the first Task Force which will be held in January after the CFF on 15 January 2019.

- The Terms of Reference will be approved by Ofgem and published by ESO once discussed at the next Charging Delivery Body and once stakeholder feedback has been considered.

- If you would like to become a Task Force member you can register your interest through the CFF Website no later than 4 January 2019.

http://www.chargingfutures.com/whats-happening/access-reform-task-forces/balancing-services-charges-task-force/

Any Questions or Views?

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Transmission Generator Residual and 838/2010 Compliance

Harriet Harmon
National Grid ESO

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Summary

- Ofgem have highlighted in their ‘minded-to’ position on TCR that Generators should not pay residual charges;
- ESO currently uses negative TGRs to maintain compliance with 838/2010 Part B;
- Following the CMA decision re: CMP261, ESO has undertaken significant work to understand how compliance with the regulation can be maintained and has awaited clarity on residual charging before raising a CMP;
- Now that the TCR position is clearer, ESO is considering how to achieve a £0 TGR (subject to compliance with 838/2010), introduce the interpretation of 838/2010 into the CUSC and how to prevent exceedances of the cap or collar.

Recap

The regulation:

"…transmission charges shall exclude:

(1) charges paid by producers for physical assets required for connection to the system or the upgrade of the connection;

(2) charges paid by producers related to ancillary services;

(3) specific system loss charges paid by producers.

Annual average transmission charges paid by producers in Ireland, Great Britain and Northern Ireland shall be within a range of 0 to 2,5 EUR/MWh…"

CMP 224

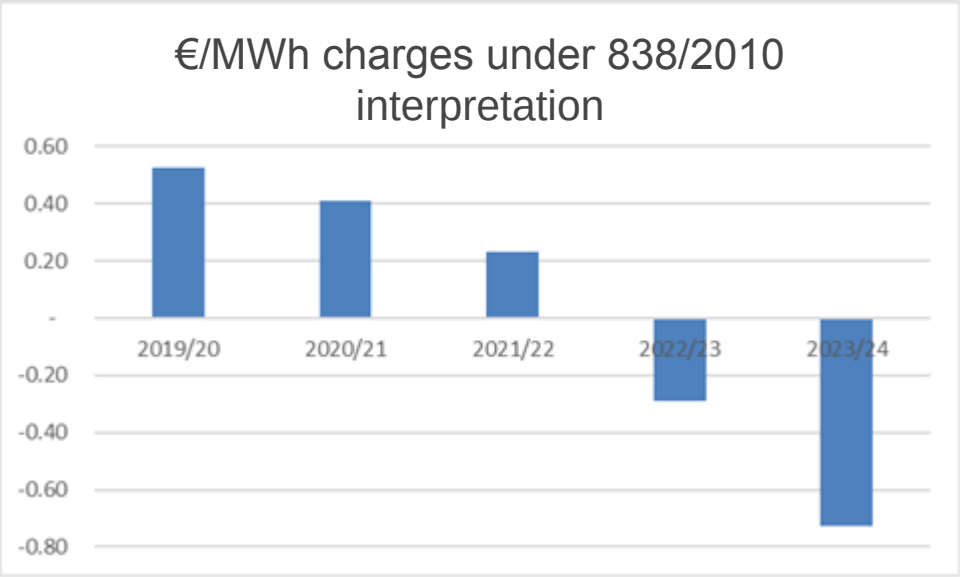
- The 'limiting regulation' was introduced into the CUSC through CMP224;
- 'physical assets required for connection' is undefined;
- In its approval of CMP224, the Authority noted that the term was ambiguous and could be interpreted broadly, or narrowly.

CMP 261 – Authority/CMA view:

"…connecting equipment does not cease to be an asset required for connection, following the initial act of connecting…" (CMA Order 5.96)

Maintaining compliance

- Owing to anticipated increases in relevant Offshore Circuits, Island Wind connections and ETO revenue growth, the total revenue to be collected is expected to increase;
- As NGESO has presented at this forum previously, continuing with the existing methodology will likely lead to charges falling below the collar.



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Maintaining compliance

- New modification to be raised by ESO in the near future to exclude, as a minimum, the cost of Offshore Circuits from consideration of TNUoS cap/collar;

- Propose that the Workgroup determine what other assets could be excluded in line with GEMA/CMA determinations (i.e. components of Local Circuit);

Purpose/scope of mod & Workgroup focus:

- Introducing interpretation into CUSC;

- Ensuring CUSC is compliant on ex ante and ex post basis with a TGR of 0;

- Creating an appropriate methodology for the ‘connection exclusion’ – ESO has identified circuit types which will need to be categorized.

Questions

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Reactive Power Roadmap update

Amy Boast
National Grid ESO

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Overview

- Context – Reactive Power Roadmap
- Current state & issues
- Future state & opportunities
- Next steps

System Needs & Product Strategy

Published in June 2017 & provided an overview of SO system needs

Consulted on potential future changes to balancing services products

Proposed 3 stage approach to deliver changes:

Stage 1

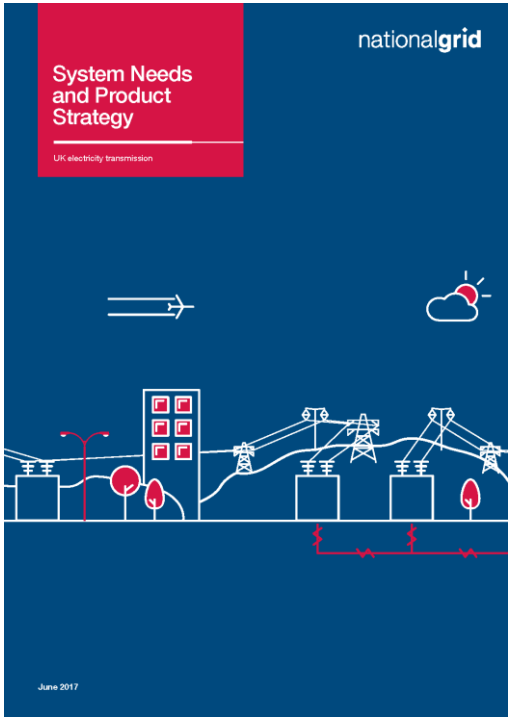
Rationalise existing product suite through removal of obsolete products

Stage 2

Increase transparency of remaining services through **simplification** of T&Cs, procurement windows and assessment methods

Stage 3

Develop **improved** services in conjunction with industry



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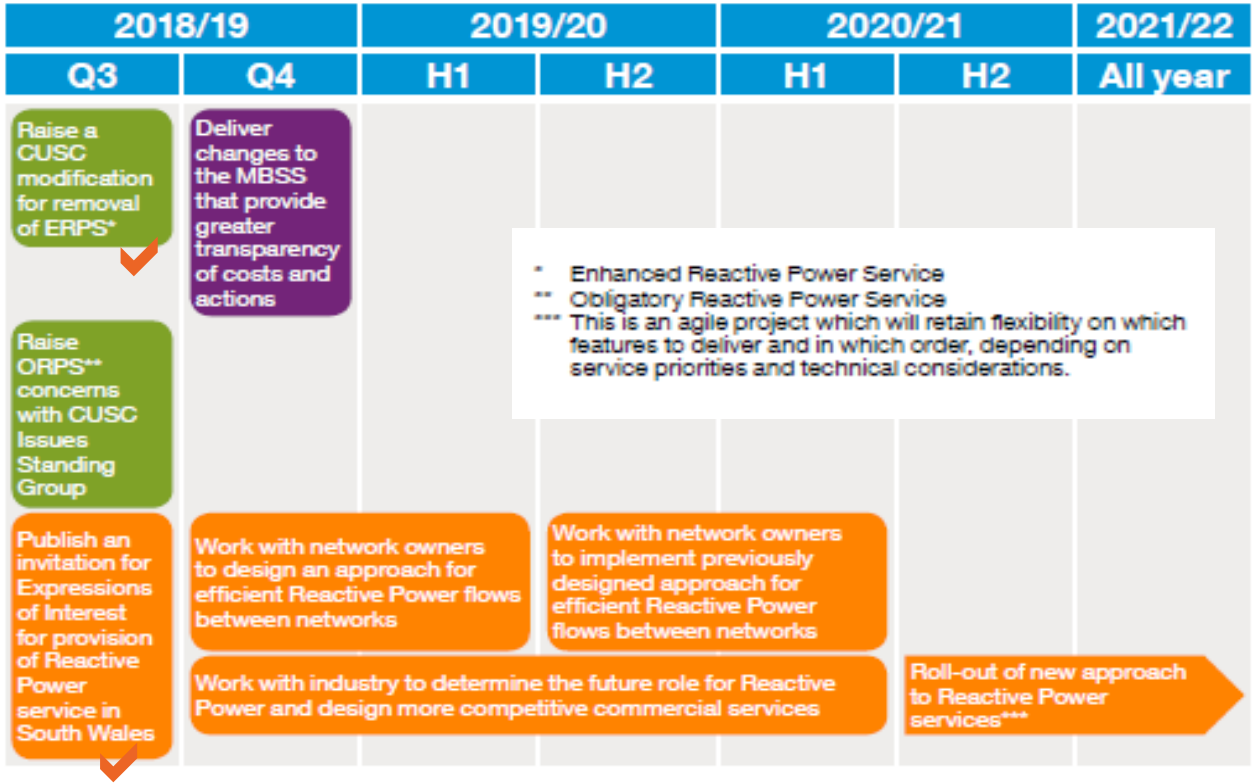
Reactive Power Roadmap

Figure 0.1
Roadmap of actions



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Current state & issues

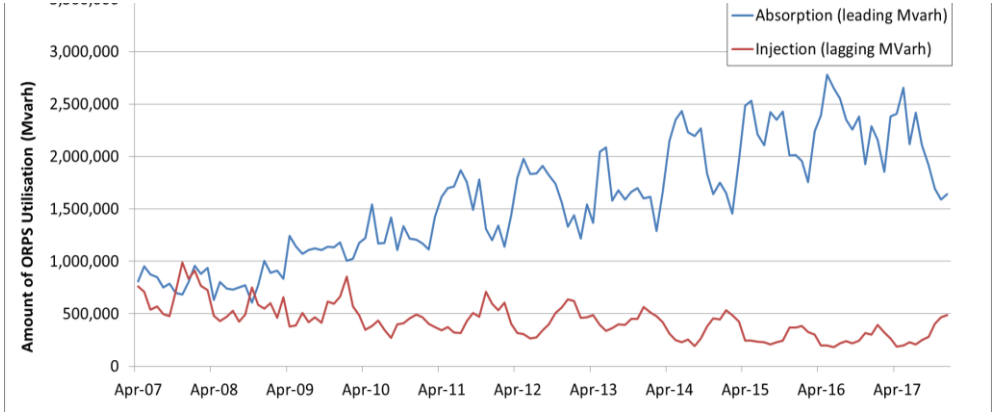
Grid Code: requires transmission connected generation to have voltage management capability

CUSC: (schedule 3) sets out remuneration for ORPS. Every MVArh produced or consumed is paid at an administratively determined default payment rate

- Assumptions of ORPS design no longer hold:
  - System needs and service utilisation has changed – costs rising as a result
  - Reduction in availability of ORPS providers
    - Actions taken to access mandatory capability – lack of transparency
  - Regional value of service not clear

    Preventing market signal to stimulate investment

System needs and service utilisation have changed



- Costs and utilisation are increasing
- There is a significant difference in lead and lag utilisation
- Trends suggests that costs will continue to rise

£330 million in last three years spent on managing voltage

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Reduction in availability of ORPS providers

Voltage Constraints

- Buy on machines – through BM, Trading or contracts
- Buy Active Power to access Reactive Power

Reactive

- All Reactive Utilisation is paid using ORPS
- This is reported through the MBSS ‘Reactive’ Section

Combined Utilisation and Constraint Costs between April 2015 -2018, organised by month

Regional value not clear preventing market investment

National frequency balance and regional reactive balance

- Reactive Power is a locational property
- From current information it is not possible for providers to identify area where Reactive Power requirements are higher
- ORPS does not allow price signals for different areas

The regions marked are for illustrative purposes only and do not reflect actual regional reactive requirements

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Future state & opportunities

Our vision is for a more flexible electricity system which makes the most economic and effective use of all available resources to meet the needs of the network.

Our principles will be to design a market:

- With **transparent** procurement decisions, with methodology and **needs clear** to the market ahead of time
- That **increases competition** to release value to the end consumer
- Which balances **operational requirements** with the **technical ability** of provider assets while maintaining system security

Future state & opportunities

This should allow us to specify our requirements in an area, procure from the most cost effective providers, and broadcast market price signals on the value of reactive solutions in that area.
This could spur new providers, or help to build the case for new asset based solutions where there is an economic case to do so.

Procurement in more timescales

Additional Reactive Capability

Clear Requirements

Regional Options Depending on Requirements

Use of “Wattless Vars”

Long Term fixed Availability and no utilisation Contracts

Next steps

Jan

- Publish contract terms for South Wales & Mersey
- Schedule industry workshops to determine the future role for Reactive Power and design more competitive commercial services

Feb

- Run tenders for South Wales & Mersey

Mar

- South Wales & Mersey tender results and contract signatory
- Run industry workshops to determine the future role for Reactive Power and design more competitive commercial services
- Deliver changes to MBSS that provide greater transparency of costs and actions

Questions

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Review of ESO credit cover requirements

Harriet Harmon
National Grid ESO

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Background

‘Security Cover’

- Sections 3 & 15 of CUSC require relevant Parties to provide ‘Security Cover’ for UoS/Cancellation Charge liabilities;
- Under current arrangements, ESO will accept:
  - ‘Qualifying Guarantee’ – PCG/Bank Guarantee
  - Letter of Credit
  - Insurance
  - Escrow

Unsecured Credit

- Section 3 of CUSC enables Parties to access ‘Allowed’ and ‘Unsecured Credit’ based on Credit Rating/Payment History;
- The ESO therefore is exposed to a proportion of Parties’ UoS liabilities

Forecast accuracy

Section 3 of CUSC provides a 20% tolerance for under-/over-forecast of Supplier Demand, (used for TNUoS charging purposes) before a re-bill

The market has changed

- There are now approximately 70 active Suppliers in the market, vs. the handful that were in operation at the time of S3 being drafted;

- During 2018, 8 Suppliers have ceased trading, with consumers undergoing SoLR process – unpaid UoS liabilities are recovered through all Parties;

- The financial risk posed by a) Unsecured Credit arrangements; and b) 20% tolerance before re-billing are significant;

Current arrangements require review

- We estimate that the approximate value of TNUoS being under-paid by Suppliers who under-forecast by <20% is £200m;
- The ESO is not guaranteed to be ‘made whole’ for unpaid sums – under current arrangements, credit management processes can mean UoS values being added to K 3 or 4 years after the fact, IF approved by Authority;
- The operating costs of the ESO are paid by consumers, therefore financial risks and cash flow costs are ultimately borne by consumers;
- Consistency across all security arrangements is crucial to prevent distortions between large and smaller Users;

Current thinking…

- Reduce the 20% tolerance for Supplier forecasts to 5%, and require the submission of forecasts to be good faith (ie ‘best view’, not ‘reasonable’) – reduces ESO exposure to Suppliers’ UoS by c.£150m

- Remove Unsecured Credit from CUSC – ESO funds (ie consumer funds) cease to subsidise Parties’ liabilities – all requisite security to be provided in full

- Need to consider future credit arrangements for a legally-separate SO

Questions

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AOB

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