Transmission Charging Methodologies Forum and CUSC Issues Steering Group

Meeting 90

14 November 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

1. Introduction, meeting objectives and review of previous actions

CISG

2. Loss of Mains Protection update

TCMF

3. RIIO2 and the future of charging

4. Alternative approach for Orkney

Lunch

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Today's agenda

5. Code modifications update
6. Small generators discount beyond 18/19
7. Charging for small half hourly sites from 20/21
8. Error margin in the G/D spilt calculation following CMP251
9. TNUoS charging of co-located generation
10. AOB and close

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Action items: In progress and completed since last meeting

ID	Month	Agenda Item	Description	Owner	Notes	Target Date	Status
14	Aug-18	AOB	MO to contact GG regarding Brexit discussion	MO	-	Sep-18	Complete
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	We are planning to get all archived modifications available on the website, however this will take some time due to the volume of material. Proposal forms, Workgroup reports, FMRs and decision letters will be uploaded. In the meantime any specific requests can be sent to the cusc.team@nationalgrid.com	Oct-18	In progress
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	In progress
16	Sep-18	CAPM Cost Recovery	JT to confirm who will assess the increase in TO costs in relation to CACM licence changes	JT	Action on Ofgem	Nov-18	In progress

Loss of Mains Protection

Graham Stein

National Grid ESO

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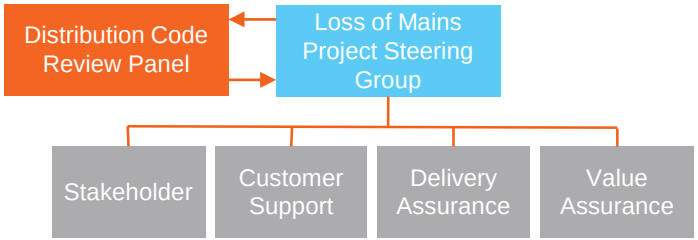
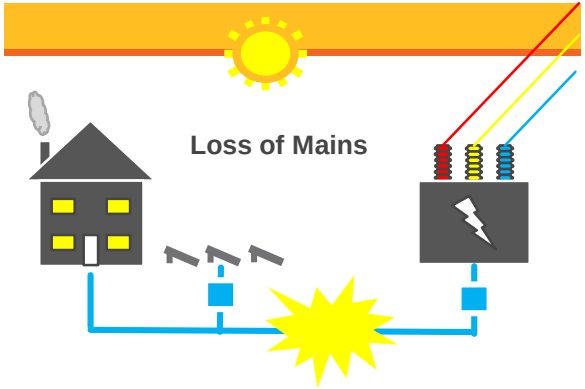
Loss of Mains Protection changes

- National programme: ~50,000 distributed generators impacted
- Protection change: Remove vector shift and set RoCoF as 1Hzs^{-1} with 500ms delay
- 2017/18 operational spend: £59.2 million
- 2018/19 spend to September: £67 million
- Programme cost estimate: ~£30million
- Forecast savings: ~£300million by 2024
- Distribution code mod ref: DC0079

Proposed Governance





- **AUG 2018:** Distribution code consultation - complete
- **SEP-NOV 2018:** Detailed implementation planning
- **DEC 2018:** Report to Ofgem
- **JAN-MAR 2019:** Mobilisation and Initial Industry Engagement
- **APR 2019-OCT 2021:** Implementation

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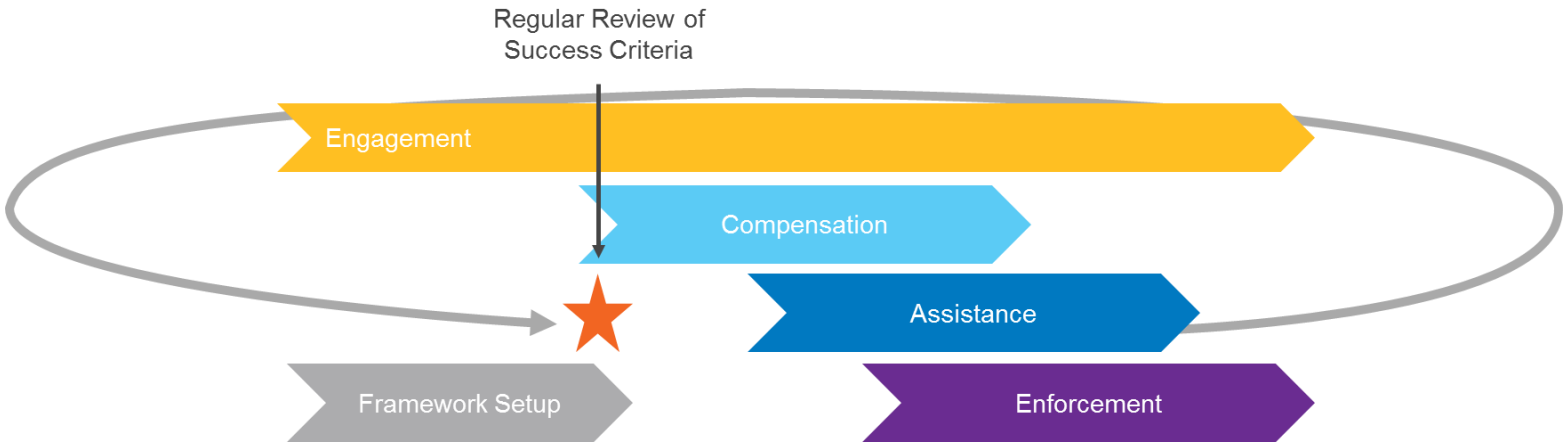
Proposed Approach

A multi-year programme is envisaged with regular decision points.

The ability to flex approach depending on performance and programme timing will be built in.

We expect to produce regular progress reports – it would be useful to know what level and frequency of information would be of value.



RIIO2 and the future of charging

Rob Marshall
National Grid ESO

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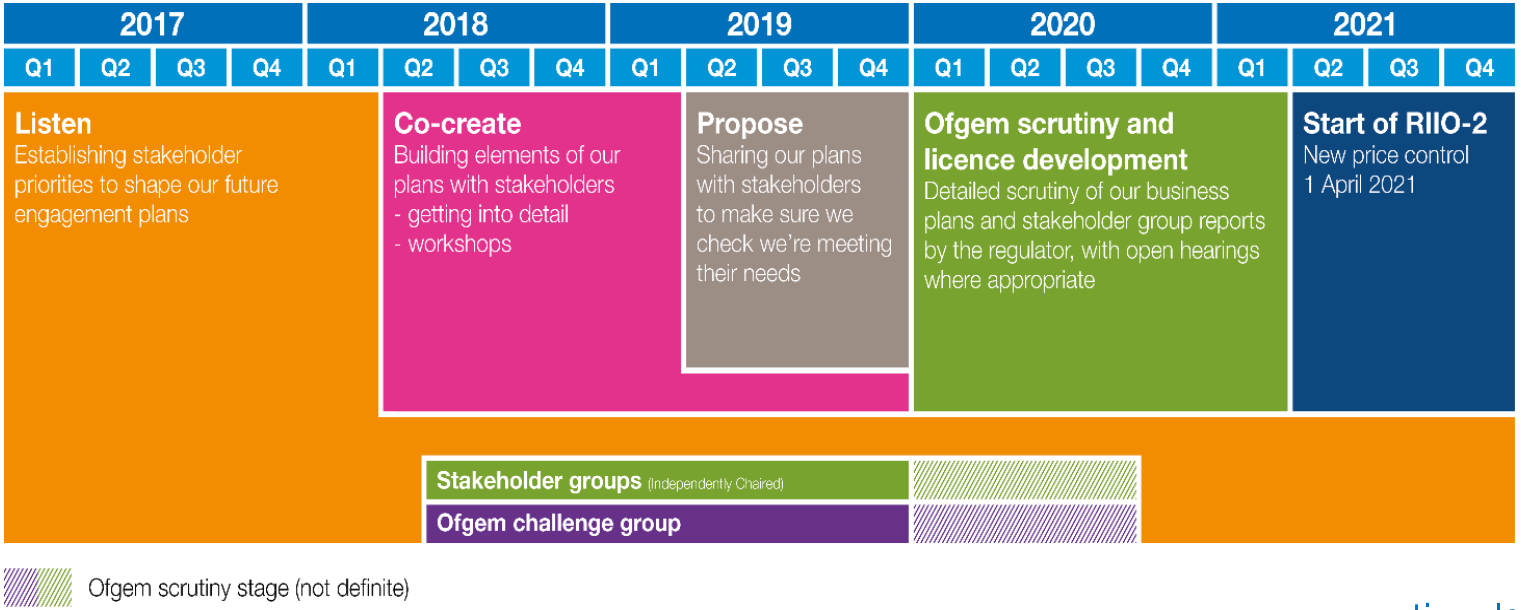
RIIO-2 – The first price control for a legally separate ESO

- Ofgem has confirmed that the ESO will have its own price control from 2021
- We will be expected to submit our well justified business plan in Q4 2019
- We will build our business plan with our stakeholders using a three phased approach – Listen, Co-create and Propose



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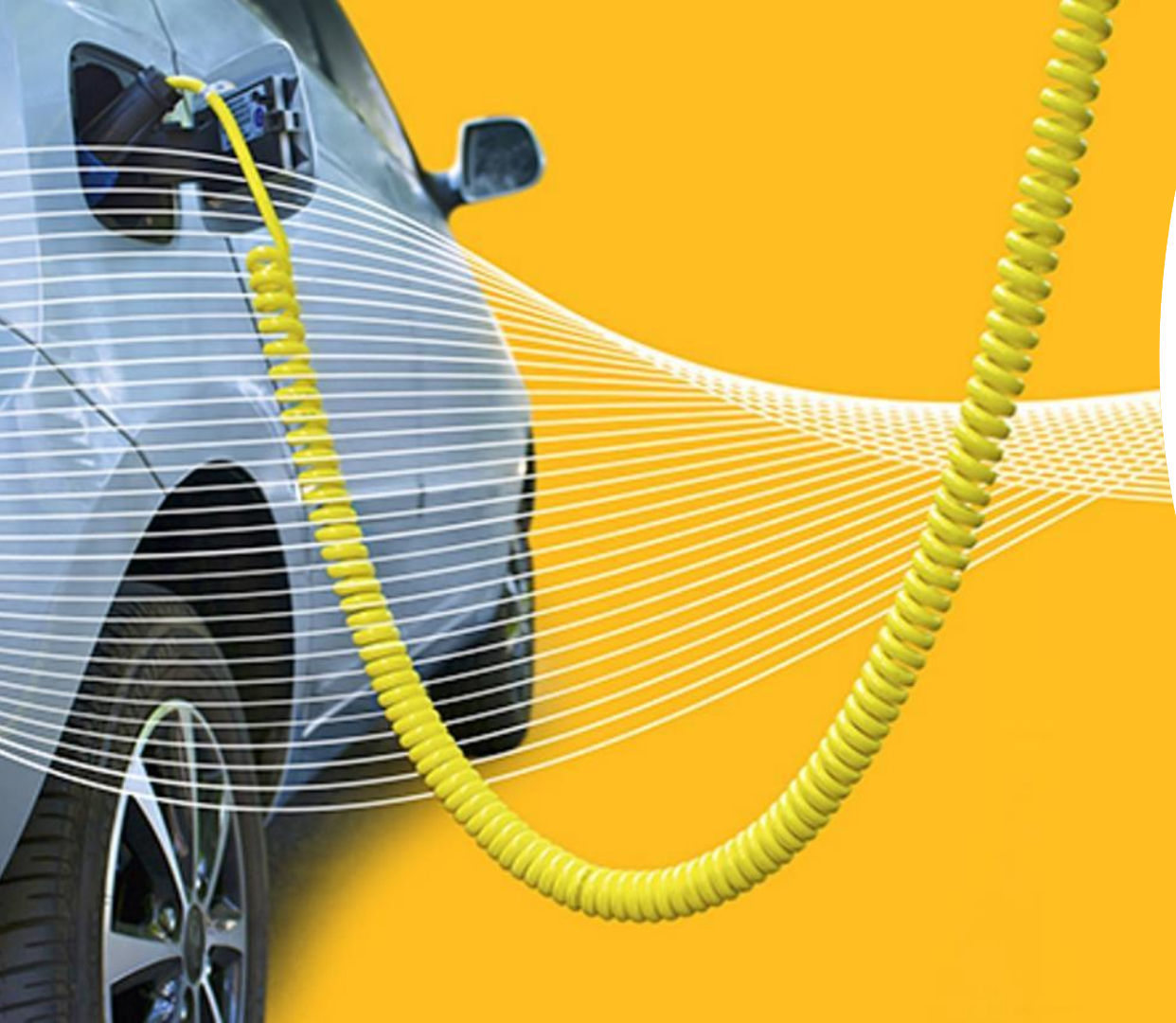

Why are they changing?

The way the system is used is changing

- Changing demand patterns and technologies
- Changing generation mix
  - Decentralisation
  - Decarbonisation

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What are the issues in charging?

Themes on stakeholders views

There is too much **volatility** in my charges

I can't **predict** what my charges will be

Network charging doesn't reflect the cost and benefit I have on the **whole system**

I am not on a **level playing field** with other users

Poll question

Go to: menti.com

Rate each theme out of 5
1 = I strongly disagree, there is no problem
5 = I strongly agree, it is a significant issue

TCMF - Orkney an Alternative Approach

November 2018

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Content Overview

- **Why** is an AA required?
- **What** is the AA
- **How** will the AA be implemented

Under the existing framework ?

- **What** lessons can be learned from the AA?
- Questions

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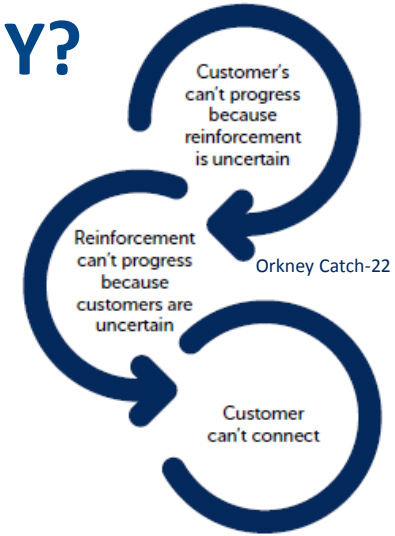
Orkney- an Alternative Approach: WHY?



- The Orkney network is at full capacity; over the last decade a number of renewable projects have looked to connect on Orkney; due to a number of reasons such as emerging technologies and government subsides the project has not progressed.
- The opportunity to address obstacles through innovative and flexible solutions (such as ANM and consortia) has been exhausted.
- Given unique location, Orkney is not connected to the MITS.
- Transmission solution will allow c.220MW of generation to connect
- Using policy development strategy we engaged with stakeholders to understand the barriers to connection. To summarise these were:
  1. Fixed Capacity Queue
  2. Misalignment of timelines
  3. Securities and Liabilities

All of which resulting in a catch-22 which has inhibited renewable development

"You need some certainty as a developer about your connection date. You need to feel certain that you will connect, or else we're back at our catch 22." Orkney stakeholder

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Alternative Approach development

Policy Pre-Development

2017-2018	2017-2018	Spring 2018
Engage with stakeholder and define problem	Develop AA Policy Proposal	Engage with stakeholders on AA proposal

Policy Development

Spring 2018	Summer 2018	Summer 2018	Summer 2018
Based on feedback develop detail on AA policy	Engage with stakeholders on AA policy	Based on feedback finalise AA policy	Submit proposal to Ofgem

Policy Future Development

2019	2019 and beyond
Implement proposals	Lessons learned to inform wider implementation

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Orkney- what is the Alt. Approach?

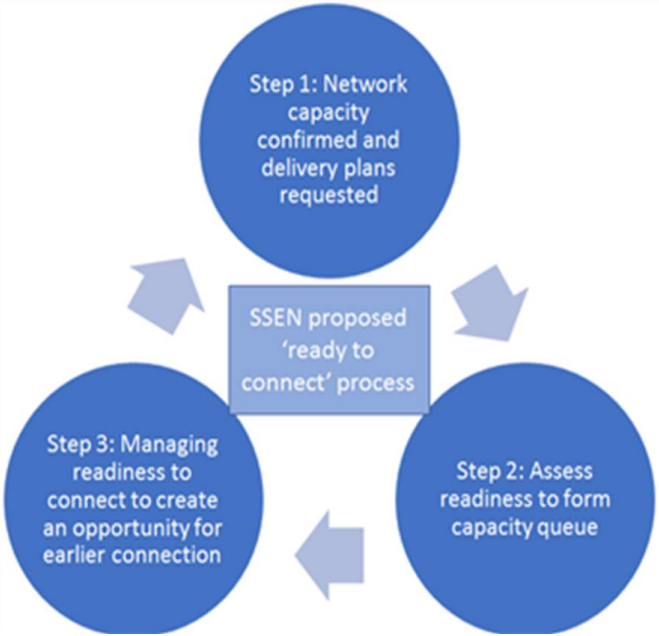
- Engaged with a stakeholder using the phased policy development approach
- Industry engagement
- Set out specific objectives of the AA based on stakeholder feedback
- Final proposal submitted to Ofgem

The Alternative Approach is made up of two parts:

1.The 'ready to connect' process; and

2.Reducing the obstacles to connection by temporarily adjusting securities

- Temporarily removing subsea cable elements
- Allow project to progress and overcome timing issues caused by the catch-22



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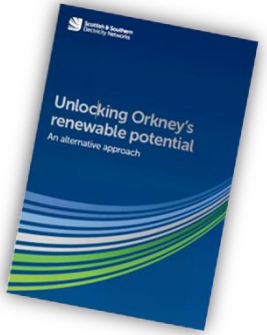
Orkney an AA- You said, we did!



You said…	We did!
"Due to both weather and environmental factors most wind farms require over and 18 month construction period including two summers." Website Response	Ensured timescales associated with milestones took into account island weather conditions
"It's fundamental to the whole argument of what has prevented projects from proceeding." Orkney stakeholder	Adjusted liabilities proposal
" you may want to consider the ability to grant further tolerance periods or at least be more flexible on the 6 months." Online Response	Provided a tolerance allowance which was then extended in response to feedback

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How will the AA be implemented?

- Trail approach under existing arrangements
- A *voluntary* approach to implementation with defined parameters
- **Ready to Connect Process:**
  - Requires changes to customers' connection offers which will outline delivery plan, milestones and queue management rules. Existing clauses in contracts will be expanded upon.
- **Adjustment to liabilities proposal:**
  - The STC provides enough flexibility for SHE Transmission to adjust costs sent through to the ESO
- A **number of derogations are required from the CUSC and SHEPD's CCMS** where the proposed AA does not align with standard industry arrangements which do not provide for any flexibility of access arrangements.
- Learning from the trial and derogations will inform any future code modifications or changes to other industry arrangements
- Final proposal and derogation submitted to Ofgem
- Pending Ofgem approval – includes a consultation period
- Implementation January 2019

What lessons can be learned from the AA.1?

- Building on previous policy work from Scottish and UK Governments, including islands CfDs.
- Working with the industry via consultation events (Orkney, online and in Glasgow), the All Energy conference, National Grid customer seminar, island forums, online events, via Scottish Renewables, as well as consultations and blogs on our website and advertised on social media.
- SSEN are instrumental in the ENA Open Networks work stream focusing on interactivity and queue management (WS2,P5)
- The proposed AA is also in line with Ofgem's priorities in their publication 'Getting more out of our electricity networks by reforming access and forward-looking charging arrangements''
- Learning from this trail will help inform wider work and could feed into Ofgem's significant code review

What lessons can be learned from the AA.2?

Ready to Connect

- **Access Rights:** Initial allocation of capacity based on readiness
- **Applying commercial policy change to existing contracted parties**
- **Interactivity**: delivery plan information
- **Queue Management**: milestones, timescales and how queue changes works in practice (enabling works etc.)
- **Whole system:** Working together across D&T SSEN has engaged National Grid as ESO to provide a whole system approach

Adjustment to liabilities

- **Risk allocation and user commitment:** the current methodology specifies that all works back to the nearest MITS node fall solely within attributable works (100% risk to the user). Trial will feed into work with the industry to try to address this long-standing issue as well as the MITS node methodology, as noted in Ofgem's publication
- **Misalignment of timescales:** The timescales for progressing transmission reinforcement and developers placing securities does not align. The trial seeks to better align timelines by providing a period of adjusted liabilities for developers initially (limited to 12 months under the trial).

Orkney an Alternative Approach: Outcome

AA was developed in consultation with stakeholders including developers and the regulator to align timelines ***as closely as possible*** and provide **additional certainty** to the regulator on the generation proceeding to connection whilst overcoming barrier to connection.

Outcome: Conditional Needs Case contingent on the implementation of the AA was submitted by SHE-Transmission to Ofgem

This wouldn't have been possible without innovative commercial arrangements and stakeholder's feedback

Implementation will be on a trial basis in 2019; any lessons learned will be fed into wider industry workstreams for implementation across GB

Ofgem consultation on needs case and the AA: December 2018 (estimated)

End slide- thank you for listening

Any questions or feedback please email lauren.logan@sse.com

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Code Modifications Update

Joseph Henry,
National Grid ESO

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New Modifications at Workgroup

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CMP306 - Align annual connection charge rate of return at CUSC 14.3.21 to price control cost of capital

CMP306	
Purpose	The purpose of this modification is to align the rate of return applied to the net asset value of connection points in the calculation of annual connection charges (as set out at paragraph 14.3.21 of the Connection Charging Methodology) to the pre-tax cost of capital in the price control of the Relevant Transmission Licensee (plus a margin of 1.5 percentage points in the case of MEA-linked assets)
Raised	September 2018
Proposer	Northern Powergrid
Latest Update	CMP306 was presented to the CUSC Panel in September by Northern Power Grid, and will proceed to a Workgroup
Next workgroup	TBC – December / January
CA Contact	Rachel Hinsley - 07811762440 Rachel.hinsley1@nationalgrid.com

CMP307 - Expanding the BSUoS charging base to include embedded generation

CMP307	
Purpose	CMP 307 will change the current collection of BSUoS from suppliers and embedded Exemptible generation to a methodology where BSUoS is charged on a gross basis to suppliers and BSUoS is charged on exports from embedded Exemptible generation
Raised	September 2019
Proposer	Engie
Latest Update	CMP307 was presented to the Panel by Engie in September 2018. The modification has been suspended until the outcome of the SCR/TCR
Next workgroup	Modification Suspended
CA Contact	Modification Suspended

CMP308 – Removing BSUoS charges from Generation

CMP308	
Purpose	CMP 308 proposes that liability to pay Balancing Services Use of System (BSUoS) charges, which are currently charged to all liable CUSC parties on a non-locational MWh basis, is removed from GB Generators
Raised	October 2018
Proposer	EDF Energy
Latest Update	Nominations window is currently open – contact the Code Administrator if you are interested.
Next workgroup	TBC – December / January
CA Contact	Rachel Hinsley - 07811762440 Rachel.hinsley1@nationalgrid.com

Modifications at Workgroup

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Modifications at Workgroup

Mod	Latest Update	Next WG Date	Next meeting
CMP280/ CMP281	WG Consultation period for CMP281 closes on November 12th 2 workgroups to be held in November to expedite process to conclude modifications	22 November 2018 29 November 2018	WG9 WG10
CMP285	WG Vote planned 19 November. WG Report will then be submitted to the November CUSC Panel for approval to issue to Code Admin Consultation in December	19 November 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 late November / early December	TBC	WG8
CMP291	WG ongoing in conjunction with GC117, recently raised on the prioritisation stack to so will be scheduled as soon as possible	TBC – likely to be December	WG3
CMP292	Has moved down on the prioritisation stack. Next WG currently being planned	TBC – December 2018	WG1

Modifications at Workgroup (1)

Mod	Latest Update	Next WG Date	Next meeting
CMP295	WG1 held on 17 October, with good progress made. Aiming to complete the workgroup report at the next workgroup scheduled for December	TBC - December 2018	WG2
CMP298	WG1 held 02 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	TBC	Kick Off
CMP301	5 November Authority issued a 'send-back' letter requesting clarification to '*clearly articulate the basis for the proposed modification*' and to '*Review the legal text*'. The decision letter is available here. Next actions to be agreed with proposer and panel	TBC	WG1
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 to be arranged	December 2018 / January 2019	WG4
CMP304	Kick off meeting held on 9 October, next WG to review the CMP305 code admin consultation responses , the benefits of the product and the future	15 November 2018	WG2

Authority Decision Updates

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Authority Decision updates

Pending Authority decisions

- CMP293 and CMP294 - National Grid Legal Separation
  - Issued to Ofgem on 1 November; no indication of approval date from Ofgem on their indicative timetable
- CMP296 and CMP297 - Aligning the CUSC to the BSC following Project TERRE to exempt Virtual Lead Parties from BSUoS and to introduce a definition of Virtual Lead Party
  - Issued to Ofgem on 12 July; no indication of approval date from Ofgem on their indicative timetable

Authority Decisions

- CMP250 - Stabilising BSUoS with at least a 12 month notice period'
  - The Authority rejected this Modification

Dashboard - CUSC

New Modifications	In-flight Modifications	Modifications issued for workgroup consultation	Modifications issued for code admin consultation
3	26	2	1

Workgroups Held (September)	Workgroups Held (October)	Authority Decisions	Modifications on hold
10	7	2	4

Questions

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TNUoS Charges for 2018/19
Small Generator Discount

Paul Wakeley
National Grid ESO

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Small Generator Discount

- A discount is given to 132kV <100MW generators connected to the Transmission Network
- This reflects the difference between charges at 132kV for Transmission and Distribution connected generators
- The costs of the discount is borne by HH and NHH demand

Defined in C13 of National Grid's licence

Applied after the TNUoS tariffs are calculated

TNUoS is charged net of the effects of the scheme

Small Generator Discount

C13 Licence condition expires
31 March 2019

- Our TNUoS forecasts have been consistent with the expiry date
- We have not included SGD in our tariffs for 19/20 and beyond

- However, CMP302 and Ofgem's Urgency letter mean (the effect of) the licence condition might be extended in and beyond 2019/20
- https://www.ofgem.gov.uk/publications-and-updates/cmp302-extend-small-generator-discount-until-enduring-solution-acknowledging-discrepancy-between-england-wales-and-scotland-implemented-decision-urgency

This presentation

From Ofgem's letter on Urgency for CMP302:

- https://www.ofgem.gov.uk/system/files/docs/2018/11/cmp302.pdf
- *… If deemed appropriate, later this year, we will conduct a statutory consultation to extend the [small generator] discount.*
- *We also note, that the SGD and its timings have been in place for some time and are known by relevant parties. …*

Today

- I am not going to talk about the merits or otherwise of the Small Generator Discount Scheme, or the likelihood of an extension
- I will show you what might happen if the scheme were extended in its current form

Mechanics of the current Small Generator Discount

Annual Cost of Scheme (+/- Over/Under recovery)

Recovered through

Additional Levy on Gross HH Tariff (£/kW) & Additional Levy on NHH Tariff (p/kWh)

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We have published data for 2019/20 and beyond

- Assuming the current (“25%”) methodology continues we published sensitivity data in our Five-Year View (Table 54)
- Warning: Ofgem have the methodology within their gift

		2019/20	2020/21	2021/22	2022/23	2023/24
Generation residual	£/kW	-3.613060	-4.373578	-5.596682	-8.097064	-10.584025
Demand residual	£/kW	51.697066	53.450016	58.199628	63.210075	66.785919
Value of small generator discount	**£/kW**	**12.021001**	**12.269110**	**13.150736**	**13.778253**	**14.050474**
Volume of small generators eligible	MW	2755.46	3131.96	3432.96	4257.56	4706.41
Total cost of scheme	**£m**	**33.1**	**38.4**	**45.1**	**58.7**	**66.1**
System gross Triad demand	GW	51.3	50.8	50.4	50.1	50.1
System gross HH demand	GW	18.0	19.2	19.0	18.9	18.9
NHH demand	TWh	25.5	23.7	23.4	23.1	23.0
HH recovery charge	**£/kW**	**0.645358**	**0.757168**	**0.895946**	**1.171136**	**1.319024**
NHH recovery charge	**p/kWh**	**0.084282**	**0.100672**	**0.119970**	**0.157749**	**0.179313**

In November Draft Tariffs

- We'll include a table assuming the continuation of the current methodology, but tariffs will **not** include Small Generator Discount
- **We appreciate the uncertainty this causes in 19/20 tariffs.** Our assumptions have been clear since the Five Year Forecast in 2015 that the licence expired
- **It is important that Ofgem make a decision before we publish final tariffs; we have told this to them**

Next Steps

We await any further publications from Ofgem

We will signpost what we are assuming about Small Generator Discount in our tariff reports

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TNUoS Settlement for Measurements Classes F and G from 2020/21

Paul Wakeley, Revenue Manager
National Grid ESO

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Measurement Classes

- Measurement classes define whether demand is treated as Half-Hourly or Non-Half-Hourly for TNUoS
  - HH treated demand is charged on the basis of Triad
  - NHH treated demand is charged on the basis annual 4pm-7pm consumption

Measurement Class	Description
A	Non Half Hourly Metered
B	Non Half Hourly Unmetered
C	HH metered in 100kW Premises
D	Half Hourly Unmetered
E	Half Hourly Metering Equipment at below 100kW Premises with current transformer
F	Half Hourly Metering Equipment at below 100kW Premises with current transformer or whole current, and at Domestic Premises
G	Half Hourly Metering Equipment at below 100kW Premises with whole current and not at Domestic Premises

https://www.elexon.co.uk/wp-content/uploads/2017/06/change_of_measurement_profile_class_v13.0.pdf

What does the CUSC say

HH Elective Metering from 1 April 2017

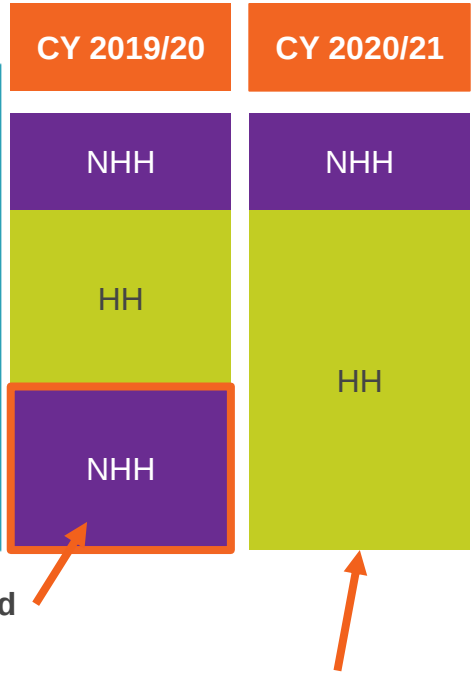
The following section describes how meters migrating to, or already within, Measurement Classes E, F and G will be charged in terms of TNUoS after 31 March 2017.

- 14.17.29.8 A change from NHH to HH within a Charging Year would normally result in Suppliers being liable for TNUoS for part of the year as NHH and also being subject to HH charging. This section describes how the Company will treat this situation for Non-Half Hourly (NHH) meters migrating to Measurement Classes E, F & G for the charging year which begins after 31 March 2017.
- 14.17.29.9 Notwithstanding 14.17.9, for each Charging Year which begins after 31 March 2017 demand associated with Measurement Classes F and G will be treated as Chargeable Energy Capacity (NHH) for the purposes of TNUoS charging for the full Charging Year up until the Charging Year which begins after 31st March 2020. Demand associated with Measurement Class E will continue to be treated as Chargeable Demand Capacity (HH).
- 14.17.29.10 The Company will calculate the Chargeable Energy Capacity associated with meters that have transferred to HH settlement but are still treated as NHH for the purposes of TNUoS charging from Settlement data provided directly from ELEXON i.e. Suppliers need not Supply any additional information.
- 14.17.29.11 The forecasts that Suppliers submit to the Company under CUSC 3.10, 3.11 and 3.12 for the purpose of TNUoS monthly billing referred to in 14.17.16 and 14.17.17 for both Chargeable Demand Capacity and Chargeable Energy Capacity should reflect the basis on which demand will be charged for TNUoS i.e. volumes associated with those Metering Systems that have transferred to Measurement Class F & G in the BSC (NHH to HH settlement) but are to be treated as NHH for the purposes of TNUoS charging should be included in the forecast of Chargeable Energy Capacity and not Chargeable Demand Capacity.

Make it simpler…

As written charging treatment of F&G change in 2020/21

Measurement Class	Description
A	Non Half Hourly Metered
B	Non Half Hourly Unmetered
C	HH metered in 100kW Premises
D	Half Hourly Unmetered
E	Half Hourly Metering Equipment at below 100kW Premises with current transformer
F	Half Hourly Metering Equipment at below 100kW Premises with current transformer or whole current, and at Domestic Premises
G	Half Hourly Metering Equipment at below 100kW Premises with whole current and not at Domestic Premises



14.17.29.9 tell us to treat F&G as NHH settled

As written these become HH settled from 2020/21

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There is other work ongoing in the same space…

- **Ofgem TCR on residual charging**
  - https://www.ofgem.gov.uk/electricity/transmission-networks/charging/targeted-charging-review-significant-code-review
  - The largest component of demand TNUoS is the residual
  - Expect tariff changes arising from TCR from 2021

- **Ofgem SCR on settlement reform**
  - https://www.ofgem.gov.uk/publications-and-updates/electricity-settlement-reform-significant-code-review-launch-statement-revised-timetable-and-request-applications-membership-target-operating-model-design-working-group
  - We consider it is in consumers' interests to be settled using half-hourly consumption data from smart meters
  - But what does this mean for TNUoS, and even measurement classes A and B (domestic)

Our proposal

- **We are proposing extending the current arrangements for F&G Measurement classes beyond CY 19/20, to then align with broader direction of travel under Residual TCR and Settlement SCR**

- To do this we believe a change to 14.17.29.9 of the CUSC is necessary, changing the expiry date of the provision
- Options:
    1. Status Quo: F&G revert to HH settled from 2020/21 onwards
    2. Remove the end data entirely
    3. Set a reasonable end date based on TCR / SCR ~ 2021/22
    4. Set an “backstop” end date ~ 2025/26

Next Steps

Based on feedback from today, we will look to raise a CUSC modification shortly to address this issue

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TNUoS Charging Methodology
The G/D Split Error Margin

Paul Wakeley, Revenue Manager
National Grid ESO

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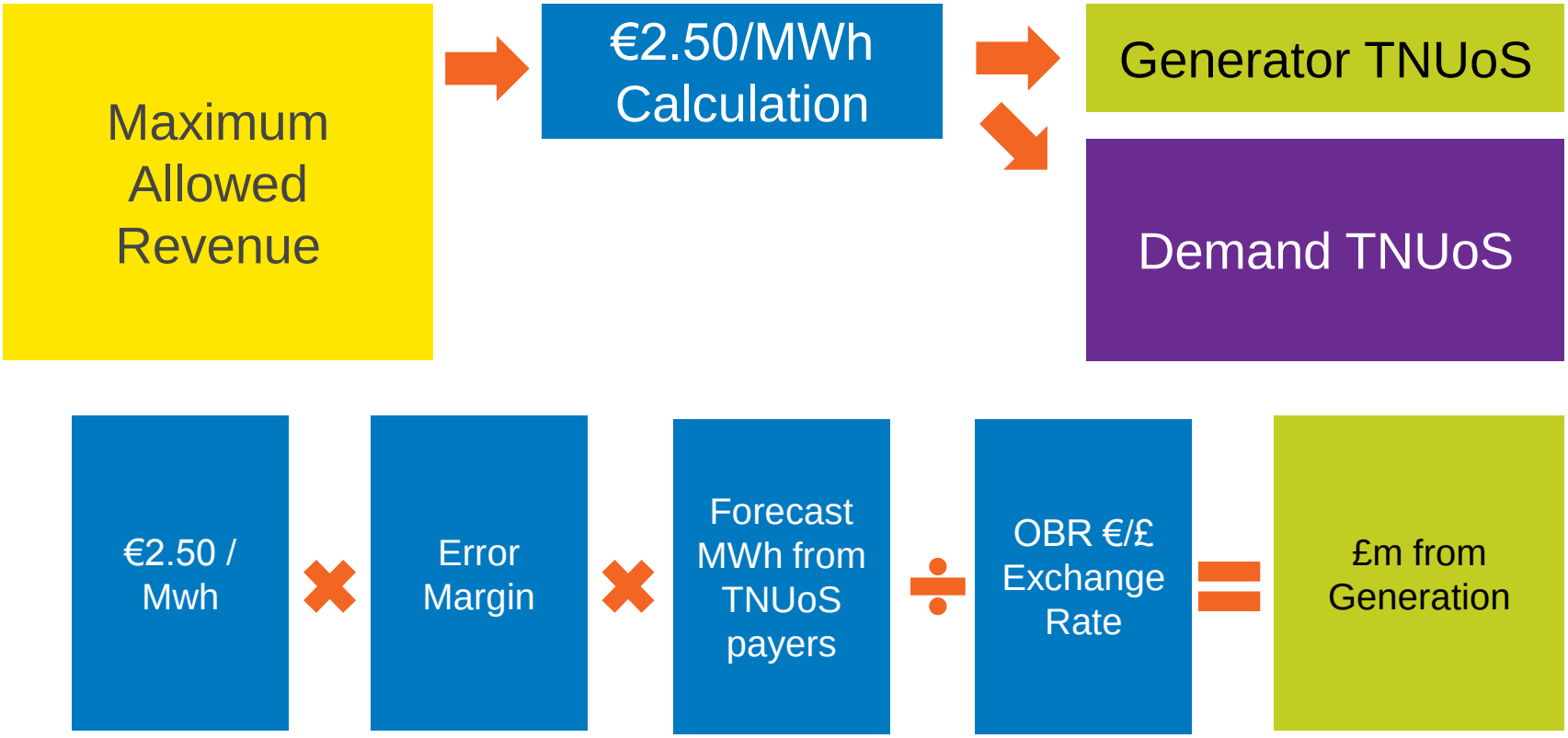
Mechanics of the G/D Split



CUSC Legal Text

14.14.5 The application of a Transmission Network Use of System Revenue split between generation and demand where the proportion of the total revenue paid by generation, for the purposes of tariff setting for a charging year n, is x times the total revenue, where x is:

1. Whilst European Commission Regulation 838/2010 Part B paragraph 3 (or any subsequent regulation specifying such a limit on annual average transmission charge payable by generation) is in effect (a "Limiting Regulation") then:

$$x_n = \frac{(Cap_{EC} * (1 - y)) * GO}{MAR * ER}$$

Where;

Cap_{EC}	=	Upper limit of the range specified a Limiting Regulation
y	=	Error margin built in to adjust Cap_{EC} to account for difference in one year ahead forecast and outturn values for MAR and GO, based on previous years error at the time of calculating the error for charging year n
GO	=	Forecast GB Generation Output for generation liable for Transmission charges (i.e. energy injected into the transmission network in MWh) for charging year n
MAR	=	Forecast TO Maximum Allowed Revenue (£) for charging year n
ER	=	OBR Spring Forecast €/£ Exchange Rate in charging year n-1

2. Where there is no Limiting Regulation, then x for charging year n is set as the value of x used in the last charging year for which there was a Limiting Regulation.

"Error margin built in to adjust CapEC to account for difference in one year ahead forecast and outturn values for Maximum Allowed Revnue and Generation Output, based on previous years error at the time of calculating the error for charging year n"

Ofgem decision (reject) on CMP251

- *We are aware of the concerns raised by industry in the CMP251 FMR about the effect the error margin is having on generator and supplier costs. We are content with the inclusion of an error margin with the existing ex-ante approach. However, NGET should make sure the size of the error margin – currently 21% - is as low as possible in order to minimise any potential distortion and the transfer of costs between generators and suppliers.*

- **Today is the start of a conversation with you about how we achieve this**

Proposal: For 2019/20

- We have “set” the £m from Generation in our June tariff forecast
- Although under the CUSC we could change the error margin now, we believe customers would prefer stability for next year’s charges
- Therefore, we are proposing **no change** to the error margin for 19/20 tariffs

From June Tariff update

Generation tariffs

We are setting generation tariffs to recover £403.5m. This is to ensure that average annual generation tariffs remain below the €2.5/MWh limit. This limit is set by European Commission Regulation (EU) No 838/2010 using the methodology defined in the CUSC. This figure has reduced by £28.3m compared to the April forecast due to a revised forecast of expected generation output. The error margin remains unchanged. The revenue to be recovered from generation, as a total, is now fixed.

https://www.nationalgrideso.com/sites/eso/files/documents/June%20Forecast%20TNUoS%20Tariffs%20for%202019-20%20-%20Report.pdf

Proposal: For 2020/21 onwards

- We will recalculate the error margin with latest data
- **We will share data and the updated margin in early 2019 via TCMF, to provide visibility and transparency**
- The updated value will then apply from 2020/21 tariffs, and be reflected in future five year views

- We are also considering updating the broader G/D split methodology following CMA decision on CMP261. We will share more information in December

How does this affect me?
Latest Five-year View of TNUoS tariffs

- Our latest five-year view uses an error margin of **21%**
- However, we did provide some sensitivities in Table 37, if the error margin were 10%
- For 2020/21, the effect on tariffs (*ceteris paribus*) is:
  - **Generation Residual** **UP** **0.75 £/kW**
  - **Demand Residual** **DOWN** **1.08 £/kW**
  - **Average NHH Tariff** **DOWN** **0.15 p/kWh**

Five Year scenario with error margin at 10% (instead of 21% used in the base case)

		19/20	20/21	21/22	22/23	23/24
Change to Generator	**£m**	**56.19**	**54.66**	**53.22**	**51.85**	**50.42**
Effect on Tariffs						
Generation Residual	£/kW	- 2.83	- 3.63	- 4.87	- 7.41	- 9.98
	Change	*0.78*	*0.75*	*0.72*	*0.69*	*0.60*
Demand Residual	£/kW	50.60	52.37	57.14	62.17	65.78
	Change	*- 1.09*	*- 1.08*	*- 1.06*	*- 1.04*	*- 1.01*
Change to NHH	*p/kWh*	*- 0.15*	*- 0.15*	*- 0.15*	*- 0.15*	*- 0.14*

Next Steps

- No change for 2019/20
- Bring forward data and approach in Early 2019 for 2020/21 onwards

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TNUoS charging of Co-located Generation

Grahame Neale, National Grid ESO

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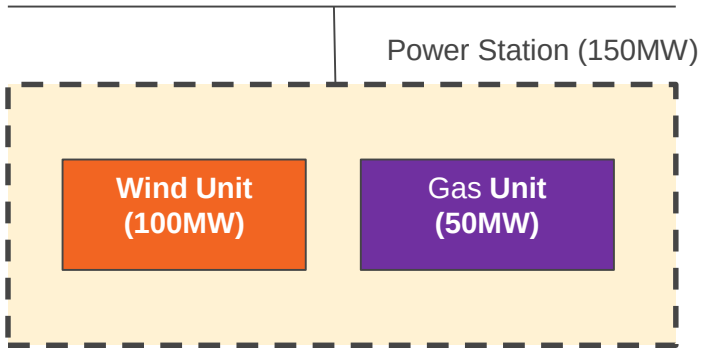
Background

Current TNUoS charging arrangements are setup in a manner that do not allow for cost reflective charging of multiple technologies behind a single connection

TNUoS charges are based on the predominant fuel type

Example: This Power Station would be charged as a 150MW Wind Farm currently.

If the wind and gas units were separate Power Stations, they would be subject to different TNUoS calculations.



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Wider Generation Charging Categories

Intermittent e.g. Wind, Tidal

Conventional Low Carbon, e.g. Nuclear, Hydro

Conventional Carbon, e.g. Coal, Oil, Gas, Pump Storage

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Reasons for Change

As the TNUoS methodology uses fuel type to determine the appropriate charge, this needs to be addressed as;

- Increasing interest in co-located connection applications
- Need to ensure there is a level playing field with all industry participants
- To facilitate markets and competition in a transparent way

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Next steps

- Aware that Ofgem's work (Targeted Charging Review, Access Reform etc) may have impacts
- Looking to engage with industry in December and January to discuss potential options to progress with
- Please contact Grahame.Neale@nationalgrid.com if you'd like to get involved
- Following this feedback, we'll progress with a option through the formal CUSC modification proposal process in 2019

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AOB

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