



**Transmission Charging
Methodologies Forum and
CUSC Issues Steering
Group**

Meeting 140 - 2 November 2023

Agenda

1	Introduction, meeting objectives and review of previous actions Claire Huxley - ESO	10:30 - 10:35
2	TNUoS Task Force verbal update John Tindal - SSE Task Force member	10:35 - 10:45
3	Connections and 5 Point Plan update Alex Curtis - ESO	10:45 - 10:55
4	GB Connection Reforms update Dovydas Dyson - ESO	10:55 - 11:10
5	CISG Connection subgroup verbal update Alison Price - ESO	11:10 - 11:15
6	Onshore v Offshore charging Overview Nitin Prajapati - ESO	11:15 - 11:30
7	Comfort break	11:30 - 11:35
9	CMP423: Amendments to Scaling Factors used for Year Round TNUoS Charges Martin Cahill - ESO	11:35 - 11:50
10	Code Administrator update Milly Lewis - Code Administrator ESO	11:50 - 11:55
11	AOB and Meeting Close Claire Huxley - ESO	11:55 - 12:10

TCMF Objective and Expectations

Objective

Develop ideas, understand impacts to industry and modification content discussion, related to the Charging and Connection matters.

Anyone can bring an agenda item (not just the ESO!)

Expectations

Explain acronyms and context of the update or change

Be respectful of each other's opinions and polite when providing feedback and asking questions

Contribute to the discussion

Language and Conduct to be consistent with the values of equality and diversity

Keep to agreed scope

Review of previous actions

ID	Month	Description	Owner	Notes	Target Date	Status
23-9	October 23	Thinking about the 30% that will connect what is the impact on Transmission Network requirements and the any investment that may be required. Also, what is the geographical spread are they evenly spread or are they all in the north for example (For reference Slide 7 – October slidepack)	AC		Nov 23	Open

TNUoS Task Force verbal update

John Tindal – SSE Task Force member

Connections and 5 Point Plan update

Alex Curtis - ESO

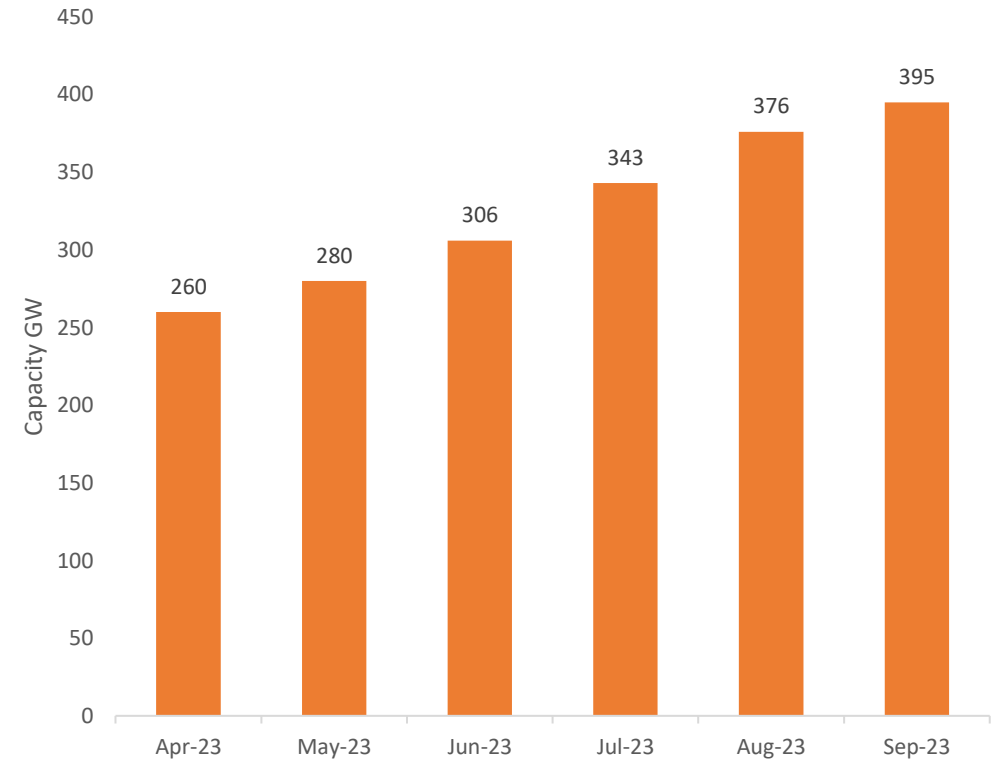
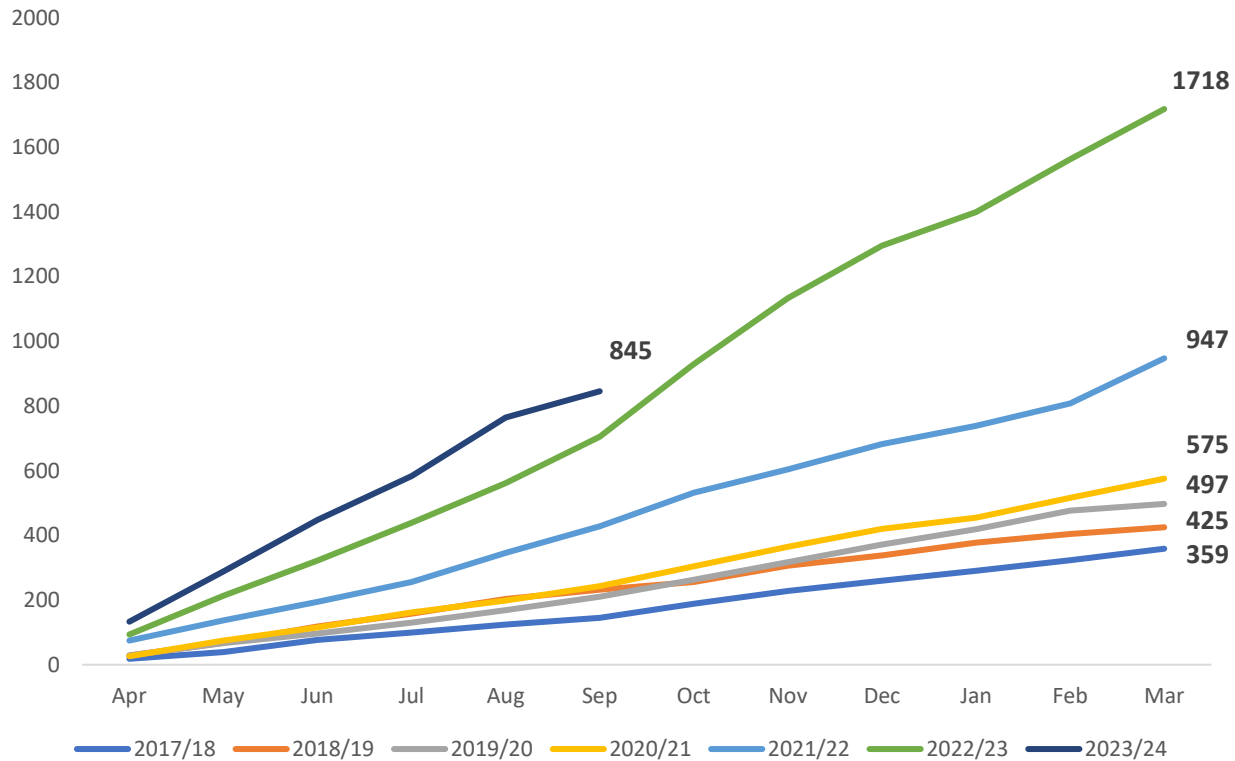


Connection Applications

The number of licenced connection applications has increased over the last 5 years, with a marked increase over the last 2 years. This increase is driven mainly by new Offshore Wind and Battery Energy Storage applications.

The increase in applications has in turn increased the contracted background and connection queue to **404GW**, which is an increase of over **100GW** in the last 5 months.

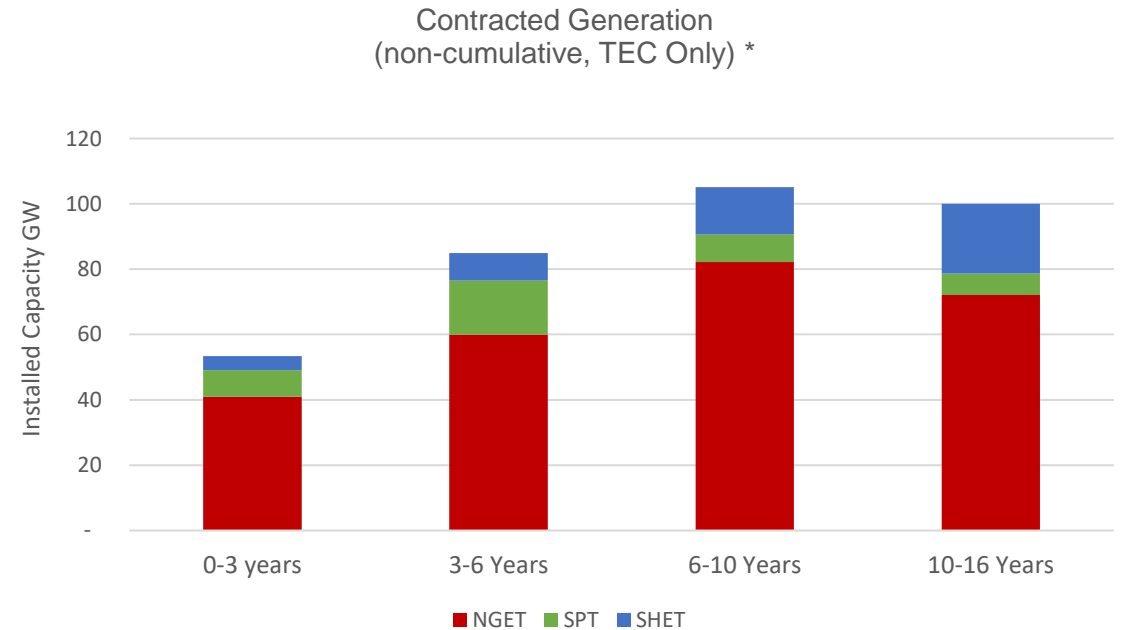
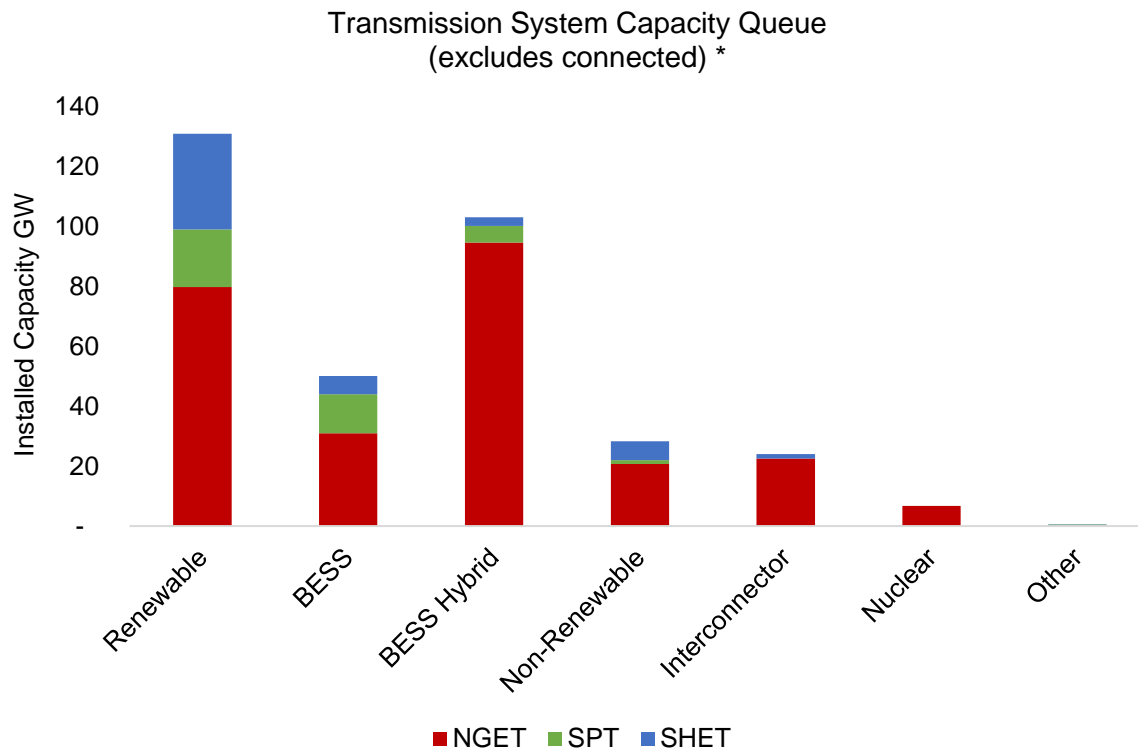
Licensed Applications Received



Connections Queue

The contracted background is still growing, with more applications offsetting a falling acceptance rate.

Over **404GW** of generation projects are currently seeking to connect to the electricity transmission system, yet our data shows that up to **70%** of those projects may never be built. There is **113GW** currently in the distribution queue.



Our 5 Point Plan

Our 5-Point Plan is a set of Tactical Initiatives ahead of the wider connections reform

1. TEC Amnesty
2. Construction Planning Assumptions Review
3. Treatment of Storage
4. Queue Management
5. Non-firm Offer Development



GB Connection Reforms update

Dovydas Dyson - ESO



Connections Reform Phase 2 October Seminars

Presented an overview of feedback from our consultation and set out next steps

Ran four table sessions to further understand stakeholder views on the following key topics:

- Application Window frequency and duration;
- What Gate 2 Milestone should be;
- Reserved Developer Capacity; and
- Detailed Design and Implementation Strategy and Transition options.

Connections Reform Phase 2 October Seminars Feedback

Application Window frequency and duration

- Some thought the 3 month saving was worth the overlap in activities. However, some noted likely issues of pre-application costs and securities placement overlapping (across windows).
- Some suggested regional/technology specific windows (which could be more frequent).
- General suggestion that windows should be reviewed and evolve post implementation.

What Gate 2 Milestone should be

- Mix of views.
- Some thought that using planning milestones leads to technology distortions (although milestones linked to planning types may help) so is linking to land rights better?
- Some proposed further options for Gate 2 – including assessment of developer viability.

Connections Reform Phase 2 October Seminars Feedback

Reserved Developer Capacity (RDC)

- Some suggested RDC should not be technology specific and should be more generic.
- Some proposed allocating RDC based on Network Requirements.
- To ensure forecasts were accurate, some suggested there could be caps per region rather than linked to Grid Supply Point and/or financial Incentives to ensure that there was no “over forecasting”.
- Some questioned whether Third Party Works and Shared Sites have been considered.

Detailed Design and Implementation Strategy and Transition options

- Some keen that ESO, TOs and DNOs prioritise delivering current initiatives before introducing reform.
- Some keen that governance arrangements for reform implementation are robust and representative of industry.
- Some keen that we consult with industry on frequency/duration of windows and on RDC.

Next Steps

Considering additional feedback received at Connections Seminar (16 October 2023) prior to making final recommendations in November 2023.

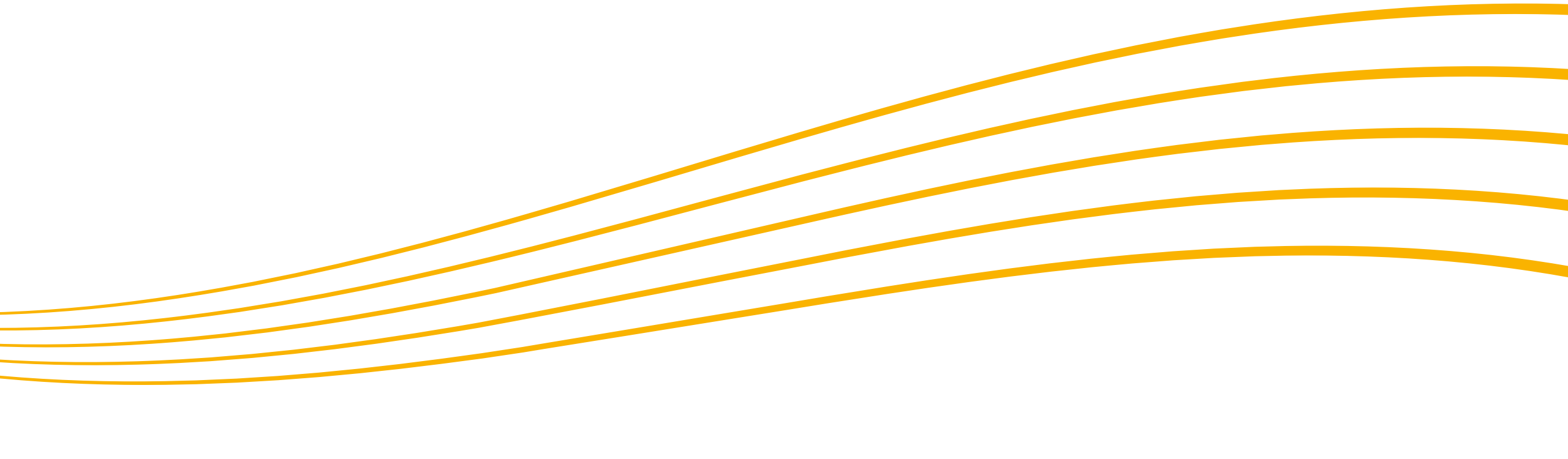


Email us

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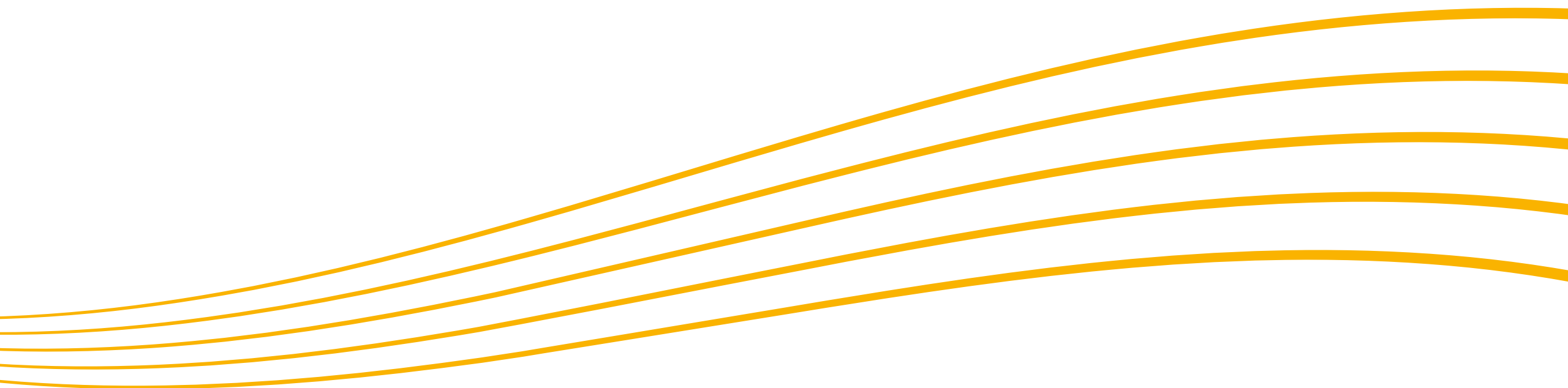
CISG Connection subgroup verbal update

Alison Price - ESO



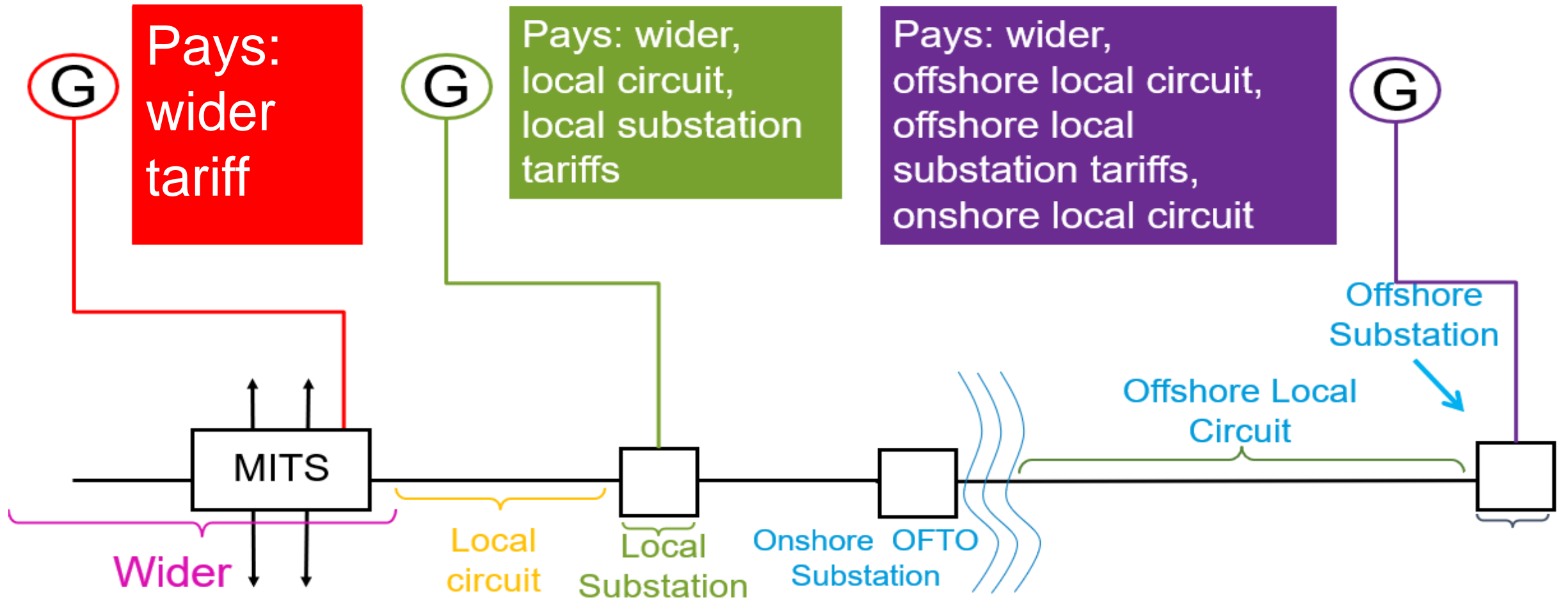
Onshore v Offshore charging Overview

Nitin Prajapati - ESO



Onshore vs Offshore Charging Overview

What TNUoS Tariffs are applicable to a directly connected generator when connected at different points of the network:



OTNR and the Impacts on Onshore Users

Offshore Transmission Network Review (OTNR)

- The OTNR aims to ensure that transmission connections for offshore wind are delivered in a coordinated way; balancing economic, social and environmental factors.
- As part of the Pathway to 2030 workstream of OTNR, the Holistic Network Design (HND) was published with the intention of developing a more coordinated approach to offshore connections.

Network Charging Code modifications and impact on onshore users

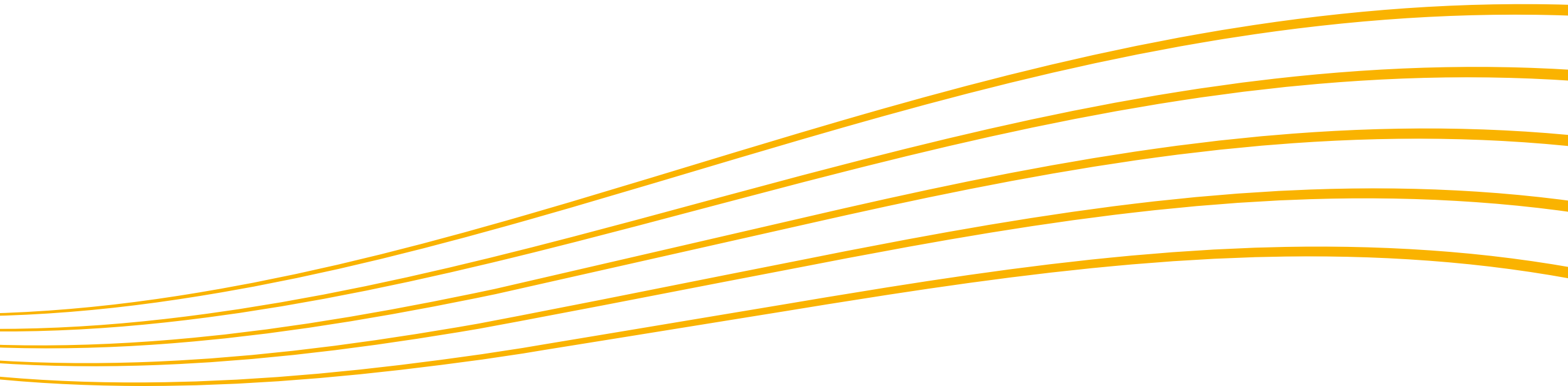
- Currently two CUSC modifications have been raised to develop the network charging methodology and relate to the HND, these are 411 and 419 below:
 - **CMP315/375: Expansion Constant**
 - **CMP411: Introduction of Anticipatory Investment (AI) within the Section 14 charging methodologies**
 - **CMP418: Refine the allocation of Static Var Compensators (SVC) costs at OFTO transfer**
 - **CMP419: Generation Zoning Methodology Review**
 - **CMP423: Generation weighted reference node**
 - **CMP424: Scaling Factors**



Comfort Break

CMP423: Amendments to Scaling Factors used for Year Round TNUoS Charges

Martin Cahill- ESO



What are Scaling Factors?

- Scaling factors are used in the calculation of TNUoS tariffs (Year-Round Background and Peak Security)
- There are pre-defined and variable scaling factors which are detailed in SQSS (Appendix E gives the different parameters (for directly scaled plant) and calculation (for variably scaled plant) to be used)
- Factors are used to scale capacity of plants to equal the ACS Peak Demand (estimated unrestricted winter peak demand on the ETS for the average cold spell)
- If any scaling factors are negative the TNUoS tariff model will not work
- e.g. a –ve scaling factor for CCGTs would mean adding 1MW reduces network cost rather than increasing

Table 1.5 Generation scaling factors for the purpose of tariff calculation

Generation Plant Type	Peak Security Background	Year-Round Background
Intermittent	Fixed (0%)	Fixed (70%)
Nuclear & CCS	Variable	Fixed (85%)
Interconnectors	Fixed (0%)	Fixed (100%)
Hydro	Variable	Variable
Electricity Storage (including Pumped Storage)	Variable	Fixed (50%)
Peaking	Variable	Fixed (0%)
Other (Conventional)	Variable	Variable

The statement of use of system charges

Why is this an issue?

- Large amount of wind on the network shifts the calculation
- Wind has a direct scaling factor of 70%
- As the amount of wind in relation to other generation types on the network increases, the term of the formula becomes smaller and smaller, until it is negative and all variably scaled factors become negative
- This breaks the model for additional calculations on shared tariffs
- In next few years, this will result in negative calculated scaling factors, unless any changes are made
- TEC register regularly changes so difficult to pinpoint exactly when negative tariffs will occur
- Also a question of current state cost reflectivity – CCGTs around 8%, so adding 1GW of generation would only result in 80MW modelled

$$S = \frac{P_{\text{loss}} + \sum_j L_j - \sum_{DT} \left(\sum_k (D_T \times R_{DT_k}) \right)}{\sum_{VT} \left(\sum_n R_{VTn} \right)}$$

ACS Peak Demand (points to P_{loss})
 Direct Scaling Factor for specific plant (points to D_T)
 Capacity for directly scaled plant (points to R_{DT_k})
 Capacity of Variably scaled plant (points to R_{VTn})

What is the proposed solution?

- **Introduce a control to the mechanism which floors Scaling Factors at 10%**
- **Fixed Scaling Factors would uniformly adjust to allow this**
- **This would be introduced as a short term fix, whilst SQSS is reviewed and considers enduring changes to scaling factors**

Why?

- Review of SQSS could take a significant amount of time, and risks –ve scaling factors in calculation before any changes are made
- CUSC currently references SQSS for scaling factors to be used in transport model. This method would maintain alignment to SQSS as much as possible whilst addressing defect
- Relatively simple to implement
- 10% ensures there is some impact included in tariff setting for additional flexible generation (rather than flooring to 0%)
- Variable scaling factors are currently being calculated at around 8% so this would be a minimal change from current state

Code Administrator Update

Milly Lewis - Code Administrator ESO



Key Updates since last TCMF

New Modifications

- **CMP423 'Generation Weighted Reference Node'**
- **CMP424 'Amendments to Scaling Factors used for Year Round TNUoS Charges'**
- **CMP425 'Billing Demand Transmission Residual By Site'**

Decisions

- **CMP331 Option to replace generic Annual Load Factors (ALFs) with site specific ALFs**
- **CMP379 Determining TNUoS demand zones for transmission connected demand at sites with multiple Distribution Network Operators (DNOs)**

Implementations

- **None**

Authority Expected Decision Date

Decisions Pending

Modification	Final Modification Report Received	Expected Decision Date
CMP298 'Updating the Statement of Works process to facilitate aggregated assessment of relevant and collectively relevant embedded generation'	06/04/2022	16/11/2023*
CMP330&CMP374 'Allowing new Transmission Connected parties to build Connection Assets greater than 2km in length and Extending contestability for Transmission Connections'	10/08/2023	08/03/2024
CMP344 'Clarification of Transmission Licensee revenue recovery and the treatment of revenue adjustments in the Charging Methodology'	08/02/2023	08/12/2023
CMP376 'Inclusion of Queue Management process within the CUSC'	07/06/2023	10/11/2023
CMP392 'Transparency and legal certainty as to the calculation of TNUoS in conformance with the Limiting Regulation'	13/10/2023	31/01/2024*
CMP398 'GC0156 Cost Recovery mechanism for CUSC Parties'	11/07/2023	15/11/2023
CMP408 'Allowing consideration of a different notice period for BSUoS tariff settings'	13/10/2023	TBC
CMP412 'CMP398 Consequential Charging Modification'	11/07/2023	15/11/2023
CMP414 'CMP330/CMP374 Consequential Modification'	10/08/2023	08/03/2024
CMP415 'Amending the Fixed Price Period from 6 to 12 months'	13/10/2023	TBC

The Authority's publication on decisions can be found on their website below:

<https://www.ofgem.gov.uk/publications/code-modificationmodification-proposals-ofgem-decision-expected-publication-dates-timetable>

* Dates moved since last update

Key Updates ahead of the next TCMF

November Consultations

- **CMP315** (TNUoS Review of the expansion constant and the elements of the transmission system charged for) and **CMP375** (Enduring Expansion Constant & Expansion Factor Review Code Administrator Consultations scheduled to run from **10 November until 5pm 15 December 2023**)
- **CMP396** (Re-introduction Of BSUoS on Interconnector Lead Parties) Code Administrator Consultations scheduled to run **until 5pm 17 November 2023**
- **CMP418** (Refine the allocation of Static Var Compensators (SVC) costs at OFTO transfer) Workgroup Consultation is scheduled to run from **20 November until 5pm 08 December 2023**
- **CMP411** (Introduction of Anticipatory Investment (AI) within the Section 14 charging methodologies) Code Administrator Consultations scheduled to run from **06 November until 5pm 27 November 2023**

Other

- **CMP286** (Improving TNUoS Predictability through Increased Notice of the Target Revenue) Send Back solution is scheduled to be presented to the November CUSC Panel.
- **CMP413** (Introduction of Anticipatory Investment (AI) within the Section 14 charging methodologies) Workgroup Report is scheduled to be presented to the November CUSC Panel.

AOB & Close