

# Balancing Services Charges

4th Task Force  
12 March 2019

# Welcome and introductions

Colm Murphy



# Purpose of today

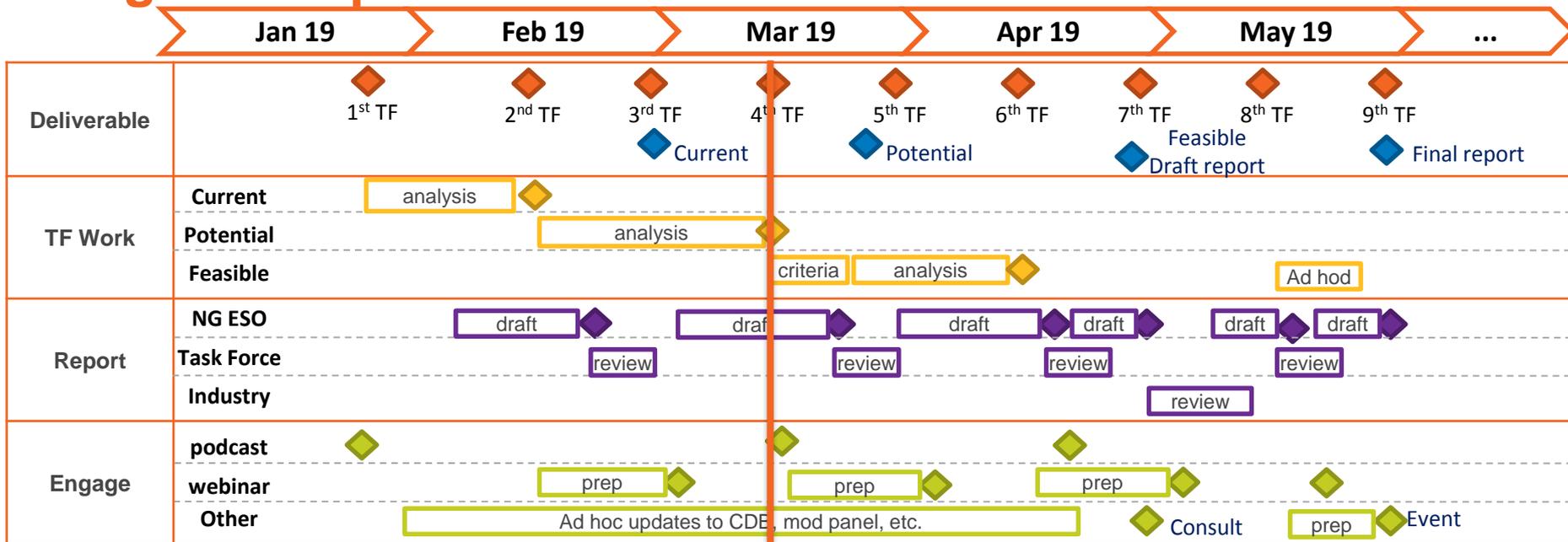
- The **purpose** of the task force meeting today is:
  - Review Webinar feedback on Deliverable 1 and 2
  - Develop an action plan and each of the options for the feasibility stage of Deliverable 3

---

No	Subject	Lead	Time
1	Review Actions, Report Structure and Minutes	Colm Murphy	10:00-10:30
2	Review Webinar Feedback	Sophie VC	10:30-11:30
3	Modelling Update	Paul Wakeley	11:30-12:00
4	<i>Lunch</i>	-	<i>12:00-12:30</i>
5	D3 Action Planning and Programme	Colm Murphy	12:30-14:30
6	D3 Options Development Commencement	Mike Oxenham	14:30-15:30
7	Summary and Next steps	Colm Murphy	15:30-16:00

---

# Programme plan



1- TF 29Jan	2- TF Feb	3- TF Feb	4- TF Mar	5- TF Mar	6- TF Apr	7- TF Apr	8- TF May	9- TF May
<ul style="list-style-type: none"> <li>• TF plan</li> <li>• <b>Currently:</b> analysis actions</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Currently:</b> agree conclusion</li> <li>• <b>Potential:</b> agree scope + analysis actions</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Potential:</b> progress analysis - review options</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Potential:</b> finalise options and decide progression towards <b>Feasible</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Feasible:</b> further analysis options</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Feasible:</b> agree conclusion</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Report:</b> finalisation before consultation</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Report:</b> comments review and actions</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Final report + event</b></li> </ul>

# Action log

No	Action	Owner	Open/Closed
1	Come back to the next meeting with Information on whether a formal consultation process would follow the Task Force	Tim Aldridge (Ofgem)	Closed
2	Check if Terms of Reference refer to conflicting opinions and subsequent decisions	Mike Oxenham (ESO)	Closed
3	Ensure feedback received from the wider industry is taken on-board by Task Force	Sophie van Caloen (ESO)	Open/Ongoing
4	Give consideration to analysis, questions and data sets required and provide this to the taskforce where possible	All TF Members	Open/Ongoing
5	Live Data Sets/Dashboards to be looked into	Mike Oxenham, Paul Wakeley	Open/Ongoing
6	Liase with Elexon in regards to Data Provision	Mike Oxenham (ESO)	Open
7	TF Members to feed in thoughts to MO on which data from Elexon may be helpful.	All TF Members	Open

# Action log

No	Action	Owner	Open/Closed
8	All TF members to consider if they can help provide meeting spaces	All	Open/Ongoing
9	Secretariat to confirm next meeting date	Joseph Henry (ESO)	Closed
10	ESO to confirm arrangements for Alternates in case of TF member apologies	Joseph Henry (ESO)	Closed
11	Secretariat to distribute minutes to Task Force members for a short period of review to agreed wording in section 4 prior to publication	Joseph Henry (ESO)	Open
12	NGESO to engage EUIG in regards to Task Force Feedback	NGESO	Open

# Engagement - Feedback

## Feedback from previous engagements:

- OVO Bilateral engagement Friday 8 March
- Webinar 7 March - see future slides

# Review Webinar Feedback

Sophie van Caloen



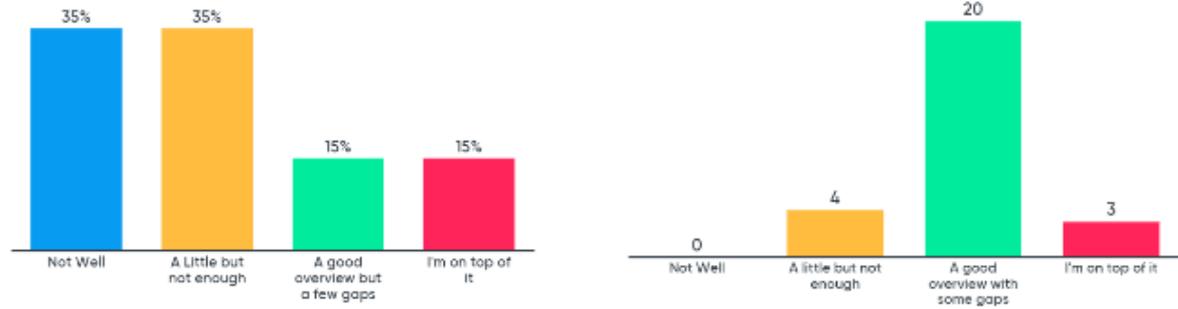
# What was the purpose of the Webinar?

- **General update** from the Task Force: drivers, scope and work programme
- **Deliverable 1:** presentation of the conclusion of the Task Force to date
- **Deliverable 2:** presentation of potential options identified by the Task Force to date
- **Q & A**

**At various points, we sought feedback from the attendees to gauge their understanding of the Task Force**

# Understanding of TF – Before and After Webinar

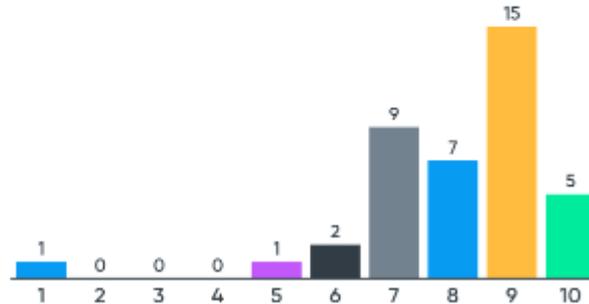
- How well do you feel you understand the progress of the Balancing Services Charges Task Force?



	Before the Webinar	After the Webinar
Respondents stating that they did not understand the progress of the TF well or only little	70%	15%
Respondents stating that they had a good overview or were on top of it	30%	85%

# Deliverable 1 - Conclusion

On a scale of 1-10 (10 being fully agree) how much do you agree with the current conclusion of the Task Force for Deliverable 1?



90% of Respondents voted that their understanding was 7/10 or better, with only 1 vote below 5.

# Deliverable 1 – Comments on conclusion

- **Most comments supportive of the conclusion**
  - Your analysis is fair / indeed, it does not provide a signal / not clear BSUoS was ever designed to provide a signal / because the charge is not granular or locational / analysis make logical sense ...
- **Some comments that might be useful for further analysis**
  - Key driver of constraint cost is network availability. See recent performance of Western Bootstrap.
  - What analysis was done on demand response to signals? Would be good to ensure that this wasn't just anecdotal. Also, as volatility and size of bsuos increases there may be more incentive for DSR to respond overnight.
  - Beware the impacts on power price longer term
  - Largely agree with analysis, though periods of low demand are heavily impacted by reactive and inertia costs, and it would be challenging to produce any forward signal to reduce these costs.
- **Note that no comment received from person voted “1”.**

# Deliverable 2 – Potential Options

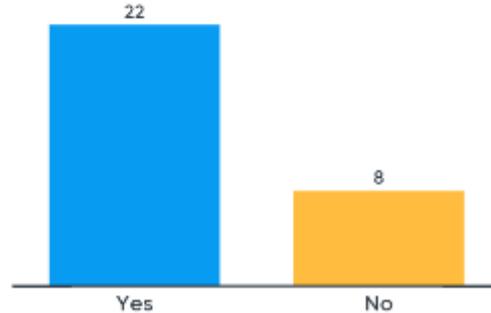
Where should the Task Force focus across these four potential options?



Locational Constraints scored 40%, followed by Locational Reactive Voltage on 30%. Response and Reserve Bands and Response and Reserve Utilisation scored 17% and 13% respectively.

## Deliverable 2 – Potential Options

Do you agree that the Task Force has identified the most suitable Potential Options for Deliverable 2 to further explore and develop in Deliverable 3?



74% of Respondents agreed that that Task Force had identified the most suitable Potential Options for Deliverable 2 to further explore and develop in Deliverable 3.

## Deliverable 2 – Comments (yes)

### ➤ **Most comments supportive of the agreed potential options**

- The main themes have been covered and you are focusing on the principal drivers of volatility in bsuos / Analysis is logical / Analysis seems reasonable as most discounted costs make sense ...

### ➤ **Some comments supportive of the agreed potential options but with caveat**

- The elements identified for further assessment are unlikely to be suitable for a FLC, but it may be helpful to investigate to better explain to industry why they are not.
- Agree that these are the areas that could be more targeted, although this may increase complexity. The "insurance" costs should surely be stripped out as a fixed charge, not half hourly.
- Would be good to be clear on definition of "forward-looking" - are we intending a dispatch or investment behavioural signal? Tension/conflict between these and other signals is not necessarily a bad thing - could lead to more efficient system overall

### ➤ **Some people would have preferred to answer “maybe” as more options might be considered and further explanation of options needed.**

## Deliverable 2 – Comments (no)

### ➤ **Some comments from people that did not agree – on constraints**

- Locational constraints are a result of under investment in network by economic decision and would need to be addressed alongside TNUOS
- Constraint costs which are ‘too high’ is just a signal for reinforcement! Get on it
- NOA process consider long term constraints then gives a TNUoS signal. Could a SO signal be created as well. This taskforce appears to be just looking at short term signals

### ➤ **Some comments from people that did not agree – others**

- Response and Reserve Utilisation - loss of double circuit risk more a driver then generation (example, Creyke beck) - very complex and odd to penalise every generator that trips (or major demand changes) - more often it's circuit loss for huge swings
- For demand users any reaction to bsuos must be set by a set forward looking price
- RoCoF is locational and related to synchronous inertia levels and this does not seem to have been considered. Please consider future needs as well. Not sure if the ESO is already accessing the BM to procure short circuit level but this is locational
- The only way to get a forward looking signal is to have an ex ante price

# Q & A – selected questions (I/II)

- **Transparency** : quite a lot of balancing/system actions are undertaken before real time. Information provision and transparency will allow people to react / Do you need to be more transparent between when constraints breach the threshold when transmission investment is needed as some constraints are actually efficient and not a cost / If BSUoS was an open clearing market, participants would be able to see what prices could be.
- **Competition** : How can locational constraints work if NG refuses to publish where locational constraints are due to 'competition reasons'? / There is a licence condition for generators for Transmission Constraints (not to take advantage) so is competition problems a red herring
- **Link with network investments**: If constraints are the result of underinvestment in the system, shouldn't these be passed to the TO to drive investment? / Is there a linkage into long term SO signals and the NOA process. BSUoS is short term but constraints can be managed by SO solutions (i.e. storage)
- **Demand incentive**: Demand for not offtaking enough is illogical. The point of the system is to meet demand not to create demand for supply?
- **Future developments to consider**: In the future the ESO might use the BM to synchronise plant to procure short circuit level and inertia, is the TF considering this? / Article 16 of EGBL is looking to remove pre determined pricing. This will increase volatility and maybe start creating price signals. Not necessarily a bad thing / Are the task force factoring in the frontier economics work around vocational Bsuos?
- **Ex-ante**: To give a forward looking signal you need to publish a forward looking price. Is this being considered for the constraints or voltage options? Then reconciled? / The only way to get a forward looking signal is to have an ex ante price

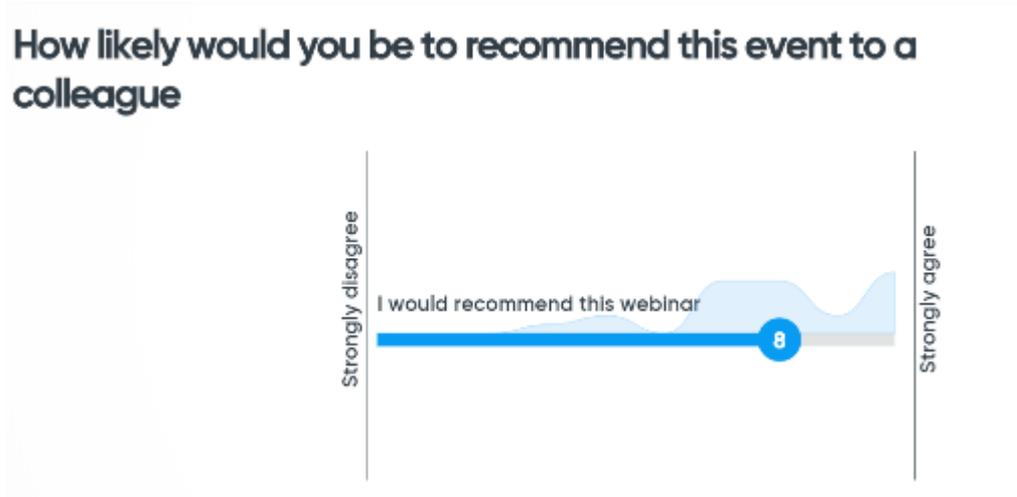
## Q & A – selected questions (II/II)

- **Payment:** if you aren't clear on who's paying, how can you design a signal intended for user behavioural response? Who is the "user"? / Would locational constraint charging include a penalty to demand for not off- taking from the system? / If level of constraint costs is economically efficient (i.e. don't invest) should the cost be recovered locationally? / Could there be separate charges for demand and supply to avoid penalizing additional demand at times of low load that could reduce costs? / Are you considering a BSUoS credit for distribution-connected demand behind a constraint to incentivise consumers to alleviate the constraint and make better use of the low-carbon energy available?
- **Options:** Could Energy Imbalance be re-prioritised once the other elements have been considered? Keen the door isn't shut just because it's too difficult
- **Storage:** could storage solutions naturally overtime reduce volatility. Should we be looking at encouraging the market to balance the system thus reducing the role of the SO and reduce volatility in BSUoS / If constraint costs are considered to be 'too high' then surely the logical answer is to manage with storage and reinforce?
- **DSO:** You need to be considering DSO and make sure signals don't contradict each other. / Is there merit in looking at how SO costs on the system are created by generation (embedded) in certain parts of the country during the summer deminis demand? They don't fit neatly into BSUoS?
- **Other markets elements:** If both TNUoS and BSUoS are providing signals, the interactions need to be considered, it wouldn't be efficient for both the send contradicting signals / How will any changes to BSUoS charging be managed alongside the uncertainty of local flexibility markets e.g. Piclo flex

### Additional note :

- Some concerns were raised about the TF being “dominated by generators parties”.
- Several questions related to the process and link with TCR/SCR as well as working groups

# How likely are you to recommend the Webinar?



Using a sliding scale, the Webinar averaged a score of 8/10 under this metric, showing that attendees appreciated the approach taken by the Task Force by undertaking the Webinar

# Modelling Update



**Paul Wakeley**

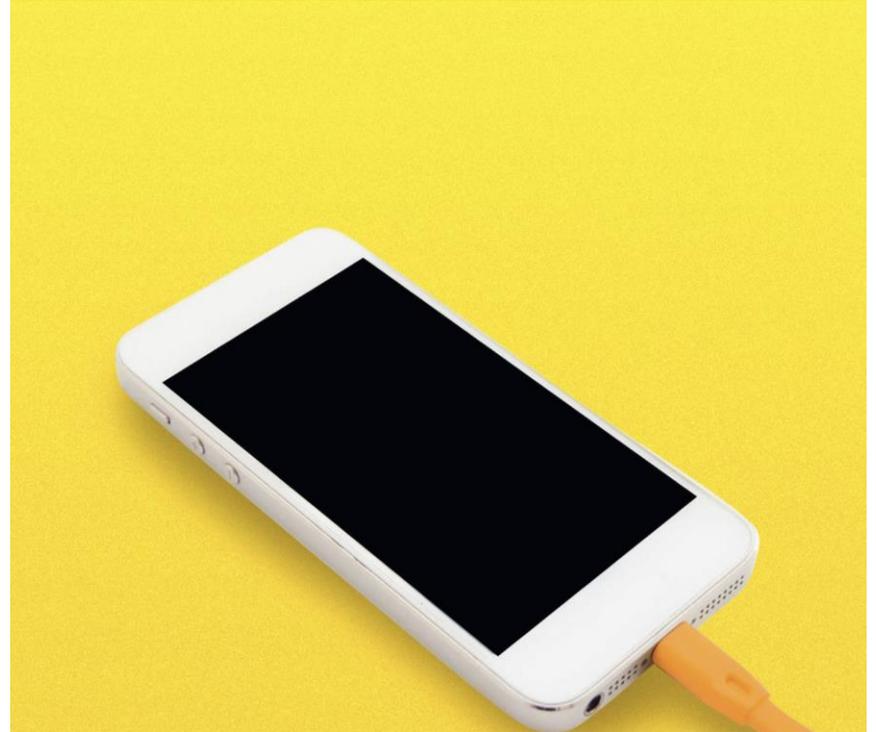
Future Markets Modelling  
Manager



# Purpose

Provide a short update on the progress of the modelling work, and the preparations for the next stage.

1. Completing historic analysis
2. Preparing for future modelling
3. Possible limitations of data



# 1. Completing historic analysis

**Following your feedback, we are refining the dataset and analysis for Deliverable 1**

**Our statistical analysis on forward looking signals in the existing BSUoS price is being refined following your feedback from the previous task force meetings**

**We will share the updated dataset and the analysis as soon as we can**

You said (abridged)	We are:
Update the dataset with more recent data, and more granular locational and cost data	We are working on providing this.
Look at Gross Demand	We are able to do this, with some settlement data provided under P349
Include embedded wind	Our dataset already includes embedded wind
Use Plexos	Plexos provides a “snapshot” of the system for a given configuration. It may be useful for future modelling.
Assess Interconnector separately	Interconnector flows are identified as a specific field in the data
Look at forecast vs actual for wind and solar	The dataset already includes this level of data
Add standard deviation	This can be provided
Information form demand	A number of source have been identified, but need to consider how these can be used

## 2. Preparing for future modelling requirements

Once the options are better defined, we can construct tariffs in different timescales

Be aware of the limitations

We expect the task force to ask “what would this tariffs look like”, to prepare for this:

1. We can use historic data, recalculated using a different methodology
2. We are collating sources of data that may be required e.g. locational generation / demand.
3. We can use Plexos, and data such as FES and NOA, to look at a day in the life of the system in future

A **significant limitation** is that this analysis is ‘status quo’ – it doesn’t take in to account market parties responding to the signal.

### 3. Modelling limitations of (possible) options

Data availability for both historic and future will be a possible limitation for charging options

1. **We record data today, for the purposes of charging / operate today.** Therefore, it might not be possible to 'cut up' charges as proposed
2. To deliver a different future charging structure might require **more work from ESO / system changes** to deliver things on an enduring basis. This needs to be considered as a limitation to be overcome.

# Q&A



# D3 Action Planning and Programme

Colm Murphy

## D3 Action Planning and Programme

**A Draft Final Report is to be published by end April 2019.**

**The next TFs are scheduled as follows.**

- 26th March (Q: Do we need to reschedule this task force?)
- 8th April
- 24th April

**As a TF what do we need to do between now and end of April to allow us to publish the draft final report and how are we going to approach e.g. what do the next 4-6 weeks look like for us as a TF to tentatively conclude D3...?**

# Access and FLC SCR - Guiding Principles

1. Arrangements support efficient use and development of network capacity
2. Arrangements reflect the needs of consumers as appropriate for an essential services
3. Any changes are practical and proportionate

Throughout D3 considerations what should be our Guiding Principles?

## D3 Terminology Discussion (comments on draft report)

- **Signal** – Is there a market price which in theory could incentivise someone to do something? This is a very weak test. However, the report appears to over play this indicating that some members suggest some elements may meet this test, without making clear that this does not necessarily mean they may be useful, or effective forward looking signals.
- **Useful forward-looking signal** – This is a much stronger test. If a party responded to the price signal, would that “market behaviour” be useful for reducing system cost ? I.e. it may not be useful if the incentive does not reflect a system benefit, if it may be in the wrong direction, or it may overly incentivise behaviour if there is double counting because the behaviour is already be incentivised by existing market mechanisms. I was concerned about 2.3.5. which defines “market behaviour” as behaviour which reduces overall cost. It may be clearer to explicitly refer to “useful market behaviour” when we mean it to be useful. Also important to be explicit whether we are referring to “investment”, or “dispatch” behaviour.
- **Effective forward-looking signal** – Strongest test relating to the CUSC objective of “effective competition”. Even something could provide a useful price signal, then do users actually respond to it in an effective way ? I.e. It may not be effective if users can’t forecast it, or there may be practical reasons why users can’t, won’t, or don’t respond to it. As above, be explicit whether we are referring to “investment”, or “dispatch” behaviour.
- **Cost-reflective signal** – A signal that reflects an element of system cost. There is a nuance here that just because a signal may be cost-reflective, does not necessarily mean that it is “useful”, or “effective” as a forward looking signal
- **Market distortion** – This would include price signals which users do respond to, but which tend to result in unhelpful behaviour which increases system cost e.g. if the incentive is in the wrong direction, if it is double counting, or if it pollutes existing price signals. It may be helpful to draw this out in places.

# D3 Options Development Commencement

Mike Oxenham



# ALUO Model Overview

## What is ALUO?

- A facilitation process/technique to generate options against a problem or question being asked and then to take those options and refine them and aim to find an effective solution to any problem or question.

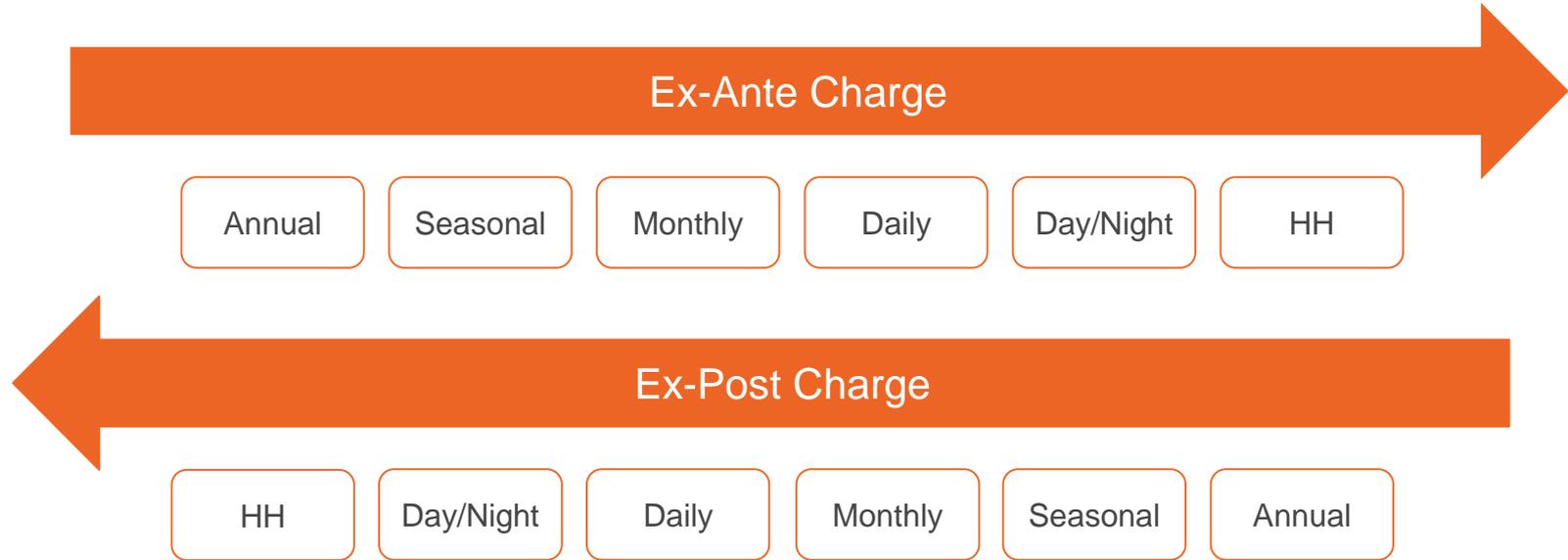
## What is the ALUO Process?

For each of the options which have been generated the task force will then in future:

- Discuss the **Advantages** of each option proposed as a group.
- Discuss the **Limitations** each option as a group noting it is critical limitations are phrased as questions. (e.g. How can option X deliver more of Y...?)
- Discuss the **Uniqueness** each idea brings to the table.
- Discuss solutions to **Overcoming Limitations** being proposed as questions.

# Common Factors

- For each of the identified options there are common factors for consideration as follows.



- Assumption – at the Feasibility Stage the £/MWh charge structure will also be explored.
- Assumption – the detailed cost component allocation to options is for future consideration.

# Potential Options

## Locational Transmission Constraints

For example, if in 'Zone A' there are transmission constraint costs being incurred across a particular boundary then those costs could be allocated to those specific parties behind the constraint and generating (or not taking demand) at the time of the constraint.

## Locational Reactive and Voltage Constraints

For example, if in 'Zone B' there is a voltage issue and costs are incurred resolving that voltage issue due to reactive power absorption payments then those costs will be recovered from those in 'Zone B' who are contributing to the need for reactive power absorption.

## Response and Reserve Bands

For example, if analysis has shown that an extra 'X' MW worth of response has been procured to continue to protect system frequency due to the largest loss then the costs of this additional response could be paid by those connections in the new range, or by those who are exacerbating the issue.

## Response and Reserve Utilisation

For example, a frequency service is automatically utilised for frequency support due to the trip of a generator so the costs associated with service utilisation are paid for specifically by the generator which tripped and caused the frequency issue at that time, whereas those other related costs are then treated as a cost-recovery charge.

# Summary and Next Steps

Colm Murphy



# Task Force - Future Meeting Dates

Date	Time	Location
Tuesday 26 March	10am – 4pm	The Strand
Monday 8 April	10am – 4pm	TBD
Wednesday 24 April	10am – 4pm	TBD
Tuesday 7 May	10am – 4pm	TBD
Thursday 23 May	10am – 4pm	TBD

# Thank you

If you have further views please contact [ChargingFutures@nationalgrid.com](mailto:ChargingFutures@nationalgrid.com).