

Transmission Charging Methodologies Forum



Wednesday 11th November 2015

Introduction and Welcome



Paul Wakeley

Agenda

- 10:30 Introduction – Paul Wakeley, National Grid
- 10:40 CUSC Modifications Update – David Corby, National Grid
- 10:55 Review of CMP224 error margins - Stuart Boyle, National Grid
(to include 2 minutes silence)
- 11:15 Annual Load Factors - Paul Wakeley, National Grid
- 11:35 TNUoS forecasts and publication timetable - Stuart Boyle, National Grid
- 11:45 TNUoS and Impact of Longannet – Helen Snodin, CAG
- 12:00 AOB – Charging issues
- 12:10 Lunch
- 12:40 Start of CUSC Issues Standing Group: Purpose and terms of reference – Paul Wakeley, National Grid
- 12:55 Discussion item: Future CUSC issues (non charging) – Nick Pittarello, National Grid
- 13.40 AOB and close

Ongoing modification proposals



David Corby

Ongoing modification proposals page 1 of 7

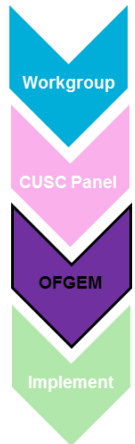
- **CMP227: Reduce the G:D split of TNUoS charges, for example to 15:85**
 - This modification was rejected by Ofgem on 15th September, therefore no implementation plan is needed.
- **CMP235 / CMP236: Introduction of a new Relevant Interruption Type / Clarification of when Disconnection Compensation payments can be expected under a Relevant Interruption**
 - Ofgem approved this modification proposal (WACM3) in July 2015.
 - In order to implement, a fast tracked CUSC modification proposal is necessary to alter some legal text (see CMP252 below).



Ongoing modification proposals page 2 of 7

■ **CMP237: Response Energy Payment for Low Fuel Cost Generation**

- Review voting for this modification took place at the July Panel, and it has now been sent to Ofgem.
- Ofgem have decided to await submission of CMP243 and decide on these two modifications together (potentially early next year).



■ **CMP242: Charging arrangements for interlinked offshore transmission solutions connecting to a single onshore substation**

- Workgroup voting for this proposal took place at the Workgroup held on 4th September.
- The Workgroup reported to the October CUSC Panel, and the Code Administrator Consultation is now open.



Ongoing modification proposals page 3 of 7

■ **CMP243: A fixed response energy payment option for all generating technologies**

- This proposal has been granted a 2 month extension and will report back to the CUSC Panel in November.
- The Workgroup consultation is now open and will close on 24th November.



■ **CMP244: Set final TNUoS tariffs at least 15 months ahead of each charging year**

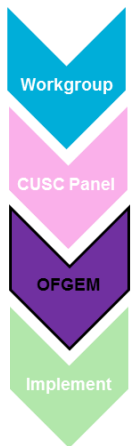
- 5 Workgroups have taken place so far for this proposal.
- The Workgroup consultation is currently live and will close on 19th November. The consultation is consulting on a revised Original which looks at setting the TNUoS tariff notice period to 6-8 months rather than 15.



Ongoing modification proposals page 4 of 7

- **CMP245&246: Introduction of a new ‘category 5 Intertripping Scheme’ to include System to System intertrips in relation to One-off Charges**
 - The customer has withdrawn this modification and no alternative proposer has come forward, therefore it will not be progressed.

- **CMP247: TNUoS Demand Charges during the implementation of BSC Modification P272 following the approval of BSC Alternative Modification P322**
 - This proposal was discussed at the July TCMF meeting, and went straight to Code Administrator consultation.
 - The CUSC panel voted on this proposal in September and an Ofgem decision is anticipated in November.



New modification proposals – page 5 of 7

■ **CMP248: Enabling capital contributions for transmission connection assets during commercial operation**

- This proposal was discussed at the July TCMF meeting, and was raised by Eneco.
- The Workgroup will report to the November Panel, after which the modification will go to Code Administrator consultation.



■ **CMP249: Clarifications of other charges (CUSC 14.4) Charging arrangements for customer requested delay and backfeed**

- The Workgroup consultation is anticipated in November and the Workgroup will report back to the CUSC panel in December.



New modification proposals – page 6 of 7

- **CMP250: Stabilising BSUoS with at least a twelve month notification period**
 - Following previous discussions at TCMF this proposal was raised by Drax. 3 Workgroups have been held to date.
 - The Workgroup is currently due to report back to the CUSC panel in December.
- **CMP251: Removing the error margin in the cap on total TNUoS recovered by generation and introducing a new charging element to TNUoS to ensure compliance with European Commission Regulation 838/2010**
 - This proposal was raised by British Gas and seeks to set generation charges to €2.5/MWh, followed by post event reconciliation as necessary.
 - The Workgroup has met once and is awaiting legal advice on interpretation of EU Regulation 838/2010. The next Workgroup will take place on 26th November.



Ongoing modification proposals – page 7 of 7

■ **CMP252: Changes to CMP235/CMP236 legal text**

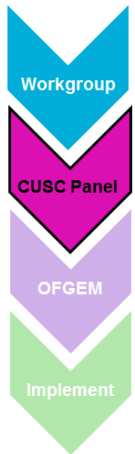
- This proposal was raised by National Grid to complete the implementation of CMP235/6 by modifying some minor points in the relevant legal text.
- The CUSC Panel agreed this modification could be progressed via self-governance / fast tracked. Following the publication of the fast track report, this has now been implemented.



New modification proposals – page 1 of 1

■ **CMP253: Housekeeping changes**

- This modification was raised to change section 11 of the CUSC following the implementation of CMP235/6.
- The CUSC Panel agreed this modification could be treated as self-governance and the Code Administrator consultation closed on 20th October.
- A report will go to the November Panel.

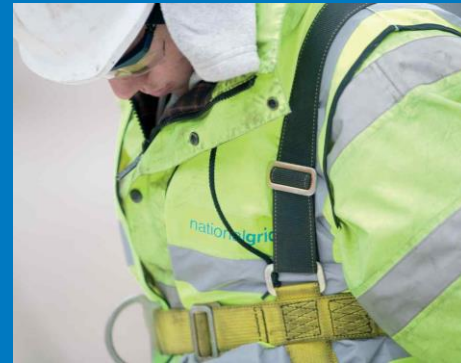


■ **CMP254: Addressing Discrepancies in Disconnection / De-energisation Remedies**

- This proposal was raised by EDF in October and seeks to enable Suppliers to instruct National Grid to disconnect customers in accordance with their rights under the Electricity Act.
- The Panel agreed with the Proposer's recommendation for urgency (Ofgem to confirm). Workgroup meetings took place on 6th and 9th November.



Review of CMP224 Error margins



Stuart Boyle

G/D Split

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

Where;

- Cap_{EC} = Upper limit of the range specified by 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
- 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

Calculation of y (forecasting error)

- Includes year ahead forecasting error for revenue and volume
- Does not include exchange rate error as this is fixed by the charging methodology (OBR March forecast)

$$Error = \frac{(1 + Revenue\ Error)}{(1 - Volume\ Error)}$$

Revenue Forecasting Error

Year	Forecast in Tariff Model (£m)	Actual from Gen Rec (£m)	Variance	Variation adjusted for systemic error
2010/11	414.66	401.49	-3.2%	5.1%
2011/12	458.24	390.40	-14.8%	-6.5%
2012/13	516.79	475.09	-8.1%	0.2%
2013/14	570.52	516.39	-9.5%	-1.2%
2014/15	654.42	615.23	-6.0%	2.3%

Systemic Error	Stochastic Error
-8.3%	6.5%

Generator Volume Forecasting Error

Year	Forecast (TWh)	Source	Actual (TWh)	Source	Variance	Variation adjusted for systemic error
2008/09	348.2	Y-1 SYS Forecast	337.6	SYS Outturn	-3.0%	-1.6%
2009/10	325.9	Y-1 SYS Forecast	325.4	SYS Outturn	-0.1%	1.3%
2010/11	323.7	Y-1 SYS Forecast	314.7	SYS Outturn	-2.8%	-1.3%
2011/12	314.4	Y-1 SYS Forecast	312.5	SYS Outturn	-0.6%	0.9%
2012/13	Change of forecasting approach					
2013/14	318.0	2012 FES Annual Demand	315.7	2015 FES Annual Dem	-0.7%	0.7%
2014/15	330.2	2013 FES GO Excl Imports				
2015/16	319.6	2014 FES GO Excl Imports				

Systemic error	Stochastic Error
-1.5%	1.6%

Calculation of y (forecasting error)

$$Error = \frac{(1 + Revenue\ Error)}{(1 - Volume\ Error)} = \frac{(1 + 6.5\%)}{(1 - 1.6\%)} = 1 + 8.2\%$$

- Effective cap reduced from €2.33/MWh (2015/16) to €2.30/MWh (2016/17)
- £6m swing from generation to demand in 2016/17
- Next updates:
 - 2015/16 generator reconciliation
 - 2016 Future Energy Scenarios

Annual Load Factors 2016/17



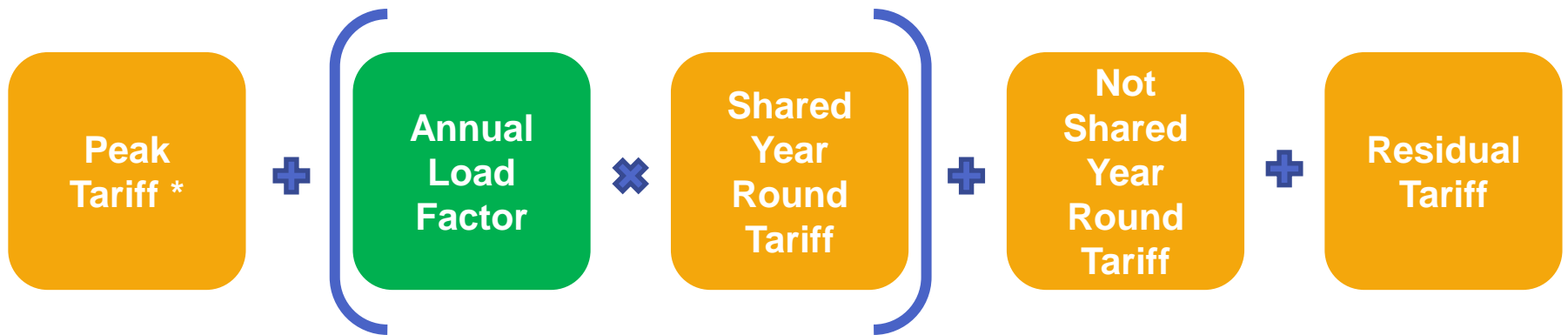
Paul Wakeley

Agenda

- What is an ALF used for?
- How do we calculate an ALF?
- Changes since Draft Annual Load Factors for 2014/15

A reminder ALFs (CMP213)

Tariff =



* Peak Tariff only paid by conventional generation

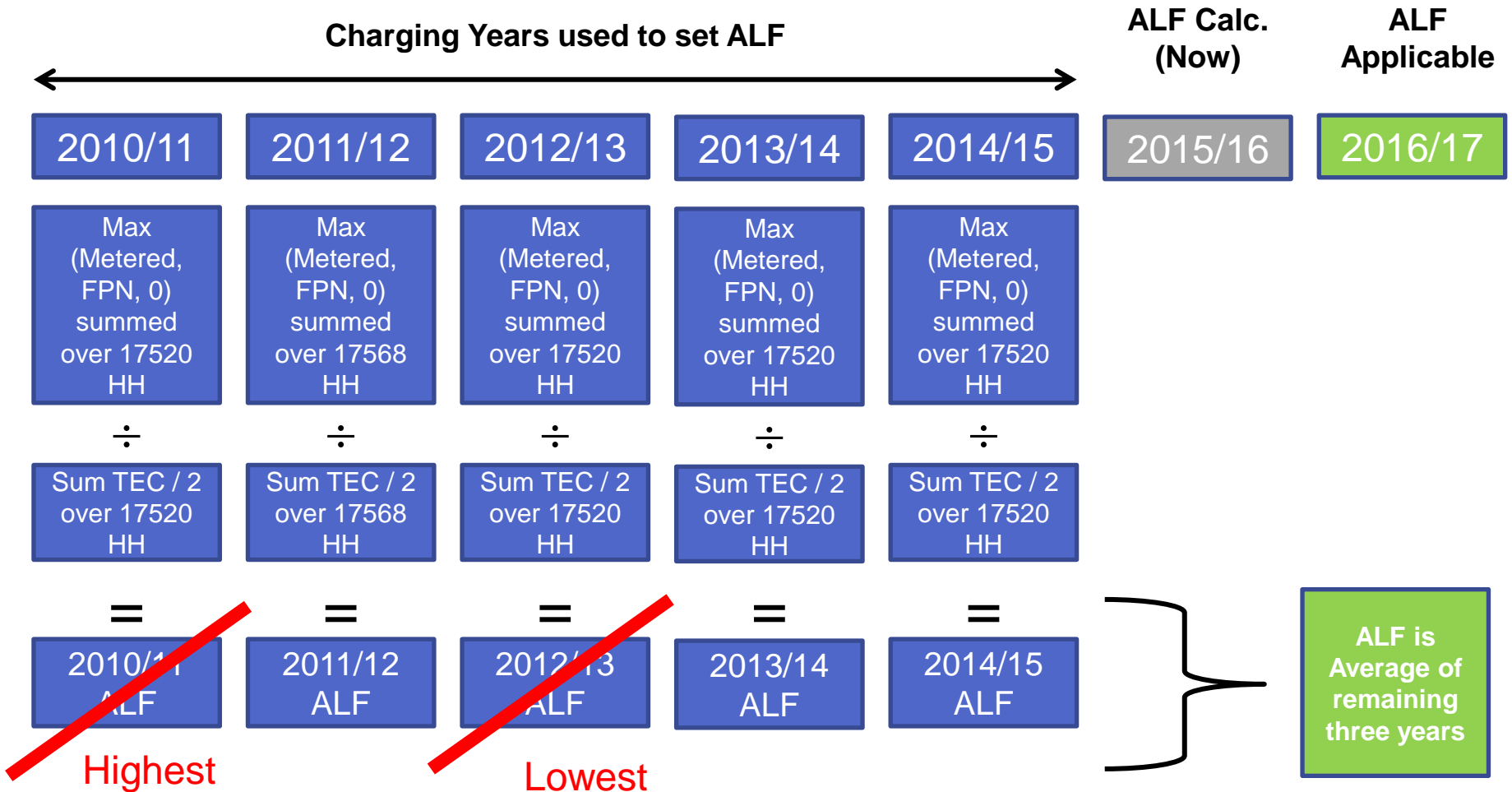
Annual Load Factors

- **ALFs have been calculated for each generator** for the charging years 2010/11, 2011/12, 2012/13, 2013/14, 2014/15 to form the overall ALF
- ALFs give a measure, over five years, of a generator's output compared to TEC, using:
 - Transmission Entry Capacity (TEC),
 - Metered Flows (MF) and
 - Final Position Notifications (FPN)

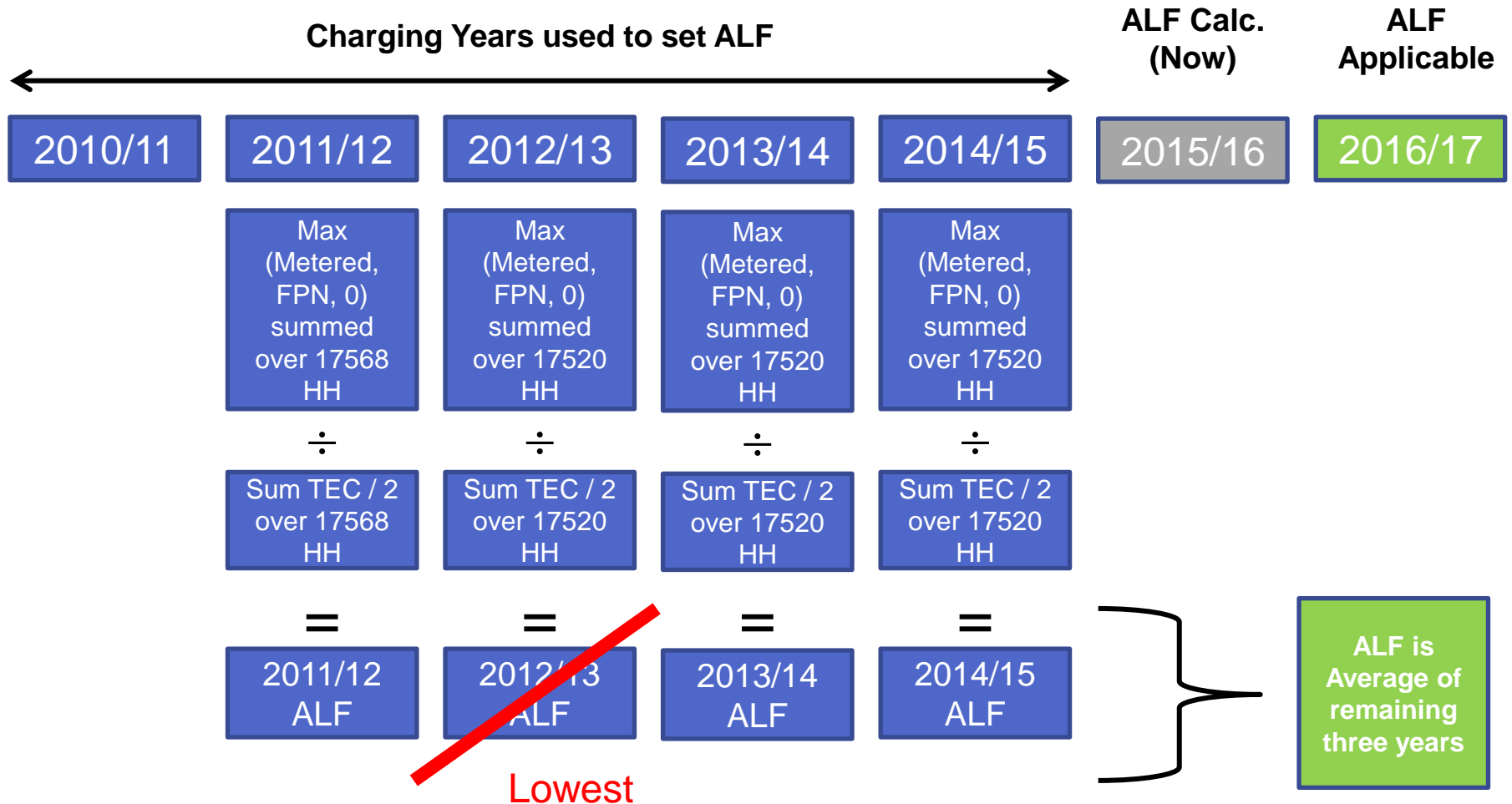
Some Observations

- **ALFs are calculated at power station level.**
 - For a power station with multiple Balancing Mechanism Units (BMU) representing generating sets and/or station demand, the BMU are aggregated before calculating the ALF.
- **Cascade hydro schemes**
 - These may have multiple power stations included in a BMU. For these the ALF is calculated at scheme level by aggregating stations and their associated BMU before calculating the ALF. The scheme level ALF is applied to each station in the scheme.

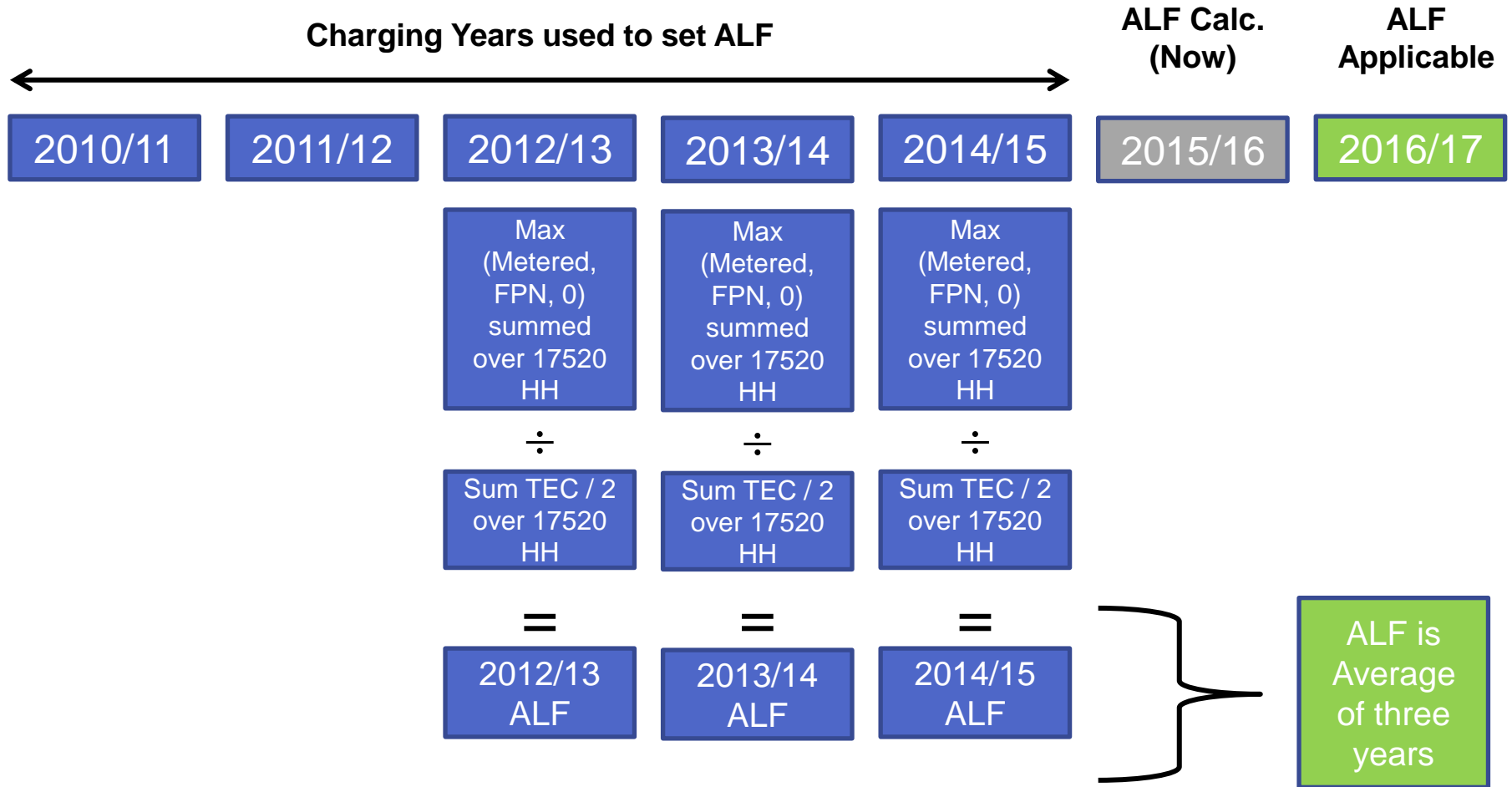
How to calculate an ALF....



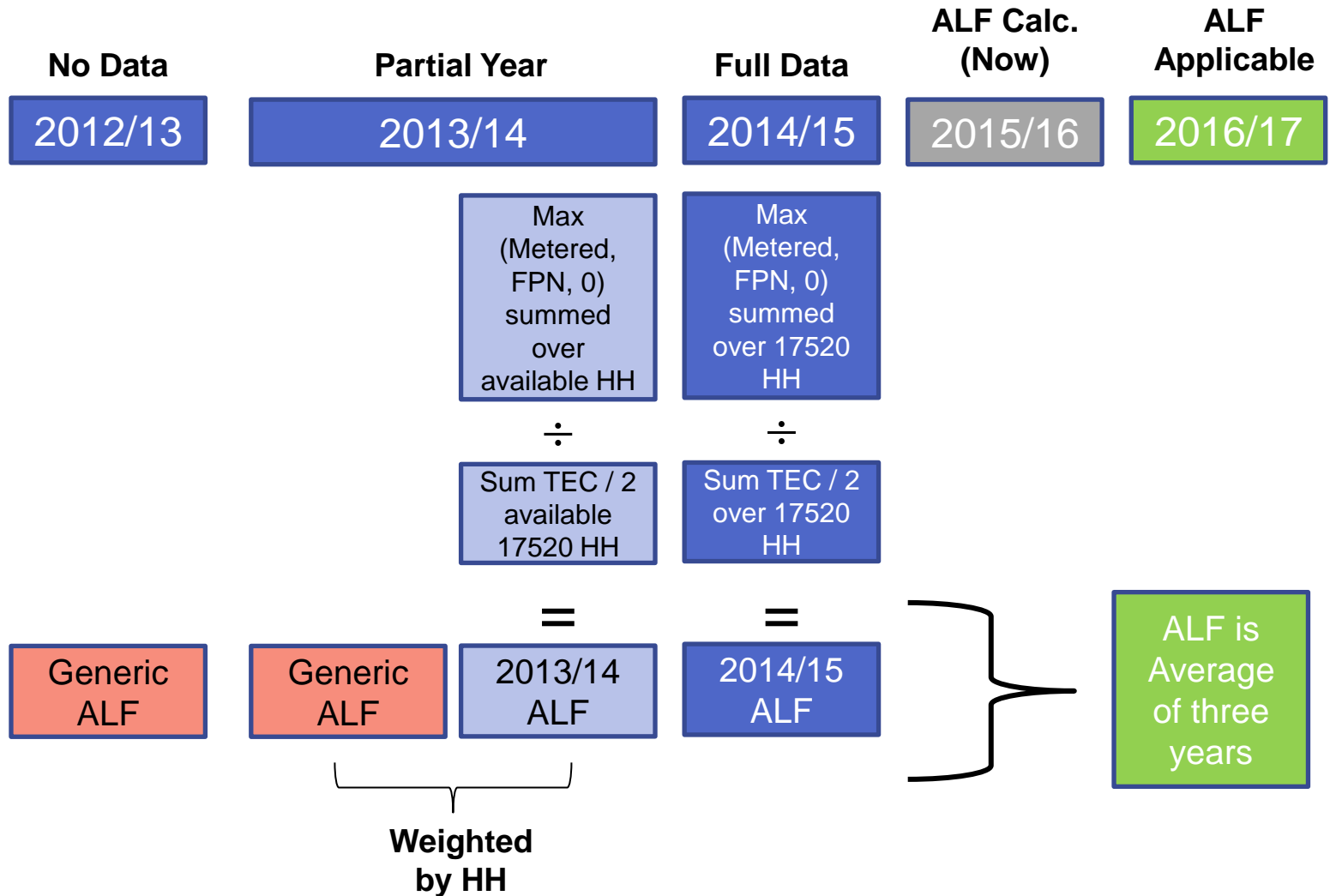
Four Full Years of Data



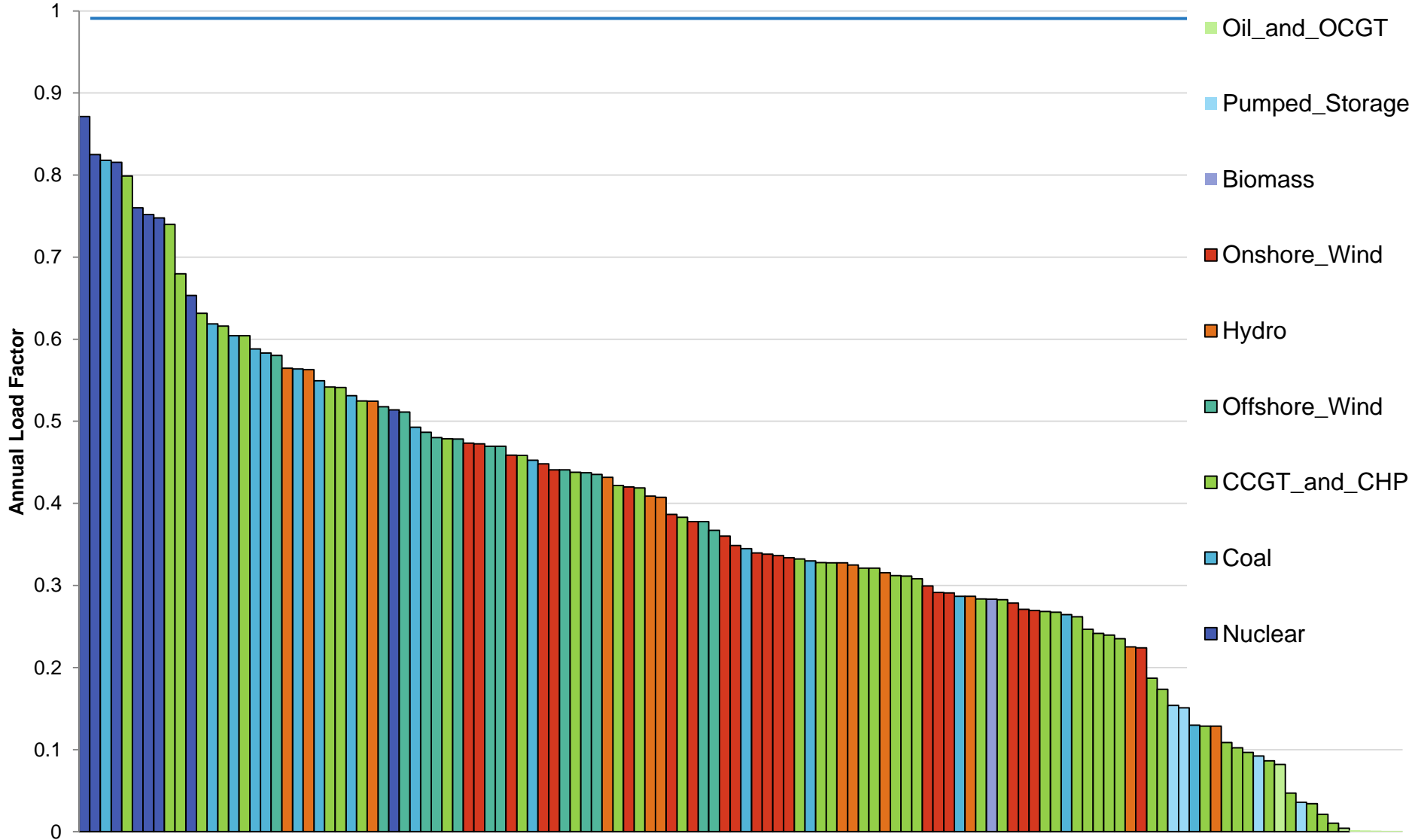
Three Full Years of Data



Less than 3 full years, e.g.



Station Load Factors, by Fuel Type

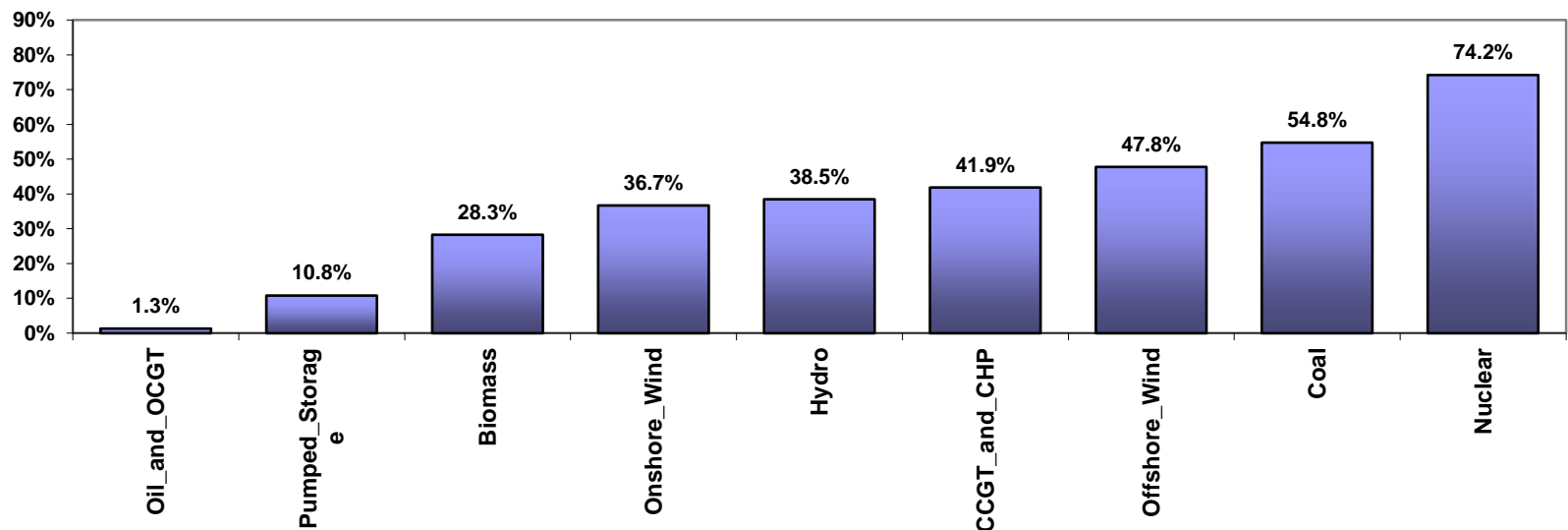


Generic Annual Load Factors

- Generic ALFs are the average of the ten most recently commissioned power stations of that type with five complete charging years of data.
 - Where less than ten power stations meet this requirement other stations with four or less years of data have been included.
 - Where stations share the same commissioning year and have the same number of years data then they have all been included in the calculation, i.e. more than ten stations included.

Generic Annual Load Factors

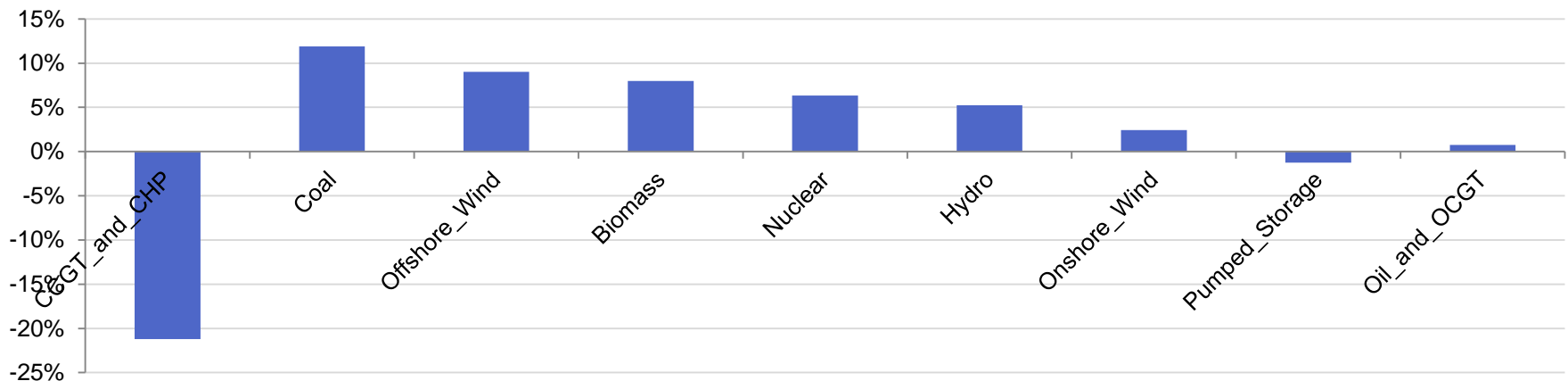
Technology	Generic ALF	Intermittent/ Conventional	Carbon/ Low Carbon
Oil_and_OCGT	1.3319%	Conventional	Carbon
Pumped_Storage	10.8267%	Conventional	Carbon
Hydro	38.5139%	Conventional	Low Carbon
Onshore_Wind	36.7344%	Intermittent	Low Carbon
Offshore_Wind	47.8149%	Intermittent	Low Carbon
Coal	54.7988%	Conventional	Carbon
CCGT_and_CHP	41.9008%	Conventional	Carbon
Nuclear	74.2383%	Conventional	Low Carbon
Biomass	28.3185%	Conventional	Carbon



Generic Annual Load Factors (Change)

Draft Annual Load Factors for 2014/15

Technology	Draft Value for 2014/15	Draft Value for 2016/17	Change
CCGT_and_CHP	63%	42%	-21%
Coal	43%	55%	12%
Offshore_Wind	39%	48%	9%
Biomass	20%	28%	8%
Nuclear	68%	74%	6%
Hydro	33%	39%	5%
Onshore_Wind	34%	37%	2%
Pumped_Storage	12%	11%	-1%
Oil_and_OCGT	1%	1%	1%



Any Questions



TNUoS forecasts and publication timetable



Stuart Boyle

TNUoS forecasts – publication timetable

- Update to be provided on the day

TNUoS and impact of Longannet



Helen Snodin

See separate slide pack

Lunch



CUSC Issues Standing Group



Wednesday 11th November 2015

CISG: Purpose and terms of reference

- *Not* considering section 14 of the CUSC (charging methodologies) – but rather other sections of the CUSC
- The objective of the CISG is to provide a forum where interested parties can raise general issues with the CUSC that are not covered by any of the other groups established under the CUSC.
- The Group will aim to consider and develop well-formed CUSC Modification Proposals ...and will also aim to coordinate and time proposals so that all industry parties are better able to resource CUSC Workgroups.
- Terms of reference were reviewed by the CUSC Panel in June and will be uploaded onto the CISG webpage:
[http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Standing-groups/CUSC-Issues-Standing-Group-\(CISG\)/](http://www2.nationalgrid.com/UK/Industry-information/Electricity-codes/Standing-groups/CUSC-Issues-Standing-Group-(CISG)/)

CISG: Discussion item

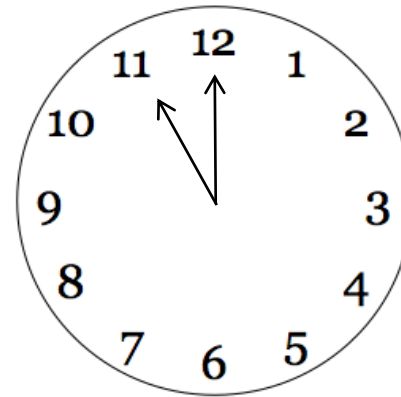
- What areas might the CISG want to consider in future?
- Fleshing out early agenda items
- Consideration of effort and time needed for different areas

TCMF and CISG – future dates

January

6

Wednesday



Venue: National Grid House, Warwick

11am start

We value your feedback and comments

If you have any ***questions*** or would like to give us ***feedback*** or share ***ideas***, please email us at:

cusc.team@nationalgrid.com

Also, from time to time, we may ask you to participate in surveys to help us to improve our forum – *please look out for these requests*

Close

