CMP242 – Workgroup 6
Slide Pack

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Agenda

1. Consider the areas raised by Ofgem.
2. Refine proposals and potential alternative(s)
3. Agree if alternative(s) becomes WACMs
4. Voting on Original and, if appropriate, WACMs
5. Workgroup Timescales

1. Areas Raised by Ofgem

Areas raised by Ofgem for further discussion

1. Parameters in the model
2. Negotiation option (as a stand-alone)
3. Priority for generators to their ‘own’ circuit
4. Double Circuits

1. Parameters in the Model

- From Ofgem:
  - In our view, the mathematical options don't reflect parameters which could have a significant impact on the apportionment of charges, such as load profiles (range, volatility, correlation, seasonal factors etc.) and fault likelihood (not an exhaustive list).
  - We would therefore like to get a clearer understanding of whether and why the WG believes the ALF is an adequate proxy for these "missing" parameters. Could the WG provide detailed justification (which could include a range of worked examples)?
  - In terms of fault likelihood (planned and unplanned, timing, length etc.), could the WG explain and justify the assumptions made, and explore the likely impacts of those assumptions on the results of the mathematical options?

Comments from Aled Moses (1)

- **Overview.** Charging is designed to approximate the costs/benefits that generators impose/gain from using the transmission network. I think the current solution finds the right compromise and reasonably approximates the benefits a generator gains from that interlink, while being clear, transparent and predictable. The solution also mirrors the principles of how charging has developed for the onshore network. Importantly I think that many of the parameters highlighted could introduce complexity, more than we see in charging on the onshore network, without there necessarily being more benefit. I also think that it may not be appropriate to make assumptions about the offshore network because of the OFTO framework.

Comments from Aled Moses (2)

- **Factors that affect the generator’s load.** The benefit a generator gains from the interlink will be dependent on their load, the load of the other interlinked generators during periods of outages, as well as the size of the interlink(s) and radial circuits. The current CMP242 solution approximates this benefit by using a general ALF, then a specific ALF.

Comments from Aled Moses (3)

- I recognise that theoretically National Grid could calculate a more accurate approximation of the utilisation of an interlink by considering the profiles of the generators and the other factors that Ofgem has highlighted. Considering the complexity of these factors I would guess that modelling the utilisation would probably require running some form of simulation to provide an accurate answer, probably Monte Carlo. Any modelled benefit would depend entirely on how valid the inputs are. There are several problems I see with moving towards a more complex approach:
  - There is no historical data for generators, and their initial output will need to be approximated.
  - The workgroup’s current approach is to use 5 years worth of data before moving to a specific ALF. If we implement a modelled solution, 5 years might not be sufficient to have accurate data.
  - Fault rates may vary seasonally, and if they do, they would then have a large impact as interlinks would only be used during faults. Again, we may not have sufficient, accurate data on OFTO faults.
  - Any modelled methodology will increase the complexity and decrease the predictability and transparency of CMP242. The ALF methodology has the benefit of being relatively simple, clear and predictable, as Ofgem set out in their decision on CMP213.

Comments from Aled Moses (4)

- **Factors that affect the OFTO.** In addition, my view is that because of the OFTO framework it would be inappropriate for us to make assumptions about how future OFTOs may experience faults. An OFTO has an overarching framework set out within law and their licence to economically and efficiently maintain their transmission network. The availability incentive sets a target for OFTOs, which has been 98% for all OFTOs to date. In my view it would be more appropriate to reflect this framework then for the workgroup to make assumptions about the faults and availability of the OFTO, and correlating this to load profile of the generator.

Exploring Other Parameters (NGET)

- Load profiles: range, volatility, correlation, seasonal factors etc.
- Have studied *ex post* Metered Output data for Offshore Windfarms for 2013/14 (with a complete year of data) on a daily MWh output.
- There are no other offshore technologies to compare at present.

Location	Wind Farms
East Coast	Lincs Wind Farm
	Sheringham Shoal
Irish Sea	Barrow Offshore
	Ormonde
	Walney I
	Walney II
Solway Firth	Robin Rigg East
	Robin Rigg West
Thames	Greater Gabbard
	Gunfleet Sands I
	Gunfleet Sands II
	London Array

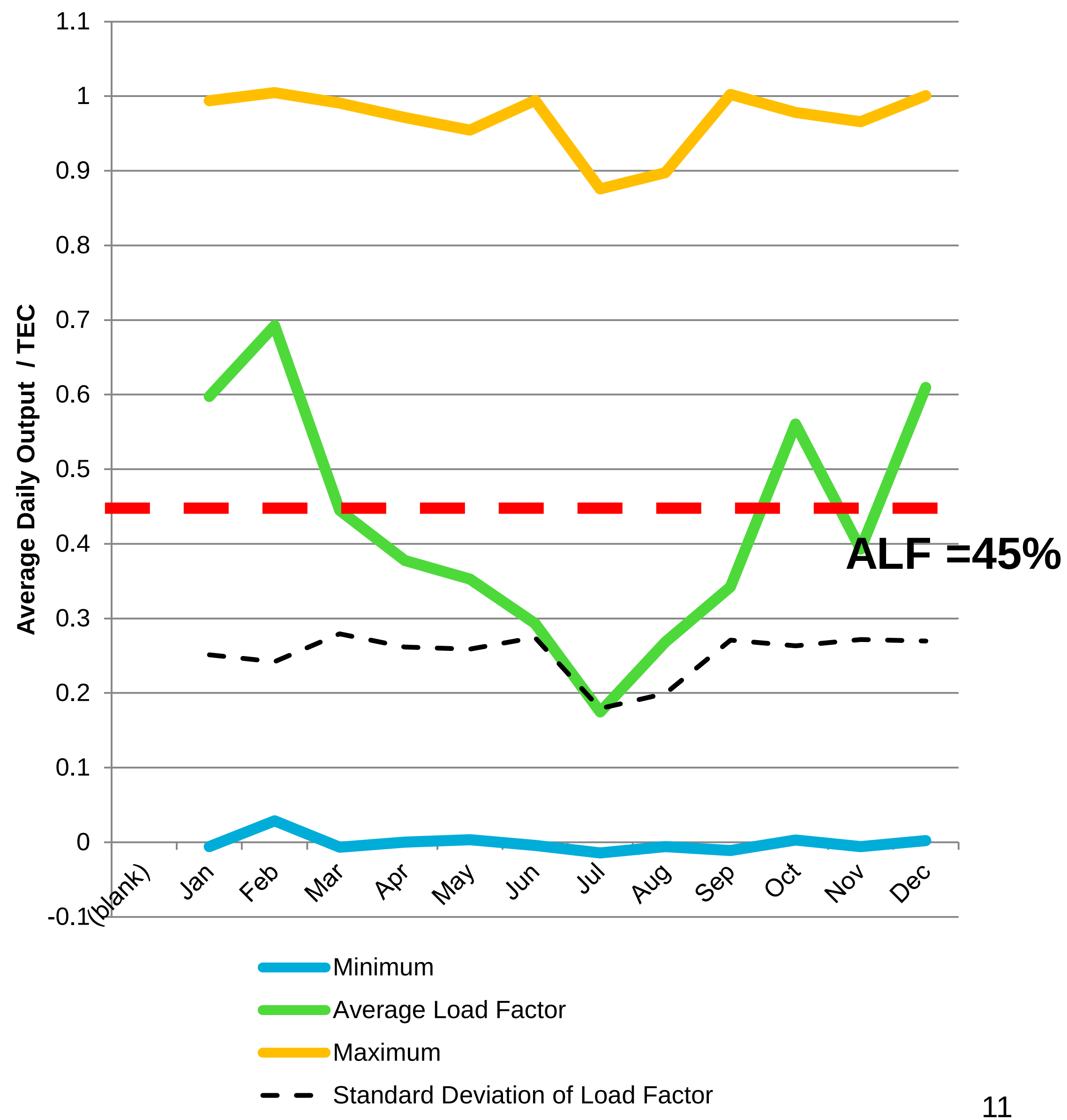
Monthly Range & Volatility of Output

Range all year is
0% to 90% output.

Average output lowest in July; highest in February

Volatility (measured by standard deviation) relatively flat all year – marginally less volatile in the summer.

Conclusion: Expect full range of output at any time throughout the year



Correlation

- Aim to look if windfarms tend to output similar levels at the same time – are they correlated?
- Analysis of daily output (MWh) across all windfarms.
- On the next tables: +1 perfect correlation; -1 perfect negative correlation; 0 no correlation.

Correlation Windfarm Output

	Barrow Offshore	Greater Gabbard	Gunfleet Sands I	Gunfleet Sands Ii	Lincs	London Array	Ormonde	Robin Rigg East	Robin Rigg West	Sheringham Shoal	Walney I	Walney Ii
Barrow Offshore	1.00											
Greater Gabbard	0.56	1.00										
Gunfleet Sands I	0.54	0.94	1.00									
Gunfleet Sands II	0.55	0.94	0.99	1.00								
Lincs	0.66	0.73	0.71	0.73	1.00							
London Array	0.56	0.98	0.96	0.96	0.76	1.00						
Ormonde	0.92	0.57	0.57	0.58	0.68	0.58	1.00					
Robin Rigg East	0.84	0.42	0.42	0.43	0.56	0.43	0.78	1.00				
Robin Rigg West	0.83	0.39	0.38	0.39	0.53	0.40	0.76	0.98	1.00			
Sheringham Shoal	0.72	0.87	0.83	0.82	0.83	0.87	0.70	0.60	0.57	1.00		
Walney I	0.97	0.55	0.53	0.55	0.68	0.56	0.92	0.84	0.83	0.71	1.00	
Walney II	0.86	0.48	0.46	0.48	0.54	0.46	0.89	0.75	0.74	0.62	0.87	1.00

Scale	
1.00	**Perfect**
0.90	
0.80	
0.70	
0.60	
0.50	
0.40	
0.30	
0.20	
0.10	
0.00	**Zero**

Recall that an "interlinked" windfarm will be close to each other as they must share a common substation.
Therefore, let us look at correlation within geographic groups of stations

Correlation – Geographic Regions

Thames	Greater Gabbard	Gunfleet Sands I	Gunfleet Sands Ii	London Array
Greater Gabbard	1.00			
Gunfleet Sands I	0.94	1.00		
Gunfleet Sands Ii	0.94	0.99	1.00	
London Array	0.98	0.96	0.96	1.00

Irish Sea	Barrow Offshore	Ormonde	Walney I	Walney Ii
Barrow Offshore	1.00			
Ormonde	0.92	1.00		
Walney I	0.97	0.92	1.00	
Walney Ii	0.86	0.89	0.87	1.00

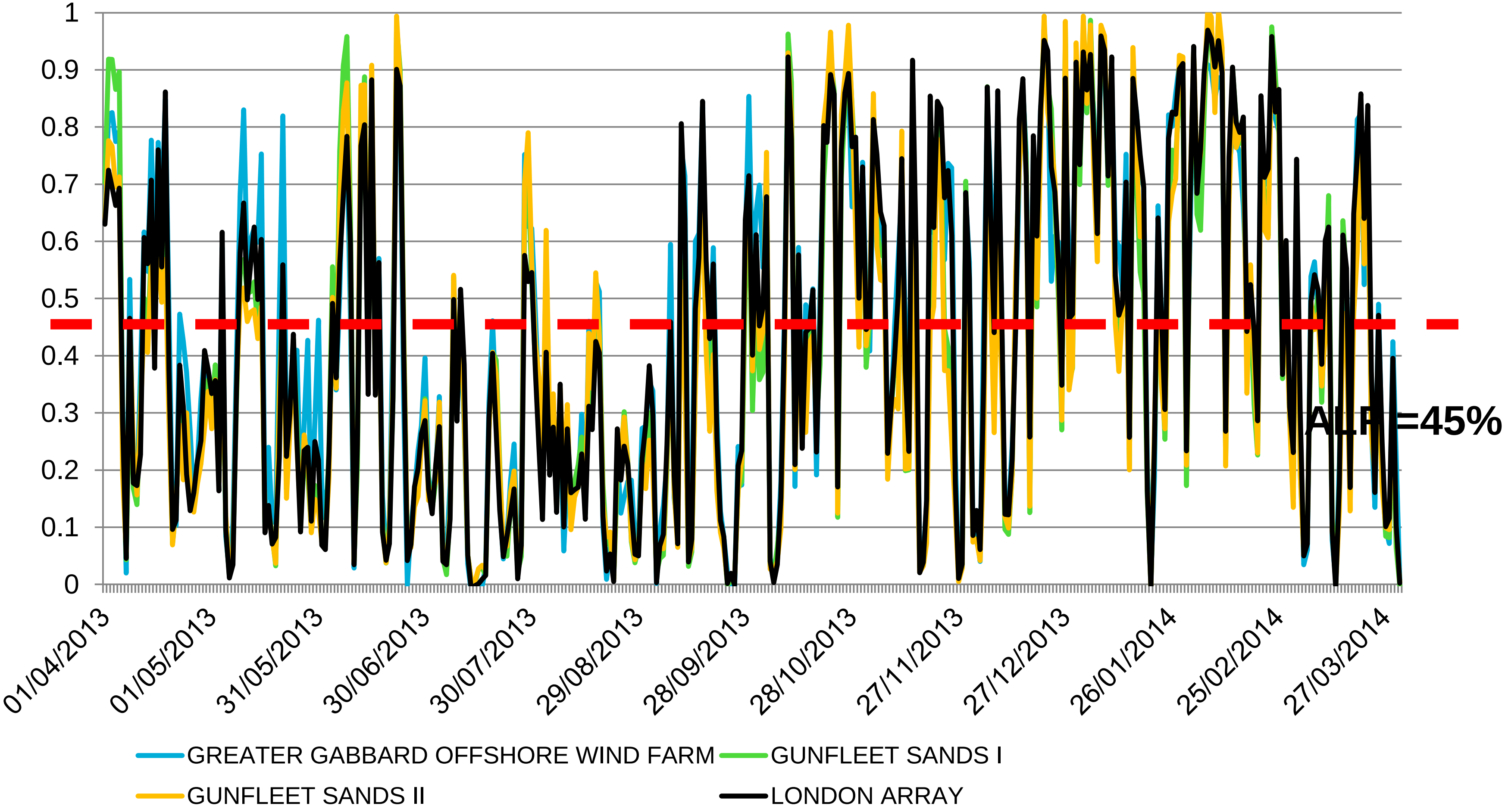
Solway Firth	Robin Rigg East	Robin Rigg West
Robin Rigg East	1.00	
Robin Rigg West	0.98	1.00

East Coast	Lincs	Sheringham Shoal
Lincs	1.00	
Sheringham Shoal	0.83	1.00

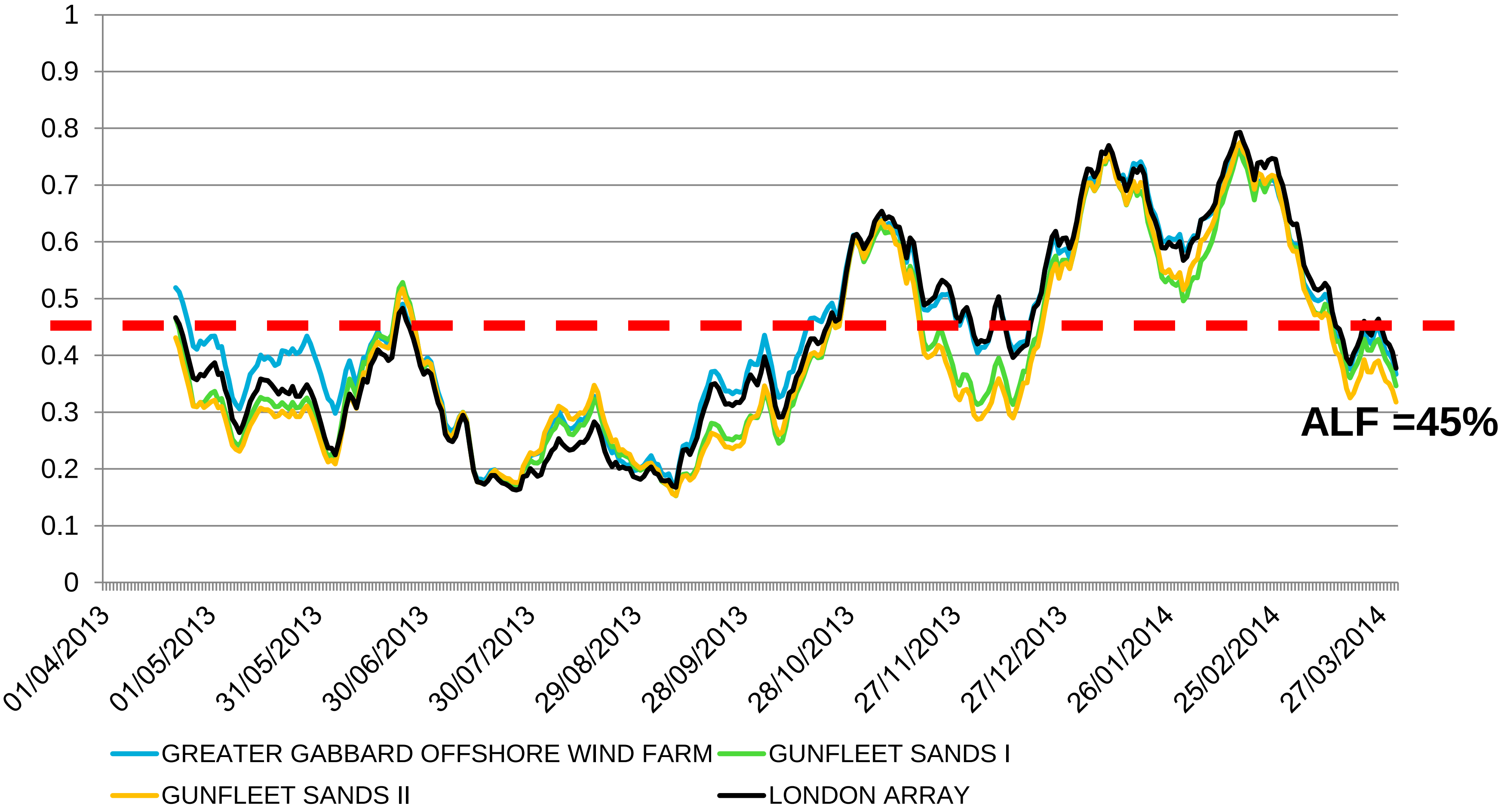
Scale	
1.00	Perfect
0.90	
0.80	
0.70	
0.60	
0.50	
0.40	
0.30	
0.20	
0.10	
0.00	Zero

Conclusion: Output of similarly located windfarms is highly correlated; so if treated “the same” in the model – both affected equally.

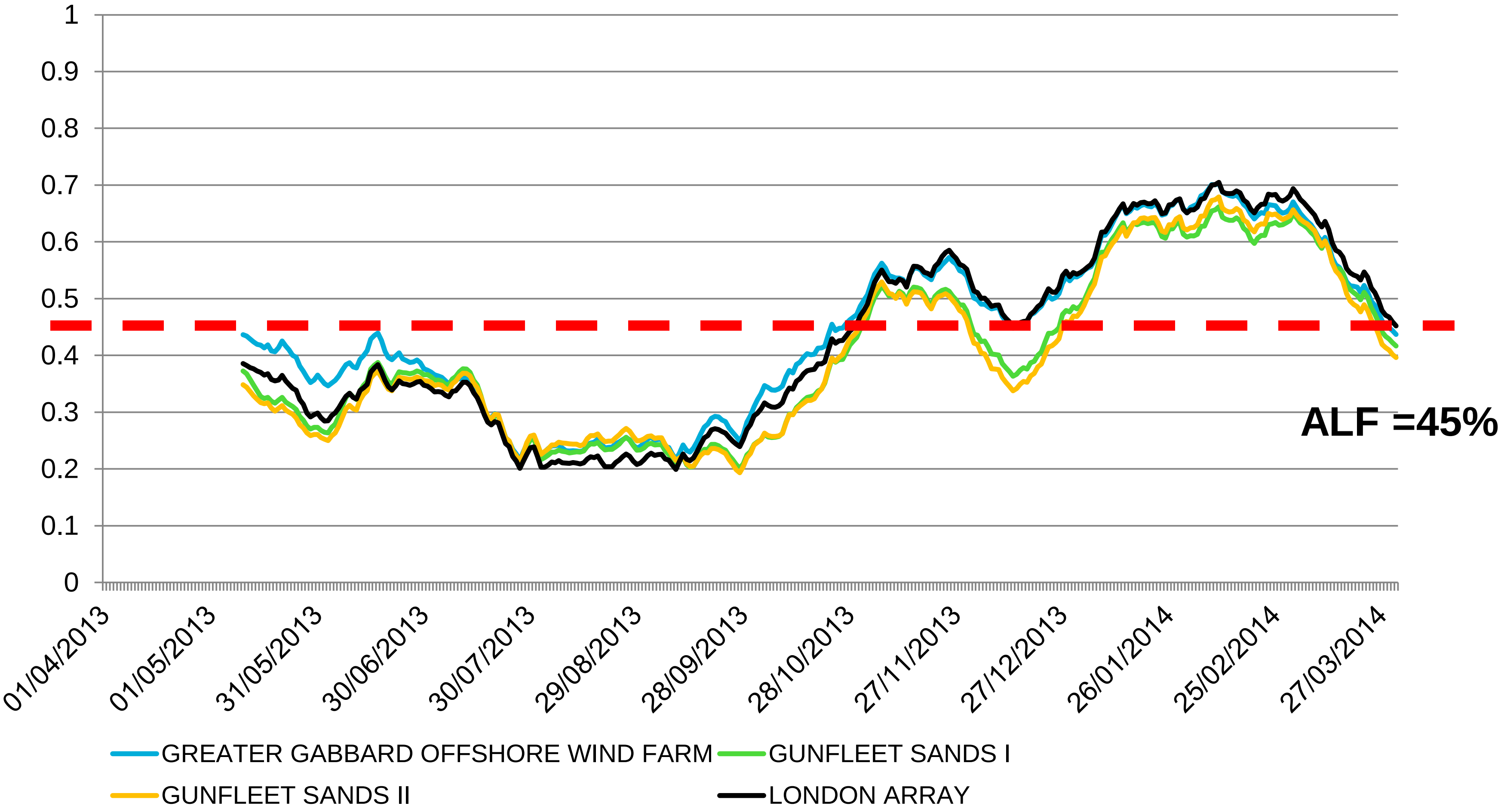
Load Factor: Daily Basis (Thames)



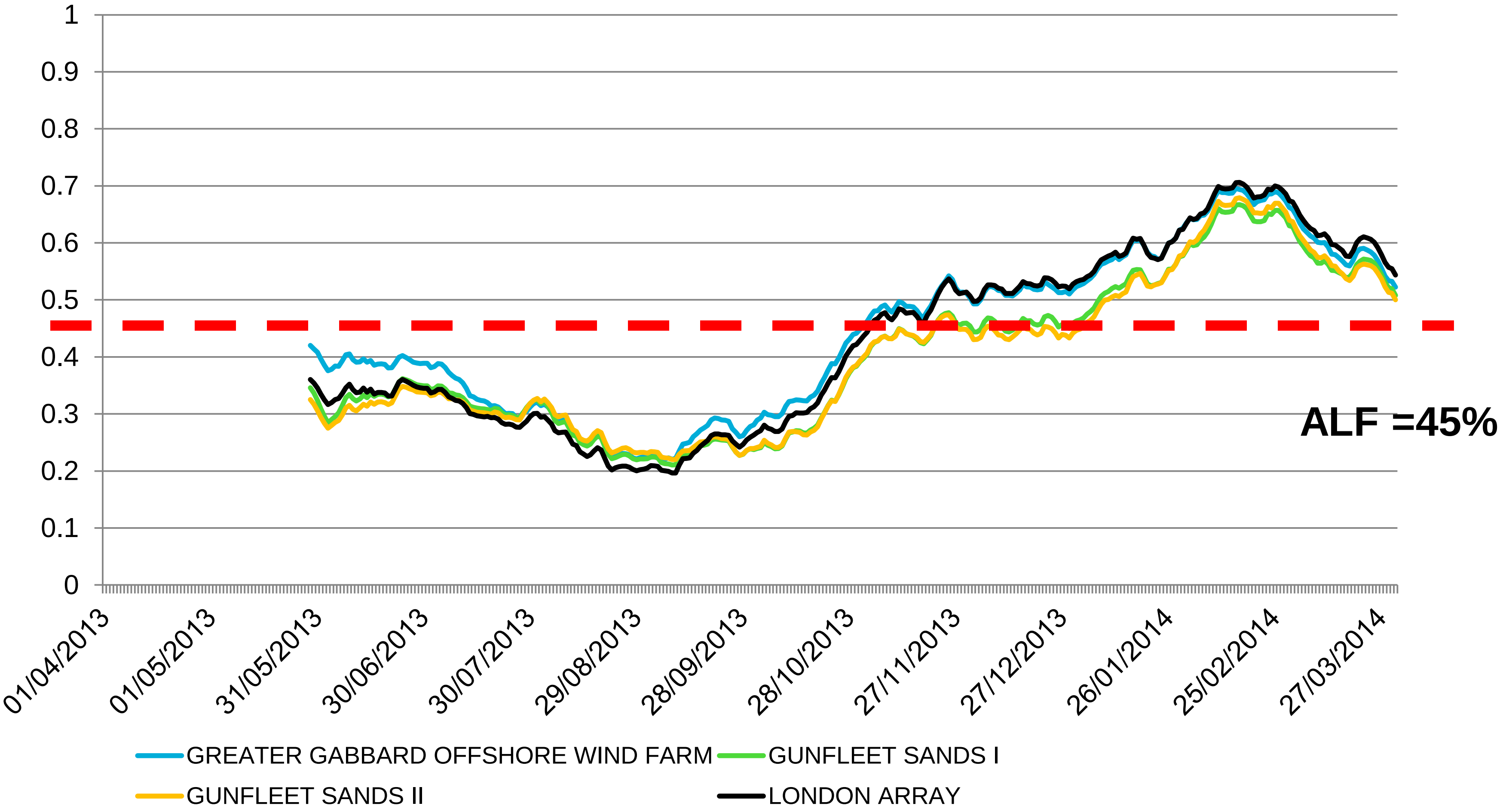
Load Factor: 20 day rolling Average (Thames)



Load Factor: 40 day rolling Average (Thames)



Load Factor: 60 day rolling average (Thames)



ALF as a proxy for Seasonal Variation

- The longer the duration of a fault, the more “average” the output will be over that time.
- There is clearly a winter and summer season, but we do not know, in advance, when a fault will occur, and TNUoS Charges are an ex ante ‘yearly’ product.

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Fault likelihood

- Exploring the data in "*National Electricity Transmission System Performance Report 2013-2014*"
- **Overall Offshore System Availability was 99.43%.**

Offshore Transmission Networks % Annual Availability		
	2012-13	**2013-14**
TC Robin Rigg	99.89	99.85
TC Gunfleet Sands	100	100.00
TC Barrow	100	99.64
TC Ormonde	100	100.00
BT Walney 1	97.47	99.99
BT Walney 2	100	94.89
BT Sheringham Shoal	N/A	99.20
BT London Array	N/A	99.97
BB Greater Gabbard	N/A	99.81

Looking at Outages (ex post)

- Of the outages, most are caused by either planned outages, or a result of non-OFTO (e.g. DNO, generator)
- From the data, the outlier is **Walney 2** (94.89%)
  - Walney 2 has 100% availability for 11 months in 2013/14, dropping to 41.34% in November
  - Walney 2 is a single circuit.
  - Outage was due to an “OFTO Unplanned” outage on 6 November, which lasted for 17.7 days.
  - The fault was on the 132kV land cable.

Determining Fault likelihood

- Overall, the likelihood of a fault on the offshore transmission network is low.
- To predict whether one circuit or another will fail is very difficult - (would need some modelling, which is subjective, and couldn't be validated easily)
- To do any reconciliation of costs based on actual outages, moves to an ex post methodology, whilst charging methodology is all currently ex ante.
- **Propose:** Can not determine ex ante the likelihood of one circuit failing, so should not be included in the model.

Summary (NGET)

- **Propose:** Do not include volatility, correlation or seasonal factors in the model as these apply to all closely located generators similarly. ALF provides a reasonable proxy for the ‘average’ output (remember charges are a yearly product)
  - If there is a reason to believe things are different (e.g new generation technology) can raise a defect in future.

2. Negotiation option (as stand-alone)

- From Ofgem:
  - We appreciate that this will be added as a second option. It would be helpful to see details on how the process for this could work end-to-end.
- From Aled Moses
  - I have a few initial comments/thoughts on a negotiated solution:
    - Set/predictable timescales would be preferable to give generators comfort
    - The current CMP242 solution allows the split to be changed every year, this could be problematic if the split had to be negotiated constantly
- **To avoid duplication this is covered under 3. Refine Potential Alternative.**

3. Priority access for generators to their “own” circuit

- From Ofgem:
  - The work on this mod has been based on the assumption of priority access for the generator (A) which is directly linked to a circuit (A), with the other generator (B) using whatever is left over (via the interlink) in the event of its circuit (B) being on an outage (or vice versa). However, it is not clear that such preferential treatment is permitted under the OFTO licence. If in fact priority access cannot be granted to generator A (or B), this may impact on the mathematical solutions, and they should be reviewed.
  - Clarified in the workgroup that **“OFTO licence”** should be **“SO licence”**

From Garth Graham

- I'd observe, in terms of point 3, that if priority is not afforded (in your example) to Generator A then, as with point 4, are we not into a double circuit having been provided, and thus the 1.8 factor applies, as does full Cap48 interruption payments with the associated CMP211/212 and CMP235/236 claims?
- In terms of the OFTO licence aspect in your point 3, given that the scenario (of an interlink, and thus another generator using the same circuit as the 'original' generator for whom the OFTO is linked) does not exist then the licence is presumably silent in this whole area? Therefore any consequential changes to OFTO licences required as a result of CMP242 being approved could, presumably, included allowing for such a priority?
- To do otherwise, and allow equal access on circuit A would appear to penalise those generators who build their link to a high standard (because they want to ensure maximum access to the market) and unduly reward a generator who goes for a 'tinplate' solution to keep their ongoing costs lower (than the higher standard generator, with whom they are competing) knowing that if it fails they get equal rights to the higher standard link - especially as they, the lower standard generator, may not (will not?) be paying for their use of that higher standard circuit at times of fault / outage on their lower standard link.

From Aled Moses

- My understanding is that at a high level it is the responsibility of the SO to manage the flows of electricity on the transmission network, while the TO/OFTO maintains their network. As a result priority on the circuit is an issue for NGET as the SO. I'm not sure what the obligations on NGET are, this might be a bit of a grey area? However if we do move away from the default position that a generator has priority on its radial circuit, we are essentially saying that an offshore generator should be allowed to curtail another offshore generator which is in my view inappropriate.

Preferential treatment (NGET)

- ***"However, it is not clear that such preferential treatment is permitted under the OFTO licence."***
    - The OFTO is not limiting access or acting preferentially. The secure use of the circuit is a **system operator** issue who must maintain the system within the limits specified in the SQSS.
    - The Bilateral Connection Agreement between the NETSO and each generator will specify the situation of use of the interlink, so will be known in advance.
    - Having an interlink provides more opportunity and flexibility to the generator and the SO than would otherwise be available.
    - Any changes to access rules would be beyond the scope of this charging modification.

4. Double circuits

- From Ofgem:
  - We would like to know if the WG thinks that CMP 242 needs to include a provision for configurations which include double circuits (with full or partial redundancy). If so, we think that this is a scenario not yet fully covered by the mathematical solutions and it would therefore require additional work. It may also have an impact on local circuit charging (particularly for the double circuit(s)), which should be reviewed as well.

From Aled Moses (1)

- *Redundancy*
  - I think it is highly unlikely that we'll see offshore networks with significant redundancy due to the cost of the cables. Cables do come oversized, but this will be for other reasons, such as procurement. Importantly, CMP242 reflects the impact of oversized cables by considering the export capacity of the network, not the TEC of the generator.

From Aled Moses (2)

- *Double Circuits*
  - From the perspective of the generator with a faulty circuit, it shouldn't matter whether the other generator has a single or double circuit. What matters is that export capacity of that circuit.
  - From the perspective of the generator that has a fault on a double circuit, I can see why it would matter. My understanding is that the majority of faults that occur on an OFTO will be cable fault, and a cable fault on a double circuit would still leave that generator able to export half of its capacity. However as a double circuit would still allow a generator to export power, I would think this would significantly reduce the business case for an interlink, and we may not see generators with double circuits opting for interlinks.

Double Circuits for Offshore Windfarms (NGET)

- The *standard offshore design* detailed in the SQSS is for a single cable. However, some generators / developers may opt for a more redundant connection (and pay for it).
- The premise of this mod is as an alternative to double circuit, but it is possible that a single circuit generator may wish to interlink to a double circuit generator.

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Current situation (Circuits)

- The most redundant current OFTO is “Thanet” which has
  - 2 x 183 MW ciruits, for a generator of TEC 300MW. This gives a security factor of 1.22.
  - In the event of one circuit fault, the generator could still get 183MW away.
- Some windfarms (e.g. Gwynt y Mor) have multiple circuits that, in total, are only just larger than the generator.
- London Array has 4 cables, but a low security factor.

Extending the Model

- Following Aled’s example, we can extend the model to look at capacity in the event of a fault for a windfarm connected via a double/multiple circuit.
- **Firstly, which faults should be considered?**
  - Initial model looked at a fault of a “route to shore”
  - Let us pause to say what is a credible fault offshore, for both a multiple circuit and single circuit connected generator.
  - Let us compare to onshore….

Double Circuits & “Faults”

- Onshore:
  - SQSS 2.6.1 states that onshore generators should stay connected following a fault outage of any single transmission circuit;
  - Importantly, a double circuit fault would take them offline completely.
- So charging “offshore” for an interlink to protect connection in a double circuit scenario is *beyond* the standard we secure to onshore.
- **Propose:** Reasonable to consider only a single circuit fault and the ‘opportunity’ an interlink then provides, when charging from the interlink.

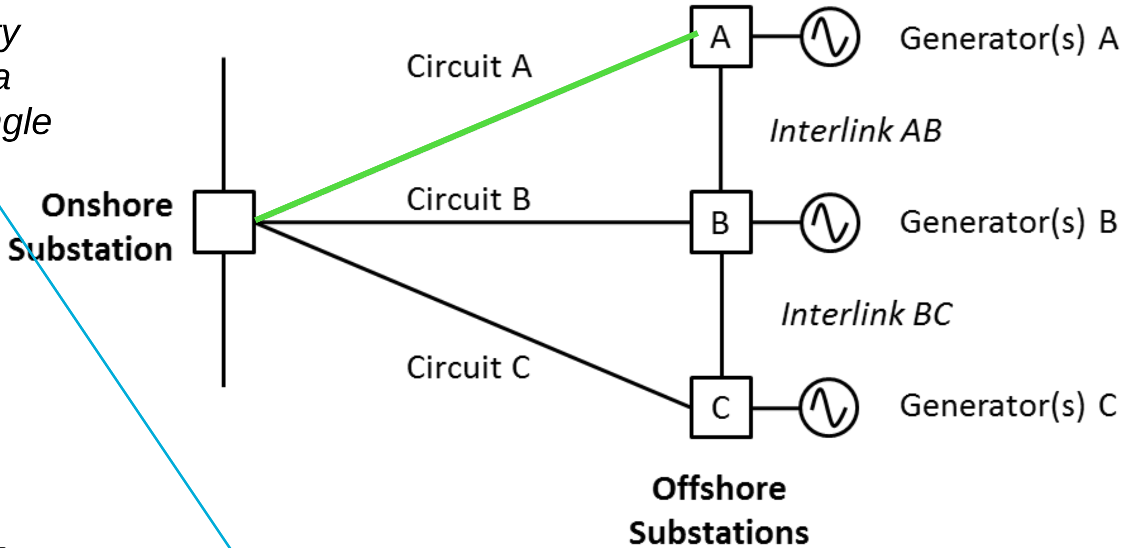
Looking only at a single fault.

- If a generator connected via a Single Circuit
  - Look at opportunity of using an interlink if that single circuit fails (previous formula)
- If connected via a Double/Multiple Circuits
  - Look at opportunity of using an interlink if a single circuit fails, adjusting the formula to reflect you still have some capacity to export to shore on your circuit.
    - Propose using “Remaining Capacity” – RCap.
    - Aled used “Fault Factor” as 50% for Double Circuits.

For Substation A

Remaining capacity on Circuit A, after a single fault. If a single circuit, RCap=0

*The **max{}** avoids returning a negative number*



For Substation A:

$$\min\{\underbrace{\mathbf{\max(0,\ ILF_A \times TEC_A - RCap_A)}}_{\text{Likely use of Interlink, i.e. generator output less any remaining capacity on the local circuit (only applies if a double circuit)}},\ \underbrace{Cap_{IAB}}_{\text{Capacity of Interlink AB}},\ \underbrace{\underbrace{Cap_B - ILF_B \times TEC_B}_{\text{Capacity on Circuit B}} + \underbrace{\min(Cap_{IBC},\ Cap_C - ILF_C \times TEC_C)}_{\text{Capacity on Circuit C, constrained by Interlink BC}}}_{\text{Total export capacity to shore}}\}$$

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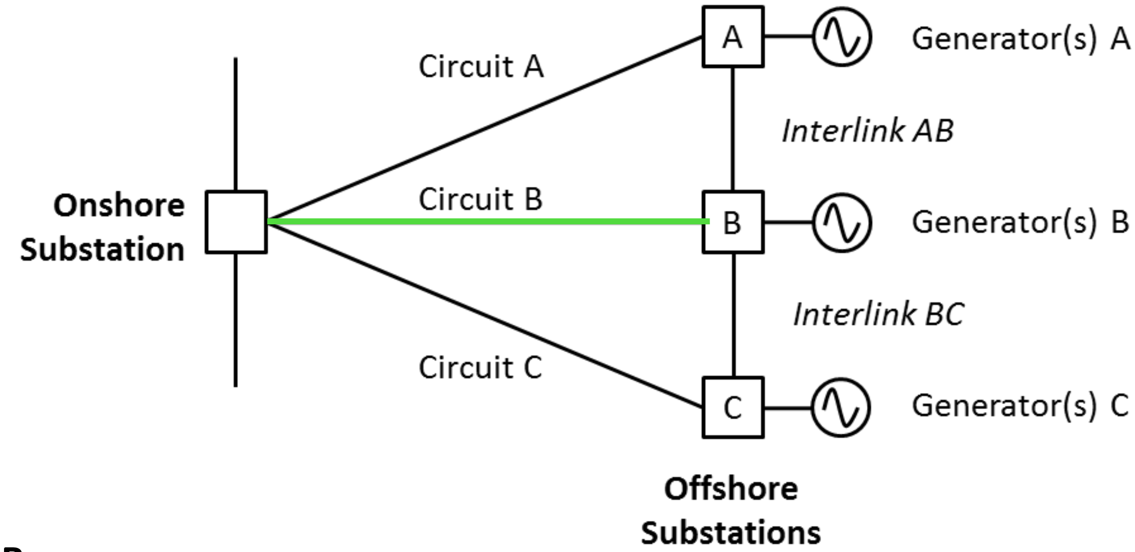
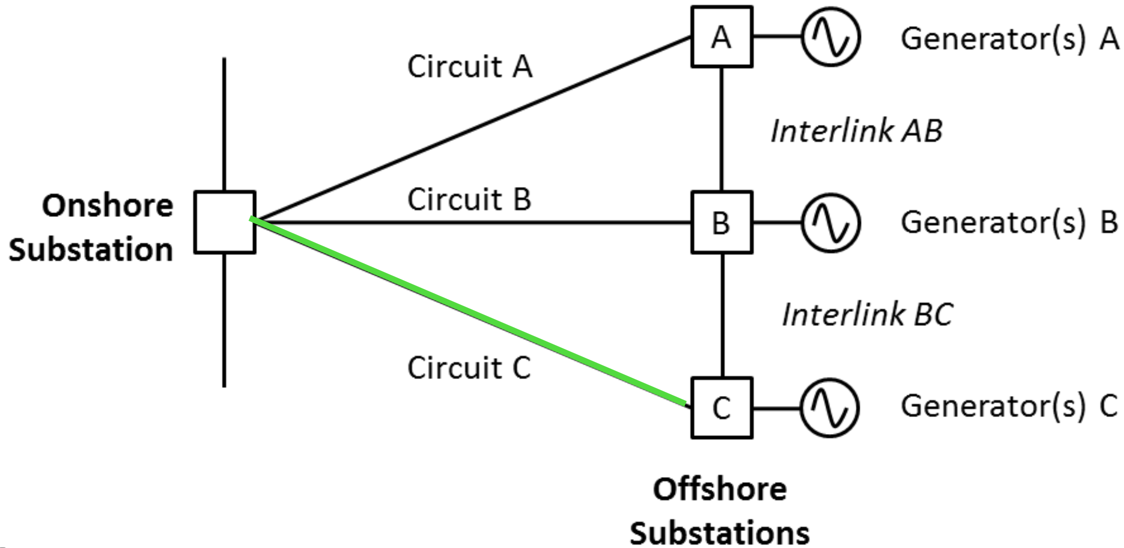
For Substation B



For Substation B:

$$\min\left\{ \underbrace{\mathbf{max(0,\ ILF_B \times TEC_B - RCap_B)}}_{\text{Likely use of Interlink, i.e. generator output less any remaining capacity on the local circuit (only applies if a double circuit)}},\ \underbrace{\underbrace{\min(Cap_{IAB},\ Cap_A - ILF_A \times TEC_A)}_{\text{Capacity on Circuit A, constrained by Interlink AB}} + \underbrace{\min(Cap_{IBC},\ Cap_C - ILF_C \times TEC_C)}_{\text{Capacity on Circuit C, constrained by Interlink BC}}}_{\text{Total export capacity to shore (note two independent parts)}} \right\}$$

For Substation C



For Substation A:

$$\min\{\underbrace{\mathbf{\max(0,\ ILF_C \times TEC_C - RCap_C)}}_{\text{Likely use of Interlink, i.e. generator output less any remaining capacity on the local circuit (only applies if a double circuit)}},\ \underbrace{Cap_{IBC}}_{\text{Capacity of Interlink BC}},\ \underbrace{\underbrace{Cap_B - ILF_B \times TEC_B}_{\text{Capacity on Circuit B}} + \underbrace{\min(Cap_{IAB},\ Cap_A - ILF_A \times TEC_A)}_{\text{Capacity on Circuit A, constrained by Interlink AB}}}_{\text{Total export capacity to shore}}\}$$

Observations

- Under the single fault scenario with a multiple circuits, there will always be remaining capacity to shore
  - The remaining capacity will always be >=50% of the TEC.
  - If the ALF <=50%, the generator can always get away ALF*TEC via there remaining circuits, meaning "on average" it has no need to use the Interlink, therefore zero cost.
- **Propose:** This seems doesn't seem unreasonable, as the generator is choosing to paying more for the multiple circuits and associated equipment already.
- **Propose:** No need for the other generator to pay towards the double circuit, as they are paying "more" for the interlink.

2. Refine Proposals and possible alternatives

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Options

Option A.
Formula Only

Using formula to apportion revenue based on ILF, max TEC, and RCap

Original Proposal

Calculate Revenue associated with Interlink Circuit (standard methodology)

Option B.
Formula and Negotiation.

Formula as A, but allow negotiation to determine proportions

WACM 1

Adjust Local Security Factor, to ensure revenue is collected from the appropriate generator

Option C.
Negotiation Only

Bilateral negotiations to agree proportions

WACM 2

Original Proposal (Formula Only)

- Update Section 14 of the CUSC to include:
  - An interlink is an offshore circuit which i) connects offshore substations which all connect to a common onshore substation and ii) are held in open standby until there is a fault on another offshore circuit.
  - The apportionment of costs associated with interlink(s) covered by this proposal, applies to situations when the interlink(s) was included in the design prior to any connected generator being financially committed, or if one or more generator is financially committed, these generators agree to the interlink(s).
  - The revenue associated with an interlink circuit (calculated using the standard offshore methodology) will be shared between the generators who have the opportunity to use that circuit.

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Original Proposal (Formula Only)

- Interlink revenue will be apportioned to each generator according to the principle of likely available capacity to shore *in the event of one circuit failure*.
  - The Interlink Load Factor (ILF) is based on the Annual Load Factor (ALF, see CMP213) as a measure of likely generator output.
    - Until all generators affected by an interlink have a station specific ALF based on five years of data, the generic ALF for the fuel type will be used for all stations as the ILF.
    - When all generators have a station specific ALF, the values of the ALF in the first such year will be used as the ILF in this calculation for all subsequent years.
  - The values of TEC used in this calculation will be the maximum TEC that each generator has held during its operational life or if a generator is yet to connect its future contracted value.

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WACM1: Formula with Optional Negotiation

- As Original Proposal, plus
  - Alternatively allow negotiation of proportions with the formula being the default
    - NGET to be notified 3 months before charges set by all parties.
    - Once told, the notified proportion continue unless notified.
  - Dispute resolution permitted under CUSC Section 7.4

WACM 2: Negotiation Only

- Define what an interlink is, and the associated revenue (standard approach, no change)
- State that the proportion of the interlink (sum to 100%) revenue to be paid by each affected generated is to be negotiated
  - Parties shall inform the proportions to NGET 3 months before OTSUDW Asset Transfer (gen build) or Charging Date (OFTO build) of the first generator.
    - If one or more generator has not yet to connect, the proportions applicable to a generator yet to connect may initially form part of the residual.
  - The proportion applies until changes.
  - Proportion can be updated if agreed by all parties for a year by 3 months notices before the charge setting date from all parties to the company.
  - If parties can not agree raise a dispute to the Authority.
    - Any dispute between two or more Users as to the proportion of interlink shall be managed in accordance with CUSC Section 7 Paragraph 7.4.1 but the reference to Electricity Arbitration shall instead be to the Authority and the Authority's determination of such dispute shall, without prejudice to apply for judicial review of any determination, be final and binding on the User.
- Adjust the local security factor, so the additional revenue associated with the interlink for each generator is recovered from the appropriate generator.

Note for all proposals

- No changes will be made to the methodology for other elements of the charge (e.g. offshore substation or charge for another circuit(s)).

A note on application via the Local Security Factor

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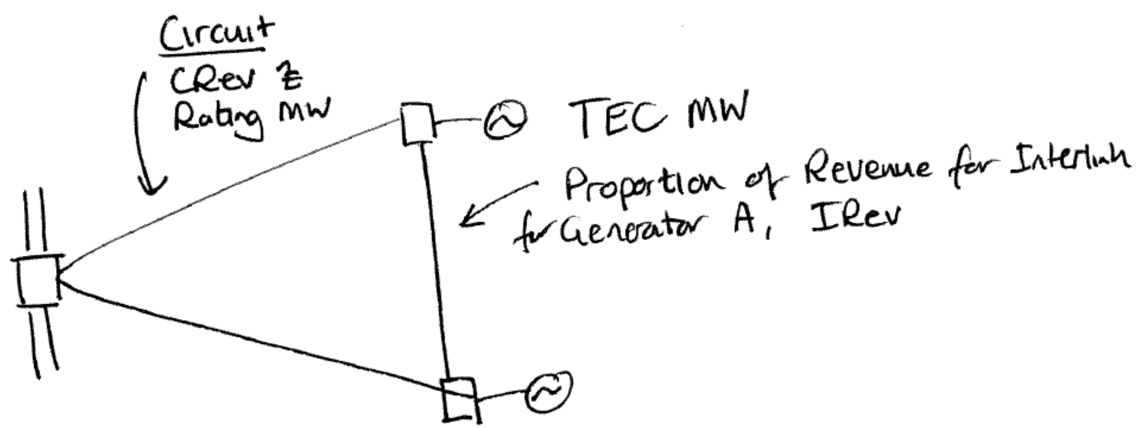
- All proposals require recovery of the additional proportion of the interlink revenue through the Local Security Factor.
- The definition of LSF therefore needs to be adjusted

$$LSF = \frac{IRev \times Rating}{CRev \times TEC} + LSF_{Initial}$$



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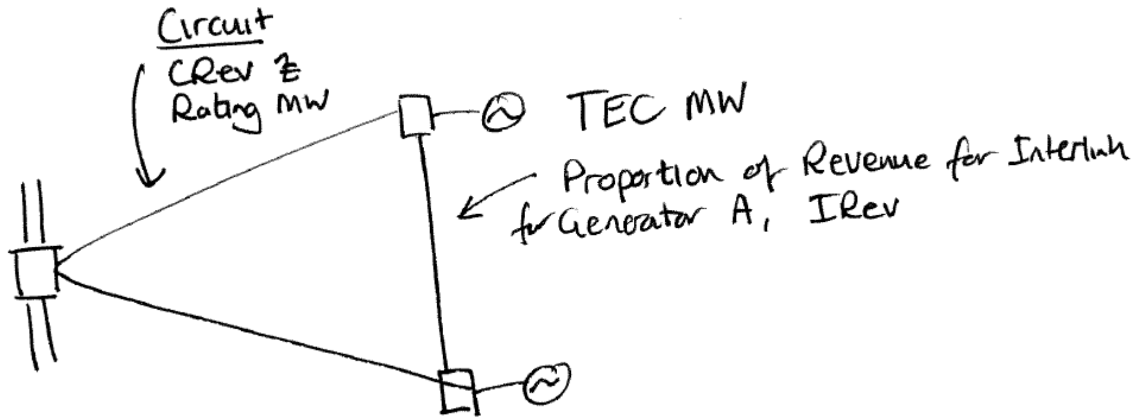

- Without an interlink, the generator pays a charge of

$$\text{LocalSecurityFactor}_i \times TEC \times \frac{CRev}{Rating}$$

- With an interlink, the LSF is updated to:

$$LSF = \frac{IRev \times Rating}{CRev \times TEC} + LSF_{Initial}$$

Note in the draft legal text $\text{NetworkExportCapacity} = Rating$ and $\sum_k Gen_k = TEC$

Proof

- Therefore a generator with an interlink pays a charge of

$$LSF \times TEC \times \frac{CRev}{Rating}$$

$$= \left[\frac{IRev \times Rating}{CRev \times TEC} + LSF_{initial}\right] \times TEC \times \frac{CRev}{Rating}$$

$$= \frac{IRev \times \cancel{Rating} \times \cancel{TEC} \times \cancel{CRev}}{\cancel{CRev} \times \cancel{TEC} \times \cancel{Rating}} + LSF_{initial} \times TEC \times \frac{CRev}{Rating}$$

$$= \underbrace{IRev}_{\text{The proportion of the Interlink Revenue}} + \underbrace{LSF_{initial} \times TEC \times \frac{CRev}{Rating}}_{\text{The charge without the interlink}}$$

An Example

- As an example, consider a generator with TEC 100MW connected at an offshore substation, with a single cable to shore of rating 120MW and circuit revenue of £3M. This generator has to pay an additional £0.75M for their share of an interlink.
  - The initial Security Factor is 1 (as it is a single circuit),
  - The Local Security Factor is then updated so that:
  - LocalSF = (£0.75M x 120 MW) / (£3M x 100 MW) + 1 = 1.30.

An Example

- If the local circuit tariff is £25 / kW, without the interlink, the generator would pay
  - 1 x 25 £/kW x 100 MW = **£2.5M** as the local circuit charge.
- With the interlink, and the updated security factor, the generator pays
  - 1.30 x 25 x 100 MW = **£3.25M** as the local circuit charge,
  - i.e. £0.75M more corresponding to their proportion of the interlink revenue.

4. Agree if Alternatives becomes WACMs

5. Voting

CMP242 : Workgroup voting

Charging arrangements for interlinked offshore transmission solutions connecting to a single onshore substation

Voting guidelines

- Vote 1: whether each proposal better facilitates the Applicable CUSC Objectives
- Vote 2: where one or more WACMs exist, whether each WACM better facilitates the Applicable CUSC Objectives than the Original Modification Proposal;
- Vote 3: which option is considered to BEST facilitate achievement of the Applicable CUSC Objectives. For the avoidance of doubt, this vote should include the existing CUSC baseline as an option.

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CUSC Objectives

a) that compliance with the use of system charging methodology facilitates effective competition in the generation and supply of electricity and (so far as is consistent therewith) facilitates competition in the sale, distribution and purchase of electricity;

b) that compliance with the use of system charging methodology results in charges which reflect, as far as is reasonably practicable, the costs (excluding any payments between transmission licensees which are made under and in accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard condition C26 (Requirements of a connect and manage connection);

c) that, so far as is consistent with sub-paragraphs (a) and (b), the use of system charging methodology, as far as is reasonably practicable, properly takes account of the developments in transmission licensees' transmission businesses.

d) compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency.

6. Workgroup Timescales

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Proposed Workgroup Timescales

Date	Event
4th September	Workgroup Meeting 6
Fri 2 Oct	Circulate draft Workgroup Report (5 days)
Fri 9 Oct	Deadline for comment
Thu. 22 Oct	Submit final Workgroup Report to Panel
Fri. 30 Oct	Present Workgroup Report at CUSC Modifications Panel

Have requested a 1 month extension (to October) from the CUSC Panel.