MATERIALITY OF P350 CFD ISSUE

The P350 Workgroup has consulted on the idea that a (positive or negative) Transmission Loss Factor Adjustment ($TLFA_S$) should be calculated for each BSC Season, and added to TLF values as follows:

$$ATLFZ_S = (TLFZ_S * 0.5) + TLFA_S$$

The $TLFA_S$ values would be determined with the aim of ensuring that, as far as possible, the application of TLF values had a zero net aggregate effect on Delivering Transmission Loss Adjustment ($TLMO^+_j$) values (therefore minimising the impact on payments to those CFD Generators whose strike price is indexed using $TLMO^+_j$ values).

The purpose of this note is to assess the materiality of the issue i.e. the impact on payments to CFD Generators if $TLFA_S$ adjustments were not made.

1. Summary of materiality

The materiality of this issue depends almost entirely on which point on the transmission network is chosen as the 'slack node' in the linearized 'DC' load flow model. The choice of slack node has absolutely no effect on TLM values or on BSC cash flows; but it does have the effect of moving the $TLMO^+_j$ values up or down (impacting strike prices for generators who are on the standard CFD and subject to TLM(D) strike price adjustment).

Based on data from the public CFD register, we estimate that (in the first CFD allocation round) 1,115 MW of wind farms were awarded CFD contracts of this type. We estimate that implementing P350 without making $TLFA_S$ adjustments would affect total annual payments to these wind farms as follows:

- If the slack node was placed at Heysham, payments to the generators would increase by 0.4%, equating to £1.3m per annum; but
- If the slack node was placed at Cowley, payments to the generators would decrease by 1.26%, equating to £4.0m per annum.

The materiality will be further increased if additional contracts subject to the same issue are awarded in the second allocation round.

2. Background - what are the provisions for TLM(D) indexation in the CFD contract?

Certain CFD contracts include provisions for adjusting the strike price each year to account for any discrepancy between the "**Actual TLM(D) Charge**" (i.e. transmission losses actually allocated to GB generators in the previous calendar year), and the "**Initial TLM(D) Charge**" (i.e. transmission losses that were expected to be allocated to GB generators when the contract was let). For the first contract allocation round the Initial TLM(D) Charges were set out in a CFD Standard Terms Notice issued by DECC on 29 August 2014:

Year(s)	Initial TLM(D) Charge
2010	0.0068
2011 – 2013	0.0083
2014	0.0084
2015 – 2016	0.0085
2017	0.0087
2018	0.0088
2019 – 2020	0.0089
2021 – 2025	0.0090
2026 – 2029	0.0091

Year(s)	Initial TLM(D) Charge
2030 – 2032	0.0092
2033 onwards	0.0093

For example, suppose the Actual TLM(D) Charge for calendar year 2018 was 0.0114, as opposed to the Initial TLM(D) Charge of 0.0088. A "**TLM(D) Charges Difference**" (TCD) would then be calculated as:

$$TCD = (SP_{IB} – IBC) \times (TLM_A – TLM_I) / (1 - TLM_A)$$

where $(SP_{IB} – IBC)$ is the initial strike price (excluding balancing charges). This is roughly equal to the current strike price multiplied by $(TLM_A – TLM_I)$, which in this example would be 0.26% of the strike price. The actual adjustment made to the strike price is then the difference between this year's TCD value, and last year's TCD value.

3. How will implementing P350 implement Actual TLM(D) Charges?

We understand that TLM(D) is intended to reflect the losses allocated to generators in GB. Modification Proposal P350 does not change the total volume of losses allocated to BM Units in delivering Trading Units, and therefore (given that 'generators' and 'BM Units in delivering Trading Units' are roughly equivalent concepts) we do not believe there is any policy intent for P350 to affect TLM(D).

The investment contracts appear to implement this policy intent correctly, by defining TLM(D) in terms of the transmission loss multiplier allocated to BM Units in delivering Trading Units. P350 does not change the total volume of transmission losses recovered through this transmission loss multiplier in a given half hour, and we would therefore expect P350 to have little if any effect on the annual TLM(D) charge defined in the investment contracts.[1]

In contrast, the standard CFD contract defines TLM(D) in terms of $TLMO^{+}_{j}$, which will be affected by Modification Proposal P350. In particular, as described in the P350 Assessment Procedure Consultation, our modelling indicates that:

- Implementing P350 with the slack node at Heysham would increase Annual TLM(D) by 0.004, leading to a 0.4% increase in strike prices (for those CFD Generators subject to TLM(D) strike price adjustment under the standard contract terms); but
- Implementing P350 with the slack node at Cowley would decrease Annual TLM(D) by 0.0126, leading to a 1.26% reduction in strike prices (for those CFD Generators subject to TLM(D) strike price adjustment under the standard contract terms).

4. Which CFD Generators are affected by this issue?

The provisions for TLM(D) strike price adjustment do not apply to all CFD Generators. We understand that they typically do not apply to embedded exempt generators (but do apply to Licensable and/or transmission-connected generators). The issue would therefore apply to those CFD Generators who are on the standard terms (as opposed to an investment contract), and who are not embedded exempt generators. The following table lists CFD contracts meeting this criteria (based on information from the public CFD register), and estimates the cost to consumers of a 1% increase in their strike price:

[1] It is difficult to make any more precise statement, because we don't know exactly how LCCC will calculate the Annual TLM(D) value (as defined in the investment contract) post-P350. They will certainly need to make some change to the method of calculation, as P350 introduces 14 different delivering TLM values in each half hour, and the current methodology assumes one delivering TLM value per half hour.

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Name	Technology Type	Initial Installed Capacity Estimate (MW)	Reduction in Capacity (MW)	Current Strike Price (£/MWh)	Annual Cost of 1% Increase in Strike Price (£m)
Bad a Cheo Wind Farm	Onshore Wind	29.9	3.25	87.40	0.0592
Dorenell Wind Farm	Onshore Wind	177	0	87.40	0.3930
Kype Muir Wind Farm	Onshore Wind	104	15.6	87.40	0.1963
Middle Muir Wind Farm	Onshore Wind	60	9.00	87.40	0.1132
Nanclach Wind Farm	Onshore Wind	39.1	0	87.40	0.0868
Tralorg Wind Farm	Onshore Wind	20	1.2	87.40	0.0417
EA 1, Phase 1	Offshore Wind	179	0	126.85	0.5768
EA 1, Phase 2	Offshore Wind	285	0	126.85	0.9184
EA 1, Phase 3	Offshore Wind	250	0	126.85	0.8056
TOTAL		**1144**	**29.05**		**3.1911**

Note that the annual cost of a 1% increase in strike price is calculated as:

Chargeable Capacity = Initial Capacity Estimate – Reduction in Capacity

Cost = Chargeable Capacity * Strike Price * 1% * Hours in Year * Generic Load Factor

For purposes of this materiality assessment we have used a Generic Load Factor of 0.29, which is the value used by ELEXON when calculating Credit Cover requirements for new onshore or offshore wind farms (see paragraph 4.5 of the CALF Guidance document).