

CUSC Alternative Form - Charging

CMP444 BlueFloat | Nadara Alternative Request 4

Overview:

This Alternative applies 0.1 of a Standard Deviation to the mean of the 2024 5-year TNUoS forecast to calculate a cap-and-floor, and ensures that the cap-and-floor that is applied achieves the policy objectives and addresses the concerns raised in the NESO Proposal, Ofgem Sep-24 Open Letter and referenced DESNZ/HMG/Ofgem/NESO documentation, as well as the NESO Proposal itself.

This proposed Alternative adopts similar statistical mechanisms previously discussed in Workgroup meetings, uses the same input dataset as the Original Solution, but in addition:

- Introduces additional policy context to guide an appropriate level of cap-and-floor
- Applies the context to a range of different statistical models

This approach is designed to:

- Retain the locational inputs from the TNUoS forecast
- Address the key principles outlined in the Modification Proposal to ensure the Modification remains in scope, but also
- Provide an objective approach to assessing what cap-and-floor are required to address the policy defects.

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Proposer: Barney Cowin, BlueFloat | Nadara Partnership

☒ I/We confirm that this Alternative Request proposes to modify the charging section of the CUSC only

Guidance for Alternative Proposers

Who can raise an Alternative? Any CUSC or BSC Party, or Citizens Advice can raise an Alternative Request in response to the Workgroup Consultation.

How do Alternative Requests become formal Workgroup Alternative Modifications? The Workgroup will carry out a Vote on Alternatives Requests. If the majority of the Workgroup members or the Workgroup Chair believe the Alternative Request will better facilitate the Applicable Objectives than the CUSC Modification Proposal, the Workgroup will develop it as a Workgroup Alternative Modification.

Who develops the legal text for Alternatives? ESO will develop the Legal text for all Workgroup Alternative Modifications and will liaise with the Alternative Proposer to do so.

What is the proposed alternative solution?

The proposed Alternative is a cap-and-floor that applies a similar statistical approach to NESO to the same 2024 5-year dataset but applies a wider range of variables to compare the outputs of multiple models. The proposed Alternative addresses the same principles as the NESO Original Solution to ensure it is in scope of the Modification, but also considers additional principles to objectively assess

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what cap-and-floor levels are appropriate given the stated policy defects. These are drawn from relevant policy, details of which can be seen in the Appendix 1, with the key principles summarised below:

- The cap should reduce the impact of the forecast charges in Northern GB¹.
- The floor should reduce the impact of the forecast credits in Southern GB².
- Retention of the existing TNUoS forecasting methodology is necessary for governance reasons.
- The cap-and-floor output should neutralise the output locational signals of the resultant Wider Tariff to a degree that is determined appropriate by relevant policy to address the stated policy defects.
- The solution should seek to either support, or as a minimum should not deter investment which is required for clean power 2030 goals.
- The solution should seek to prevent increasing consumer costs through disproportionately increased CfD bids.

The relevant policy documents that have been considered for the purposes of the proposed Alternative are listed below – see Annex 1 for relevant policy analysis:

- Ofgem: Open Letter Sep-24³ - Open Letter seeking industry action on TNUoS
- HMG: Clean Power 2030 Action Plan: A new era of clean electricity⁴.
- DESNZ: Review of Electricity Market Arrangements (REMA) Autumn Update⁵
- NESO: Clean Power 2030: Advice on achieving clean power for Great Britain by 2030⁶

Alternative Solution Process

This Alternative follows broadly the same process is followed as the NESO's Original Solution (pink below), with the addition of another stage where the additional principles drawn from relevant policy are applied to the model outputs (amber below) to assess the outputs against the policy defects.

¹ For the purpose of this report, Zones 1-14 inclusive – Scotland to Yorkshire Dales

² For the purpose of this report, Zones 15-27 inclusive – Yorkshire Dales to Cornwall

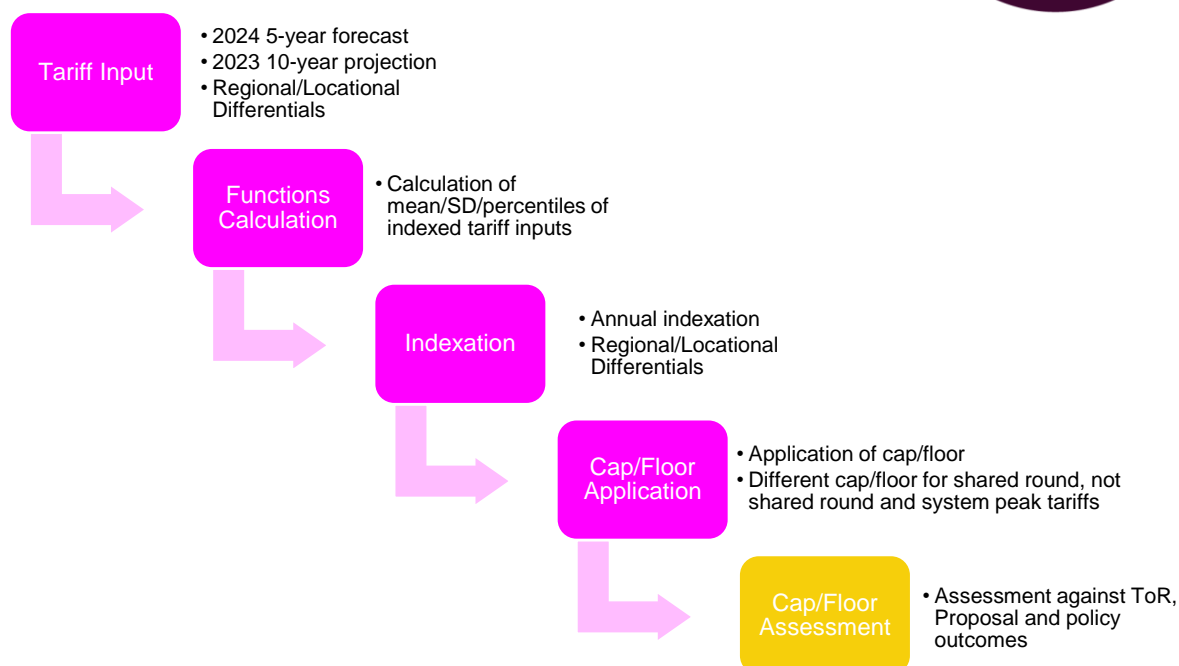
³ Open Letter: Seeking industry action to develop a temporary intervention to protect the interests of consumers by reducing the uncertainty associated with projected future TNUoS charges

⁴ Clean Power 2030 Action Plan: A new era of clean electricity

⁵ REMA Autumn update 2024

⁶ neso.energy/document/346651/download

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The following models have been assessed:

Standard Deviation	Percentiles
0 Standard Deviation (Mean only)	5% Percentile
0.1 Standard Deviation from Mean	10% Percentile
0.2 Standard Deviation from Mean (as per NESO's proposal)	20% Percentile
0.25 Standard Deviation from Mean	25% Percentile
0.5 Standard Deviation from Mean	30% Percentile
	40% Percentile
	50% Percentile

Alternative Solution Output

It is proposed that the 0.1 of a Standard Deviation should be applied to the mean of the 2024 5-year TNUoS forecast to derive an appropriate cap-and-floor level that achieves both the principles in the Modification Proposal but also addresses the policy defects outlined in both the Proposal and the Sep-24 Ofgem Open Letter.

See detailed analysis in Appendix 2.

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Northern GB - System Peak

Zone	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
1	2.48	2.23	2.55	2.08	2.69	2.74	2.80	2.85	2.91
2	2.48	2.53	2.58	2.63	2.69	2.74	2.80	2.85	2.91
3	2.48	2.45	2.58	2.08	2.69	2.74	2.80	2.85	2.91
4	1.96	2.37	2.58	2.08	2.69	2.74	2.80	2.85	2.91
5	2.48	2.53	2.58	2.63	2.69	2.74	2.80	2.85	2.91
6	2.48	2.53	2.58	2.63	2.69	2.74	2.80	2.85	2.91
7	1.96	2.00	2.20	2.08	2.69	2.74	2.80	2.85	2.91
8	2.48	2.53	2.58	2.63	2.69	2.74	2.80	2.85	2.91
9	2.26	2.04	2.09	2.08	2.12	2.74	2.80	2.85	2.91
10	1.96	2.00	2.04	2.08	2.12	2.74	2.80	2.85	2.91
11	2.48	2.53	2.04	2.08	2.12	2.74	2.80	2.85	2.91
12	1.96	2.00	2.04	2.08	2.12	2.74	2.80	2.85	2.91
13	2.48	2.53	2.58	2.37	2.65	2.74	2.80	2.85	2.91
14	1.96	2.00	2.04	2.08	2.12	2.74	2.80	2.85	2.91

Northern GB - Shared Year Round

Zone	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
1	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
2	8.78	8.96	9.14	7.30	9.50	9.69	9.89	10.09	10.29
3	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
4	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
5	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
6	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
7	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
8	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
9	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
10	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
11	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
12	8.78	8.96	9.14	9.32	9.50	9.69	9.89	10.09	10.29
13	7.01	7.15	7.91	8.41	7.86	9.69	9.89	10.09	10.29
14	7.01	7.15	7.91	8.41	7.86	9.69	9.89	10.09	10.29

Northern GB - Not Shared Year Round

Zone	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
1	7.99	8.14	8.31	8.47	8.64	8.82	8.99	9.17	9.36
2	7.99	8.14	8.31	8.47	8.64	8.82	8.99	9.17	9.36
3	7.99	8.14	8.31	8.47	8.64	8.82	8.99	9.17	9.36
4	7.99	8.14	8.31	8.47	8.64	8.82	8.99	9.17	9.36
5	7.99	8.14	8.31	8.47	8.64	8.82	8.99	9.17	9.36
6	7.99	8.14	8.31	8.47	8.64	8.82	8.99	9.17	9.36
7	7.99	8.14	8.31	8.47	8.64	8.82	8.99	9.17	9.36
8	7.99	8.14	8.31	8.47	8.64	8.82	8.99	9.17	9.36
9	7.99	8.14	8.31	8.47	8.64	8.82	8.99	9.17	9.36
10	7.99	8.14	8.31	8.47	8.64	8.82	8.99	9.17	9.36
11	6.05	7.41	6.30	6.42	6.55	6.68	6.81	6.95	7.09
12	6.82	6.14	6.82	7.42	8.64	8.82	8.99	9.17	9.36
13	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
14	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09

Southern GB - System Peak

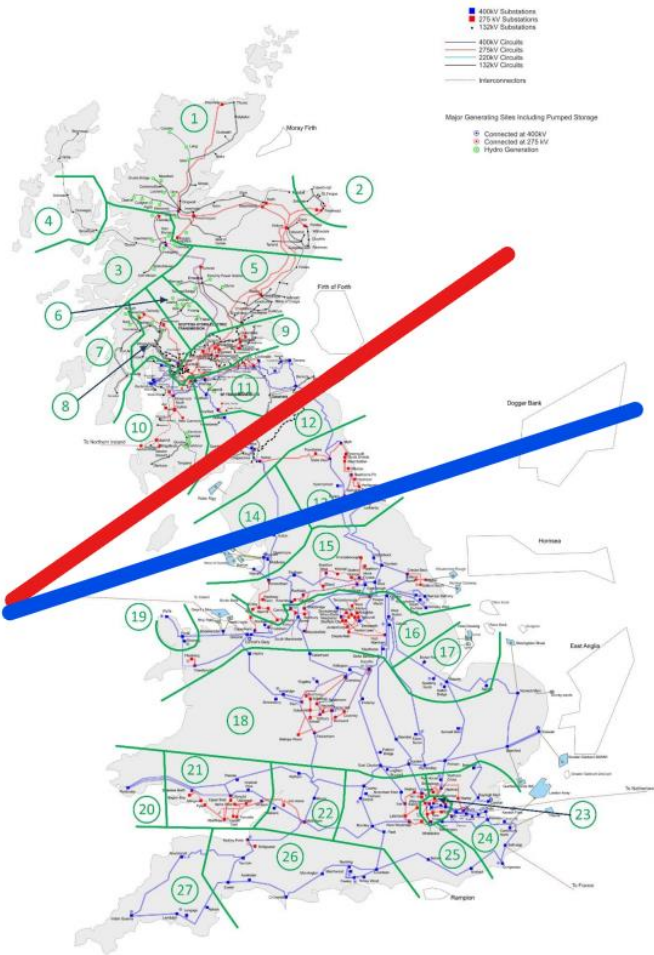
Zone	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
15	2.48	2.53	2.58	2.63	2.69	2.74	2.80	2.85	2.91
16	2.48	2.53	2.45	2.08	2.12	2.74	2.80	2.85	2.91
17	2.48	2.53	2.58	2.50	2.69	2.17	2.21	2.25	2.30
18	1.96	2.00	2.04	2.08	2.12	2.17	2.21	2.25	2.30
19	2.48	2.53	2.58	2.62	2.32	2.74	2.80	2.85	2.91
20	2.48	2.53	2.58	2.63	2.69	2.74	2.80	2.85	2.91
21	2.48	2.53	2.58	2.63	2.69	2.74	2.80	2.85	2.91
22	2.48	2.53	2.58	2.63	2.69	2.74	2.21	2.25	2.30
23	1.96	2.00	2.04	2.08	2.12	2.17	2.21	2.25	2.30
24	1.96	2.00	2.04	2.08	2.12	2.17	2.21	2.25	2.30
25	1.96	2.00	2.04	2.08	2.12	2.17	2.21	2.25	2.30
26	1.96	2.00	2.04	2.63	2.69	2.74	2.80	2.85	2.91
27	1.96	2.00	2.58	2.63	2.69	2.74	2.80	2.25	2.30

Southern GB - Shared Year Round

Zone	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
15	6.66	6.79	6.93	7.06	7.21	9.05	8.91	8.89	7.80
16	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
17	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
18	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
19	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
20	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
21	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
22	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
23	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
24	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
25	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
26	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80
27	6.66	6.79	6.93	7.06	7.21	7.35	7.50	7.65	7.80

Southern GB - Not Shared Year Round

Zone	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
15	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
16	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
17	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
18	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
19	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
20	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
21	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
22	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
23	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
24	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
25	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
26	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09
27	6.05	6.17	6.30	6.42	6.55	6.68	6.81	6.95	7.09



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What is the difference between this and the Original Proposal?

Source Data and Method Data Preparation Method - No difference

- The Alternative uses the same data set, which retains locational signals through the inputs, and uses the same approach to modelling the data.

Model Selection - Improvement

- The Original Solution does not put forward any arguments or rationale for the selection of the applied model. This Alternative models a range of options and provides a rationale for arriving at the most appropriate.

Cap-and-floor Determination - Improvement

- The Original Solution does not put forward any objective arguments or rationale as to why the cap-and-floor levels are appropriate. This Alternative provides an objective and logical rationale for an appropriate level of cap-and-floor.

Cap Impact - Improvement

- The caps in the Original Solution only impact a relatively small number of zones (The upper extremities) for a limited period, and there is no objective rationale as to why these zones have been selected. This Alternative impacts the majority of zones in Northern GB, and provides objective justification as to why this is necessary.

Floor Impact - Improvement

- The Original Solution does not include an effective floor. This is required to ensure reduced consumer cost. The Alternative provides an effective floor impacting the majority of zones in Southern GB and provides a rationale as to why it is necessary to impact those zones.

Clean Power 2030 Goals

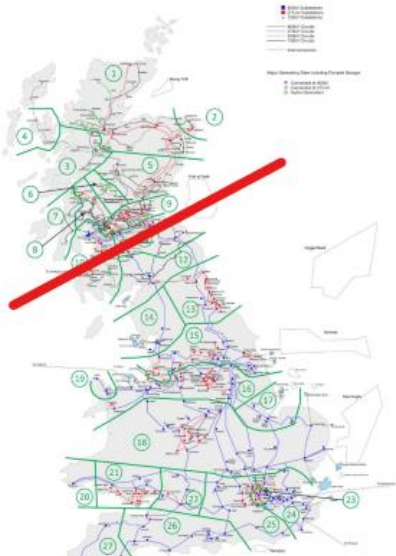
- The Original Solution does not support clean power goals due to the relative lack of impact of the cap-and-floor. The lack of impact means it would continue to deter investment which is required for 2030 goals. The Alternative neutralises market distortions which currently deter investment for clean power 2030.

Increasing Consumer Cost from CfD bids

- The absence of a cap in the NESO Original Solution does not protect against an increase in consumer costs resulting from increased CfD bids in Southern GB. The Alternative provides an effective cap and floor that protects against disproportionate costs being applied to the consumer.

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Difference Between Original and Alternative Proposals (SYR/NSYR)

[illegible]

Northern GB - System Peak

Zone	2016	2017	2018	2019	2020	2021	2022	2023	2024
1	2.46	2.23	2.10	1.97	1.86	1.86	1.86	1.86	1.86
2	2.46	2.00	1.86	1.86	1.86	1.86	1.86	1.86	1.86
3	1.86	2.41	2.38	1.86	1.86	1.86	1.86	1.86	1.86
4	1.86	1.86	2.41	2.38	1.86	1.86	1.86	1.86	1.86
5	1.86	1.86	1.86	2.41	2.38	1.86	1.86	1.86	1.86
6	1.86	1.86	1.86	1.86	2.41	2.38	1.86	1.86	1.86
7	1.86	1.86	1.86	1.86	1.86	2.41	2.38	1.86	1.86
8	1.86	1.86	1.86	1.86	1.86	1.86	2.41	2.38	1.86
9	1.86	1.86	1.86	1.86	1.86	1.86	1.86	2.41	2.38
10	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	2.41
11	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86
12	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86
13	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86
14	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86

Southern GB - System Peak

Zone	2016	2017	2018	2019	2020	2021	2022	2023	2024
19	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
20	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
21	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
22	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
23	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
24	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
25	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
26	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
27	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
28	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
29	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
30	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
31	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19
32	1.86	2.03	2.45	2.88	3.16	3.74	4.36	4.81	5.19

Northern GB - Shared Year Round

Zone	2016	2017	2018	2019	2020	2021	2022	2023	2024
1	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
2	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
3	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
4	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
5	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
6	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
7	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
8	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
9	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
10	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
11	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
12	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
13	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
14	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70

Southern GB - Shared Year Round

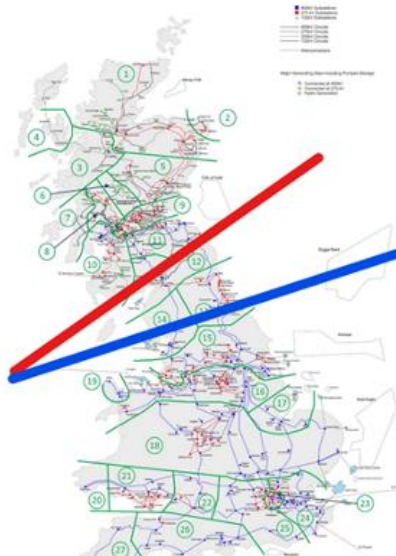
Zone	2016	2017	2018	2019	2020	2021	2022	2023	2024
19	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
20	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
21	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
22	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
23	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
24	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
25	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
26	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
27	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
28	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
29	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
30	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
31	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70
32	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70

Northern GB - Not Shared Year Round

Zone	2016	2017	2018	2019	2020	2021	2022	2023	2024
1	1.86	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
2	1.86	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
3	1.86	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
4	1.86	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
5	1.86	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
6	1.86	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
7	1.86	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
8	1.86	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
9	1.86	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
10	1.86	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
11	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
12	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
13	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
14	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10

Southern GB - Not Shared Year Round

Zone	2016	2017	2018	2019	2020	2021	2022	2023	2024
19	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
20	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
21	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
22	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
23	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
24	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
25	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
26	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
27	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
28	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
29	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
30	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
31	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10
32	8.50	8.10	8.10	8.10	8.10	8.10	8.10	8.10	8.10



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Broader Context with NESO Proposal and WACMs

Whilst this Alternative is presented to be considered on its individual merits, but it is suggested that in order to fully assess the merits of this and all other in-scope Alternatives, options might best be considered and presented collectively, ensuring the full range of policy options are fully explored and presented to Ofgem to ensure that the best outcome is delivered. The following are proposals currently being discussed by the workgroup, representing the full range of Alternatives.

1. Baseline – No cap& floor
2. NESO Proposal – High cap & low floor – collective mean and two standard deviations
3. Multi-stage cap & floor – different adopted means and one standard deviation
4. Moderate cap & floor – collective mean & 10% decile approach
5. Lower Cap & High Floor – collective mean & range of standard deviation and percentiles, Cap and Floor at 60% and 40% percentiles
6. **Minimised Cap and Maximised Floor – collective mean & range of standard deviation and percentiles, Cap and Floor at 0.1 Standard Deviation**
7. Fixed tariff - out of scope

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Principle	Comment
Establishes appropriate, individual, upper and lower limits on the £/kW charges paid by generators through the Year-Round and/or Peak Tariffs/	Individual upper/lower limits are imposed separately on the System Peak, Shared Year Round and the Not Shared Year Round tariffs. Each element has its own individual outputs derived from the 2024 forecast.
Retains regional/locational differentials in charges and between technology types through a single GB cap and floor.	Adopts the NESO approach using the 2024 5-year regionally derived TNUoS forecast to calculate the mean. Should the regional inputs change, the resulting charges change.
Maintains a procedure for ensuring compliance with the requirements on generator annual average transmission charges as provided for in Regulation 838/2010	Procedure is maintained
Is capable of implementation without requiring NESO to change its TNUoS forecasting approach or timetable	Capable of implementation without a change to TNUoS forecasting approach or timetable.
Is capable of implementation from April 2026, if approved	Capable of implementation from April 2026.

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What is the impact of this change?

Proposer's Assessment against CUSC Charging Objectives	
Relevant Objective	Identified impact
(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;	Positive: DESNZ/HMG/Ofgem state their concerns with the differential in charges between Northern and Southern Generators. This cost differential, which also impacts CfD strike prices, results in market distortion and ineffective competition driven by cost reflectively based on locational element which is no longer fit for purpose under central network planning. This Alternative addresses these issues.
(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 accordance with the STC) incurred by transmission licensees in their transmission businesses and which are compatible with standard licence condition C11 requirements of a connect and manage connection);	Positive: The current position is that Northern Generators are paying disproportionately high costs in relation works being carried out by transmission licensees to reinforce the system based on capacity spatial distribution that is centrally planned. The costs are not cost reflective, which assumes generator choice in site location. This Alternative addresses this issue.
(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 and the ISOP business*;	Positive: This Alternative seeks to minimise the volatility and unpredictability of forecast TNUoS so will benefit transmission

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	licensees ongoing business.
(d) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency *; and	None
(e) Promoting efficiency in the implementation and administration of the system charging methodology.	Slight negative: Adds slight complexity
*The Electricity Regulation referred to in objective (d) is Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast) as it has effect immediately before IP completion day as read with the modifications set out in the SI 2020/1006.	

When will this change take place?

Implementation date:

April 2026

Implementation approach:

Impacts forecasted tariffs.

Acronyms, key terms and reference material

Acronym / key term	Meaning
BSC	Balancing and Settlement Code
CfD	Contracts for Difference
CUSC	Connection and Use of System Code
DESNZ	Department for Energy Security and Net Zero
NESO	National Energy System Operator
REMA	Review of Electricity Market Arrangements
TNUOs	Transmission Network Use of System

Reference material:

Public
1.

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Appendix 1 - Relevant Policy Context

It is important to ensure not only that any solution remains in scope of the modification Terms of Reference, but also accommodates relevant stated policy context and specific direction, purpose and expectations of outcomes from NESO/Ofgem/HMG/DESNZ.

It is noted that the Ofgem Sep-24 letter requesting industry intervention references REMA, the TNUoS Task Force, the Strategic Spatial Energy Plan and Clean Power 2030. Anticipating the outcomes of wider reform is outside the scope of this modification and solution, however there are a number of specific policy publications which directly reference this modification which need to be considered to understand the full relevant policy context in which it is expected that the solution will be applied. This alternative seeks to extract the relevant context from the referenced policy to inform a decision on what parameters and level of cap/floor are appropriate, and what is a logical methodology for applying them. These are discussed below in detail.

Ofgem: Open Letter Sep-24⁷ - Open Letter seeking industry action on TNUoS

- Seeks **temporary** industry intervention to reduce the uncertainty associated with projected TNUoS charges, in particular around concerns driven by 2023's 10-year projection of charge increase for generators in the North of GB.
- The letter outlines that a **solution should reduce the uncertainty around the future range of TNUoS charges, particularly in Northern GB** where projected charge increases... were particularly high and not necessarily aligned with our **long-term TNUoS policy direction**. The most significant increases are expected in Northern Scotland... primarily driven by the large-scale infrastructure investments that are required to decarbonise the electricity system... [which] include the 26 critical energy projects worth an estimated £20 billion under the Accelerated Strategic Investment ("ASTI") framework⁸, and the Holistic Network Design ("HND")⁹.
- Ofgem note that if the changes resulting from the TNUoS Task Force proposal are approved... may now not be capable of implementation until 2027.
- Ofgem note that under the current charging methodology, the unprecedented infrastructure build required to achieve Clean Power 2030 not only results in **significantly higher TNUoS charges in Northern regions, but also much higher credits in Southern regions**.
- **In the immediate term... generation TNUoS charges should send a useful investment signal**. Over the longer-term the role and propose of TNUoS charging could change, and also that a new approach to system planning¹⁰ needs to be reflected in the TNUoS methodology. This is important to avoid a disconnect between how the system is planned and how charges are applied.

Accordingly, in addition to the specific stated outputs outlined in the letter and NESO's Terms of Reference, Ofgem's concerns and supplied context require that the modification should:

- Be a temporary intervention only.
- Reduce the uncertainty around the future range of TNUoS charges, particularly in Northern GB
- Address the discrepancy in respect of both higher TNUoS charges in Northern regions and also higher TNUoS credits in Southern regions.

⁷ Open Letter: Seeking industry action to develop a temporary intervention to protect the interests of consumers by reducing the uncertainty associated with projected future TNUoS charges

⁸ Decision on accelerating onshore electricity transmission investment

⁹ A Holistic Network Design for Offshore Wind | National Energy System Operator

¹⁰ Strategy and policy statement for energy policy in Great Britain (accessible webpage) - GOV.UK

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- In the immediate term generation TNUoS charging needs to send a useful investment signal.

HMG: Clean Power 2030 Action Plan: A new era of clean electricity¹¹.

- This HMG report follows NESO's Advice on Achieving Clean Power by 2030¹², outlining concerns about rising TNUoS charges, creating a **need for reforms** to the network charging regime, in particular **significant increases to TNUoS charges for Scottish Generators, and a significant decrease to those in England and Wales**.
- The report also notes that **some of the higher charges are at the very end of the network resulting in some of the most productive wind assets facing the highest charges**.
- The report goes on to outline the following specifically in relation to this modification:

*Ofgem have proposed a **temporary cap and floor to alleviate these concerns**. In an open letter Ofgem encouraged NESO to develop a temporary cap-and-floor solution in response to projected increasing costs and volatility of TNUoS to drive investment in renewables. **We expect that this update will provide generators with greater certainty ahead of future allocation rounds including providing certainty on direction of travel ahead of AR7. We will continue to work with Ofgem and NESO as this modification progresses.***

HMG specifically state that the temporary Cap&Floor should alleviate the outlined concerns. Accordingly this modification should seek to:

- Address the significant increases to TNUoS charges for Scottish Generators, and a significant decrease to those in England and Wales
- Address the fact that some of the higher charges are at the very end of the network resulting in some of the most productive wind assets facing the highest charges.
- Provides greater certainty to generators ahead of future [CfD] allocation rounds.
- Provides certainty of direction of travel ahead of AR7 [CfD round].

DESNZ: Review of Electricity Market Arrangements (REMA) Autumn Update¹³

- This update was published alongside the Clean Power 2030 Action plan and provides an update on policy development within the Review of Electricity Market Arrangements (REMA) Programme and how DESNZ's vision for electricity market reform sits alongside the Clean Power 2030 Action Plan.
- Outlines that the ambition to complete the policy development phase of REMA by around mid-2025 and that the timetable for REMA decisions will align with the timetable for the next allocation round (AR7) for the Contracts for Difference (CfD) scheme.
- Specifically in relation to this modification, the update includes the below:

*Ofgem have recently published an open letter on a proposed code modification to introduce a temporary cap and floor amendment to TNUoS generator tariffs. **The purpose of this modification is to minimise system cost for consumers, while reducing uncertainty to investors to deliver Clean Power by 2030. This is ultimately an industry modification process, but Ofgem, as decision maker, will help ensure a smooth transition into any future arrangements under REMA.***

The DESNZ paper explicitly states that that the Cap&Floor should reduce uncertainty to investors to deliver Clean Power by 2030. In summary, this modification should:

¹¹ Clean Power 2030 Action Plan: A new era of clean electricity

¹² <https://www.neso.energy/publications/clean-power-2030>

¹³ REMA Autumn update 2024

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- Minimise system cost for consumers.
- Reduce uncertainty to investors to deliver Clean Power by 2030.
- Ensure sufficient continuity to future market reform, acknowledging that the current status quo - a 'do nothing approach' - is not an option, and that the current locational charge is unpredictable for investors, and the existing methodology to determine locational TNUoS differences is not deemed to be cost reflective.
- Ensure a smooth transition from the current TNUoS arrangements through to REMA is possible, retaining consistency with existing TNUoS forecasting until the conclusion of REMA whilst also allowing for subsequent revision to the relevance/materiality of locational signals and their associated cost reflectivity.

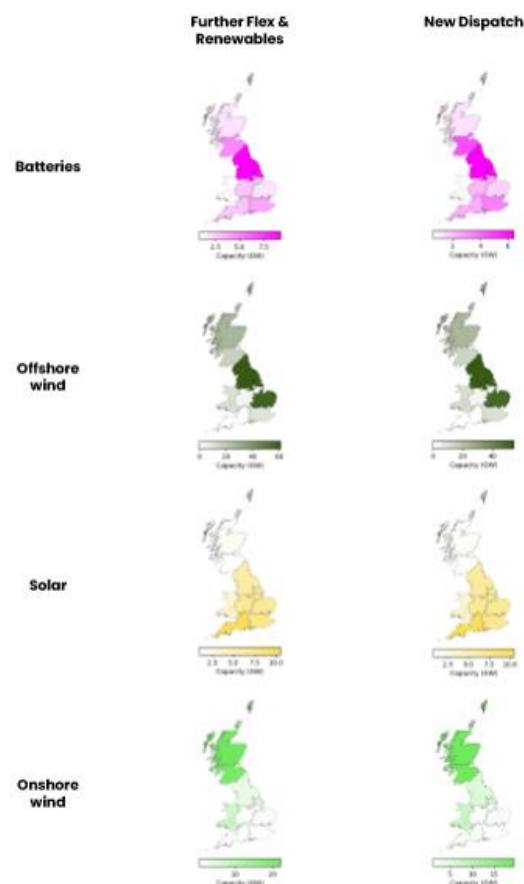
Clean Power 2030

Capacity Requirements

Following on from the above and that one of DESNZ's explicit expectations of the modification is to *"enable the required pace and timing of investments to reach a clean power system by 2030"*, it is necessary to understand both the required context and also the timescales of CP2030 to understand the expected outcomes of this modification.

NESO's Clean Power 2030 Advice¹⁴ outlines the following capacity requirements by 2030¹⁵:

- 43-51 GW Offshore Wind
- 27 GW Onshore Wind
- 47 GW Solar
- 22-27 GW BESS



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HMG's Clean Power Plan 2030 Action Plan¹⁶ response arrives at the following:

- 43-50 GW Offshore Wind
- 27-29 GW Onshore Wind
- 45-47 GW Solar
- 23-27 GW BESS

Spatially, from the CP2030 Advice:

- BESS, which it is noted helps with system constraints, is required in zones 7-15.
- Offshore Wind capacity is required in zones 13-18.
- Onshore Wind capacity is required in zones 1-12.
- Solar capacity is required in zones 13-27.

Capacity is required nationally to achieve CP2030, specific regions/locations dependent on technology. All capacity is required to achieve CP2030 targets.

This modification will be implemented Apr-26, the TNUoS Task Force outcomes won't be implemented by 2027, and the capacity ambitions target 2030. There is a stated requirement for an immediate investment signal and there is no other policy initiative through which this might be possible, and it is requested by DESNZ that this modification itself should be a vehicle for enabling clean power 2030.

Network Reinforcement Costs

The Ofgem Sep-24 Open Letter references 26 critical ASTI projects and also reinforcements under HND. The ASTI decision¹⁷ was made by Ofgem on 15th December 2022. The HND¹⁸ was published in July 2022 follows BEIS's Offshore Transmission Network Review in July 2020¹⁹ and outlines NESO's (ESO at the time) recommendations for 23GW of offshore wind and the required onshore and offshore network. NESO's recommendations include capacity nationwide, in particular, in Scotland, Northern England and the Southwest.

In respect of capacity location, the only approach for this modification that is consistent with the policy intent is one that:

- at best acts as a positive enabler by incentivising generation build to achieve the capacity targets in their entirety, or:**
- as a minimum removes obstacles that risk the capacity targets not being achieved.**

Transmission Reinforcement Build Costs

Ofgem outline in their Sep-24 Open Letter that:

*under the current charging methodology, the unprecedented infrastructure build required to achieve Clean Power 2030 not only results in significantly higher TNUoS charges in Northern regions, but also much higher credits in Southern regions. NGESO's 10-year projections for TNUoS generation charges in the early 2030s suggest that **paying much larger credits to generators to use the system could oppose consumers' interest as they may end up paying more depending on the broader picture***

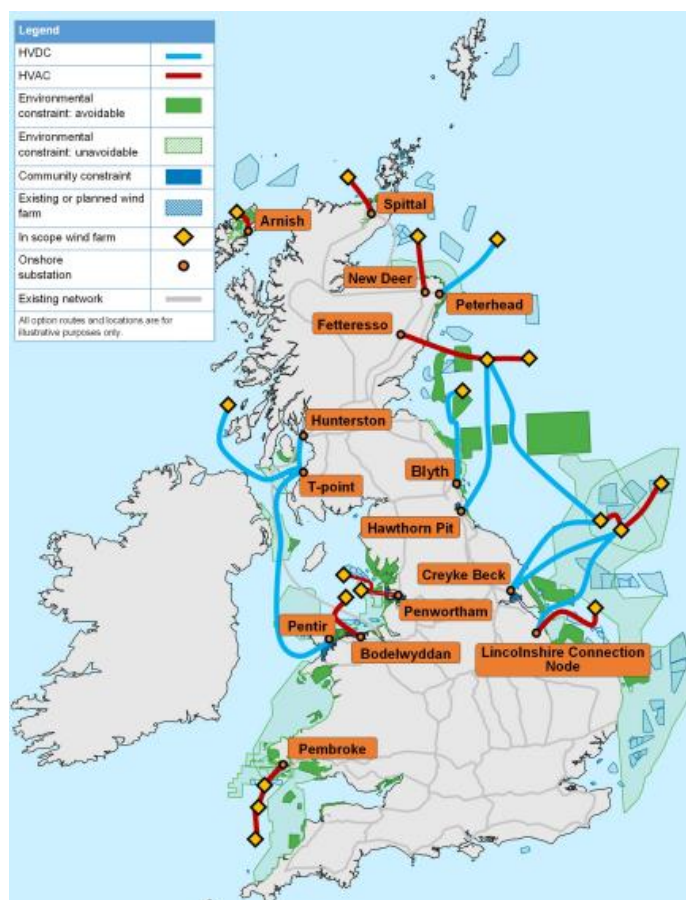
¹⁶ <https://assets.publishing.service.gov.uk/media/675bfaa4cfbf84c3b2bcf986/clean-power-2030-action-plan.pdf>

¹⁷ <https://www.ofgem.gov.uk/decision/decision-accelerating-onshore-electricity-transmission-investment>

¹⁸ <https://www.neso.energy/publications/beyond-2030/holistic-network-design-offshore-wind>

¹⁹ <https://www.gov.uk/government/groups/offshore-transmission-network-review>

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This aligns with both DESNZ and HMG's concerns with regional differentials in TNUoS charges, which are driven by the Transport & Tariff Model²⁰. The locational signals in the T&T Model are designed to reflect the cost of using the transmission network in different locations, providing incentives for generators to choose to locate in areas where they can minimise costs.

The location of offshore wind farms are derived from the Crown Estate Scotland (TCES) and the Crown Estate (TCE) Leasing Rounds. The ability of developers to react to locational signals of TNUoS by prioritising wind farms in the South of GB is limited. Offshore Developers did not choose to locate their projects where they did, but are being assigned costs as if they did.

Cost reflectivity is based on the principle that users of the transmission system are charged based on the costs that they impose on the network, which enable a user to consider the siting of their project to maximise efficiency and reduce impacts on the network. If siting of a project is not in their control and is instead driven by external parties, the applicability of cost reflectivity in this particular context is not incentivising efficient network build.

CUSC Modification CMP428²¹, which was implemented on 14th June 2024 and STC Modification CM094²² (rejected in favour of CMP428) acknowledges and seeks to remedy, in the context of User Commitments, the disconnect that generators are liable for financial commitments:

Notwithstanding that the build is not specifically triggered by the connection of the customer²³

On the same basis, Generators are currently liable for inflated TNUoS charges notwithstanding that the build is not specifically triggered by their connections, and is instead triggered through central network planning and third party lease processes.

The outlined disproportionate forecast in credits to generators in Southern Regions result in an increase in the costs to consumers. This is exacerbated by the CfD auction process whereby Northern generators are likely to determine the CfD strike price for added onshore wind and offshore wind capacity. The continued divergence in TNUoS between North and South would thus also lead to growing costs of CfD backed wind generation to consumers.

In respect of TNUoS transmission reinforcement costs derived from central network planning, this modification should seek to ensure that the associated costs aren't disproportionately

²⁰ <https://www.neso.energy/document/138046/download>

²¹ <https://www.neso.energy/industry-information/codes/cusc/modifications/cmp428-user-commitment-liabilities-onshore-transmission-reinforcement-holistic-network-design>

²² <https://www.neso.energy/industry-information/codes/stc/modifications/cm094-amendment-bi-annual-estimate-provisions>

²³ <https://www.neso.energy/document/319781/download>

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applied to generators whose connection arrangement/location has been determined by third parties.

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Appendix 2 - Alternative Solution Model Analysis

Criteria	0 SD	0.1 SD	0.25 SD	0.5 SD	1SD	2SD	3SD	4SD	0.05 Pntle	0.1 Pntle	0.2 Pntle	0.25 Pntle	0.3 Pntle	0.4 Pntle	0.5 Pntle
The cap should reduce the impact of the forecast charges in Northern GB.	Y	Y	Y	Y	U	N	N	N	N	N	U	U	U	Y	Y
The floor should reduce the impact of the forecast credits in Southern GB.	Y	Y	Y	Y	U	N	N	N	N	N	U	U	U	Y	Y
Retention of the existing TNUoS forecasting methodology is necessary for governance reasons.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
The cap/floor output should neutralise the output locational signals of the resultant Wider Tariff to a degree that is determined appropriate to address the stated policy defects.	Y	Y	Y	Y	U	N	N	N	N	N	U	U	U	Y	Y
The solution should seek to either support, or as a minimum should not deter investment which is required for clean power 2030 goals.	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	Y	Y
The solution should seek to prevent increasing consumer costs as a result of increased CfD bids.	Y	Y	Y	Y	N	N	N	N	N	N	N	U	U	Y	Y

The cap should reduce the impact of the forecast charges in Northern GB²⁴ and the floor should reduce the impact of the forecast credits in Southern GB²⁵.

- Yes – 0SD, 0.1SD/0.25SD/0.5SD, 0.5Percentile/0.4 Percentile
- Uncertain –
 - 1SD – caps effective zones 1-12 from 2030, but floors ineffective
 - 0.3 Percentile – caps effective zones 1-13, but floors ineffective
 - 0.25 Percentile - caps effective zones 1-12 from 2029, but floors ineffective
 - 0.2 Percentile - caps effective zones 1-12 from 2029, but floors ineffective
- No
 - 2SD – Caps variable 1-11 from 2030, but no floor
 - 3SD – Caps variable 1-9 from 2030, but no floor
 - 4SD – Caps very limited 1-4, from 2033, no floor
 - 0.1 Percentile – Caps effective 1-11, limited floor
 - 0.05 Percentile – Caps partially effective zones 1-11, Floor not effective

Retention of the existing TNUoS forecasting methodology is necessary for governance reasons.

- All models retain the existing TNUoS forecasting methodology

The cap/floor output should neutralise the output locational signals of the resultant Wider Tariff to a degree that is determined appropriate to address the stated policy defects.

- See cap/floor assessment above.
- Only 0SD, 0.1SD, 0.25SD, 0.5SD 0.4 Percentile and 0.5 Percentile neutralise the impact of both cap & floor equivalently across GB.
- **0SD** (applying just the mean) retains no locational signals in the tariff outputs, so for the purposes of this analysis will be **excluded**
- **0.1SD** retains locational differentials in the output for SM, SYR and NSYR. The boundary where locational signals are retained is 13-15 (Yorkshire Moors/Manchester/Leeds) for SYR and 11-12 (Scottish Borders) for NSYR, so is **retained**.
- **0.25SD** retains locational signals within zones 11-14 (Scottish Borders to Yorkshire Moors) and 8-14 (mid-scotland to Yorkshire Moors), with the cap/floors impacting, so this is **retained**.
- **0.5SD** retains locational signals 12-19 for SYR (Scottish border to Midlands inclusive) and 8- with the caps impacting in midland Scotland and the floors impacting from south midlands.

²⁴ For the purpose of this report, Zones 1-14 inclusive – Scotland to Yorkshire Dales

²⁵ For the purpose of this report, Zones 15-27 inclusive – Yorkshire Dales to Cornwall

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Whilst the impact of the cap/floors is wider than would be required to mitigate the policy defects, given the degree of protection it provides as a compromise, it is **retained**.

- **0.5 Percentile** outputs is similar to OSD, although scattered locational signals remain pre-2027. This is **excluded**
- **0.4 Percentile** retains locational signals zones 12-19 (SYR) and 11-19 NSYR). Caps impact from zone 12 (SYR) and 11 (NSYR) (Scottish Borders), and floor impacts from 18/19 (SYR) (Midlands). Whilst the impact of the cap/floors is wider than would be required to mitigate the policy defects, given the degree of protection it provides as a compromise, it is **retained**.

The solution should seek to either support, or as a minimum should not deter investment which is required for clean power 2030 goals, and the solution should seek to prevent increasing consumer costs as a result of increased CfD bids

- Options 0.1SD and 0.25SD are retained as models that sufficiently neutralise the output location signals to a degree consistent with the stated concerns regarding Northern GB charges and Southern GB credits. These models would act to neutralise market distortions to a sufficient degree such that required CP2030 investment would not be deterred.
- 0.5SD and 0.4 Percentile are considered compromises that might be presented, that don't neutralise to the required extent of the concerns relating to Northern GB charges and Southern GB credits, but nonetheless offer a moderate degree of protection which will improve the landscape such that investment isn't being as actively deterred as current conditions.
- Only those models that have effective floors would act to prevent increasing consumer costs as a result of increased CfD bids, which would to a varying extent be 0.1SD, 0.25SD, 0.5SD and 0.4 Percentile.