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Workgroup Consultation Response Proforma

CMP444: Introducing a cap and floor to wider generation TNUoS Charges

Industry parties are invited to respond to this consultation expressing their views and supplying the rationale for those views, particularly in respect of any specific questions detailed below.

Please send your responses to usc.team@nationalenergyso.com by **5pm** on **29 January 2025**. Please note that any responses received after the deadline or sent to a different email address may not receive due consideration.

If you have any queries on the content of this consultation, please contact usc.team@nationalenergyso.com.

Respondent details	Please enter your details	
Respondent name:	Nina Brundage	
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Which best describes your organisation?	<input type="checkbox"/> Consumer body <input type="checkbox"/> Demand <input type="checkbox"/> Distribution Network Operator <input checked="" type="checkbox"/> Generator <input type="checkbox"/> Industry body <input type="checkbox"/> Interconnector	<input type="checkbox"/> Storage <input type="checkbox"/> Supplier <input type="checkbox"/> System Operator <input type="checkbox"/> Transmission Owner <input type="checkbox"/> Virtual Lead Party <input type="checkbox"/> Other

I wish my response to be:

(Please mark the relevant box)

☒ **Non-Confidential** (this will be shared with industry and the Panel for further consideration)

☐ **Confidential** (this will be disclosed to the Authority in full but, unless specified, will not be shared with the Workgroup, Panel or the industry for further consideration)

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For reference the Applicable CUSC (charging) Objectives are:

- 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 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);*
- 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*;*
- d) *Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency **; and*
- e) *Promoting efficiency in the implementation and administration of the system charging methodology.*

* See Electricity System Operator Licence

**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.

For reference, (for consultation question 6) the Electricity Balancing Regulation (EBR) Article 3 Objectives and regulatory aspects are:

- a) *fostering effective competition, non-discrimination and transparency in balancing markets;*
- b) *enhancing efficiency of balancing as well as efficiency of national balancing markets;*
- c) *integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security;*
- d) *contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector while facilitating the efficient and consistent functioning of day-ahead, intraday and balancing markets;*
- e) *ensuring that the procurement of balancing services is fair, objective, transparent and market-based, avoids undue barriers to entry for new entrants, fosters the liquidity of balancing markets while preventing undue market distortions;*
- f) *facilitating the participation of demand response including aggregation facilities and energy storage while ensuring they compete with other balancing services at a level playing field and, where necessary, act independently when serving a single demand facility;*
- g) *facilitating the participation of renewable energy sources and supporting the achievement of any target specified in an enactment for the share of energy from renewable sources.*

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What is the EBR?

The Electricity Balancing Regulation (EBR) is a European Network Code introduced by the Third Energy Package European legislation in late 2017.

The EBR regulation lays down the rules for the integration of balancing markets in Europe, with the objectives of enhancing Europe's security of supply. The EBR aims to do this through harmonisation of electricity balancing rules and facilitating the exchange of balancing resources between European Transmission System Operators (TSOs). Article 18 of the EBR states that TSOs such as the ESO should have terms and conditions developed for balancing services, which are submitted and approved by Ofgem.

Please express your views in the right-hand side of the table below, including your rationale.

Standard Workgroup Consultation questions

1	Do you believe that the Original Proposal better facilitate the Applicable Objectives?	Mark the Objectives which you believe each solution better facilitates:	
		Original	<input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/> E
		<p>We believe that the Original Proposal better facilitates the following objectives when compared to a baseline of inaction. However, as discussed below, we remain concerned that, while some of these Objectives are better facilitated compared to inaction, they are not <i>appropriately</i> facilitated by this solution.</p> <p>Objective Assessment:</p> <p>A – Positive:</p> <p>The current volatility and unpredictability in TNUoS charges negatively impacts competition of electricity generation. Specifically, that it a). exposes certain market participants—those in charging zones at either end of the spectrum—to materially greater uncertainty (in £/annum terms) than those in the middle charging zones because there are bigger swings in monetary terms, and b). it creates a material risk of high prices PLUS cost of uncertainty flowing through clearing prices, meaning that, from a consumer perspective, effective competition is not achieved. Any solution aimed at addressing this issue represents a net improvement in the electricity market by seeking to remove a known barrier to entry, fostering greater stability and improved investment confidence. Seeking to remove barriers to entry, by definition, helps to</p>	

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		<p>improve market entry and competition. However, as we will discuss further throughout this consultation, the Cap and Floor levels set out in this proposal do not go far enough to sufficiently address this challenge.</p> <p>B – Slightly Positive: The current TNUoS charging regime lacks cost reflectivity.</p> <ol style="list-style-type: none"> 1. Generally, existing generating assets are unfairly burdened with paying for new network infrastructure (required for the purpose of connection of future generation) via TNUoS charges, without any ability to anticipate or mitigate these costs. It is not cost reflective to expose existing generation to the cost of infrastructure that it is not triggering. We elaborate on this further below. 2. The proceedings of the TNUoS Task Force and various code modification working groups have identified various specific elements of the charging methodology that lack cost reflectivity. <p>C – Neutral</p> <p>D – Slightly Positive: The current TNUoS charging regime discriminates against northern Scottish generators for the reasons explained in the answer to B, above.</p> <p>E – Neutral: The Original Solution looks to adhere to many of the existing practices, principles and publications around TNUoS to limit the bureaucratic and administrative requirements of the solution.</p>
	Do you support the proposed implementation approach?	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p>As directed by Ofgem in their September 2024 open letter, simple improvement upon a base case of inaction on transmission charging/ Transmission Network Use of System (TNUoS) charges is insufficient – it must be <i>appropriate</i> to mitigate the significant harm to clean energy deployment and consumers that will materialise without intervention. Without decisive action on TNUoS,</p>

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	<p>the UK's goal of delivering Clean Power by 2030 is at risk. Existing renewable generation in the north could be forced to cease operation and ScotWind projects may never come to fruition, economic growth and just transition commitments will go unrealised, and consumers will ultimately bear these unnecessary costs of TNUoS uncertainty through the Contract for Difference (CfD) mechanism.</p> <p>The predicted exponential increase in TNUoS charges gives rise to unintended consequences including impacts on cost of capital as well as artificial inflation of CfD clearing prices, and subsequent CfD uplift for southern generators, which is paid for by electricity customers. Recent analysis completed by Aurora Energy Research¹ found that TNUoS charges, coupled with transmission loss multipliers (TLMs), are artificially inflating CfD prices resulting in a strike price differential of up to £20/MWh for offshore wind generation between the North and South of GB in 2025. This is ultimately impacting consumers bills to the tune of £550m per year, totalling £7.9b in additional consumer costs between 2025-2050 if left unchecked. These broader interactions must be factored into Cap and Floor system impact.</p> <p>To prevent this scenario, the Cap and Floor proposal must be refined to safeguard against the ongoing value erosion that existing projects have already suffered in recent years. It must also address systemic issues to ensure fairness and cost reflectivity for future projects. While the proposal represents an improvement over inaction, it fails to deliver the decisive interventions required to mitigate the significant threats posed by the current TNUoS regime to the UK's clean energy objectives.</p> <p>There is a lack of clear rationale behind how NESO have determined what constitutes an <i>appropriate solution</i>, and they have not conducted full analysis into energy system impacts – especially around consumer costs related to TNUoS-driven CfD clearing, and the subsequent uplift that southern generators will experience. As specified in Ofgem's letter, "minimising system costs for consumers"</p>
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¹ Aurora Energy Research (2024). *The cost of locational signals in network charges to the consumer*.

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		<p>is a critical objective of this solution. We do not believe that there has been a complete evaluation of consumer costs – inclusive of CfD impacts—which must be sufficiently accounted for in the solution.</p> <p>The implementation approach appears to be more focussed on process than outcomes. The outcome should be a cap which supports the delivery of CP30 and stems unfair value erosion from existing assets which will damage confidence of infrastructure investors at an important time.</p>
3	Do you have any other comments?	<p>It is important to note that Ofgem’s original letter requesting the introduction of a Cap and Floor mechanism, as well as the early stages of Workgroup solution development, predated the Government’s publication of the Clean Power by 2030 Action Plan (CP30). Ensuring that CMP444 aligns with these broader system objectives for strategic energy deployment is essential, despite the challenges posed by timing and the urgency of solution development. Locational market signals, such as TNUoS, must actively support strategic energy planning objectives. Misaligned market signals risk creating investor uncertainty, ongoing substantial value losses for operational assets, and place undue costs on consumers. This threatens both near-term and long-term progress towards achieving the UK’s clean energy goals.</p> <p>In addition, greater emphasis must be placed on protecting existing assets. There is currently a disproportionate focus on providing investment certainty for future projects, but it is critical to recognise that this is not solely about future investments—it is equally about safeguarding the value of existing ones. Sending existing projects/assets a closedown/relocation signal whilst simultaneously planning strategically to deploy more (CfD-backed) generation in the same place would be a perverse market situation.</p> <p>If the cap is set too high, existing generation built in Scotland—developed in good faith based on the market signals of the time—will continue to face rising tariffs, further eroding its value. These assets are owned and</p>

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		<p>funded by a diverse range of investors. This ongoing value destruction risks damaging investor sentiment more broadly, as they must increasingly account for the cannibalisation of existing assets.</p> <p>Moreover, this situation underscores the lack of cost reflectivity in TNUoS for existing projects. Existing generation should not bear the costs of future infrastructure strategically deployed to serve new developments - existing projects have no ability to relocate or mitigate these additional costs - cost increases at an exponential level not predicted at the point of operating projects' Final Investment Decisions. Addressing this imbalance is vital to ensure a fair and equitable charging regime that supports both current and future progress towards the UK's clean energy ambitions.</p>
4	Do you wish to raise a Workgroup Consultation Alternative Request for the Workgroup to consider?	<p><input type="checkbox"/> Yes (the request form can be found in the Workgroup Consultation Section)</p> <p><input checked="" type="checkbox"/> No</p> <p>Click or tap here to enter text.</p>
5	Does the draft legal text satisfy the intent of the modification?	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>Yes – we think the legal text does support the intent of the Original Solution of this modification.</p>
6	Do you agree with the Workgroup's assessment that the modification does not impact the Electricity Balancing Regulation (EBR) Article 18 terms and conditions held within the Code?	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>Click or tap here to enter text.</p>

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Specific Workgroup Consultation questions		
7	Do you believe the cap and floor should have an end date? If so, how long or what is the appropriate trigger.	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p>OW does not think that a specific end date should be included in the modification. We recognise that, given the timing of this modification with ongoing REMA development, specific and accurate timings will be hard to predict. This allows for more flexibility based on REMA development and further resulting CUSC mods.</p>
8	What level of certainty would be required from this modification to best support investment decisions? Please justify any additional protection required (for example grandfathering rights or any other levels of protection).	<p><input checked="" type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p>This is an incredibly subjective question and not at all suited to a yes/ no answer. Rather than asking <i>what the required level of certainty should be</i> from this modification, the question should be <i>how much uncertainty can the system, and thus consumers, afford to price into energy development?</i> As shown in research from Aurora Energy Research², the rise of transmission charging when compared to 2017 levels (when the current TNUoS regime was put in place) leads to £7.9 billion of additional costs of CfD-backed offshore wind generation to consumers cumulatively from 2025-2050. In 2025 alone, transmission charging (TNUoS plus Transmission Loss Multipliers (TLM)) is expected to lead to a £20/MWh strike price differential for offshore wind between the North and South of GB. Due to growing uncertainty and demonstrated investment loss experiences by existing assets, these costs will inflate for future projects to mitigate the uncertainty and impacts already felt. If insufficient, the Cap and Floor will fail to deliver CP30 at the lowest cost to consumers, resulting in unnecessary risk being priced</p>

² Aurora Energy Research (2024). *The cost of locational signals in network charges to the consumer.*

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		<p>into the market which must be paid for by bill payers. Ofgem, NESO, and DESNZ should not be willing to accept this reality on behalf on consumers for the simple goal of retaining location signals – especially given that the energy system is diverging from this model.</p> <p>There should be grandfathering assumptions for both projects that take investment decision during this regime and, in addition, to projects that took investment decisions prior to this mod being implemented. As discussed in Q3, existing assets which took in-good-faith investment decisions years ago, must be better protected by the Cap and Floor proposal. Unfettered TNUoS has already undermined significant value from operational Scottish projects, which have no way to respond to changing signals and are paying for new projects to connect to the network. Seeing this continued deterioration of investments will dampen interest in future projects and potentially result in cannibalisation of existing projects by future projects in the same geography that are better placed to price-in the risk/vagaries of exponential growth in transmission charges. This cannibalisation risk will inevitably get priced into new ventures. This Proposal's future focus is overlooking a source of significant uncertainty that has the serious potential to deter future investment in Scotland and increase the cost of capital for projects that do move forward.</p>
9	Does the Original proposal with no specific end date provide Developers with sufficient confidence to make an investment decision? Please justify.	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p>No. However, the lack of specified end date is not the notable cause of the lack of confidence. The cap is not set at a viable level for projects in the north of Scotland to take investment decisions – irrespective of the cap's duration.</p>
10	Does the Original Proposal and any of the Alternatives raised	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>

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	<p>achieve the objectives of the Ofgem letter?</p>	<p>Original – No</p> <p>This Proposal does not establish an “appropriate” upper and lower limit. As already highlighted in this response, the cap for northern Generators is insufficient to enable continued delivery of projects. Additionally, the Floor is insufficient as it sits lower than the 10-year forecasted projections, which this modification is supposed to prevent given Ofgem’s objectives. This means that it ultimately fails to prevent continued subsidisation of generation in southern zones due to uncapped negative charges, which ultimately fall to the consumer to pay for.</p> <p>Alternative 1 – Yes</p> <p>This Alternative has merit given that it has both a Cap and Floor that will insulate from the extremes in the 10-year forecast. The cap under this proposal is more impactful and thus will have a positive impact on investor confidence that is needed to support continued development of projects in Scotland.</p> <p>Alternative 2 – No</p> <p>As discussed in the Workgroup, the use of standard deviations is incorrect given the TNUoS dataset is not a normal distribution. It is also made quite clear in Ofgem’s letter that there is to be a “single GB cap and floor” that corrects the extreme TNUoS charges in the north and subsidies in the south. Converse to these objectives, this Alternate looks to apply a two-step cap.</p> <p>Alternative 3 – No</p> <p>For the same reasons as Alternative 2, this Alternative does not retain the “single GB cap and floor” objective per Ofgem’s open letter, and it takes a standard deviation approach despite non-normal distribution of data.</p> <p>Alternative 4 – Withdrawn</p> <p>Alternative 5 – Yes</p> <p>The approach is very policy-orientated in its solution rather than being statistically driven—like the other</p>
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		<p>proposals. For this reason, it looks to expressly address the objectives laid out in Ofgem's open letter and defines the Cap and Floor based on the specifications. As such, it proposes both a Cap and Floor that are impactful at mitigating the extreme's forecasted under NESO's 10-year projection.</p> <p>Alternative 6 – Yes</p> <p>This solution looks to use the Ofgem-directed call to limit the impact of large-scale, nationally significant infrastructure investments that are required for whole-system decarbonisation. By amending the dataset used in the Original Solution, this inclusion is avoided, and a more impactful Cap and Floor are set.</p> <p>Alternative 7 – No</p> <p>This proposal appears quite discriminatory of northern generators without ever recognising the equal emphasis Ofgem should place on minimising subsidy to southern GB. This proposal does not address the issue of possible discrimination and non-cost reflectivity for existing generation, and it stands to permit greater value erosion of existing northern generation than the Original Proposal. This would have serious implications on investor confidence, and the strong emphasis of retaining the locational signal element stands in contrast to Government's strategic planning objectives. The greater system cost to consumers must be comprehensively understood – including interactions with the CfD. This solution does not address the highly volatile nature of TNUoS, and it does not stand to address many of the key objectives Ofgem seeks to remedy with this solution.</p>
11	Do you agree with the data set proposed for the calculation of the cap and floor? If not, what data set would you propose? What is your view on the use of	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p>This dataset does not adequately address impacts already faced by existing assets that have experienced significant NPV deterioration since commissioning – even those that are only a few years old. Utilising</p>

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	NESO's 5-year forecast of April 2024?	<p>NESO's 5-year forecast does not support greater cost reflectivity for existing assets. Rather, it remains discriminatory against existing generation in the north and does not address the challenge that these projects have no means to respond to signals that have been set well after investment decisions have been made.</p> <p>Additionally, Ofgem has recognised the challenge of using TNUoS to fund large-scale, nationally significant infrastructure investments that are required for whole-system decarbonisation. This dataset does not seek to limit the burden of these projects on current and future Generators.</p> <p>Nationally significant projects (eg. ASTI and HND projects) should be removed from calculations because of their wider strategic system benefit that they bring.</p>
12	Please provide your assessment of the Original Solution and the 7 Alternative Requests discussed by the Workgroup (additionally, please indicate your preferred solution with associated justification):	
Alternative Request		Assessment
Original Solution		<p>Negative</p> <p>While statistical approach is consistent with dataset, the fundamentals of this solution are insufficient. As discussed throughout this response, the Cap is reached in northern zones in late forecasted projections, but it does not provide the requisite certainty to projects in the north. Additionally, the floor has no bite, and thus it does not meet the objectives in Ofgem letter, and it supports continued consumer subsidisation of southern generation. This solution will not appropriately prevent the worst impacts of the TNUoS status quo and will not be the safeguard to investments required to deliver on the CP30 mission.</p>
Alternative Request 1		<p>Positive - This is our preferred solution.</p> <p>The statistical approach to this Alternative is consistent with the dataset. Most importantly, both the Cap and Floor levels are set to be impactful against forecasted extremes. This will have a net-positive impact on</p>

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	consumers and result in less harm to existing projects. The cap is at a level that will provide greater investor confidence to northern projects. Additionally, the need for generator adjustment is limited.
Alternative Request 2	Negative The statistical approach is not consistent with the dataset (non-normal distribution). The two-step cap is not aligned with Ofgem's objective for a single UK-wide cap, and it will not deliver the system benefits required to achieve Government's CP30 objectives.
Alternative Request 3	Negative The statistical approach is not consistent with the dataset (non-normal distribution). The two-step cap is not aligned with Ofgem's objective for a single UK-wide cap, and it will not deliver the system benefits required to achieve Government's CP30 objectives. Additionally, significant Generator Adjustment will be needed.
Alternative Request 4	N/A - withdrawn
Alternative Request 5	Positive We support this alternative and the level at which the Cap and Floor is set. The statistical approach is consistent with the dataset. The strong alignment with Ofgem/DESNZ's policy objectives (Clean Power by 2030) is a welcome signal to investors that there is a strong north star to coordinate future energy development around a common target. This Alternative presents a Cap and Floor that is set low enough to continue delivering projects in the north, and it ends the subsidisation of southern projects – thus minimising TNUoS-related costs falling to consumers (greatest consumer benefit of all proposals).
Alternative Request 6	Positive The statistical approach is consistent with dataset. We support that this alternative is designed to couple with other proposals nicely. Also, we agree that the solution should remove strategic infrastructure development from

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	<p>TNUoS to best align with Ofgem’s priorities. This Alternative creates more effective Cap and Floor than original proposal which is welcomed.</p> <p>We would support this proposal being considered in addition to the other Alternatives that we see as positive and impactful towards the goal of this modification (e.g. Alternative 1 + Alternative 6 could be a welcome combination of reform ideas).</p>
Alternative Request 7	<p>Negative</p> <p>This proposal is quite discriminatory of northern generators without ever recognising the equal emphasis Ofgem should place on minimising subsidy to southern GB. This proposal does not address the issue of non-cost reflectivity for existing generation, and it stands to permit greater value erosion of existing northern generation than the Original Proposal. This would have serious implications on investor confidence, and the strong emphasis of retaining the locational signal element stands in contrast to Government’s strategic planning objectives. The greater system cost to consumers must be comprehensively understood – including interactions with the CfD. This solution does not address the highly volatile nature of TNUoS, and it does not stand to address many of the key objectives Ofgem seeks to remedy with this solution.</p>