



BHA Response to the Consultation on Ofgem's minded-to decision in respect of CMP444

Executive Summary:

This response strongly supports the implementation of CMP444 and its proposed cap and floor mechanism as a transitional measure to reduce uncertainty in TNUoS charges. CMP444 addresses structural flaws in the current charging regime that disproportionately penalise geographically remote but strategically valuable assets—particularly Pumped Storage Hydropower (PSH). These projects are critical to meeting the UK's Net Zero and energy security goals.

We disagree with Ofgem's assessment that CMP444 fails to better facilitate the Applicable Charging Objectives (ACOs). In our view:

- ACO (e) – Cost Reflectivity: The current TNUoS framework reflects theoretical locational cost, but not the real-world system value of technologies like PSH. CMP444 enhances cost reflectivity by recognising wider system benefits and avoided costs.
- ACO (d) – Competition: Volatile, regionally skewed charges stifle competition and exclude many viable projects. CMP444 would create a more level playing field.
- ACO (f) & (h) – Implementation and Administration: Interconnector experience shows that cap and floor regimes are administratively feasible and cost-efficient.
- ACO (g) – Compliance with Electricity Regulation: CMP444 supports investment in secure, low-carbon infrastructure in line with retained EU legislation.

By approving CMP444 (e.g., WACM1), Ofgem would enable shovel-ready projects to proceed, reduce system costs, and support long-term consumer interests. This response outlines clear evidence and reasoning to support that position.

1. To what extent do you agree with our assessment of the impacts of CMP444 options on ACO (e)? Please provide your detailed rationale.

We disagree with Ofgem's assessment that CMP444 has a negative impact on Applicable Charging Objective (e) – promoting efficiency in the implementation and administration of the CUSC arrangements. While Ofgem raises concerns about administrative complexity, this overlooks the systemic inefficiencies currently created by volatile and regionally skewed TNUoS charges. These inefficiencies are already undermining investor confidence, delaying shovel-ready Long Duration Electricity Storage (LDES) projects such as Pumped Storage Hydropower (PSH), and ultimately increasing consumer costs through higher congestion and curtailment payments. CMP444 enhances cost reflectivity not just in a static locational sense but in a dynamic, system-wide one. For example, PSH delivers grid services like inertia, fast frequency response, and avoided curtailment that are not priced into the current TNUoS regime. The current regime is therefore incomplete in its definition of 'cost'. By allowing these projects to proceed, CMP444 promotes a truer form of cost-reflectivity, one that reflects long-run system value.

CMP444's cap and floor approach offers a pragmatic, transitional intervention that can bring forward strategically valuable infrastructure while longer-term reform is developed. It would enhance forward planning certainty for both developers and system planners, improving the efficiency and credibility of the CUSC regime. As demonstrated by the interconnector regime, cap and floor arrangements can be administered without prohibitive cost or complexity.

By failing to implement CMP444, Ofgem risks preserving a status quo that is both administratively opaque and increasingly unfit for purpose in a decarbonising, decentralised energy system. A targeted, time-limited cap and floor would enhance, rather than hinder, administrative efficiency by reducing risk, stabilising investment decisions, and aligning delivery with Ofgem main objective protecting present and future consumers, as well as Clean Power 2030 objectives.

2. Do you agree with our assessment of the impacts of CMP444 options against ACO (d)? Please provide your rationale. If you have data to support your assessment of the interactions between CMP444 options and competition in generation we would encourage you to share it with us alongside this consultation response, clearly marking any confidential data.

We do not agree with Ofgem's assessment that CMP444 has a negative impact on Applicable Charging Objective (d) – promoting competition in the generation of electricity. On the contrary, we believe the current unpredictability and regional disparity in TNUoS charges actively distorts competition, particularly disadvantaging generators in remote locations such as Scotland and Wales, where most Pumped Storage Hydropower (PSH) projects are located.

The latest NESO 10-year projections show TNUoS charges could triple in Northern zones by 2033. This creates an uneven playing field, undermining investment in strategic, long-duration storage that is essential to decarbonising and balancing the UK grid. The consequence is not an efficient market, but a market that privileges proximity over value, and volatility over resilience.

CMP444's cap and floor mechanism would offer a more level and predictable foundation for competition. It would reduce investor risk for a limited time and scope, enabling credible participation from a broader set of market actors, including those offering crucial non-energy services like inertia and system stability.

Without intervention, only the most risk-tolerant or vertically integrated players can compete, excluding smaller or regionally constrained developers despite their projects' long-term system value.

Preserving the status quo risks delaying critical infrastructure, increasing system costs (e.g. curtailment and constraint payments), and narrowing the field of viable generation types. A well-designed cap and floor would stimulate competition not stifle it, by addressing structural disadvantage and enabling the deployment of technologies aligned with Clean Power 2030 and Net Zero goals.

3. To what extent do you agree with our views on the interactions between cost-reflectivity and competition? Please provide evidence (qualitative or quantitative) supporting your answer.

We believe Ofgem's current interpretation of cost-reflectivity is too narrow and, as a result, undermines competition rather than supporting it. The principle of cost-reflectivity should not be confined to short-run, locational marginal costs alone. In the context of a transitioning energy system with high penetrations of renewables and rising system volatility, a more holistic view is needed, one that considers long-term system value, strategic services, and avoided costs (e.g. constraint payments, curtailment, and additional transmission reinforcement).

Under the existing TNUoS framework, the cost-reflective signal disproportionately penalises generators in Scotland and Wales, precisely where the most valuable long-duration storage and renewable resources are located. This geographical skew distorts competition by disincentivising otherwise economically and environmentally efficient projects. For example, Imperial College modelling shows that just 4.5GW of PSH could save the system up to £690 million per year by 2050, [yet such projects face some of the highest locational charges](#).

True cost-reflectivity must account for total system cost impacts, not just the theoretical cost of a generator's location. This includes resilience benefits, grid-balancing capabilities, and avoided carbon and curtailment costs, factors largely unpriced in current charging. By failing to reflect these wider system benefits, the current TNUoS regime creates a form of locational discrimination that limits competition to a narrow set of geographies and technologies.

In short, current TNUoS charging both fails to reflect full costs and actively impairs competition. A reformed framework, as tentatively proposed under CMP444, would enable more equitable, dynamic and innovation-aligned competition.

4. To what extent do you agree with our assessment of CMP444 options against ACOs (f)? Please provide your detailed reasoning.

We disagree with Ofgem's assessment that CMP444 has a neutral or negative impact on Applicable Charging Objective (f) – promotion of efficiency in the implementation and administration of the system charging methodology.

Ofgem's rationale appears to focus narrowly on the potential administrative complexity of introducing a cap and floor mechanism. However, this overlooks the substantial inefficiencies in the current charging methodology, which introduces volatility, unpredictability, and distorted locational signals, particularly for long-duration assets like Pumped Storage Hydropower (PSH). These inefficiencies result in project delays, stranded investments, and rising constraint costs, none of which serve the long-term interests of consumers or the efficient functioning of the system.

The existing regime offers no effective mechanism to account for or reward the system services provided by PSH, such as inertia, frequency response, black start capability, and long-duration storage. These are essential for a stable and resilient grid, particularly as intermittent renewables increase. A targeted, time-limited cap and floor under CMP444 would improve the efficiency of system investment by enabling the deployment of strategically valuable storage assets that are otherwise unviable under current charging signals.

The interconnector regime demonstrates that such mechanisms can be administered efficiently within existing regulatory frameworks. The precedent of the GB interconnector cap and floor regime demonstrates that such mechanisms can be managed with proportional administrative effort. CMP444 proposals are similarly rules-based and apply to a limited set of generators, meaning the marginal complexity is manageable. The efficiency gained by unlocking strategic assets far outweighs the modest administrative effort required. With appropriate design, CMP444 could provide both administrative clarity and investment predictability, key conditions for system-wide efficiency. In summary, we believe CMP444 would promote a more efficient and future-fit charging methodology by enabling critical infrastructure investment while wider TNUoS reform is developed.

5. To what extent do you agree with our assessment of CMP444 options against ACOs (g)? Please provide your detailed reasoning.

We disagree with Ofgem's assessment that CMP444 offers no improvement against Applicable Charging Objective (g) – compliance with the Electricity Regulation and other relevant legislation. We believe the proposal aligns more closely with both the spirit and intent of the Electricity Regulation (EU) 2019/943 (retained in UK law), which requires that charges be transparent, non-discriminatory, and reflect the long-term marginal costs of operating and developing the transmission system. Article 18 of Electricity Regulation (EU) 2019/943 (retained in UK law) states:

"Transmission tariffs shall be cost-reflective, transparent and non-discriminatory while providing appropriate incentives for network users to make efficient use of the network."

CMP444 aligns with this requirement by reducing geographic discrimination and incentivising generation and storage projects that provide long-term system value.

Currently, TNUoS charges are neither transparent in their long-term volatility nor truly cost-reflective in a system undergoing deep decarbonisation. The NESO's 10-year TNUoS projections show potential charges tripling in some regions by 2033, creating an unstable investment environment for generators and long-duration energy storage providers. This undermines the development of system-critical infrastructure such as Pumped Storage Hydropower (PSH), especially in remote but resource-rich locations like the Scottish Highlands.

A key principle of the Electricity Regulation is to support an internal electricity market that facilitates investment in secure, sustainable, and low-carbon energy. The current charging regime actively disincentivises such investment by applying disproportionate costs to developers based on geography rather than system value. CMP444's cap and floor mechanism, by contrast, introduces a more stable and proportionate approach that enables critical infrastructure to proceed while long-term reforms are considered.

In this context, CMP444 supports greater compliance with relevant legislation by enabling non-discriminatory access to the market and ensuring investment decisions are driven by long-term system need rather than short-term volatility.

6. To what extent do you agree with our assessment of CMP444 options against ACOs (h)? Please provide your detailed reasoning.

We do not agree with Ofgem's assessment that CMP444 delivers no improvement against Applicable Charging Objective (h) – facilitating effective competition between electricity suppliers and promoting innovation.

The current TNUoS framework, with its highly volatile and geographically skewed charges, creates structural barriers that limit innovation and reinforce regional and technological incumbency. It undermines investment in long-duration, flexible infrastructure like Pumped Storage Hydropower (PSH), which is essential to enabling greater participation of intermittent renewables and new supply models.

CMP444, by proposing a cap and floor mechanism, would reduce locational cost uncertainty for new generation and storage developers, particularly those operating in high-TNUoS zones in Scotland and Wales. This would enable more diverse business models to enter the market, including community-owned, independent, and technology-pioneering schemes. That, in turn, supports a more innovative ecosystem of suppliers and storage operators who can offer new services, such as aggregated flexibility and behind-the-meter storage offerings.

By de-risking investment in PSH, CMP444 indirectly supports innovation in downstream supply markets. Long-duration storage enables more dynamic tariffs, peer-to-peer energy trading, and greater use of demand-side response, all essential to a smart, decentralised, and net-zero-aligned energy system.

In short, without addressing the locational and financial barriers created by current charging arrangements, innovation will be stifled and supplier competition constrained. CMP444 offers a practical mechanism to unlock latent innovation and level the playing field, thereby promoting a more competitive, adaptive, and forward-looking electricity market.

7. To what extent do you agree with our assessment of CMP444 options against the ACOs, taken collectively? Please provide your detailed reasoning and any evidence in support.

We fundamentally disagree with Ofgem's collective assessment of CMP444 against the Applicable Charging Objectives (ACOs). Taken together, Ofgem concludes that the proposal fails to better facilitate the ACOs compared to the status quo. In our view, this conclusion is based on an overly narrow interpretation of cost-reflectivity and administrative efficiency, while underestimating the wider strategic and systemic value of CMP444, particularly for enabling critical long-duration energy storage infrastructure.

Strategically, CMP444 would address growing investor uncertainty by reducing exposure to extreme volatility in TNUoS charges, especially in remote regions where many shovel-ready Pumped Storage Hydropower (PSH) projects are located. These projects offer proven, long-lived, and essential grid services such as inertia, black start, and rapid response, none of which are rewarded under the current framework. CMP444 provides a bridge mechanism that helps unlock investment in these assets while enduring TNUoS reform is developed.

Competitively, CMP444 would improve market fairness by levelling the playing field for geographically disadvantaged projects, thereby enabling greater diversity in market participation. This aligns with the

Electricity Regulation's requirement for non-discriminatory access and promotes innovation by allowing new technologies and business models to compete on a more stable footing.

Administratively, the success of the cap and floor regime for interconnectors shows that such mechanisms can be implemented effectively and with proportional oversight.

CMP444 supports a more balanced, fair, and future-ready charging regime. It better facilitates the ACOs collectively by addressing a structural failure in today's methodology, delivering not just fairness and efficiency, but long-term system resilience and value for consumers.

8. Do you consider that implementation of any of the proposals (if we assessed them to better facilitate achievement of the ACOs) would have particular impacts relevant to our principal objective and/or wider statutory duties? Please provide your detailed reasoning and any evidence in support.

Yes, we consider that implementation of CMP444, if assessed to better facilitate the Applicable Charging Objectives, would have significant positive impacts relevant to Ofgem's principal objective and wider statutory duties, particularly in relation to protecting consumers, promoting decarbonisation, securing system resilience, and enabling strategic infrastructure investment.

1. Protecting the interests of existing and future consumers

CMP444 would unlock investment in long-duration, flexible infrastructure like Pumped Storage Hydropower (PSH), which provides system services that reduce reliance on gas peaking plant, lower constraint and curtailment costs, and enable more renewable integration. According to modelling by Imperial College London, just 4.5GW of PSH could save the system up to £690 million annually by 2050, benefits which directly reduce costs for consumers. Consumers also benefit from greater system stability, lower volatility in wholesale prices, and reduced exposure to gas market shocks.

2. Decarbonisation and sustainability

CMP444 support the delivery of Clean Power 2030 and Net Zero objectives by facilitating investment in net-zero enabling infrastructure. Long-duration storage is not just an ancillary asset, it is essential for managing intermittency and ensuring the operability of a decarbonised grid. Without mechanisms like CMP444, these projects risk indefinite delay, directly undermining statutory climate targets.

3. Security of supply and system resilience

PSH enhances national energy resilience through rapid dispatch, black start, and inertia services, attributes not currently priced in markets. CMP444 would help bring forward assets that materially improve the operability and flexibility of the future grid, aligning with Ofgem's duty to ensure secure supply.

4. Just transition and regional fairness

CMP444 would help overcome regional disadvantage under current TNUoS charges, particularly for Scottish and Welsh projects. This supports Ofgem's duty to ensure non-discriminatory access to the system and advances a fairer regional distribution of infrastructure and associated economic benefits, such as jobs and supply chain investment.

In conclusion, implementation of CMP444 would directly support Ofgem's principal objective and statutory duties by accelerating delivery of infrastructure that protects consumers, enables Net Zero, and enhances resilience. The risk of inaction is not neutrality, it is systemic underinvestment, rising costs, and growing inequality.