Via email to: [RIIO3@ofgem.gov.uk](mailto:RIIO3@ofgem.gov.uk)

26 August 2025

**Hitachi Energy’s response to** **RIIO-3 Draft Determinations for the Electricity Transmission, Gas Distribution and Gas Transmission sectors**

Dear RIIO team,

I am writing to set out Hitachi Energy’s response to Ofgem’s initial proposals for the upcoming RIIO-3 price control period. We appreciate the opportunity to engage in this dialogue and trust that our response will be welcome. Our response is specific to the Electricity Transmission related draft determinations.

As you will know, Hitachi Energy is a global leader in technologies that increase the capacity, resilience and flexibility of the electricity grid. Leveraging £5bn of investment, we are harnessing best practices in the energy, industrial, mobility, IT and smart cities sectors around the world and delivering this insight to the markets in which we operate in. We are a major investor in the UK, with a turnover of over £1 billion and operations across the country, from Shetland to Somerset and North Wales to Norfolk. We are continuing our growth journey in the UK with over seven hundred employees and are on track to more than double our UK operations over the last five years.

We are advancing the world’s energy system based on renewable energy, the lowest cost, most secure and most sustainable source of power. As a technology leader, we collaborate with customers and partners to enable a sustainable energy future – for today’s generations and those to come. We are already helping to bring clean energy to more than ten million UK homes by connecting the world’s two largest offshore windfarms at Dogger Bank and Hornsea to the grid. Based on our role in the UK’s energy system, our response focuses solely on electricity transmission networks and assets.

Hitachi Energy is broadly supportive of the financial framework presented for the Electricity Transmission (ET) sector. We believe that the sector is rightly seen as a critical enabler of the Clean Power 2030 Action Plan (CP2030) and we welcome Ofgem’s recognition of the scale, pace, and urgency for the delivery of both infrastructure and investment, as well as of the need to remove regulatory bottlenecks. However, we have a number of concerns which we argue run contrary to this ambition and suggest that further refinements are needed to ensure that transmission operators (TOs) and the wider ET supply chain are able to deliver at pace and on time.

**Project investment and delivery**

Our main concern is that the draft framework is built around funding models that are better suited to steady-state operations, rather than designed to support a growth-focused infrastructure programme. The framework does not adequately translate Ofgem’s ambition into action, not sufficiently recognising that the next pricing period will be supporting the UK’s largest and most complex electricity transmission programme. This is seen through Ofgem’s decision to only approve a portion of TOs’ proposed projects upfront, with the rest deferred for later approval within the 2026–31 period. While we note Ofgem’s concern of “an unnecessary and avoidable risk” as the reason for rejecting the remaining proposals, we suggest that any delay of early investment decisions poses greater financial and strategic risks. During the RIIO-2 period, TOs repeatedly highlighted challenges in Ofgem’s approval processes, noting the need for a more streamlined and timely approach. The impact of similar delays during the RIIO-3 period would likely be more severe – compounding the impact on pace of delivery, while significantly increasing costs for investors and, ultimately, for consumers.

Ofgem’s cautious approach, combined with the risk of lengthy approval delays and project by project decision-making, does not affect just TOs. Importantly, it would also have a direct impact on investor confidence in the wider ET supply chain, including suppliers such as Hitachi Energy, and their investment plans in manufacturing capacity and skills. An ambitious, comprehensive, clear, and consistent project pipeline is critical to giving both TOs and suppliers the visibility they need to plan and invest with confidence.

Furthermore, we are concerned that the current routes for TOs’ allowances are overly restrictive and could lead to additional delays. This is most acute for workforce recruitment. TOs and supply chain need to scale up rapidly to deliver projects during the RIIO-3 period, but Ofgem’s funding model requires them to wait for project-specific approvals before the challenging task of strategically building up the required workforce. This creates a bottleneck at a time when securing skilled labour is already one of the sector’s biggest challenges. Delaying recruitment through reopeners risks missing critical windows to attract and train the workforce needed to deliver high-quality infrastructure and services, and to retain vital planning, regulatory and delivery expertise. A more holistic and proactive approach is needed to empower TOs to invest in delivery capability from the outset.

**Sustainability practices**

*Related funding proposals*

Hitachi Energy fully supports Ofgem’s drive and acceleration of initiatives to reach the country’s net zero targets but also wishes to note that the level of ambition on sustainability falls short of what is needed to support the TOs’ net zero commitments. This particularly concerns Ofgem’s rejection of several key funding proposals, including for low-carbon construction, marine biodiversity restoration, and species and habitat recovery. These programmes should be encouraged as a part of TOs’ efforts to mitigate environmental impacts, secure planning consents, and maintain stakeholder confidence. We are disappointed they are not being prioritised at this time.

*F-gases in electrical equipment*

We believe that the approach to achieving net zero targets must be grounded in a holistic evaluation of environmental impact. Specifically, this should be reflective of the Life Cycle Assessment (LCA), rather than focusing solely on the presence or absence of F-gases in individual components. With this letter, we attach Hitachi Energy’s own report, the “LCA of Different Concepts of SF₆-free GIS”, which has been reviewed and approved by the independent IVL Swedish Environmental Research Institute. This provides a robust comparison of SF₆, vacuum, and C4-FN-based solutions for Ofgem’s consideration.

In summary, the findings clearly demonstrate that:

* C4-FN/CO₂/O₂ mixtures offer the lowest total carbon footprint across the full life cycle of high-voltage GIS equipment.
* While vacuum and air-based solutions may have zero GWP gases, their larger physical footprint and increased material use result in higher overall CO₂ equivalent emissions.
* Even under a 100% renewable energy scenario, material production remains a dominant contributor to environmental impact, reinforcing the need for compact and efficient designs.

Fast-tracking AIS solutions may appear beneficial from a gas-centric perspective, but it risks overlooking the broader environmental trade-offs. We advocate for a technology-neutral, LCA-based regulatory framework that prioritises total environmental performance over isolated metrics. As an example, due to the compactness of a GIS solution, it could bring a higher improvement on baseline biodiversity compared to the equivalent AIS alternative as well as being less visually intrusive and therefore less liable to planning delays. The reduced land footprint of GIS can also help lower overall project costs, particularly in areas where land acquisition is – or becomes – expensive or constrained.

In conclusion, while we support the proposed reduction of F-gases, we urge Ofgem to integrate LCA as the cornerstone of its evaluation and fast-tracking criteria. This will ensure that sustainable, scalable solutions are promoted - delivering better outcomes for the grid and the planet.

*Extendible designs for switchgear applications.*

We understand and support full technology openness for in terms of extendible designs. This is supported by IEC, where each OEM shall provide sufficient information to enable such an interface to be designed at a later stage. Consequently, future optionality is ensured. In addition, there is backwards compatibility towards all major OEM’s when it comes to extension possibilities.

This is supported by IEC 62271-203:2022, specifically Article 6.108.5. Thus, provisions are designed to ensure that extension of bays by third-party OEMs is possible maintaining the operational integrity, safety, and performance of the overall GIS installation. From a commercial perspective, this technology openness is the basis for a competitive market, that enables the TSO’s choosing the best value for money.

To summarize, extension of the GIS installation presents no technical, commercial, or regulatory impediments.

I hope that our response is of interest to you. Should you require further evidence or if wish to discuss these issues in more detail, please do not hesitate to contact me.

Yours sincerely,

**Dai Richards**   
Director External Affairs  
Hitachi Energy