

## **Hitachi Energy's response to Ofgem Consultation: Centralised Strategic Network Plan: Consultation on framework for identifying and assessing transmission investment options.**

### **Introducing Hitachi Energy**

Hitachi Energy is an exciting global business founded on two iconic companies – Hitachi and ABB Power Grids – with a ground-breaking heritage of innovation in pioneering technologies. As a global technology leader, we serve the energy, industrial, mobility, IT and smart cities sectors. We are a major investor in the UK, with a turnover of £500 million.

We are advancing the world's energy system to be more sustainable, flexible and secure. 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 millions of UK homes by connecting the world's two largest offshore windfarms at Dogger Bank and Hornsea to the grid. We strongly believe that the UK can lead the world in creating a secure, low cost, Net Zero-ready energy system through investing in technologies to make the energy system more sustainable, flexible, and secure.

### **Consultation Questions**

#### **Q1. Do you agree with our broad regulatory approach to establishing the FSO's obligations to deliver the CSNP products?**

Yes, we agree it is sensible to have Ofgem providing oversight and the Future System Operator (FSO) owning and publicising the methodology. We believe that providing a public methodology is the best way to enable effective collaboration.

#### **Q2. What are your views on the types of system need that we have proposed are covered by the CSNP? Are there any gaps?**

Table 1 is a comprehensive and sensible set of proposals. However, we disagree that system restoration should be excluded from the list of needs. We believe it should be included on the basis that the reliability, availability, and overall design of the system have critical impacts on system restoration.

We also see scope to include studying variants for connecting generation (e.g. offshore wind) and major loads (e.g. green hydrogen production), that could be either grid connected or private wire. We appreciate that this could be covered by stage 1 Model Future Supply and Demand.

#### **Q3. Do you agree that the time horizon for system need assessment should be extended to 2050?**

We support the idea of both a short-term plan for system needs assessment and a longer-term horizon scanning plan. An extension to 2050 makes sense for the first CSNP, but by the 2030s it will only be a 12 year look ahead which is not valuable. We instead advocate a rolling twenty-five year look ahead. This would align with the Strategic Spatial Energy Plan recommendation from the *Electricity Networks Commissioner's Review*. The short-term assessment period should be longer than the average project life cycle (currently 10-12 years).

#### **Q4. Do you agree that the FSO should move to a year-round nodal assessment of system need as part of the CSNP?**

Yes, we agree.

#### **Q5. We welcome stakeholders' views on how the FSO can communicate effectively about future system needs?**

The FSO's communications on future system need should be thought of holistically by linking to communications about future supply and demand. In general, the National Grid Electricity System Operator's (NGESO) Future Energy Scenarios (FES) and Network Options Assessment (NOA) updates and webinars are helpful for industry, but a different approach is needed for educating the public on future system needs, tailoring the approach and language to a public audience.

The scale of transmission and distribution infrastructure needed to meet the demands of the grid requires greater public buy in and community engagement. We therefore support Recommendation 12 of the *Electricity Network*

*Commissioner's Review* in its calls for the Future System Operator (FSO) and Transmission Operators (TOs) to work with Government to design and implement a public information campaign on the need for a grid refresh, highlighting the importance of new infrastructure in tackling climate change and delivering cheaper electricity.

**Q6. What are your views on the FSO establishing minimum design requirements for high-level option designs and are there areas where exceptions are needed?**

We support the idea of minimum design requirements, which should reduce re-work and deliver time and cost savings. We also support Ofgem's calls for this to be a collaborative exercise, and we stress the importance of ensuring supply chain collaboration in the process to bring forward the latest thinking on technology roadmaps and deliverability considerations. Within the next decade, ensuring deliverability and speed is going to be of paramount importance, so efficient resource usage, and fast, deliverable solutions need to have a high relative weighting in evaluation.

**Q7. Do you have any views on our proposals for considering environmental and community impacts as part of high-level design of options?**

We appreciate the need and value of this approach and therefore support it, but we emphasise it should be done on a collective impact basis across all projects in a community rather than looking at individual projects in isolation.

**Q8. Do you have any views on our proposal for the FSO to independently decide which network needs it may lead the high-level design of?**

Whilst it is difficult to predict what the solutions or needs will be, we agree in principle with the proposal and stress the need for some of the solutions to be looked at holistically. We also agree on the need for guidance on which needs the FSO will be focusing on. Open discussions with the TOs will be important in this process.

**Q9. Do you have any views on our proposal for the FSO to set out how and when third parties can be involved within the CSNP?**

The involvement of third parties is important and can lead to improvements across the network. To save both the FSO and third parties time this should be via an efficient process with a staged evaluation of the value of any proposed solution. There also needs to be clarity of the evaluation criteria for any proposed options.

**Q10. Do you have any views on our proposals on data exchange to enable the implementation of CSNP?**

We agree that data access is critical to getting the best solutions and wherever possible making data openly accessible would be beneficial. However it is vital that data sharing between the FSO and TOs is not restricted by open data concerns, as this would be detrimental.

**Q11. Do you have any views on our proposals regarding the principles to be followed in the CSNP decision-making framework?**

We agree and support the principles, especially as the decisions taken will have long-term implications. The criteria used for evaluating options will need to be flexible, based on the priorities of the current time periods, for example the cost of delay at the moment is huge, while in 15 years it may be less significant.

**Q12. Do you have any views on our proposals on the decision-making framework for selecting potential projects to address longer-term system needs?**

We note the use of the word 'CAPEX' in the proposals, which we think is the wrong phrasing to use and an unhelpful inclusion in a consultation document. The proposals should refer instead to 'TOTEX', which includes both capital expenditure (CAPEX) and operational expenditure (OPEX), and we are pleased to note that the tools suggested in the proposals, such as MPV, include TOTEX thinking. We also welcome Ofgem's recognition of the value in securing future flexibility.

**Q13. Do you have any views on the decision-making framework to bring potential projects into the 'delivery pipeline' for nearer-term needs?**

Yes, we agree with the proposals as they will have a significant impact on the certainty of project pipelines throughout the entire value chain. While we recognise that there are some associated risks, they are significantly outweighed by

the benefits in terms of investor confidence. The uncertainty created in the existing NOA process has been a factor in the lack of supply chain development in the UK.

**Q14. We would welcome views on our proposal to not re-evaluate projects that are in the delivery pipeline, and whether a materiality trigger is appropriate and what criteria might be used.**

Yes, we agree that the materiality trigger is an appropriate mechanism to include. What precisely the trigger should be depends on the project and the value it is generating, so it should be defined on a project-by-project basis rather than a blanket criteria.

**Q15. Do you have any views on our proposal on inclusion of environmental and community impacts in the CSNP Cost Benefit Assessment (CBA)?**

Yes, we agree with the inclusion of environmental and community impacts in the CSNP Cost Benefit Assessment (CBA), however as noted above in our response to Question 7 it should be collectively impact-assessed rather than a set of individual options treated in isolation.

**Q16. Do you have any views on our proposal for the CSNP to include a methodology for assessing and taking forward system operability solutions?**

We agree it is right to include operability in the proposal as it allows a strategic approach to be taken to system-wide operability. As the system evolves over time there will be lots of new challenges and solutions, so the approach must be flexible. We support to recognition that enabling work to support future flexible options could also be valuable.

**Q17. Do you agree with our proposal for the ESO to review its current approach to assessing short- and long-term solutions, and for the FSO to set out its approach in the CSNP Methodology?**

We agree with the proposal; cost should be considered over the effective life of the solution, along with the benefit it delivers, both financial and environmental. We believe all options should be evaluated on a level playing field and realistic operational dates be used in the process - this would benefit solutions that could be implemented quickly.

**Q18. Do you have views on our proposals for FSO to develop capabilities to consider different combinations of options and how this should be implemented?**

These proposals are important; as different energy vectors in the system become more integrated and energy becomes more intertwined with transport and industrial systems, there will be significant opportunity to optimise the overall UK system. However, these approaches and analysis are in their infancy, so it is difficult to recommend any definitive ones to follow. We support Ofgem's suggestion on a long-term window for this. We also recommend the creation of a dedicated workstream within the FSO to guarantee its progress, the knowledge generated from this will be world leading, creating export value that the UK can benefit from.

**Q19. Do you agree with our proposal to introduce a requirement, as part of the new CSNP licence condition, for the FSO to make recommendations on additional interconnection and OHAs opportunities between GB and other markets?**

Yes, we agree. As discussed in our response to Question 8 it is vital to take a holistic view, especially as implementing Offshore Hybrid Assets (OHAs) blurs the line between interconnectors and the rest of the network.

**Q20. Do you agree with our proposal that the FSO should use reasonable endeavours to support relevant stakeholders as part of the offshore asset development process?**

Yes, we agree. As discussed in our response to Question 8 and 19 it is vital to take a holistic approach.

**Q21. Do you agree with our proposal that the FSO assess third-party options under the CSNP and recommend delivery by competition where proposed solutions meet the relevant competition criteria?**

No comment.

**Q22. What are your views on whether changes to the SQSS or obligations on licensees are needed to support the CSNP – where specifically are these changes needed and when do they need to happen by?**

No comment.

**Q23. Do you agree that the FSO should evaluate the climate resilience of the long-term whole-system CSNP?**

Yes, we agree. It is inevitable that climate resilience will become an important factor, both at a high level and particularly in detailed design.

**Q24. Do you agree with the proposed position on the treatment of connections in the CSNP?**

Yes, we agree.