

# Hitachi Energy's response to Ofgem's consultation on Electricity Transmission Advanced Procurement Mechanism

## Introducing Hitachi Energy

Hitachi Energy is an exciting global business 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 £1 billion.

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. In the UK, we are already helping to bring clean energy to 4.5 million homes by connecting the world's largest offshore windfarm at Dogger Bank to the grid. We strongly believe that the UK can lead the world in creating a secure, Net Zero-ready energy system through investing in technologies to make the energy system more sustainable, flexible, and secure.

## Our response

### **1. Do you agree with our proposal to introduce the Advanced Procurement Mechanism to address supply chain constraints faced by the transmission owners?**

We welcome Ofgem's recognition of existing challenges in the supply chain, including the resulting cost of delay, and the intent of the Advanced Procurement Mechanism (APM). In our view, the APM is vital if the UK intends to move towards a strategic procurement system, going a step beyond the Accelerated Strategic Transmission Investment plan for 2030. Without such a mechanism and a joint procurement ambition in the future, the UK will likely struggle to secure the global and local supply chain commitments that it requires to meet its grid expansion and net zero targets.

Regardless of the final design and implementation of this mechanism, transmission operators (TOs) require a higher level of certainty and mechanisms with broader scope than solely advanced procurement to ensure accelerated network development, and to avoid the lack of clarity that prevented some TOs from fully utilising the flexibility provided by ASTI. This will increase investor confidence in the UK market, help attract supply chain investment and enable TOs to set out their future ambitions. Increased visibility of the future procurement pipeline, both in aggregate and by specific project, will increase the attractiveness of the UK for supply chain capacity investment.

The UK is currently at a disadvantage when compared to other global competitors due to fragmentation in the purchasing programmes for network equipment. As an example, we refer to the Offshore Wind Industry Council (OWIC)'s report 'Delivering the shared offshore network', including an analysis of internal fragmentation and differences in standards as a supply chain barrier for offshore wind. We welcome Ofgem's recognition of various challenges in the Offshore Electricity Transmission (OFTO) regime, with OWIC highlighting the involvement of multiple parties in project delivery as detrimental for network infrastructure.

Given the well-known, significant constraints in the global supply chain market, we believe that the most impactful solution for consumer protection would be for Ofgem to prioritise the UK's competitiveness with other countries, rather than increased focus on competition within the UK. If UK TOs are to become more competitive with TOs in the EU or in the US, this mechanism is critical in order to improve delivery lead times and avoid delays, ultimately lowering costs for consumers in the UK. Competition within the UK and local supply chains can only be realised once we are competitive in the global market. A programmatic approach to project approval and procurement will support this

ambition, which requires more progress with standardisation of designs and components in line with the UK Government's Transmission Acceleration Action Plan.

Finally, we also note the exclusion of Competitively Appointed Transmission Owners (CATO) from the APM. As a result, CATOs will find themselves at the back of the procurement queue, which can further fragment purchasing in the UK.

**2. Do you agree with our proposed framework for evaluating eligibility?**

We understand the intention of the eligibility framework but would highlight the importance of ensuring that all elements of a relevant project can be successfully secured for timely delivery, which is where the value is delivered. For example, an HVDC convertor is considered eligible, but this will require an offshore platform jacket and topsides etc. to be procured. Allowing early procurement of the complete inventory requirement for a project would avoid the risk of unknown constraints delaying specific projects.

If the mechanism is limited to individual equipment items then we agree with the proposed framework but suggest that more work is needed in regard to the equipment included under flexible procurement. The time between reserving capacity and initial design decisions does allow for some degree of flexibility in response to changing project requirements, market conditions, or technological advancements, but the degree of flexibility depends on the programme of projects involved as discussed in question 6.

We also note that bulk procurement would likely have significant cost benefits for the UK's growth. Securing a large volume of equipment based on a high degree of certainty would make the UK more attractive to the supply chain and, hence, enable more competitive bids. This would also support Ofgem's Growth Duty by strengthening local supply chains.

**3. Do you agree with how we have defined supply chain constraints?**

In the foreseeable future, several types of transmission network equipment will be approaching 10-year delivery timeframes. As such, we see the existence of a long lead time in itself as a constraint and suggest that all equipment with such lead times should be eligible for inclusion within the APM.

**4. What are your views on which equipment types are most constrained, which are at risk of future constraint, and which are less of a concern, and what are your views on the items we should include within the scope of the APM?**

We provide the following comment with reference to equipment in Hitachi Energy's portfolio: circuit breakers, HVDC converters and transformers, wound plant, switchgear, instrument transformers. From this perspective, we see the equipment included in Table 1 as a good initial list reflecting the current needs of the market. One area of omission is power electronics based Flexible AC Transmission System technologies (FACTS) that will grow in significance as the network depends more on intermittent renewables. FACTS already have long lead times and this is likely to increase with demand of these emerging technologies.

We note that the equipment listed are not standard items and should be considered as engineered solutions, dependent on a project's specific system requirements. A useful illustration of this is our gas-insulated switchgear (GIS) solution as specifying this by the meter does not helpfully reflect the variation between various GIS solutions.

**5. What are your views on our intention to exclude strategic procurement from the APM, and the potential benefits of later expanding the APM to include it?**

We see significant benefits of a programmatic approach to procurement. As noted in our answer to Question 1, strategic procurement can compensate for the fragmentation within the UK market, providing more certainty for investment and ultimately leading to significant cost savings. There are also time savings which can further derisk of delivery and minimise delays. It can also support growth of local supply chain, with a programmatic approach likely providing greater certainty for local investment. In our view, the delivery of the TO equipment included in Ofgem's proposals could be delayed without this mechanism.

**6. Do you agree with how we have characterised fungible, flexible and bespoke procurement, and our proposed treatments of each of these? Do these definitions reflect real world contracting and engineering realities?**

We recognise and support Ofgem's intent to encourage more rationalisation of the range of variants of equipment that the UK TOs procure. There are considerable benefits to be gained from simplifying the range of equipment procured, saving design time and cost from the process and making the UK a more attractive market for suppliers. Unfortunately, the progress on rationalisation / harmonisation has been limited and our involvement has only been with individual TOs to date. The closer alignment there is between the UK harmonised solutions and those agreed in the EU, or manufacturers standard solutions, the larger the time and cost savings will be.

The majority of our equipment, particularly the highly constrained items, will fit somewhere between the flexible and bespoke categories. There is a degree of flexibility very early in procurement before the engineering design phase is underway. This flexibility then reduces as designs are approved and finalised. The actual degree of flexibility depends on the programme of projects that are procured and how similar the requirements for each project are. Without understanding the programme requirements, it is not feasible for us to assess the degree of flexibility, which could range from almost no flexibility to late-stage flexibility for similar, harmonised, projects.

The distinction between flexible and bespoke procurement relates to the progress against equipment manufacturing milestones. These milestones progressively fix the optimal design of equipment and they also act as commercial triggers for payments and our own commitments to our supply chain. Commercial milestones and timescales are commercially sensitive, and we will provide a separate confidential annex to illustrate some typical milestones for different equipment solutions.

**7. Do you agree with our proposed approach to funding services contracts through the APM?**

We understand that the APM intends to include services such as design, engineering, commissioning, and installation with equipment orders. We welcome this approach and confirm that this is essential and that commitment to these services is always part of commercial arrangements, made at the same time as initial equipment reservations. This should be included within the Use It Or Lose It (UIOLI) allowance to ensure that appropriate capacity can be committed. We believe that direct contracts with OEMs are better suited for the mechanism.

**8. Do you agree with our rationale for using a UIOLI mechanism for the majority of APM expenditure, rather than other regulatory tools?**

We agree with Ofgem's rationale and support the move towards a programmatic approach for reasons discussed in previous answers.

**9. Do you agree with our proposal for the APM allowance to be capped at 20% of the estimated equipment cost?**

We disagree with this proposal and believe that this cap level is insufficient to secure the required capacity. OEMs require full financial commitments, delivered in stages with various milestone payments, for example, for initial reservation, completion of design, and procurement of raw materials, before final manufacturing and installation. The APM mechanism needs to support this milestone-based system. These commitments will vary for each type of equipment and their delivery times.

In our experience, typical commercial arrangements for security capacity are more complicated than simply making a factory reservation, as design work usually begins after an initial commitment from a TO. In all cases, the assumption is that a project order will progress, and a range of milestone payments are agreed to fit design and manufacturing stages. The payment profile and timing of the milestones varies greatly for solution types, but the APM must allow the TOs to support this commercial approach. Many EU operators provide full orders from the offset and as previously discussed TOs in the UK must be competitive in this regard. The confidential annex will provide more specific information.

The APM Register will likely be a good guide for setting costs, particularly for fungible and flexible equipment. However, we urge Ofgem to consider that costings also need to consider the escalation mechanisms that exist in contracts in the event of supply chain shocks, such as those that relate to raw material prices, especially for equipment with longer lead times.

**10. Do you agree with the use of a re-opener to update the APM in-period?**

We recognise the need for a re-opener and support Ofgem's approach. However, the proposed annual re-opener window is too infrequent, and we support Ofgem's suggestion to open it at any time to ensure that procurement remains effective and responsive to the UK's needs. This reopener process must not be too bureaucratic, to avoid delays.

**11. What are your views on our proposed approach to cost reconciliation?**

While we are unable to provide a detailed view, this approach seems sensible. Realising the proposal for benchmarking performance internationally is particularly interesting in light of the competitive global landscape that we outlined in previous answers.

**12. What are your views on how we should approach in-period updates to the APM?**

We believe that Ofgem should make careful considerations regarding the types of equipment being added to or taken off the agreed list. There is a danger that removing an item from the list will make the item more difficult to procure, with the UK seen less favourably by suppliers. This could result in lower tendering appetite and overall competitiveness of procurement. A highly volatile list could make the UK less attractive to supply for OEMs and investors, as there would be reduced confidence in TO enquiries, which would also impact investment in local supply chains.

In line with similar developments across the world, we expect that the pre-agreed list would require minimal changes in the next decade. If Ofgem was to set this out as its expectation, it would likely help secure the required investment for the long-term. Additions to the list would support confidence in the UK market, but removals would reduce confidence as described above.

**13. Do you agree with our proposal regarding retrospective application of the APM?**

We agree with the proposal. Any recent decisions should be applied retrospectively, with urgency given to equipment with the longest lead times to ensure that practical delivery is aligned with the UK's power decarbonisation targets. We support the ambition of having equipment in place quickly

but there is also a need to get it right, which would be enabled by the retrospective application of the APM.

**14. Do you agree that the publication of detailed APM costs and volumes could be commercially detrimental to TOs, and by extension consumers? If so, why?**

We agree that detailed expenditure should remain confidential in order to safeguard fair competition.