

Hitachi ABB Power Grids' Response to Ofgem's "RIIO-2 Draft Determinations"

Introducing Hitachi ABB Power Grids

Hitachi ABB Power Grids (HAPG) is an exciting new global joint venture founded on two iconic companies 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 committed to powering good for a sustainable energy future. Our aim is to bring affordable, clean energy and sustainable living to the world to make it fit for future generations. 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, and we were recently confirmed as the chosen supplier for Europe's first multi-terminal HVDC interconnection, linking Shetland to the UK transmission system for the first time.

Meanwhile, our Phoenix Project, in partnership with SP Energy Networks, University of Strathclyde and the Technical University of Denmark, has received funding from Ofgem's Network Innovation Competition and is seeking to find alternative sources of system inertia that are essential to stabilise the future network.

We strongly believe that the UK can lead the world in creating a secure, net zero-ready energy system through a stronger, smarter, greener grid.

Embedding the consumer voice in RIIO-2

In HAPG's view, the UK energy sector is among the most innovative in the world. This is in part supported by innovative regulation. With the advent of Net Zero now on the statute books, Ofgem have the opportunity to establish innovative regulatory mechanisms, driving the energy system cost effectively towards Net Zero, where the rest of the world can only follow.

Q1. What role should Groups play during the price control period and what type of output should Groups be asked to deliver? Who should be the recipients of these outputs (companies, Ofgem and/or stakeholders)?

We support the role of Groups during the price control period but believe that the supply chain could and should be engaged more on T2 plans. Stakeholder engagement needs to include the whole supply chain – recognising the critical role these companies will play in bringing key technologies to market. Any scrutiny groups should include supply chain representatives and, further, Ofgem should consider dedicated groups for this purpose to serve as trusted advisors. They add value by presenting a clear view on the art of the possible through their experience of applying the sort of innovative technologies required for the future grid, both in the UK and in other countries.

In the longer term, the challenge to decarbonise the networks will take significant R&D effort to achieve. It is important that all Groups work together to achieve that common goal and that technology providers are clear about the Regulator's ambitions, in order that R&D funds can be directed accordingly.

HAPG supports BEAMA's view, which states: "Government and Ofgem must make the UK the best place for companies to invest in the innovation and deployment of the new energy systems and they should also work closely with the supply chain to get these policies right." We believe that BEAMA's proposed network group, would be a step in the right direction.

Overall, Ofgem should seek to involve a balanced group of stakeholders, covering a range of views and experiences. In addition, engagement should be coupled with more regulatory reporting. This would give supply chain companies and other stakeholders greater clarity on future transmission system plans.

Q2. What role should Groups take with respect to scrutinising new investment proposals which are developed through the uncertainty mechanisms?

Whilst groups play an important role in giving an independent view, HAPG believes the onus for scrutinising new investment proposals should be on the transmission companies themselves in conjunction with Ofgem, with input from the groups when helpful. The level of granular detail involved means it would be impractical for the Groups to be expected to perform this role in detail. The place of the Groups should be to advise on the suitability of proposals and suggest improvements. The role of the Groups should also be to identify and deploy technologies that are currently available, to meet the objectives of each regulatory cycle.

Q3. What value would there be in asking Groups to publish a customer-centric annual report, reviewing the performance of the company on their business plan commitments?

HAPG welcomes more transparent annual regulatory reporting and we think there would be value in gathering independent views on company performance. However, again, we think that the detail should be prepared by the transmission companies, with the Groups performing a peer review role. This could be in the form of an Advisory Board.

Q4. What value would there be in providing for continuity of Groups (albeit with refresh to membership as necessary) in light of Ofgem commencing preparations for RIIO-3 by 2023

HAPG believes there would be value in seeking ongoing, consistent engagement with groups. However, as per our answer to question 1, we would urge that these include supply chain / technology representation.

Quality of service – setting outputs for RIIO-2

Q5. Will the combination of the two proposed Licence Obligations support the delivery of a digitalised energy system and maximise the value of data to consumers?

HAPG supports the use of Licence Obligations in place of incentive only mechanisms (reputational incentives for stakeholder engagement, for instance), which can encourage companies to do the minimum to demonstrate best endeavours and avoid penalties, and do not sufficiently encourage going 'above and beyond'. Where Ofgem has a clear view on what outputs should be delivered and how, we would urge more widespread use of License Obligations. Incentives should be more symmetrical where possible; i.e. below target performance should be penalised but positive incentives should be provided for encourage companies to perform to higher levels.

We believe that Ofgem should be more prescriptive on the outputs it wants to see in some areas; for example, on the level of digitalisation needed by the end of this price control period. Digitalisation and data analysis are key enablers of decarbonisation, improved asset management and lowest cost reliable

capacity – so setting clear digital strategies is vital to success. Presently, there is no end target for the industry to coalesce around.

Ofgem could then set specific allowed, base line expenditure to reach this target, as well as incentives to go further than this, with connection agreements also aligned. This target should also be interoperable across the gas network. An example of how this could work in practice can be found in the good work done by the Government and Ofgem on cyber security.

Q6. Do you agree with our proposed frequency for publication of updates to the digitalisation strategy and the digitalisation action plan, respectively?

The frequency of updates should reflect the digitalisation targets discussed above and be consistent across the whole system. The frequency should also recognise the significant speed of development of digital technologies. Updates are useful but only when they feed into the end goal, whilst also taking into account potential disruption.

Q7. What kinds of data do you think should comply with the data best practice guidance to maximise benefits to consumers through better use of data?

We support Ofgem's proposals for whole system data sharing. This data can give a picture of the condition of the network and assets, operational costs, capacity, and congestion, and it should be conditioned to allow for planning infrastructure investment, as well provide real time insight on energy services.

Much of the data in the digitalisation action plan should be viewed as public data. Whilst recognising the need for commercial confidentiality, HAPG would like Ofgem to begin publishing aggregated investment data, e.g. 'this year the T companies replaced 15 substations at a unit cost of (x) to the customer.'

Publishing yearly information on additional capacity delivered and further supply of renewable energy to the system would increase transparency for the consumer and deliver a better understanding of what improvements are being made.

Q8. Do you agree that the Groups could have an enduring role to work with the companies to monitor progress and ensure they deliver the commitments in their engagement strategies?

Yes, but as discussed above this process would be more effective where clear targets, Licence Obligations and symmetrical incentive mechanisms are in place.

Q9. Do you agree with our proposal to accept the proposals for an ODI-R for BCF and the other proposals set out above as EAP commitments and to require progress on them to be reported as part of the AER?

If reducing BCF is considered a priority for achieving Net Zero, then there should be specific required outputs set via Licence Obligations with symmetrical incentives, rather than a reliance solely on reputational considerations that may not prioritise measures with the biggest net zero impact.

Ensuring efficient cost of service

Q10. Do you agree with our proposed RPEs allowances? Please specifically consider our proposed cost structures, assessment of materiality, and choice of indices in your answer.

No comment.

Q11. Do you agree with our proposed ongoing efficiency challenge and its scope?

HAPG supports the proposed ongoing efficiency challenge but believes the scope should be more focussed on outputs and efficiency of delivery, rather than so strongly on inputs. Where outputs leading to Net Zero 2050 are required, further limiting the inputs through excessively stringent unit costs is likely to have unintended consequences and is very likely to delay the decarbonisation of the energy system.

Unit cost is not a fair judgement of efficiency. Where unit costs are implemented, they should be based on outturn costs rather than tendered costs. Additionally, they should consider a mean or median approach rather than a “best case”, as more future projects will be on brownfield sites where the “best case” is rarely seen. Further, unit costs should reflect new technology and recognise that technology which delivers Net Zero is unlikely to be the same price as existing high GWP technology. Furthermore, a Totex approach should be taken to ensure the whole life cycle value of a product or project is considered.

The erosion of unit costs ultimately leads suppliers to leave the marketplace rather than participate in a race to the bottom. The market becomes less attractive, less competitive and R&D investment is hindered.

Managing uncertainty

General observation: Uncertainty mechanisms can finance many of the transmission companies’ transformation activities, but Ofgem must make decisions on them quickly.

Q12. Do you agree with our proposed common approach for re-openers?

HAPG supports the common approach for re-openers, so long as this does not delay investment. We also believe that re-openers offer a great opportunity for Ofgem to engage with the supply chain, who can demonstrate what is currently possible through their expertise and experience. Groups can play a valuable role in the re-opener process.

Cross-sector uncertainty mechanisms

Q13. Do you agree with our proposals on a materiality threshold, a financial incentive, a ‘foreseeable’ criterion, and who should trigger and make the application?

HAPG agrees with the principles guiding cross-sectoral Ums and supports the proposals on a materiality threshold.

The foreseeable criterion should be focused to ensure that the requirement is specifically foreseen (i.e. specific date, time, size of connection) rather than generally foreseen. In particular, success in CfD auctions will change the timing of a connection and subsequent network reinforcement significantly and, whilst the requirement could be seen to be “foreseen”, the timing and ultimate size is extremely variable.

Q14. Do you consider that two application windows, or annual application windows, are more appropriate, and should these be in January or May?

No comment

Q15. Do you consider that the R110-1 electricity distribution licences should be amended to include the CAM, or wait until in 2023 at the start of their next price control?

HAPG believes that the distribution licenses should be amended as part of this price control, because key decisions are being made now in preparation for Net Zero 2050.

Cyber Resilience Operational Technology⁷⁰ (OT) and Cyber Resilience Information Technology⁷¹ (IT)

Q16. Do you agree with our proposed re-opener windows for cyber resilience OT and IT, and our proposal to require all licensees to provide an updated Cyber Resilience OT and IT Plan at the beginning of R110-2?

Yes, and HAPG is supportive of Ofgem and the Government's overall approach to cyber security, including the relevant stakeholder engagement which represents best practice.

Q17. What are your views on including the delivery of outputs such as: CAF outcome improvement; risk reduction; and cyber maturity improvement, along with projects-specific outputs?

We support this approach and believe being prescriptive in this space will produce tangible outcomes.

Non-operational IT and Telecoms capex re-opener

Q18. Do you agree with our proposal for the Non-operational IT and Telecoms capex re-opener?

Yes. Digitalisation must not be held back due to lack of investment in IT or telecoms. The speed of development of digital technologies drives the need for IT investment. IT and telecoms decisions must follow the needs of the digital strategy and cannot be seen in isolation from it.

Physical security

Q19. Do you agree with our approach to using a re-opener mechanism for changes to government physical security policy?

Yes, but again we would stress the need for speed and efficiency.

Q20. Do you agree with our approach regarding legislation, policy and standards?

No comment.

Net Zero and innovation

Q21. Do you agree with our overall approach to meeting Net Zero at lowest cost to consumers? Specifically, do you agree with our approach to fund known and justified Net Zero investment needs in the baseline, and to use uncertainty mechanisms to provide funding in-period for Net Zero investment when the need becomes clearer?

Net Zero is not a zero-cost deliverable. HAPG agrees that Net Zero should be delivered at the lowest overall cost possible to consumers, but this is not to say there won't be significant costs associated with this scale of energy system transformation, which could be as significant as doubling the capacity of the network. The CCC puts the cost of achieving Net Zero by 2050 at £50bn a year, much of which will fall to the transmission companies. Consumers will inevitably have to pay in the short term and at likely a higher cost than in previous price controls.

We agree with using Ums to support net zero investment, as long as they are quickly and efficiently delivered and do not delay investment in the network. They must deliver more innovation and funding but ensure business can continue as usual.

Fundamentally, net zero is the most significant challenge facing the network and will need significant funding for areas such as digitalisation.

Q22. Do you think the package of cross sector and sector-specific Ums provides the appropriate balance to ensure there is sufficient flexibility and coverage to facilitate the potential need for additional Net Zero funding during RIIO-2?

HAPG agrees that flexibility for Net Zero R&D is crucial, particularly in this field where technologies are moving forward at pace and there are many unknowns. However, we would again urge that the whole supply chain be consulted on this, recognising that those companies have the best real world understanding of the required technologies.

Net Zero re-opener

Q23. Do you have any views on our proposed approach to a Net Zero re-opener?

The Net Zero re-opener should be used for issues that are known but where solutions are not yet known or are still unclear or immature. For example, the industry knows it needs to take SF6 out of use, and everyone is working hard to find an alternative – but we don't yet know the specific solution because it is still under development. That is where the re-opener can come in. Once again, we urge that speed be at the heart of the approach to this.

Innovation

General observation: Innovation funding should be more joined up with other innovation funds, and supply chain companies should be able to bid. HAPG believes it would add value if supply chain companies could access funding outside the auspices of National Grid.

Q24. Do you agree with our proposals for the RIIO-2 Strategic Innovation Fund?

Yes, but HAPG would like to emphasise the need to integrate successful innovations into business as usual. This applies to innovations funded by both SIF and NIA.

Q25. Do you have any comments on the additional issues that we seek to consider over the coming year ahead of introducing the Strategic Innovation Fund?

There are too many examples where learning (successes and failures, both of which are important in innovation) from innovation projects have simply evaporated. More consideration should be given to how best to ensure successful innovations are rolled out more widely, so they become common practice. If this is not improved, the benefits of innovation risk being lost.

Network Innovation Allowance

Q26. Do you agree with our approach to benchmarking RIIO-2 NIA requests against RIIO-1 NIA funding?

HAPG cautions against this approach. Even if companies didn't successfully innovate last time, that should not be necessarily taken as an indication that they won't this time. The need for innovation in this round is even greater than last time considering the demands of Net Zero, so all beneficial projects should be supported.

Q27. Do you agree with our proposal that all companies' NIA funding should be conditional on the introduction of an improved reporting framework?

Yes, increased transparency is very important in order to expand the benefits of innovation roll out, so this proposal is welcome. This logic applies across the whole energy system.

Q28. What are your thoughts on our proposals to strengthen the RIIO-2 NIA framework?

Again, we would like to stress the importance of transparency. HAPG recommends including reporting on how technologies have been rolled out at scale, rather than simply one-off innovations.

Q29. Do you have any additional suggestions for quality assurance measures that could be introduced to ensure the robustness of RIIO-2 NIA projects?

Quality assurance measures are useful, but there has to be a recognition that some innovations may not succeed but should be tried – failure is part of the process. Again, those that do succeed must become business as usual for the benefits to be realised.

Closing out RIIO-1 NIA

Q30. Do you agree with our proposals to allow network companies and the ESO to carry over any unspent NIA funds from the final year of RIIO-1 into the first year of RIIO-2?

Yes, HAPG agrees with the proposals to allow network companies and the ESO to carry over any unspent NIA funds from the final year of RIIO-1 into the first year of RIIO-2.

Improving data transparency within innovation projects

Q31. Do you agree with our proposal that all work relating to data as part of innovation projects funded via the NIA and SIF will be expected to follow Data Best Practice?

Yes, Best Data Practice is a good benchmark for maximising value from this important resource. Transparency of data is very important, but IP must also be respected. Foreground IP can be shared with few issues, but background IP is often very commercially sensitive and seeking to share background can make participation in innovation projects commercially difficult.

Increasing competition

Q32. Do you agree with our proposed position on late competition?

Yes. HAPG would like for government to legislate for further competition and welcomes plans to introduce late competition, so long as it does not hold up progress in investment and it creates value and encourages innovative solutions.

Introduction of early competition

Q33. Do you agree with our proposed approach on early competition?

Yes. Competition is best served early, again as long as it does not hold up investment.

Approach to the Totex and Business Plan Incentive Mechanisms

Q34 – 42

No comments

Impact of COVID-19 on the price controls

Q43. Do you think we need specific mechanisms in RIIO-2 to manage the potential longer-term impacts of COVID-19? If yes, what might these mechanisms be?

Yes, because operational costs, efficiency, and productivity could be impacted by COVID-19 restrictions and should be considered.

A business impact re-opener could be appropriate here, both for COVID-19 and other significant uncertainties, such as the outcome of Brexit trade negotiations or other 'Black Swan' events.