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RIIO Team
Network Price Controls
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Dear RIIO Team,

We welcome the opportunity to respond to this consultation on Ofgem RIIO-2 Draft Determination decision for National Grid ESO (ESO). We are Scottish Hydro Electric Transmission plc (SHE Transmission). As the Transmission Owner (TO) we maintain and invest in the high voltage 132kV, 220kV, 275kV and 400kV electricity transmission network in the north of Scotland. **We are one of the ESO's key stakeholders**, working closely together on a wide range of areas including: GB network planning, outage planning, real time network operations, industry engagement and customer connections.

We have engaged with the ESO during the development of our respective business plans and will continue engagement throughout the final stages of the RIIO-2 regulatory business planning process and subsequent implementation. This response is in regard to Ofgem's Draft Determination of the ESO's business plan and follows on from our response to Ofgem's Call for Evidence on the ESO's business plan¹.

For us, business planning is not constrained to price control periods but forms part of our continuous network development and operational engagement with the ESO. Our strategic objective is to enable the transition to a low carbon economy. This includes being ready to accommodate new low carbon connections to our network, as such our working relationship with the ESO (and other stakeholders) is of critical importance. Efficient whole system planning and solutions for net-zero will require enhanced collaboration with the ESO with transparent and accountable roles and responsibilities, reflected in price control arrangements, licences and codes. This has been the key focus of engagement with the ESO on their Business Plan and a key focus of our response.

¹ SHE-Transmission call for evidence response on the ESO's business plan dates 10 February 2020 addressed to Julie Black

We have engaged with the ESO on the following areas upon publication of Ofgem's Draft Determinations:

A Net-Zero regulatory framework

We believe the **regulatory framework of the ESO and TO should be aligned in a number of areas to deliver net-zero**. This includes some of the areas in which the TO works closely with the ESO to develop projects under Uncertainty Mechanisms (UMs).

Our SHE-Transmission response to our own RIIO-T2 Draft Determination Decision outlines concerns in relation to the proposed approach to **UMs and pre-construction funding** in RIIO-T2. We believe this could also have an adverse impact on the ESO. Both the proposed LOTI and pre-construction mechanisms has the potential to **cause delays in delivering projects** that the ESO has signalled to proceed following the Network Options Assessment (NOA) with an Earliest-In Service Date. This potential **delay in delivering NOA projects has a knock-on effect on delivering net-zero** and delivering connections customers' **agreed contracted dates** (which the ESO has a direct commercial and contractual agreement to deliver).

In some circumstances the ESO may instruct the TOs under the industry codes to provide operability solutions as they transition towards operating a net-zero system. These are unknown to the TOs at the time of drafting their Business Plans and could be requested throughout the RIIO-T2 period. This could include works to enable Zero MW solutions (either by SHE-Transmission or a third party) and indeed other issues like system operability where they have been demonstrated to deliver the best value for the consumer. We believe these works could be funded under the Medium Sized Investment Projects (MSIP)² however some solutions may fall under the £25m threshold for MSIP. Where this is the case, we have proposed an UM *'Operability and System Management including Black Start'* to fill this gap. **We welcome clarity from Ofgem on the mechanism to recover costs for these works and the assessment requirements from the ESO.**

Overall, as outlined in our response to our draft determination decision, we should be incentivised under the RIIO framework to deliver net-zero outcomes in a timely and efficient manner. We believe the same ethos is true for the ESO in their critical role as system operator to deliver net-zero outcomes across the GB system.

Operating a net-zero system

Net-Zero requires continued investment to maintain the **reliability** of the network during the energy system transition which will result in transporting the increasing levels and uses of green energy. We have outlined the required investment in our Non-Load Related Expenditure (NLRE). In our own response we have outlined concerns that Ofgem's Draft Determination will

² As outlined in page 67 of the ET Annex

impact reliability, this concern is shared by the ESO in operating the system and maintaining reliability in their System Operator role.

To enable the ESO's ambition to operate a net-zero GB network, significant investment to our network operations, including digital infrastructure, is required. We have included in our plans upgrades to **smart monitoring, control rooms and IT infrastructure** (see Section 3 and 4 of our main business plan) to enable the ESO's net-zero network operation including restoration plans. This includes greater responsibility on the TO for both physical and cyber security. Ofgem has proposed to reject a number of SHE-Transmission's proposals to introduce **technology and infrastructure** to support a larger, more complex system, e.g. fit for purpose warehouses, a secure System Operations control room and asset condition monitoring.

The rejection of these proposals will impact the ESO's ambitions as the connection between our control centre and the ESO becomes even more critical with the increase in renewable generation and managing a net-zero system. As such we are **supportive of the ESO's plans to upgrade their control system** to meet the complex requirements of a net-zero system requiring increased automation and situational awareness³.

We will work collectively with the ESO, including through the existing Energy Networks Association⁴ groups, to ensure data requirements and digital platforms are aligned. We have engaged with the ESO on their preferred IT delivery method via National Grid Group. This is a similar delivery method used by SHE-Transmission via SSE Group IT. **We are supportive of the ESO's proposed** approach in principle based on the efficiency and deliverability we have experienced during RIIO-T1.

We support the ESO's plans to support the development of a customer portal for connections. A key feature identified by customers was that any portal should be coordinated across the industry and the ESO plans to take forward the development of such a system during RIIO-2. We are committed to working together with the other TOs and ESO – for example via the ENA Data Working Group⁵ - during RIIO2 to ensure that each Customer Portal platform operates in such a way that provides a consistent and coordinated experience for all customers contracting with the ESO for a connection to the GB transmission network.

³ This is included in: Annex 4 - Technology investment report

2.1. 110 Network control <https://www.nationalgrideso.com/document/153641/download>

⁴ ENA group on Modernising Energy Data, System Modelling Group (STCP22-1)

⁵ with further sub-groups formed to address specific aspects of the 2019 Energy Data Task Force (EDTF) report

The Network Options Assessment (NOA)

The NOA provides a signal for recommended network investment for Transmission Owners (TOs) whilst delivering the most efficient outcomes for consumers. Our response is in relation to Ofgem's draft decision not to take forward Metric 10: *Consumer value savings from the Network Option Assessments (NOA) process*.

The ESO has noted in its proposals to extend the NOA to include assets at the end of their life, wider works for connections, and the inclusion of a range of system needs through 'trial by doing' approaches. We note both the Challenge Group's concerns⁶ with the ESO's future proposals for the Network Options Assessment (NOA) and how these will contribute to effective system planning and optimisation for net-zero alongside Ofgem's concerns.

We continue to support the NOA as a tool to assess the pathways for investment in the GB transmission system. Currently we believe that the focus of the NOA on boundary investments is appropriate, not least given the high value of these projects and hence materiality to the consumer. We welcome the ESO's commitment to continually improve the NOA methodology for boundary investment, including the inclusion of non-network commercial options. Looking forward, we support whole system considerations (including regional approaches) in the NOA as in other network planning approaches. We remain mindful of **the imperative of net-zero targets** and so encourage a focus on the economics of anticipatory investment and quantification of the risks to the consumer.

The annual NOA process is thorough and rigorous, with multiple network investment pathways and scenarios assessed. From this, there is confidence in the recommendations which have resulted in strong consistent and repeated signals for investment. The current incremental approach to the development of the NOA methodology maintains this rigour. We support any changes that provides further confidence and certainty to deliver works required for net-zero and, in particular, recognises practicable procurement and delivery realities associated with construction.

However, there is a significant cost associated with the NOA, in the time and expenditure necessary to prepare options and undertake the analysis. Accordingly, it is important to remain vigilant that the benefits realised by any development of the NOA continue to outweigh these costs. We have **concerns that any benefits of introducing changes to widen the scope of NOA** would be outweighed by these costs as well as other unintended consequences. For example, introducing an annual assessment to local connections works will introduce uncertainty to connections customers as to whether or not their works would go ahead (a catch-22 we have experience with the islands, notably Orkney, which could become a GB wide issue). The annual

⁶ Page 114 https://www.ofgem.gov.uk/system/files/docs/2020/07/draft_determinations_-_eso.pdf

assessment window for application would also significantly change the connections assessment process, adding an additional layer of complexity, governance and assessment. This additional rigour does not align with the flexible and agile regulatory process outlined in Ofgem's decarbonisation action plan⁷ and could have an adverse effect on delivering net-zero. Despite Ofgem's decision not to include this as matrix we believe **any changes to the NOA should be consulted upon and developed with stakeholders including the TOs.**

We note there is a significant **cost of resource and expertise** in this from the ESO and **support** the ESO's funding proposals in this area. The point of cost and resource is also relevant to us as a TO. We have based our RIIO-T2 resources on the current NOA assessment process yet Ofgem (as noted above) has proposed a drastic reduction to our CAI. This will have an adverse impact on our **ability to engage with the ESO on the like of whole system solutions**, developing or improving the NOA, innovation projects and connections portals. We do not believe this was an error in the Determination modelling and not the intended outcome from Ofgem and propose in our own DD response (see ET Q9 and SHET Q10) that these costs are reinstated to ensure we are adequately resourced.

Innovation

As an industry it is important to collaborate across other network licensees, taking a whole system approach, especially when it comes to developing innovations. The ESO is a key collaborator due to their unique position within the industry when it comes to understanding system balancing and performance. We **welcome Ofgem proposals for the ESO to collaborate with other parties on innovation.** Ofgem's draft determination position outlines the potential funding arrangements for the ESO's NIA projects only lasting a maximum of two years. **We are concerned that this would likely result in the ESO not participating in projects lasting more than two years.** Potentially removing an essential collaborator from certain projects, which could reduce the value that those projects could deliver.

For example, the average duration of our registered NIA projects starting within the T1 period was 24 months. That is not including contractual negotiations which on average take an additional three to six months. Under the proposed RIIO-T2 conditions our NIA projects would not have included the ESO if they had only been able to fund two-year projects. This **does not align with our whole system approach which we believe is essential to delivering net-zero.** **We propose this maximum two-year duration is removed in Ofgem's final determination for the ESO.**

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https://www.ofgem.gov.uk/system/files/docs/2020/02/ofg1190_decarbonisation_action_plan_web_0.pdf

Network Access

Following Ofgem's draft determination decision to reject our Network Access CVP and the ESO:TO System optimisation ODI initial proposal we will continue to **engagement with the ESO, Ofgem and TOs to ensure the regulatory framework encourages these outcomes**. As outlined in our SHE-Transmission CVP 2B proposals we believe this requires a whole system approach, working together with the ESO and connections customers rather than the sole responsibility of the TO. In particular we are concerned with the potential lack of funding available in the STCP 11.4 and STCP 11.3 funding pots following the inclusion of NGET TO. Any increase in these funds will require consequential changes to the CUSC.

Pathfinders

Under its Network Development Roadmap, the Electricity System Operator (ESO) sets out its 'learning by doing' approach to identify potential distribution network and non-network alternatives to the provision of transmission services that would resolve thermal, voltage or stability constraints.

We note Ofgem's concerns in the draft determination on the delivery schedule of the ESO's pathfinders' projects which is included in their Network Roadmap under 'Long term network planning'. Ofgem has marked this as not meeting minimum requirements and below expectations⁸. However, **we agree with the trial approach taken by the ESO given the innovative nature of the pathfinders works**. This trial approach should help ensure value for consumers without fully implementing a new process which could include risk and not arrive at the optimal solution for consumers. We support the continued development of the ESO' Pathfinder projects, with acceleration of:

- Development and application of the transparent cost benefit methodology for the assessment of monopoly and market derived solutions. This methodology should incorporate the full range of societal, economic and environmental costs and benefits.
- Consideration of the roles and responsibilities of parties to the Pathfinder, with specific regard to obligations under prevailing industry licences and codes to ensure risks are clearly assigned and transposed into Pathfinder commercial terms.
- Resolution of the charging and funding regimes, along with the costs of administering the tender processes and tender participation.

In addition, subject to identifying an appropriate party, we would encourage the ESO to undertake independent audit and review of the lessons to learn from trial projects.

⁸ Page 127 of https://www.ofgem.gov.uk/system/files/docs/2020/07/draft_determinations_-_eso.pdf

We will continue to engage with the ESO throughout RIIO-2 business planning process and beyond. Including engaging in the newer areas of the ESO's role like the development of **offshore grid** and **Net-Zero advocacy** as mentioned in their Business Plan, to understand the potential impacts on the North of Scotland.

If you have any questions or wish to discuss any aspect of this response, please don't hesitate to get in touch.

Yours sincerely

Aileen McLeod

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