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Dear Steven,

SSEN Distribution response to the RIIO-ED3 Framework Consultation

1. Thank you for the opportunity to respond to Ofgem's Framework Consultation on RIIO-ED3. This response is on behalf of SEPD (Southern Electric Power Distribution) and SHEPD (Scottish Hydro Electric Power Distribution). As a Distribution Network Operator (DNO) with a network reach of over 3.9 million households and businesses in the North of Scotland and Central Southern England, we play a central role in delivering net zero and driving local economic growth at the heart of our communities.
2. We welcome Ofgem's acknowledgement that Distribution networks have a clear role to play in the electrification of society and the economy: delayed network build is the top risk for RIIO-ED3 and to an overall efficient energy transition for customers today and tomorrow. This recognition aligns with the UK Government's mission for Clean Power by 2030 (CP2030)¹ and net zero by 2050 – and the Scottish Government's target of net zero by 2045. These targets will drive an unprecedented increase in electricity demand. By 2050, annual electricity demand is likely to at least double, with a significant growth in embedded generation, storage and connected low carbon technologies.² NESO's CP2030 report estimates that 29-30% of GB's 2030 Clean Power supply will come from onshore wind and solar, and an approximate 29% of the 27GW of onshore wind and 90% of solar will be connected directly to the Distribution network.³
3. Ofgem must approach RIIO-ED3 with its duty to consider sustainable economic growth and net zero in mind, cognisant of the national missions the Government is pursuing – in particular the missions to kickstart economic growth and make Britain a clean energy superpower. Distribution, enabled by the RIIO-ED3 regulatory framework, can make a vital contribution to these missions.
4. With this wider context in mind, we welcome Ofgem's 'new risk hierarchy' for RIIO-ED3, which is predicated on the fact that there can be no successful net zero transition without Distribution – something re-affirmed in the National Infrastructure Commission's (NIC) call for evidence for its independent study of Distribution Networks.⁴ The

¹ [Clean Power 2030 Action Plan, DESNZ](#)

² Ibid.

³ NESO '[Clean Power 2030](#)'

⁴ NIC '[Electricity Distribution Networks Study – Call for Evidence](#)'

required increase in network capacity is an unprecedented challenge for the sector but also a great opportunity to contribute to the wider mission of green economic growth by providing green jobs for those transitioning out of high carbon industries, growing the UK renewable energy supply chain and enabling regional net zero ambitions. Ultimately, the RIIO-ED3 framework must enable DNOs to make their vital contributions to both the net zero mission and the wider drive to secure economic growth for the UK – whilst ensuring current and future customers get a fair deal.

5. Capitalising on this opportunity and achieving maximum value for customers through the net zero transition will entail Ofgem taking a holistic approach with planning at a system level, rather than the more familiar incremental approach to investment, which is no longer appropriate in a world where rapid capacity delivery and system transformation are critical. Pivoting to a holistic approach would ensure RIIO-ED3 becomes part of a strategic continuum with aims rooted in the near-term, rather than a standalone five-year plan. This lies at the core of our approach, which views the next price control as a stepping-stone for achieving long-term net zero ambitions.

Five key priorities for RIIO-ED3

6. We would challenge Ofgem on if their proposed overarching objective for RIIO-ED3 is sufficiently ambitious⁵ – it should capture the need to ensure the energy transition is delivered at Distribution in the most efficient way over the long term, for current and future generations of customers. If RIIO-ED3 is going to successfully achieve the overarching objective and associated priority outcomes, the regulatory framework must achieve the following:
 - i. It must enable **strategic investment** in practice, in line with our Strategic Development Plans (SDPs), informed by strategic transitional Regional Energy Strategic Plan (tRESP) inputs and in line with long-term demand projections. We need certainty to invest, making the right decisions to deploy the right solutions at the right time. This will allow us to engage our supply chain earlier and with confidence, allowing them to ramp up capacity – and will be essential to developing the required skilled workforce in time for the transition. **Strategic investment** will be a key requisite to realising the full value of an efficient transition by delivering efficient costs for customers and enable earlier connections - and subsequently unlocking economic growth.
 - ii. It must recognise the impact of **climate change** and give clear direction on the level of climate resilience required and associated costs. Networks need to know to what resilience standard current and future networks need to be reinforced or built.
 - iii. It must set appropriate methodologies for **cost assessment** and **incentive target setting** that are fit for purpose in the context of rapid network capacity delivery and drive the required behaviours, recognising that historical costs are increasingly a bad predictor of future costs, and historical performance data may not reflect the current set of challenges being faced. We need confidence that Ofgem’s cost assessments and incentive frameworks will judge networks on their true performance against the strategic objective of efficient growth, taking into account factors that are genuinely outside of their control.
 - iv. It must **enhance delivery capabilities** in the face of growing supply chain and workforce pressures. Our ability to plan longer-term across multiple price controls to facilitate better signalling and collaboration with the supply chain on skills and materials will be key – as will be the ability to invest in the requisite digital architecture and skills. Ofgem must provide confidence and continuity in both plans and investment thereby allowing DNO strategies and plans to work across price control boundaries for skills and supply chain.
 - v. It must ensure DNOs can maintain **financeability and investability** so that they are able to attract the investment needed to deliver ambitious net zero plans at an unprecedented pace. Ofgem should recognise that the cost of equity range Ofgem set out in the RIIO-3 SSMD is too low in the context of intense global competition for capital, and must be reassessed for ED3 – and set the cost of debt mechanism following an assessment of our financial requirements and business plan rather than relying on decisions made for other sectors.

⁵ Ofgem’s proposed overarching objective is: “to ensure that ED networks are ready with the necessary capacity, to meet decarbonisation goals at least cost, based on whole system value.”

7. These are SSEN Distribution's five regulatory priorities for RIIO-ED3. Underpinning these is an imperative that the regulatory framework captures the **whole system value** and **societal value** that networks provide current and future customers. This includes accounting for our centrality to the wider Government mission for economic growth. SSEN Distribution has already developed tools that help us do this. For instance, our Strategic Cost Benefit Analysis (CBA), informed by NERA's study on how to evolve the CBA methodology to enable greater strategic investment ensures we capture environmental benefits (avoided carbon emissions or air pollution) and social benefits (facilitating affordable housing) in decision making, as well as traditional costs and benefits.⁶ As we enter a period of unprecedented network investment, the regulatory framework must incentivise DNOs to make decisions that take full account of the varied ways our networks provide societal value to the customers and communities we serve over both the short and the long-term – cultivating short-term investment certainty in the context of long-term uncertainty.
8. In addition, the regulatory framework needs to be very clear in which areas they expect DNOs to cooperate and where they expect them to compete to the benefit of customers. Both dynamics are important for achieving the best outcomes for customers, but clarity will be key to driving the desired behaviour from DNOs in different areas. Ofgem also must be clear where common approaches or standards benefit customers more than bespoke solutions in different licence areas.
9. An executive summary of the five sections of the consultation can be found in **Appendix A** and our full response is found in **Appendix B**. We note that Ofgem's consultation is silent on several critical points, for example the Business Plan Incentive (BPI) and Totex Incentive Mechanism (TIM). It is likely that the framework will need to evolve in these areas as the definition of success, ambition and efficiency in RIIO-ED3 changes to reflect that we are in a period of significant growth. We continue to believe that DNOs should be incentivised to be efficient for customers and that this should evolve to assess both the way the transition is being planned and delivered for them locally (over 20-25 years to 2045/50) as well as the efficiency of the practical delivery of those plans in a growth environment.

Next steps

10. Ofgem should look to provide certainty on regulatory questions as quickly as possible to enable DNOs to begin on their RIIO-ED3 Business Plans, and enable a high quality submission. For instance, early clarity around planning scenarios would enable DNOs to accelerate planning. Where possible, Ofgem should not delay key regulatory decisions until Draft Determination or Final Determination.
11. I look forward to engaging further on these points, including through the RIIO-ED3 Working Groups in due course.

Yours sincerely,

Clothilde Cantegreil
Head of Strategy

⁶ NERA – '[Review of the Regulatory Framework for Strategic Network Investment](#)'.

Appendix A: Executive Summary

Regulatory Archetypes

12. The RIIO Framework with its use of incentive-based regulation provides a good platform for RIIO-ED3. We think the status quo is broadly fit for purpose and ‘incentive-based regulation’ should remain the core archetype. Targeted evolutions in key areas could be introduced to drive the **strategic investment** needed to make networks ready for net zero.
13. A ‘Plan and Deliver’ model could potentially be introduced in targeted areas. One of the main benefits of this would be in the context of strategic load requirements, identified through the Regional Energy Strategic Plans (RESP). While there is broad agreement around the overall direction of travel, the real benefit of RESP, coupled with ‘Plan and Deliver’, would be to provide certainty of strategic need in a way that is democratically accountable. This would support accelerated funding that could even span multiple price controls, whilst maintaining our ability to be agile in response to changes in period. DNOs would be held to account for delivery through a combination of existing tools. Our Strategic Development Plans (SDPs) already provide a good means for bottom-up planning and should be viewed as a blueprint to build on.
14. While ‘Plan and Deliver’ would likely be most suited to higher voltage larger, strategic, projects, at the lower voltage level, the focus should be on facilitating long-term programme delivery and a multi-price control approach - possibly taking learnings from the Gas Mains Replacement Programme (Repex). Again, this could potentially be supported by the identification of strategic need through the RESP process to support multi-driver interventions.
15. However, we have serious concerns that the more ‘extreme’ model of ‘Plan and Deliver’, where fungibility and the ability to make trade-offs within a totex allowance is significantly reduced, would be disproportionate. While we agree that DNOs should be held to account for delivery, given the sheer number and heterogeneity of projects we will deliver in RIIO-ED3, the ability to make trade-offs and optimise programmes in an agile way is vital. Doing so enhances deliverability and maximises customer outcomes because it means we can align outages, respond to changes on the ground and allocate network risk in a responsible manner. The current framework largely gives DNOs the agility to do this – and, as above, evolving existing, tested tools to hold DNOs to account is more proportionate than implementing a rigid ‘Plan and Deliver’ model. By removing agency away from DNOs, an extreme version of ‘Plan and Deliver’ could significantly increase risk for DNOs and this would require corresponding adjustments to financial metrics.
16. We would encourage Ofgem to be clear on the exact nature of the issue that needs to be resolved through the archetypes, and explore how existing tools could be refined for RIIO-ED3 and applied in a proportionate manner. These include the Business Plan Incentive (BPI) and cost assessment, which are currently overfocused on reducing cost within period.

Networks for Net Zero

17. At SSEN Distribution, we have embedded a strategic approach to network planning through our Networks for Net Zero approach. We are already developing SDPs which map network requirements to 2050 at each point in our network at GSP level and are fully informed by Local Authorities and stakeholders. Our SDPs provide a transparent and accountable blueprint for long-term electricity needs in our communities and RIIO-ED3 must enable long-term planning with a 2050 view in mind.
18. We agree with the need for a more proactive approach to investment, and a focus on enabling system-wide flexibility – our SDPs provide an excellent base on which to build. There will still be a clear role for flexibility at Distribution level, in supporting delivery of net zero goals and balancing timing of investments, but within the broader context of system flexibility and long-term demand requirements.
19. Our SDPs also provide a starting point for RESP in practice, and how tRESP could work in ED3, for ED3. Ofgem and NESO need to take an incremental rather than a ‘big bang’ approach. There are some easy, quick wins to be had. For instance, setting clear up-front scenarios and assumptions that DNOs can use in their planning. Overlaying these should be a layer of regionality given the significant variation that is already evident – agreeing local ambition and targeted joint or complementary engagement on strategic investments. Ofgem/ NESO should engage with DNOs early on tRESP, to ensure a ‘no surprise’ approach, so that DNOs can start planning now.

Responsible Business

20. We place a high premium on doing the right thing by our customers and wider society, and are proud to be a Fair Tax Mark and Living Wage accredited business. We were the first DNO to publish a Just Transition strategy⁷ and develop Vulnerability Future Energy Scenarios (VFES)⁸ – being a responsible business will remain a priority of ours in the RIIO-ED3 period and beyond. Customer engagement is a critical tool for us to ensure we continue to do the right thing and maintain our social licence to operate. Following submission of our RIIO-ED2 Business Plan, we made our Customer Engagement Group (CEG) permanent with the formation of our ‘Powering Customers to Net Zero’ (PCNZ) group.⁹ It includes members who speak from a range of perspectives, including vulnerable customers and customers less familiar with the networks sector. The group provides powerful and independent scrutiny across the whole of the business, challenging us to ensure the decisions we take are the right ones for our customers.
21. Beyond the PCNZ, we are taking a collaborative approach in engaging our local leaders - through our Distribution Future Energy Scenarios (DFES)¹⁰ and SDP processes¹¹, we engage democratically accountable, local voices to ensure the network that serves them is right for their ambitions, at the right time. RESP will complement and broaden this engagement to take in a wider range of energy needs and link to overall national targets.
22. Any additional deliberative research with stakeholder or customer groups that is not convened at a national level by Ofgem should consider stakeholder fatigue, particularly as tRESP and RESP processes are set up. More broadly, our challenge to Ofgem is to make it clear how the output from extensive stakeholder engagement DNOs will undertake as part of the RIIO-ED3 process will shape Ofgem’s decision-making. This will help to model clear roles and responsibilities for national, regional and local spatial and network planning so that we ensure the top-down approach meets the bottom up seamlessly, with NESO and DNOs working collaboratively to achieve this with minimal duplication.
23. We agree that the cost assessment approach will have to evolve in RIIO-ED3, moving beyond a focus predominantly on lowest cost operation of the network towards a focus on whole energy system outcomes for current and future generations. Such an evolution might be achieved by increasing the role of bespoke, technical and ex post cost assessments however this will need to be considered in light of a decision on regulatory archetypes. The methodology should rely more on views of forecast costs in order to capture the step changes we are experiencing in many cost areas due to the current market landscape. Ultimately, it is vital that Ofgem do not conflate ambition with low cost at RIIO-ED3 and avoid a race to the bottom on costs between DNOs which would risk under-delivery. Ofgem should consider an efficiency framework which assesses (i) the extent to which DNOs have clear long-term plan for the transition and (ii) the extent to which costs are efficient in the context of a period of high growth and resource constraints. In the same vein, Ofgem’s approach to Real Price Effects (RPE) forecasting and ongoing efficiency target setting need to be revised to ensure that they are reflective of market constraints and do not reduce outputs when the aim is to increase efficiency or delivery.
24. The Financial Framework for RIIO-3 as defined by the Sector Specific Methodology Decision (SSMD) for Electricity Transmission (ET), Gas Distribution (GD) and Gas Transmission (GT) is not suitable for application RIIO-ED3. We note that the Energy Networks Association (ENA) Finance Working Group (FWG) has submitted evidence on allowed returns including setting the right cost of equity based on market evidence and cross checks. This evidence sets out clearly that the cost of equity range Ofgem set out for the SSMD is too low and must be increased significantly to reflect the evidence. This is also justified when considering the change in investment and risk profile of the electricity networks sector and the need for financeability and investability as we transition to net zero. We also note that the cost of debt mechanism is shifting towards a nominal Regulatory Asset Value (RAV) weighted mechanism. This will need to be assessed against our financial requirements and business plan. Ofgem must consider options based on the evidence submitted as part of the business plan process rather than rely on decisions for ET/GT/GD which will be informed by those sectors’ own business plans. There is also a need to evaluate the balance of risk and returns including the incentive framework to ensure returns are competitive globally. Over-reliance on historical

⁷ [Just Transition | SSE](#)

⁸ [Vulnerability Future Energy Scenarios - SSEN](#)

⁹ [RIIO-ED2 Business Plan - SSEN](#)

¹⁰ [DFES - SSEN](#)

¹¹ [Strategic network planning process - SSEN](#)

transactions or other unobservable evidence would be unsuitable for setting returns for ED3. Lastly, the capitalisation rates and asset lives in particular will need to be assessed as part of business plans including considering lower asset lives depending on the business plan evidence provided at that time.

25. The RIIO framework is a good base on which to build for ED3 but there is a clear need to evolve the current suite of incentives to reflect the growing challenges DNOs are facing. Optimising incentives so they are fit for purpose in a price control period which will see unprecedented change should include setting targets that reflect customer benefits and drive efficient behaviours – and ensuring that DNOs are sufficiently funded in baseline allowances to deliver targets once set against the overall objective of the Price Control, to deliver the most efficient next 5 years of the energy transition in the context of the 2045/50 targets.
26. For example, the Interruptions Incentive Scheme (IIS) requires a significant review to ensure it is fit for purpose in a period of unprecedented network interventions; this inevitably means more reliability risk as we carry out more work on the network, as well as far more planned outages. The incentive needs to be optimised to avoid unintended consequences and ensure DNOs are not penalised for doing the right thing and carrying out necessary works. Similarly, we are facing more severe and adverse weather conditions that our networks were not built to withstand – the incentive should not disproportionately penalise DNOs for performance which is beyond their reasonable control.

Smarter Networks

27. We are delivering the smart, fair and flexible electricity system of the future, now – so we welcome the inclusion of Smarter Networks as a customer outcome. We have a strong track record on data and digital on which to build at RIIO-ED3. Our DNO-first partnership with Icebreaker One and the implementation of their trust framework, FIRST, informs industry best practice, and we were the first network operator to publish full half-hourly smart meter datasets, modelling demand with greater accuracy. Our award-winning Local Energy Net Zero Accelerator (LENZA) tool helps Local Authorities better plan energy systems against future regional energy demands and we are working with NESO on how it will use the future Data Sharing Infrastructure (DSI) to deliver RESP.
28. We are determined to go further in RIIO-ED3 when it comes to data, digitalisation and innovation. Ofgem must ensure that DNOs are fully funded to invest in the underpinning data and digital architecture required, and also ensure we are able to attract and retain technology professionals with the requisite data skills. This is one potential area where Ofgem may consider the relative roles of collaboration or competition, given the importance and efficiency that comes with consistency and only investing once in digital backbones and trust frameworks. The innovation framework is largely working well – however, it could be improved with a pragmatic mechanism to enable greater rollout of successful innovation projects into Business as Usual. A key blocker can be getting the required funding to scale from individual trials to widespread adoption, particularly if the innovation dividends will be realised over the longer term and a standalone business case does not exist within the price control for other operators. Ofgem have recognised the need to take a longer term, strategic approach at RIIO-ED3 – this should be extended to innovation and appropriately enabled to secure system-wide benefits from initial innovation funding.

Resilient and Sustainable Networks

29. Distribution is entering an incredibly challenging period in which societal electrification will place greater demands than ever before on our networks – whilst facing unprecedented challenges on numerous fronts, including severe weather events caused by climate change, a growing skills shortage and a supply chain that is already stretched. The regulatory framework needs to be calibrated to enable DNOs to do everything they can to mitigate these risks – it must not inadvertently incentivise DNOs to build networks that won't meet future needs.
30. There is an increasing risk of climate change impacts on our network. We are experiencing an increase in the severity and frequency of storm events, flooding of substations in areas never previously designated at risk, trends of extreme summer heat and a longer growing season leading to vegetation encroaching on overhead lines. We have made great strides in ensuring sustainable climate resilience is embedded into investment decision making processes and are building regional specific climate adaptation plans. However, whilst our sector does have engineering standards, it is clear that a wider decision on what the right level of resilience UK infrastructure should meet is long overdue – especially as our understanding of the potential macroeconomic damage of various climate

change scenarios and risks is more advanced than ever.¹² Focus on climate resilience is particularly urgent given the increasing interdependency between telecommunications and electricity networks, and their criticality to the UK economy, national security and wider society. The NIC first addressed the need for higher resilience standards to Government in 2020¹³ – and made further recommendations in 2024; their approach should inform how Ofgem approaches the question of climate resilience at RIIO-ED3.¹⁴

31. DNO baseline allowances should ensure DNOs are funded to reflect higher asset specifications, accounting for current and future climate risk. Whilst this will entail higher unit rates, building a network that is future proof is the right thing to do and cost efficient over the long-term. A separate climate resilience investment driver could also help DNOs with planning and give Ofgem some oversight of the level of resilience building being undertaken. Design of a Climate Resilience Metric is complex and should not be rushed for RIIO-ED3 – more important is the wider debate on what level of resilience is right for our customers and the UK and how to ensure this can be systemically integrated into network standards and future builds, with priority retrofits where necessary.
32. Supply chain pressure and skills shortages impacting both capacity and increasing costs are significant challenges that DNOs are already experiencing. Network reinforcement and build in RIIO-ED3 will largely take the form of thousands of smaller capital projects and programmes, especially at the Low Voltage (LV) and High Voltage (HV) levels. The sheer number and heterogeneity of projects we deliver at LV and HV levels means we require a huge number of LV and HV assets – and volume will only increase, meaning supply chain capacity will need to ramp up sharply. At the same time, because we operate a 132kV network in our SEPD licence area, we also have major capital delivery projects at the Extra High Voltage (EHV) level which are similar to Transmission projects. We therefore share some of the same challenges with lead times of certain EHV transformers increasing lately from 12 months to 18 – 24 months and prices increasing by 130% over four years simply for the plant. At the same time, DNOs need an estimated 2,200 people each year from 2024 to 2030 to deliver future plans – including people with craft skills like jointers who can take years to train.¹⁵
33. There are clear steps that can be taken to assist DNOs with supply chain challenges and help build workforce resilience – and Ofgem should consider how potential interventions might also satisfy their duty to consider how they can facilitate sustainable economic growth when regulating. For supply chain, Ofgem should consider a higher baseline allowance and other regulatory interventions, including a bespoke Advanced Procurement Mechanism (APM) for Distribution, which might span across price controls for certain expenditure. We expect existing challenges to be exacerbated by the proposed APM for TOs which could impact our ability to deliver in RIIO-ED2 and RIIO-ED3 price control and increase costs – Ofgem must take steps to mitigate these impacts. For workforce resilience, if we are to attract the approximate 15,700 new skilled workers into the UK Distribution sector that are needed by 2030, a sustained concerted effort is required given the sector wide skills shortages we are already seeing in key roles.¹⁶ Ofgem should create a framework which encourages greater collaboration between DNOs (and their contractors), and ensure networks are properly funded to develop the skilled workforces needed to deliver long term, not just into RIIO-ED3.
34. Sustainability and managing our impact on the environment goes to the core of our values as an organisation delivering the net zero transition. We were the first DNO to have our 1.5°C science-based targets to reduce scope 1 and 2 emissions accredited by the Science Based Targets Initiative (SBTi) in 2021.¹⁷ So far, we have achieved a 22% reduction from our baseline year and will continue to be ambitious, having launched our Sustainable Supplier code in 2023¹⁸ with 37.4% of our supply chain by spend committed to goals ranging from their own energy efficiency through to complying with modern slavery requirements. Whilst we welcome the continued focus on environment from Ofgem, this category should be expanded to sustainability which would encourage a greater focus on biodiversity, justified in the context of a growing the nature crisis. This is an area where we have showed leadership

¹² [Long-term macro-financial scenarios for climate risks - Network for Greening the Financial System](#)

¹³ [Anticipate, React, Recover: Resilient Infrastructure Systems – NIC 2020](#)

¹⁴ [Resilience Standards Report – NIC 2024](#)

¹⁵ [Workforce demand estimates 2024-2030 - Energy and Utility Skills](#)

¹⁶ Ibid.

¹⁷ [Science-Based Targets – SSEN](#)

¹⁸ [Sustainable Supplier Code – SSEN](#)

- for example, through partnering with NatureScot to deliver the largest ever Scottish seagrass planting programme.¹⁹ In addition, Ofgem should streamline regulatory reporting by asking for standardised data between RIGs, RRP, EAR and SLC46 documents. This would enable greater clarity and scrutiny.
35. At SSEN Distribution, we recognise the importance of losses as a system-wide issue, and we have made excellent progress managing them. We refreshed our losses strategy for 2023/24, which included updating and embedding our design standards for cable and overhead line sizing, as well as renewed focus on improving the energy efficiency of our substations. In addition, our Asset Policy sizes assets for longer term demand projections which helps to manage losses in the short and medium term. In the first instance, Ofgem should ensure that DNOs are appropriately funded and incentivised to make investment decisions that support losses reduction and build network visibility – this may mean higher unit rates in RIIO-ED3 Business Plans but will provide greater value for current and future generations of customers. Ofgem could also consider a minimum level of losses monitoring. The BPI should be used to recognise and reward ambitious plans to increase capabilities to identify, isolate and reduce losses. This approach would use ED3 as a stepping stone to ED4 and be a precursor to bringing losses management fully into the Totex model.

¹⁹ [Scottish Seagrass Planting Programme – SSEN and NatureScot](#)