REA Response to Ofgem Call for Evidence on Electricity Distribution Business Plans for RIIO-2

The Association for Renewable Energy & Clean Technology (REA) is pleased to submit this response to the above call for evidence. The REA represents a wide variety of organisations, including generators, project developers, fuel and power suppliers, investors, equipment producers and service providers. This includes member forums dedicated to a wide range of energy generators, such as solar PV, biomass, and energy from waste, as well as energy storage and EV charge point developers – all of whom are involved in helping to decarbonise our power grid. Members range in size from major multinationals to sole traders. There are over 500 corporate members of the REA, making it the largest renewable energy trade association in the UK.

The below constitutes general comments raised by REA members concerning the published DNO RIIO-2 Business Plans, and raises several actions we would like to see undertaken by both the DNOs and Ofgem as part of the RIIO-2 planning process:

A DNO Business Plans Summary Template should be developed by Ofgem to allow for easier comparison on key issues across the plans and improve transparency.

While it has been good to be able to view the range of DNO business plans, there has been no attempt made to make them accessible in a standardised format by which they can all be easily compared. It is not realistic to expect detailed feedback on six separate plans, all several hundred pages long and all considering their own priorities, rather than stipulating what is needed from the DNOs to inform the overall transition to a decarbonised energy system for the future.

There are several universal issues that all the business plans should be addressing and on which it would be valuable if Ofgem, and other stakeholders, can make quick comparisons. This includes aspects such as the future amount generation and demand required; costs of grid reinforcements; ambitions for renewables deployment; ambitions energy storage capacity and ambitions for the number of EV charging points, among other issues.

Given these business plans have now been published, Ofgem should look to create a summary template for DNOs to fill out, with these required fields specified. Once published, it will create a useful summary that will allow for greater transparency, as well as highlight where there remain clear gaps in the plans between DNOs. This will also likely increase consumer engagement in the RIIO-2 planning process and help to cut through much of the marketing copy that is also, understandably, presented in much of the business plans.

Each business plan should provide more detail on key standardised areas they are committed to working with other DNOs, such as set out in the ENA Open Networks

Project– this needs greater coordination and leadership from Ofgem, and then the Future System Operator.

All the business plans make references to current collaborations with other DNOs and commitments to working with others to deliver a range of outcomes. However, these references are inconsistent, and it is not clear what actions the DNOs are prioritising or how this relates to a genuinely collaborative approach. There is a need for greater coordination in how these actions are represented, as well as leadership in setting expectations and priorities for collaboration. This is a role that should be done by Ofgem in the immediate term, but we also recognise that such a role may be taken up by the establishment of a Future System Operator.

In particular, it would be helpful if each business plan set out how they were specifically delivering against the multiple workstreams in the ENA Open Networks Project. These should be considered priority areas for delivery, with clear expectations around what the DNOs should be working towards with common deliverables and standardised targets. Each Business Plan should have a clear section dedicated to how they plan to deliver directly against these targets.

There needs to be an overall whole system approach to delivering a decarbonised grid, with increased EV and heat electrification infrastructure.

While all the business plans have a good focus on the delivery of decarbonised distribution grids, with higher deployment of EVs and heat pump infrastructure, members raise concerns that a much more integrated approach is going to be required. Having six parallel strategies is unlikely to deliver an efficient UK grid system. It is likely this will lead to barriers to UK wide innovation and an inconsistent regional consumer experience of a smart energy system. Ofgem, and then the Future System Operator, will need to take a bigger role in delivering a more whole systems and directed approach, to ensure all DNOs are delivering against the same objectives.

DNOs Business Plans should have a section on how they intend to deliver against BEIS and Ofgem's Smart System and Flexibility Plan.

Only SSE and Electricity Northwest make direct reference to BEIS and Ofgem's Smart Systems and Flexibility Plan (SSFP), published in July 2021. This is concerning given the number of commitments made within the SSFP that directly relate to and involve the DNOs. All the Business Plans should include a section laying out how they intend to deliver against the required actions within the SSFP, with a commitment to working with the regulator and the Government to see the plan delivered. It is important that all the DNOs buy in and are committed to the delivery of the outcome of the SSFP, otherwise it is unlikely these ambitions will be realised.

Ofgem should set benchmark expectations for how DNOs should deliver grid connection services and address capacity constraints

While all the business plans make commitments to improvements in connection services and address capacity issues related to distribution grids, there is a noticeable lack of benchmark against which to compare DNOs success in delivery. As such, there is little way to make comparisons between the DNOs and identify where further focus is required within specific plans. Ofgem should analyse the commitments against expected deliverables and ensure DNOs are making sizable comments to see improvements in this area. The variance in grid connection processes, costs and time taken to secure grid connections remains one of the largest barriers to renewable and clean technology deployment. Delivering meaningful improvements, and greater

standardisation, across DNOs in this area needs to be considered an important focus within these business plans.

Consistent details are needed from each DNO regarding levels of grid reinforcements needed and associated costs

All the business plans do provide some detail concerning the level of grid reinforcements expected to be required, however, they are inconsistent in how they present these challenges, or how they present the expected costs involved. Ofgem should create a standardised template by which DNOs can report their expected reinforcement activities and costs, making it easier for comparisons to be made between the business plans and for gaps to be identified. It is essential that Ofgem, and broader stakeholders, have full visibility of grid constraints and where reinforcement actions are going to be focused, as they could have material impacts on the future pipeline of renewables and clean technology deployment, including energy storage projects.

Business plans are inconsistent in how they examine the need for energy storage or how they intend to deal with stress events.

While the business plans do address the need for energy storage, there is a concerning lack of detail within all the plans around how much energy storage they are expecting to need to connect at the distribution level, to help facilitate a flexible and decarbonised grid. While some provide estimated levels of storage capacity they expect to be required, this is not true of all the plans.

Nor do the plans provide much detail about future-proofing distribution grids for stress events. Western Power Distribution is notable in providing the most detail on this, however, others only make limited reference to ensuring their ability to balance the grid in stress scenarios. Given the importance of delivering reliable flexible distribution grids, as well as appropriately rewarding assets helping to achieve this, greater information should be provided on how each DNO Intends to deliver against specified stress scenarios.

Data sharing commitments need to be stronger – with greater transparency around demand and generation data, right down to home appliances.

Transparent and secure data sharing is going to be crucial to achieving a flexible grid system. A significant barrier to the development of smart systems, and smart products for consumers, has been the lack of adequate data sharing between DNO's, as well as with other suitable third parties. Such data sharing is essential to enable the delivery of innovative services for consumers and the grid. This includes making data available right down to the domestic appliance level, where it is suitably anonymised and protected, but around which innovative demand-side response services can start to be offered, creating benefits for both consumers and the grid.

It is welcome that all the business plans do make commitments to allowing greater data sharing and delivering against the Energy Data Taskforce recommendations. However, the details about how this will work remain unclear. Ofgem should review all the commitments made and ensure there is consistency against what is being promised by each DNO. It is essential that each DNO is working towards a high level of data availability and transparency, operating through compatible data sharing platforms, so that suitable flexibility products can be applied to the whole UK market.

Commitments to meeting staffing shortages and training should be stronger

A lack of adequate levels of human resources within the DNO's has been a major barrier to service provision, especially when dealing and responding to connection applications. This can often lead to long delays for renewable and clean technology projects being deployed.

While all the business plans make some reference to needing to recruit and train more staff, few go into detail in terms of identifying which areas of the business will need the most support or attempt to put numbers around how many staff they are expecting to need to see these plans delivered. UK Power Networks is notable in providing Figure 37, page 108, on "Workforce requirements for RIIO-ED2", other business plans do not have similar comparable tables. The need for additional staff should be scrutinised by Ofgem and further details given by the relevant DNOs.

Business plans should have better analysis concerning the challenges at different scales caused by the demand for simultaneous electrification of heat and transport.

It is welcome that all the plans do acknowledge the interplay and increasing demand caused by the simultaneous electrification of heat and transport. However, there is little attempt made to analyse the specific issues this might cause the distribution grid at different scales and identify plans to ensure these challenges are met.

For example, as more homes elect to have both a heat pump and EV charging point, possibly combined with some form of home energy storage unit, there could be a need for more installations of three-phase grid connections at domestic properties. DNO's will need to consider how these connections will be facilitated and at what cost to consumers. It may well prove that requirements for three-phase connections are mitigated by better integrated deployment of smart energy systems within homes, specifically designed to co-ordinate demand across EV, heat pump and storage devices. Either way, DNO business plans should reflect the need for more integrated deployment schemes, as well as plans for facilitating three-phase connections where required. Neither of these issues is currently considered by the business plans.

Equally, there is a lack of detailed analysis of specific regions within the distributed grid system which might be particularly vulnerable to overloading if a high proportion of properties in that area have electric heat and EVs, particularly remote rural areas. This needs to be considered from the point of view of significant stress scenarios, such as a cold winter night, where there is likely to be a high heat load from both heating and EV charging demands.

The interplay between the simultaneous electrification of heat and transport must be appropriately considered by the DNO's, as it could become a significant barrier to the successful decarbonisation of our energy needs, which must be avoided.

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