Greening electricity distribution networks: How green are the RIIO-ED2 Business Plans?

Electricity distribution networks have now produced drafts of their RIIO2 Business Plans. It is clear that the net zero agenda has been a major factor in shaping these plans, building on the Business Plan Guidance provided by Ofgem. However, since that Guidance was produced, the policy landscape has continued to evolve rapidly – both on net zero and the wider environmental agenda, including biodiversity, as well as on climate resilience. It is essential that Ofgem takes these changes on board as it updates its Guidance and that the companies take account of this wider context as they finalise their plans.

Introduction

All the electricity distribution networks have now published drafts of their RIIO2 Business Plans (with the exception of UK Power Networks who have produced a 20-page summary). It is clear that the net zero agenda has had a major influence on these plans although there are areas in which the companies need to up their game before they submit their final plans to Ofgem in December 2021. This Viewpoint draws out some common themes and includes proposals for where Ofgem should look to strengthen or update the Guidance it gives to companies on environmental issues. It is based on a Sustainability First working paper which looks in more detail at the individual plans and how they compare on the "green" agenda.

While this Viewpoint has a narrow focus on the environment, we absolutely recognise that household budgets are under extreme pressure as energy bills rise this autumn and into next year – and that affordability remains central to the price control process. Citizens Advice has produced a helpful commentary on the plans which focuses primarily on this consumer perspective, including the support offered to consumers in vulnerable situations. Similarly, we expect Ofgem and the Challenge Group to closely scrutinise the costs in the plans to ensure they deliver value for consumers.

We hope that this Viewpoint will add to this broader picture by looking through the lens of Ofgem's goal of "delivering an environmentally sustainable network", considering both the DNOs' role in facilitating the net zero transition and also their own environmental impact as set out in their Environmental Action Plans. We also touch on the difficult but crucial issue of inter-generational equity, given Ofgem's duties to future consumers.

Overview – a fast-evolving landscape

While some companies are further ahead in their thinking around net zero than others our view is that all companies need to do more on a number of the issues that Sustainability First has consistently emphasised including losses, energy efficiency, climate adaptation and biodiversity. Stronger Ofgem Guidance would help in raising the bar in these crucial areas.

This is a fast-evolving landscape and it is important that Ofgem's Guidance and the company plans are able to adapt to take account of new evidence and policy thinking. Since the ED2 Business Plan Guidance was published in February[1] we have seen the Dasgupta review on biodiversity, the Climate Change Committee's Adaptation report, revised FES scenarios from National Grid, a new 2035 legally binding target from government, updated guidance from the Science Based Targets initiative, the final stages of the Environment Bill, new guidance from Natural England on valuing biodiversity, the latest IPCC report on global climate impacts and updated carbon valuations from BEIS.

[1] With minor updates in April

The bar on what would be seen as minimum standards continues to rise over time and Ofgem needs to find a way to accommodate this in the ED2 process.

In addition, a central theme from the Citizens Advice report is around the need for consistency of reporting to enable meaningful comparisons. This is a message that we would echo. Where others are developing authoritative and standardised measures for use across sectors (as with Science Based Targets and now on biodiversity) we would encourage Ofgem to rely on those approaches rather than looking to companies to develop their own.

A related theme, which we highlighted in our Fair for the Future Regulatory report, is around the importance of industry co-operation. While the RIIO process involves an element of competition, to encourage companies to produce ambitious plans, Ofgem needs to reflect on how they will ensure that this does not undermine the co-operation needed in a number of environmental or other key areas.

The DNOs role as facilitator of net zero

EVs and heat

A core theme of all the company plans is the need for additional load related investment to support the expected growth in electricity demand from EVs and the electrification of heat. The companies generally show a good understanding of the nature of this challenge, in particular around EV growth where through innovation projects and operational experience they have built a good sense of what is involved.

On heat DNOs are typically at an earlier stage of the journey and the overall policy direction is much less clear. We advocated in a recent paper on energy efficiency that the DNOs should be using ED2 to build this understanding and in particular to look at their role in the provision of energy efficiency as a way to reduce demand as heat is electrified (and also make it easier to provide flexibility as the building itself acts as a thermal store). A couple of the DNOs have responded to this challenge. Ofgem expects the companies to consider energy efficiency as an alternative to reinforcement. It could helpfully reinforce this point in its feedback to companies to make clear that this is an area it considers important – for affordability, societal benefit and reducing carbon emissions.

More broadly the move to electrification of heat and transport is expected to deliver significant co-benfits, alongside de-carbonisation, which it is important that Ofgem recognises and takes into account.

Handling uncertainty

One of the major challenges in planning for ED2 (and beyond) is the very significant uncertainty that exists around the pathway to net zero as reflected in the various FES scenarios and the CCC pathways underpinning the 6th carbon budget recommendations. The Ofgem Guidance is based around the FES 2020 scenarios. In the FES 2021 scenarios decarbonisation happens faster with lower emissions in 2030 than anticipated in FES 2020, in line with the 6th carbon budget, which government has now accepted. While companies may be unable to fully update their DFES reports and business plan modelling to reflect FES 2021, the direction of change should be acknowledged. More generally, Ofgem has required the companies to demonstrate how their plans could flex to accommodate different scenarios but has not provided a base case scenario that they would expect the companies to use. As a result DNOs have each taken a different approach with some using a low base case (with more of the growth being dealt with through volume drivers) whereas others base their plans more clearly around a central case. This makes the plans hard to compare. In particular, where a low base case is used, this risks understating the eventual overall bill impact. It is important that in their final plans all companies set out clearly their best view of the bill impact, not just the "base case" in regulatory terms. It is this overall bill impact that matters to consumers faced with rising bills this winter.

While the DNOs have generally looked at the impacts of the different scenarios on the level of expenditure required it is less clear that they are really considering how to manage the uncertainty involved – what really drives the need for investment, what early indicators might suggest which trajectory they are on and how quickly they could ramp up activity if needed. In our Fair for the Future Regulation work

we have explored the concept of "adaptive planning" as a tool for managing uncertainty which companies might find helpful as they look to strengthen this aspect of their plans.

Local area planning

A further strand in supporting the transition is the role the DNOs are expected to play working with local authorities in developing local area energy plans. A number of the companies have set out ambitious ideas for how they could offer more support in this space. One challenge is that DNO and local authority boundaries do not necessarily align and it is not helpful for local authorities to face different support arrangements in different parts of their area. This is an example where cooperation is needed. Ofgem and the ENA should be thinking now about how to build on the best ideas from individual plans to develop more standardised offerings for local authorities.

Environmental Action Plans

The other central element of the plans from an environmental perspective is the Environmental Action Plans (EAPs) that Ofgem has required the companies to develop, focussed on their own environmental impacts.

Business Carbon Footprint (BCF)

A central part of the EAP is the company's own carbon footprint and targets for reducing it, which Ofgem requires be accredited by the Science Based Targets initiative (SBTi). We had raised a concern previously that Ofgem was allowing companies to put forward plans that were only consistent with a "well below 2 degrees" scenario which was not in line with the net zero legal commitment. However the SBTi has now changed its own rules so that in future all corporate targets have to be aligned with 1.5 degrees. Ofgem should update its Guidance to reflect this.

While the SBTi framework should be helpful in aiding comparisons between companies there are still a variety of start dates and target dates that make this harder. Moreover, a number of the companies also present early 'headline dates' for achieving net zero on their operational BCF - excluding losses and including offsetting. While these headline targets may have stakeholder support, the challenge is that they risk confusing the picture – taking the focus away from the formal SBTi metric. Consistent measures are vital to enable relative performance to be assessed and the issues around offsetting are complex, with SBTi expected to produce further guidance shortly.

Losses

Part of the underlying issue on BCF is the approach that Ofgem has taken towards losses. We have raised on a number of occasions the need for losses to be taken more seriously by both Ofgem and companies, given they account for 90% of the DNOs' carbon footprint. Companies have argued that losses are outside their control and that anyway they will fall away as the grid decarbonises. However, there are actions the companies can take – and even in the long-term reducing losses is extremely important as an energy efficiency measure, reducing the overall system capacity that is needed to meet net zero. In the end in ED2 there are no financial incentives on companies to reduce losses – a backwards step compared to ED1.

The companies do still have a licence requirement to have a losses strategy and some have touched on the issue in putting together their plan. However more focus is needed – and absent some regulatory mechanism it is not clear how companies will be held to account for delivery of anything they commit to in this crucial area. We ask Ofgem to rethink its approach to losses in the light of the limited attention given to this issue in the draft plans. With the growing recognition of the need for early decarbonisation, including the IPCC report and the government's interim target, a focus on losses becomes increasingly important.

As a minimum we expect Ofgem to require companies to use the latest carbon values produced by BEIS following its comprehensive review to align the values with net zero. However, we would really like to see losses included in the EAP scorecard and factored into the financial incentive that Ofgem is developing (discussed further below). As things stand companies could be rewarded via the score-card for changing their fleet to EVs but not for action to reduce losses which we consider sends the wrong signal about priorities.

Scope 3 Emissions

While the SBTi does not require companies to set targets for their scope 3 emissions (ie those from elsewhere in their value chain), Ofgem is requiring companies to start reporting those. Some companies have gone further and committed to set targets for scope 3 emissions. While at one level this is welcome there remain real questions about how robust any measures are, how they cover embodied carbon etc Again this is an area where consistency of reporting is vital and where there would be value in cooperation across industry on more common approaches

Biodiversity

Since the Ofgem Business Plan Guidance was developed the Dasgupta review has been published setting out the clear imperative that exists to protect and enhance biodiversity. The Environment Bill is also now in its closing stages and will, among other changes, require (for England) that major projects subject to planning deliver an environmental "net gain" of at least 10%.

Ofgem's Guidance needs to be updated to take on board these major developments. Currently Ofgem simply requires companies to develop an approach to measure biodiversity and provision of ecosystem services. However there is already an established Defra methodology that companies will be required to use under the Environment Bill for relevant developments and a clear benefit in a consistent approach to measurement. For the most part the companies do not put their proposals in this area in the context of the "net gain" obligation. The focus tends instead to be on simple metrics that stakeholders might understand in terms of the numbers of trees planted or sites improved but lacking any wider framework or methodological underpinning.

Natural England has recently produced updated guidance on measuring biodiversity for the "net gain" test and also guidance on how to value ecosystem services. Ofgem should encourage use of these standard approaches (or the equivalents in other nations) rather than looking to companies to develop their own approaches. Again, consistency is important and in what is a new area for the companies there would be value in co-operation and sharing of learning.

In Dasgupta and elsewhere there is also growing recognition of the synergies that exist between biodiversity and decarbonisation (albeit with some conflicts as well). The more ambitious plans do make these linkages alongside looking at wider co-benefits. We hope that companies will look to learn from those who are further ahead in their thinking in this space. We also encourage Ofgem to revisit its Business Plan Guidance to reflect the latest thinking. This is visibly an area that is important to stakeholders and when Ofgem comes to assess proposals we hope that it will give those stakeholder views due weight, as well as taking account of the wider benefits such initiatives can provide which may not be readily quantified.

Climate adaptation

Ofgem's Business Plan Guidance required companies to develop climate resilience strategies, looking at a range of scenarios and adaptive pathways, and with an expectation of cross-sectoral coordination. But with little sense that this was a particular priority, it is unsurprising that only a few of the plans seem to look at much beyond traditional flood protection.

However, in its recent Adaptation report the CCC flagged the electricity sector as one where significantly more focus was required, noting the cross-sector impacts that could flow from disruption to the grid. This sense of priority should be reflected in Ofgem's updated Guidance.

Events over recent months have reminded us of the potentially devastating effects that climate change can have and the IPCC report suggests that a 1.5 degree change is likely within the next two decades. This should be a wake-up call not just on decarbonisation but on adaptation too.

EAP Scorecard

In its sector methodology for ED2 Ofgem committed to developing a financial incentive around an EAP scorecard to incentivise greater ambition in what is a fast-changing area and to hold companies to account for delivering on their commitments. The detail of this is still being worked

through, including the weights to be given to different elements, and it is important that this focuses on the priority areas for DNOs and does not simply replicate what was done in transmission. In particular we would like to see losses and a strategy for SF6 as priorities for inclusion.
We would also stress the value of local input into assessing EAP performance. As with the proposed strategy delivery incentives around vulnerability, for example, there would seem to be a role for a group of CEG representatives with relevant expertise to inform more qualitative judgements, combining the benefit of local understanding with a cross-industry view.

Inter-generational equity

Sustainability First recently commissioned Frontier Economics to produce a pro bono report looking at the issue of inter-generational equity, recognising that we lack a clear framework for making such trade-offs. This is a complex issue as highlighted in the recent webinar we hosted to discuss the Frontier report. However a clear recommendation is that these issues need to be explicitly addressed and the impacts on future generations made clear.

This is a live issue for ED2 in the context of Ofgem's decision to extend asset lives which affects how the costs of ED2 are recovered across generations and also the total cost that customers have to pay (as companies have to wait longer before they get their investment back which they need to be compensated for). It is essential that the networks are transparent about the impacts of the asset lives policy on bills for future generations (out to 2060) and that Ofgem is willing to have an open debate – in the light of these numbers – as to whether the end result is fair across generations.

Conclusion

The companies only have a few months remaining before they submit their final plans. They will have a lot to do to respond to feedback from their Consumer Engagement Groups, the Ofgem Challenge Group and others but we hope that building on our analysis they will look too at how they can further strengthen the environmental aspects of their plans.

It has been valuable being able to compare across plans and we would hope that in future price control cycles Ofgem will make publication of draft plans a requirement on every company, to aid transparency.

Clearly Ofgem will be looking at the plans to think ahead to how it will assess these. It will publish updated Business Plan Guidance by the end of September. We have highlighted here those environmental areas where it seems particularly important to update the guidance to reflect the significant number of wider developments since the Guidance was first published. We have also highlighted a number of areas where we would like to see Ofgem sending a clearer signal to companies about materiality. The framework of incentives is one important way that Ofgem can signal its priorities and the work on the EAP scorecard needs to be viewed in that light.

This is a crucial agenda and one that we can expect will continue to evolve over the coming years. Ofgem needs to ensure that its framework is able to adapt as the policy context evolves.

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Sustainability First is a think tank and charity focused on developing practical approaches to promote social, environmental and economic wellbeing in essential services.

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