Electricity North West
Linley House, Dickinson Street,
Manchester, M14LF

Web: www.enwl.co.uk

Email: peter.emery@enwl.co.uk

Akshay Kaul
Ofgem
10 South Colonnade
Canary Wharf
London
E14 4PU

14 October 2019

Dear Akshay,

Electricity North West response to Open Letter Consultation on approach to setting the next electricity distribution price control (RIIO-ED2)

We are pleased to see the process start for RIIO-ED2 and keen that this progresses effectively throughout 2019 and 2020. It is important that stakeholders can assess the impact of the changes being led by Ofgem in a timely manner, particularly network access and forward-looking charge arrangements and Distribution System Operation (DSO) policy so that companies can engage, assimilate and reflect stakeholder responses to these policy changes in business plan submissions.

The move to a low carbon economy now has high momentum, with wide social and political support. The energy sector is on a transformative journey which is central to achieving UK-wide and regional carbon reduction targets. We agree that the electricity distribution sector is unique in respect of the impact and pace of change required. In response the RIIO-ED2 framework needs to be considered on a standalone basis, distinct from GD2 and T2. This will ensure that the framework is fit to enable a smarter more flexible energy system responsive to the drivers of decarbonisation, digitisation and decentralisation. Our stakeholders are asking us to take a leading role in delivering the Government's policy and the RIIO-ED2 framework and its application must therefore facilitate this.

We recognise we have a critical role as the North West's network operator in this transformational journey. We are well placed to respond to the evolving stakeholder requirements and regulatory framework, having focused on developing our network to support the transition to a low carbon economy. Our delivery of next generation network management systems will enable rapid automated control of our network and support the transition to a DSO model. Ultimately, the framework for RIIO-ED2 also needs to allow DNOs to fully transition and evolve to support and facilitate a DSO model.

We have **highlighted below key themes that are of upmost importance to ensuring that the framework for RIIO-ED2 is fit for this new purpose,** given the significant drivers shaping DNOs in the next price control period and beyond.

We are wholly supportive of enhanced customer engagement. Work with our Customer Engagement Group (CEG) commenced in early 2019 and is progressing strongly, ensuring that our business plan development will reflect the views of all our stakeholders including those that may be regionally specific. Our CEG was one of the first to be constituted in our sector and is already providing considerable challenge to our thinking and approach, right from the start of the RIIO-ED2 process.

We strongly support giving customers a distinct voice as part of the RIIO-ED2 process, and urge Ofgem to take the opportunity to reflect the output of this engagement as part of the decision making process. This would allow for variations between DNOs reflecting regional differences, where evidenced with customer and stakeholder engagement. This should be accommodated for RIIO-ED2 given the variations in local plans for delivering 'Net Zero' such as Greater Manchester Combined Authority (GMCA) by 2038 and Lancashire County Council by 2030. Given that these regional commitments are to be delivered quicker than the national target of 2050, we will be required to have facilitated more than half the change to 'Net Zero' within the RIIO-ED2 period by 2028[1], and our plan will need to reflect this. This is further borne out in our stakeholder engagement undertaken on this open letter where, as an example, one response stated; "*More collaboration between Water Companies, Distribution Network Operators (DNO's), Gas Distribution Networks (GDN's) and Energy Retailers could create a co-ordinated regional approach, with local authorities and local partners, to ensure no opportunity is missed to support vulnerable people in their region*".

The regulatory environment and framework must allow us to facilitate, support and deliver decarbonisation and low carbon transition. We are ready to act as a facilitator and leader of wider change to support low carbon transition. Our leadership role in the region's transition to zero carbon continues to strengthen with our stakeholders seeing us as a key part in enabling and supporting them on their journeys to delivering 'Net Zero'. Our regional stakeholders are setting ambitious targets and in response we have created our 'Leading the North West to Zero Carbon' plan articulating how we will lead and encourage businesses, our customers and our colleagues on the decarbonisation journey. We are actively engaging with our regional stakeholders ensuring that their requirements on a range of topics, including 'Net Zero' will be reflected in our business plan submission. We are ready to rise to this challenge and the regulatory environment and framework must support this.

We welcome the clarity that has been provided within the open letter with regards to the "*proposed positions*"[2]. Early clarity in certain areas of the process will allow Ofgem, companies and their stakeholders to focus on the topics that should be decided on an ED specific basis; ensuring effort is appropriately targeted to deliver the ambitious reforms required in the next price control period. It is critical that key issues are identified early in this process and prioritised as there is a significant amount of work to be completed between now and final business plan submission. This includes extensive and comprehensive engagement with customers and stakeholders and the conclusion of the significant code reviews led by Ofgem in good time for stakeholders to react and feed changes into DNOs business plans. However, we are concerned that if Ofgem's timeline for policy developments that shape our customers' needs is delayed we will potentially need to make substantial late changes to our business plans.

Distribution System Operations policy needs to be agreed in conjunction with stakeholders and in a timely manner to provide clarity for companies stakeholder engagement and business plan development activities. We have responded in detail to the consultation released alongside this one namely "*Position paper on Distribution System Operation: our approach and regulatory priorities*". This sets out our full response to Ofgem's current positions and ways of working considering the issue of DSO. We welcome the position paper which clearly lays out Ofgem's approach in this area; however, we would caution that the direct link between the development of this regulatory approach and the impact it will have on companies RIIO-ED2 business plans cannot be under-estimated. It is therefore important that work is undertaken in a co-ordinated manner with some decisions made during 2019 and 2020 to ensure that DNOs can have sufficient time to consider the implications of such decisions and reflect them in their business plans. Early decisions on key points such as a view of which DSO functions Ofgem initially would view as non-contestable (i.e. remaining within DNOs) and which they believe should be opened up to more market participation would be helpful. For Ofgem to have better informed views it is critical to ensure that stakeholders are given

[1] Assuming a five year period of control as proposed in the Open Letter consultation
[2] Open letter page 12

the opportunity to fully engage in these pieces of work and are cognisant of the Open Networks workstream.

Appropriate lessons from the development and determination process of Gas Distribution (GD) and Transmission (T) should be implemented to improve the outcome and legitimacy of RIIO-ED2. There will inevitably be learning that can be applied from the processes currently running for GD and T. Changes should not be limited to purely the incremental, we would also urge Ofgem to be bold in removing elements that are not demonstrably working for GD and T. As an example we welcome the reduced requirement for business plan iterations for Electricity Distribution when compared to GD and T. Given the unique and substantial opportunities to deliver government policy and other stakeholder needs by DNOs, the framework should not be wedded to decisions made as part of GD and T. This is particularly crucial when considering issues of financing and financeability given the likely investment requirements of the ED sector over both short and longer terms and the sector's pivotal role in both timeframes.

RIIO-ED2 should be focused on creating value for customers as well as intergenerational fairness, ensuring there is balance between current and future customers. As recognised, decisions made now should consider future customer and stakeholders wants and needs. Actions now to enable the delivery of policies that cover multiple price control periods should not be curtailed unduly. We agree that ensuring services are delivered efficiently is crucial in underpinning the legitimacy and trust in the sector, and this may require increased investment given the considerable change needed. Our Smart Street[3] project is a prime example where investment in networks can quickly deliver a substantial reduction in consumers' energy bills providing significant benefits that will be valuable especially for fuel poor customers.

We agree with the views of NIC, CCC, IGov and Sustainability First that strategic investment needs to be considered and factored into decision making for RIIO-ED2. It may be optimally efficient to deliver fit for the future solutions including investing ahead of time to meet a very likely need, to ensure that the on costs of investment are not incurred by consumers twice given the expected speed of change. It is crucial that greater collaboration occurs between Ofgem, BEIS and other government departments (as listed above) who will directly impact on DNO activities in the RIIO-ED2 period. This will ensure that all aspects, aspirations and objectives are joined up in a coherent plan. The framework for RIIO-ED2 needs to ensure that it is flexible to change given the degree of transformation required. Flexibility should ensure that strategic investment can occur, with sufficient certainty around funding or assessment criteria to give companies confidence that they will be fairly remunerated for delivering strategic investment.

It is in consumers' interests that overall industry risk is managed through the reduction in regulatory risk by increased certainty and confidence in the RIIO-ED2 framework. There are obvious increased external risks facing the sector and we welcome Ofgem's aim of lowering overall risk to the sector. Increasing sector risk can be offset by the reduction of regulatory risk. Increasing certainty and confidence in the regulatory framework could be provided by clarity prior to the commencement of RIIO-ED2 in areas such as close-out and uncertainty mechanisms. Any uncertainty that remains will undermine the regulatory settlement and fail to offset the very real risk increase associated with the external factors facing the electricity distribution sector. This is of further importance given the potential reduction in equity returns which have been discussed.

Ofgem's approach to financeability needs to accord with its statutory duty that individual licence holders are able to finance their activities and that licensees can secure both debt and equity finance. Initial views on financeability for RIIO-ED2 draw directly on conclusions reached in the GD

[3] Smart Street controls the voltage on the network to make appliances operate more efficiently, reduces demand and network losses and releases network capacity for LCTs. Where Smart Street is deployed customers will see a potential saving of up to £70 per annum on their electricity bill as a result of the energy efficiency created by Smart Street.

https://www.enwl.co.uk/zero-carbon/our-key-innovation-projects/smart-street/

and T sector specific methodology decision[4] where, concerningly, the onus is currently being placed on companies alone to ensure financeability. This emerging conclusion is not compliant with GEMA's statutory duty and fails to give due consideration to the specific impact on an individual licensee. Adopting a simplistic, all sector approach could easily result in efficient companies which suffer from higher financing costs by accident of timing becoming unfinanceable, thereby increasing the perceived risk by investors of the sector, to the detriment of customers.

Fairness of returns needs to be assessed from both debt and equity perspectives. The proposals place debt financeability risk squarely with the equity investor at a time when equity investors are facing increasing investment risk: "*...We expect the electricity distribution networks to see the greatest impact arising from the forces of decarbonisation, decentralisation, and digitalisation...*" as well as a potential 50% reduction in equity returns. It is difficult to reconcile how an increase in risk results in such a dramatic fall in return to equity investors, especially given that the open letter states: "*...Investors in a network company expect to receive a return on their investment, and we will allow returns on capital to reflect the associated risks...*"

We agree that data is as an enabler in a changing energy environment and support the findings of the Energy Data Task Force (EDTF). It is important that where changes in data policy result in new costs to facilitate a change in ways of working this needs to be clearly and unambiguously set out. Projects to support open data might be costly for a DNO to implement, with benefits accruing to other segments of the value chain, so in supporting this approach we expect efficient levels of funding will be provided to deliver these projects. It should also be explicitly noted where costs may be incurred in RIIO-ED2 but the benefit to the industry will be realised in future periods.

We have highlighted some key themes that run throughout our detailed responses to the questions set out in the Open letter consultation. The full responses to all questions are provided in Annex 1 to this letter. Annex 2 is our response to the "*Position paper on Distribution System Operation: our approach and regulatory priorities*" which has been provided here for ease of reference.

We look forward to working with Ofgem and other stakeholders over the coming period to develop and shape the framework for RIIO-ED2. We remain confident that an overall framework that enables the delivery of key objectives, whilst ensuring fairness for all customers and shareholders can be achieved.

If you have any questions on any elements of the response, please don't hesitate to contact me or Paul Bircham (paul.bircham@enwl.co.uk).

Yours sincerely

Peter Emery
Chief Executive Officer

CC: RIIO2@Ofgem.co.uk

Attachments:

Annex 1 - Electricity North West response to Open Letter Consultation on approach to setting the next electricity distribution price control (RIIO-ED2)
Annex 2 - Electricity North West response to Ofgem's Position paper on Distribution System Operation

[4] https://www.ofgem.gov.uk/publications-and-updates/riio-2-sector-specific-methodology-decision

Annex 1: Open Letter consultation questions and responses

Consistent with our support for enhanced stakeholder engagement as part of RIIO-2, we have engaged with our stakeholders on the contents of the RIIO-ED2 Open Letter as we felt it was important to understand stakeholders' views and suggestions at the very beginning of the process for RIIO-ED2. We reached out to almost 200 North West organisations, had conversations with just under 50 of them through our advisory panels and have received written input from the following stakeholders:

- AgilityEco Services Ltd.
- Auriga Services Ltd.
- Blackpool Borough Council
- Cosy Homes in Lancashire
- Eden District Council
- Energy Saving Trust
- KYP (Kashmir Youth Project)
- and Lancashire County Council

We have considered their feedback in the development of our response to the Open Letter and also in the answers to the detailed questions set out in the consultation as follows.

1. Do you have any views on the proposed objective for RIIO-ED2?

We broadly agree with the proposed objective for RIIO-ED2. We are pleased that the overarching objective includes references to both existing and future customers; achieving the right balance between these customer groups is a crucial consideration in a rapidly evolving energy sector that is decarbonising, decentralising and digitising. Decisions made as part of RIIO-ED2 need to be cognisant of future requirements along with the delivery of long term consumer value so should not prioritise short term price reduction to the detriment of future consumer and stakeholder needs. Ofgem highlights a range of respected government organisations including the Cabinet Committee on Climate Change (CCCC) and National Infrastructure Commission who highlight the same consideration.

The overarching objectives for RIIO-ED2 should reflect variation in regional requirements. Given the enhanced role of customer engagement, which we support, the regional information and insight gained as part of this engagement must be reflected and accepted as part of companies' business plan submissions and in turn the regulatory decisions made as part of the RIIO-ED2 process.

To enable this, we propose the objective could be enhanced to: "to ensure that the DNOs deliver the value for money services that both existing and future consumers need **reflecting regional requirements**."

The framework needs to enable DNOs, who are ideally placed to lead delivery of many aspects and to facilitate delivery of, local and national government priorities through the business plans DNOs will develop with their customers and stakeholders. Ofgem needs to be open to recognition of customers and stakeholders requirements of DNOs in the next period and beyond.

2. To what extent should we take into account outcomes linked to decarbonisation targets, and what outcomes might this involve?

We note the significance of Ofgem's statement in the Open Letter that they expect all network companies to put the Government's 2050 'Net Zero' target at the heart of all decision-making, whether this may be of a financial or operational nature. RIIO-ED2 will be a critical period for decarbonisation as we anticipate the adoption rate for low carbon technologies (LCTs) to significantly accelerate during the price control period in order to meet our region's ambitions and the country's carbon neutrality commitments.

Securing customers' support and confidence in LCTs will be key to maximising the pace of the transition and we expect that some customers will require assistance to make this change. This support will include the availability of objective information and technical support to enable informed decision-making.

We anticipate that the need and costs for such support will vary regionally. For example, Greater Manchester has a target of being carbon neutral by 2038, whereas Lancashire has a target for achieving carbon neutrality by 2030, both being ahead of the UK's overall commitment and therefore more intensive support will be required in our operating region. Given that RIIO-ED2 is likely to conclude in 2028[1], and these regional commitments are to be delivered quicker than the national target of 2050, we will be required to have facilitated the majority of 'Net Zero' within the RIIO-ED2 period. Network companies starting points also make a key difference to how their plans will meet those regionally differentiated stakeholder and customer needs; for example we expect to be able to connect half a million electric vehicles (EVs) in Greater Manchester without major reinforcement costs through innovatively using the assets already installed.

In addition we foresee the need to continue to socialise the costs of funding reinforcement charges for those residential customers adopting LCTs from general reinforcement as without this continuing from RIIO-ED1 into RIIO-ED2 then this could become a barrier to LCT adoption. We await clarity for our customers from Ofgem's Significant Code Reviews (SCR's) on charging and access issues and continue to actively support these reviews in developing policy.

We expect that the primary outcomes in this area will be the volumes of energy efficiency (EE) measures, LCTs and renewable distributed generation (DG) connected to distribution networks. All of these will need to increase significantly during RIIO-ED2 to put the region and country on the right path to meet its decarbonisation targets.

In our view there is considerable uncertainty on both the technology mix that will occur and local adoption rates. As a consequence, we believe that outcomes should also be linked to associated allowances and incentives to give us the flexibility to deliver what our customers and stakeholders require and when they need it. This points towards the use of uncertainty mechanisms such as the 'Capacity Mechanism' we have already developed in outline and shared with Ofgem.

[1] Assuming a five year period of control as proposed in the Open Letter consultation

3. Are there activities that DNOs are best placed to carry out in order to achieve these outcomes? What are the alternatives? Why would it be appropriate for energy consumers to fund these activities?

We believe that DNOs are well placed to lead the transformation of the electricity distribution system to meet the challenges of decarbonisation, decentralisation and digitisation as well as maximising the opportunities these provide for society. Addressing decarbonisation, digitisation and decentralisation will have socialised benefits so it makes sense for energy consumers' to fund this transition with DNOs representing a trusted and effective vehicle for co-ordinating and delivering key aspects of this transition where appropriate.

Our role is developing with greater focus as a capacity manager and resource co-ordinator in the future in addition to our traditional network asset centred activities.

An example would be to provide objective information and technical support to customers on LCTs and associated equipment, such as electric vehicle chargers, where customers will use competitive markets, as they do now, to select the electric vehicle that best meets their needs. The availability of impartial and practical advice to support customers is essential in order to facilitate the rate of adoption of LCTs needed and is therefore of benefit to all customers.

DNOs are uniquely placed to implement grid-side energy efficiency measures such as Smart Street. These investments deliver material financial benefits to customers in addition to significant carbon reductions. Smart Street controls the voltage on the network to make appliances operate more efficiently, reduces demand and network losses, and releases network capacity for LCTs. Where Smart Street is deployed, customers will see a potential saving of up to £70 per annum on their electricity bill as a result of the energy efficiency created by Smart Street.

In our view, DNOs are uniquely placed to provide direction of where energy efficiency (EE) measures should be rolled out. Although they might not be best placed to deliver meter-side EE measures themselves, but would do this through supporting and stimulating the competitive supply chains for EE. For example, DNOs can identify where deploying EE measures in constrained areas of the network can deliver carbon reduction benefits as well as releasing capacity for further LCT adoption. Stakeholder engagement and feedback on the Open letter from Energy Savings Trust, Auriga Services Ltd and AgilityEco Ltd indicated support for DNOs playing a role in EE measures. Further to this our engagement also rendered this response:

"Studies show that home interventions [LEAP advice and interventions] are the most effective way to support vulnerable consumers with multiple issues, but are resource intensive. Direct funding from Electricity North West allowed the service to support over 350 households in two years, delivering total lifetime bill savings of nearly £400,000, at a 4:1 social return on investment."

Therefore, it is our view that DNOs should be able to procure EE measures from service providers and compare these on an equal basis with network reinforcement. This would require EE benefits on the supply side to be included in DNO decision-making tools, such as the CBA model.

We recognise there are actions that DNOs can take in respect of our own operations to support decarbonisation and we expand on this further within our answer to Q28.

4. How should we assess DNO funding requirements and measure DNO performance in these areas?

DNOs' performance and support for customers in these areas should be measured through; customer /stakeholder engagement and support whilst being assessed through customers' satisfaction with the services provided. This should be supported by appropriate Ofgem oversight in line with GEMA's duties under law.

Funding requirements for purchasing energy efficiency (EE) as a means of creating capacity on the network should be assessed in line with funding requirements for creating capacity generally i.e. EE measures should only be purchased where it is more efficient as defined in a whole system CBA model, than alternative means of capacity creation. This will require EE benefits to be included within Ofgem's CBA model to allow DNOs to include this in their decision-making.

Grid-side EE measures are best assessed through ex-ante allowances where the cost and benefits to customers are detailed in the company's business plan.

We, and other members of the ENA, are also consulting with BEIS on whether there may be an additional role for DNOs to encourage the competitive delivery of EE measures on a wider basis, irrespective of the network benefits. This would be by using the Regulatory Asset Basis as an EE funding mechanism via the purchase of EE benefits from the competitive market on behalf of all customers. We anticipate further consideration of this mechanism from BEIS to be published in the conclusions they draw from their recent consultations on EE funding.

5. How should we incentivise DNO performance when the achievement of outcomes could be dependent on the actions of others?

We recognise that some outcomes are dependent on the actions of others. For example, government policy, availability of equipment and customer behaviour will all affect the rate of adoption of low carbon technologies (LCTs).

Customers should not face the burden of large "worst case high spend" ex-ante allowances where the outcomes are unduly uncertain. We agree with Ofgem that companies should explore developing baselines in their plans to meet expected consumer and stakeholder requirements with mechanisms to flex for uncertainty. However, where the value of initiatives are more certain e.g. grid-side energy efficiency measures, then ex-ante allowances coupled with output targets are appropriate to incentivise performance as strong incentive based regulation has proved to be in consumers long term interests.

Where the level of uncertainty is high then volume drivers or incentives are more appropriate and protect customers, whilst strongly incentivising DNOs to achieve desired outcomes. For example, incentives on electric vehicle connection could be most appropriately funded through a form of volume-related driver.

6. How do we ensure that network companies are best placed to undertake strategic investment and manage the associated risk? How should the risks of these investments be managed?

Network capacity is a key enabler of decarbonisation and therefore investment in infrastructure and services is an essential provision. Strategic investment when defined as "an ahead of need investment in network infrastructure or services in order to enable a particular project or initiative which can demonstrate wider social or economic benefits", should be encouraged under specific circumstances.

The existing framework already provides a number of tools to ensure network companies are able, and best placed to, undertake strategic investment and risk management, such as scenario planning, cost benefit analysis, real options considerations and the use of competition to identify the properties of potential solutions.

We welcome the NIC's recommendations of a proactive approach by network operators in providing the distribution network capacity and infrastructure for public charging facilities (although we recognise that DNOs cannot provide charging points under current rules) to support the decarbonisation of transport.

In order to ensure network operators are well placed to make anticipatory infrastructure or service investments to support future capacity needs, funding mechanisms that encourage prudent, but proactive behaviours, are required. A clear set of rules for their application are equally as important, so that investment risks are clear and the incentive for enabling an efficient energy transition is appropriate.

The scale and timing of future economic development or decarbonisation technologies inherently have a degree of uncertainty associated with them. However, robust forecasting over a range of credible future scenarios allows a least regrets investment approach to be taken, particularly when combined with a common approach to cost benefit analysis. The demonstration of strategic investment (be it physical asset reinforcement or procurement of flexibility services) should be benchmarked against a common CBA ensuring that there is a unified method of assessment. We have led on the use of real options cost benefit analysis[2] in our sector and are progressing work on the practical application of the value of lost load (VoLL)[3] work that found the VoLL changes as the use of electricity network capability changes and based on individual customer circumstances.

7. What, if any, changes to the framework are required to support strategic investment?

We believe that the current framework already facilitates investment in a sense 'ahead of need' given its existing flexibility, and this already forms the basis of company's network investment programmes of work. Generally much of our investment other than post fault work where there is already a power cut, can be seen as 'ahead of need' as we invest to provide for; expected asset failure (asset health replacement investment), to maintain reliability and resilience, or to meet expected needs of our customers. The current framework may need some developing so there is clearer multi-stakeholder understanding of the circumstances when investment (either in assets, flexibility services or other approaches) is merited because this feeds into customers' bills as well as benefitting customers by being able to seamlessly meet their needs.

Within Electricity North West, longer-term thinking is already embedded within our organisation with our decision making regularly assessed over 5, 10, 20 and 30 year windows to ensure that we are focussing on our existing and future customer's priorities. This is done whilst also ensuring that we are able to provide adequate network capacity, without undue risk of stranded assets. We continue to talk to our customers and stakeholders as part of our ongoing engagement activities on a longer-term horizon and regularly consult through our Distribution Future Electricity Scenarios (DFES)[4] publication and our Long Term Development Statement (LTDS)[5]. We also consider future

[2]https://www.enwl.co.uk/zero-carbon/smaller-projects/network-innovation-allowance/enwl001---demand-scenarios/real-options-model/
[3]https://www.enwl.co.uk/zero-carbon/smaller-projects/network-innovation-allowance/enwl010---value-of-lost-load-to-customers/
[4] https://www.enwl.co.uk/get-connected/network-information/dfes/

issues and challenges when developing our innovation priorities, recognising that most solutions require time to become ready to incorporate as business as usual.

We are entering an unprecedented period of change in the electricity distribution sector whereby government policy and commitments may mean that there are expectations for networks to undertake strategic investment outside of the current balance of risk within RIIO-ED1. Therefore the framework would benefit from greater distinction provided by Ofgem on what we see as two types of investment:

- **Anticipatory investment**: with a natural degree of uncertainty as assessed by the current frameworks in place in RIIO-ED1 for asset health, load growth, resilience and others parameters.
- **Strategic investment**: with potentially a higher degree of uncertainty and possibly more dependent on government policy, technology development, consumer behaviour and/or other external factors where the scale of change to net zero carbon, and time to achieve it, means potentially an overall lower cost to consumers if some investments are made in RIIO-ED2 as part of getting to 'Net Zero'. There may be slightly more short term ED consumer bill increase regret risk, offset by reducing risk of a climate crisis in the medium term.

Anticipatory investment describes the decisions which take place in today's environment as business as usual whereby decision making processes are well established and supported by robust decision making tools.

With these distinctions made, together with associated guidelines and consistent cost benefit approach (including the potential addition of societal and wider benefits) the existing framework should be flexible enough to support strategic investment during RIIO-ED2. Greater transparency on such decisions will be important to ensure the trust and legitimacy of the sector and its regulation. We believe that the costs of the infrastructure for both anticipatory and strategic investment should be funded by DUoS customers and should not be subject to any retrospective apportionment.

The issue of timing is also an important consideration, and we share two examples that highlight this timing issue. However in both cases we see this as being able to be managed through a least regrets approach within a CBA. The issues below are already experienced in Electricity Transmission where their projects can be very large and multi-year with more than one major project having a single outcome that only arises from their combined delivery. Hence we consider these aspects can be addressed in RIIO-ED2 and will make proposals in due course because the framework needs to be clear in advance for all parties. The two examples are:

- A large asset based network development that takes several years to deliver and so we need to start work prior to the uncertainty reducing to a minimal level so that it is delivered in time for the anticipated need;
- Where widespread change, through a number of small interventions, is anticipated over multiple years and in multiple locations this could not be delivered when required if all the work was left until the need was more certain.

[5] https://www.enwl.co.uk/get-connected/network-information/long-term-development-statement/

8. How should we hold the companies to account for the delivery of strategic investment, and the outcomes that they are expected to deliver?

We welcome a common and transparent assessment framework for strategic investments that considers the uncertainty associated with it. The outcome expected to be delivered by strategic investment is wholly dependent on the nature/reason for the investment and as such there is no one specific method to measure or hold companies to account.

The three proposed outcomes stated on page 4 of the RIIO-ED2 Open Letter are extremely high level and probably not appropriate to use in the case of strategic investments, if these are being considered as a measure of success/delivery.

A regular network options assessment process could be employed where emerging needs under a number of credible future scenarios are reviewed and a gateway test established for next stage solution development.

The development of an appropriate solution is then subject to cost benefit appraisal of asset based interventions and market based alternatives.

Having a common assessment approach for all network operators which encourages co-ordination and optimisation could be a demonstrable approach to efficient strategic investment.

9. Is there a need to separate out the revenues and outputs for 'traditional' DNO functions from DSO functions? How could this be achieved?

We assume this question is framed around the Distribution System Operation (DSO) functions in figure two of your position paper – Distribution System Operation: our approach and regulatory priorities.

There is a critical need for decisions on DSO policy to be made well ahead of the RIIO-ED2 price control commencing in order to ensure that network companies are clear on their responsibilities and accountabilities for performing DSO functions. It is also necessary to ensure that the Electricity System Operator (ESO) and the transmission operators are able to reflect any impact of DSO policy decisions within their business plan proposals to take into account their responsibilities and accountabilities at the boundary of the distribution and transmission networks.

Where more certain, such as an existing or extension to a current function, then the revenues and outputs can be adequately managed using an approach to identify appropriate baseline allowances for the re-scoped activity. It would be helpful for Ofgem, companies and their stakeholders, if companies clearly highlighted in their business plans which functions are considered DSO. However, we do not see the need, or benefit to consumers at this point in time, to separate out revenue and revenue treatments. We anticipate and expect these to be treated under a totex framework in the same way as any other activity or expenditure would be treated. Many of these activities are so intrinsically linked with existing activities that creating an artificial boundary may lead to sub-optimal or undesired effects.

We expect there to be a number of new types of costs that we will be incurring during the RIIO-ED2 period as we transition to DSO functions. Stakeholders are interested to understand in more detail how Ofgem will assess these costs where there are relatively limited historic or comparator information available. They are also interested in how these potentially uncertain costs interact with the setting of confidence-dependent incentive rates as well as impact on Business Plan Incentive.

During the price control period, with reference to new DSO functions, a contestability framework can ensure transparency and objectiveness; however we retain the view that where expenditure is incurred when DNOs do deliver contestable services (with the appropriate safeguards in place) there is no benefit to consumers at this point in time to separate out the revenue and outputs.

10. In the event of the DSO function being delivered by a separate party, how might we determine the revenues for DSO activities? What type of funding model would be appropriate to set DSO revenues? In this event, would changes also be required to DNO revenues and outputs?

We would welcome Ofgem providing more clarity on the context for this question. Our response is therefore our preliminary view.

Our initial view is that if a third party is delivering a function, then this would be unregulated and managed through market activities, whilst functions delivered by DNOs would be within the RIIO-ED2 framework.

There may be a hybrid model possible, whereby for example a flexibility platform is operated by a third party but the DNO utilises the platform to procure flexibility services, and then we would expect to see the cost of procurement funded through regulatory allowances, in the same way as procurement from any other service provider would be managed. We have no strong view on whether Ofgem should regulate flexibility platforms or aggregators, as there is not enough information available to us at present. Any role being undertaken voluntarily by non-DNO parties tends to imply that a competitive market opportunity exists and this is unlikely to require price control regulation by Ofgem.

Whilst we understand and support the regulatory principle of delivery of DSO functions by third parties where that is more efficient, we have not yet seen compelling evidence for specific tasks. There are some examples, such as operation of flexibility trading platforms, which could be delivered by third parties; however, we would see this as being procured through the Distribution System Operator. Such a model ensures that customers face the lowest overall cost whilst service assurance is maintained by the DSO. The removal of the Distribution System Operator from the management of third parties is not in the interests of customers and could place an undue burden on regulatory bodies to fully co-ordinate such activities or result in less efficient outcomes. Recent examples of where such a model of carving out roles has proved problematic include the DCC, where costs have been high and the service provider relatively unresponsive in our experience. In Ofgem's decision regarding the DCC Price Control: 2017/2018 published in February 2019, Ofgem refer to the DCC itself acknowledging the need to make engagement with its customers more structured and embed it within the decision making process and to improve transparency. Consequently, Ofgem urged the DCC to take note of customers' suggestions when establishing processes governing customer engagement. In particular, Ofgem considered that any governance process should be proportionate, which would mean greater customer input for those decisions with greater potential impact. Ofgem also expect the DCC to clearly identify and explain the role of customers in the engagement process, to communicate clear, accurate and timely information throughout the life cycle of the decision, and to agree with customers on information and feedback processes. If the third party gets into financial difficulty then the regulator will need to safeguard continued provision of service.

11. Where a DNO is undertaking a DSO function, what type of outputs or outcomes are necessary to measure how efficiently they are performing this function? Over what time period could these be measured?

We believe that there are already a range of metrics which are, and could be, used to measure network performance. The metrics which would be applied would depend upon which of the DSO functions a DNO were to be performing.

Where existing functions continue to be provided by a DNO, then they are well placed to propose outputs as a measure, these should be considered in further detail as part of the sector specific methodology consultation taking place in 2020.

Where extended or new DSO functions are undertaken by DNOs, then we would suggest that such outputs or outcomes are developed by the Open Networks project in consultation with industry stakeholders and Ofgem, and that this is captured within the relevant Ofgem work stream to ensure an efficient and cohesive process is followed to arrive at such measures. These functions, and particularly the detail and timing of how they are delivered by the DNO, should be a regional specific matter so costs and solutions work most efficiently on a local level.

12. In what ways could the existing arrangements drive more innovation and competition?

The current arrangements already drive innovation and competition, although we are supportive of strengthening the arrangements for innovation.

Innovation

Our response to this part of the question should be considered with our response to question 38.

Current or envisaged problems that are the subject of innovation trials or research are not always the same as challenges that may arise in or from future regulatory periods. The rules on innovation need to be cognisant of this and be sufficiently flexible to ensure that future emergent issues can be accommodated within the designated rules and framework. Too closely defined selection criteria will reduce the overall benefit that could be delivered in RIIO-ED2. Indeed the certainty of the issues to innovate on is one of the key uncertainties, so there needs to be a relatively wide scope of potential innovation themes.

One area to consider is how innovation arrangements can support customers in vulnerable circumstances and interventions that potentially go beyond the meter such as; energy efficiency. The rules should not be barriers to innovation and must be cognisant of future requirements or these types of issues (for example our 'Power Saver Plus (PS+)' proposal for NIC funding in RIIO-ED1)[6]. Indeed our stakeholder engagement on the Open letter supports this:

"Electricity North West should look to work with partners to develop innovative new services and products for the energy transition and decarbonisation to help customers save energy and save money. Small devices such as the free smart thermostat that AgilityEco is fitting for eligible households via our LEAP scheme, helps vulnerable households to better control their heating and reduce their bills whilst staying warm and well."

[6] https://www.ofgem.gov.uk/system/files/docs/2017/11/electricity_north_west_nic_submission_-_power_saver_plus_nov_2017_redacted_clean_redacted_0.pdf

Further, it is vital to maintain the strength of the 'Totex Incentive Mechanism' (TIM) as this drives innovation and pushes forward the efficiency benchmark for future price control determinations, lowering consumer costs. One of the ways in which companies deliver increased efficiency and productivity is through innovation. Therefore keeping a strong TIM is key to maintaining the appetite for, and the amount delivered by, innovation in RIIO-ED2. Reducing innovation support is arguably inconsistent with the need for companies to evolve and change rapidly to meet future government policy objectives. The whole framework package needs to consider how best to deliver these changes and acknowledge that innovation will play a key role in the successful delivery of the changes required. We are supportive of an Innovation Rollout Mechanism (IRM) in the current framework, and see its benefit in a longer price control period. Whilst IRM may still be applicable in a five year control the shortened time frame may limit its usage. Framework flexibility to support the transition from innovation to business as usual is important, and in the proposed absence of an IRM, flexible transition support mechanisms need to be considered.

Competition

We are supportive of competition and markets where it is in best interest of customers. The use of competition is already embedded within our current practices and as such we do not envisage there to be a need for fundamental changes to drive competition.

We believe that the current arrangements for supporting and driving competition are fit for purpose and do not require specific RIIO-ED2 intervention. The concurrent powers available to GEMA under the Competition Act 1998 to take enforcement action in relation to suspected infringements of UK and EU competition law are comprehensive and have been proven over time to be an effective measure and applicable where absolutely necessary.

We always seek to maximise the benefit and deliver the best solution for our customers and consumers. Having a TIM which is calibrated fairly and with a strong enough incentive power will continue to drive this behaviour and as such there is no need to intervene as there is no problem to be addressed. We and the sector have shown itself to be responsive to change; including the ways of developing competition and lowering cost to consumers. An example is embracing the use of flexible and other non-traditional network solutions, and putting forward our own clear and material commitments to BEIS to act on reports of perceived conflicts of interest without hesitation.

We have been a strong advocate of competition in connections for many years and have led the development of competition in this area. This was recognised by Ofgem in its 'Competition Test' assessments in 2013 where we passed more market segments than any other DNO. The seven market segments we passed represented 95% of the connections in the North West which were deemed competitive. We also led the development of the 'Competition in Connections Code of Practice' and this enshrined many of our approaches as best practice and were adopted by the other DNOs.

We have also fully embedded vibrant and effective competition through our procurement processes in place whereby transparent, competitive tenders are run for a variety of supplies (e.g. transformers and switchgear), services (e.g. design) and works (e.g. cable laying and overhead line construction). These tenders are conducted in line with best practise procedures, as well as European and UK procurement regulations (OJEU), to deliver best value to customers.

Currently much of our reinforcement and replacement network investment is delivered by competitively appointed contractors, generally via frameworks but with some standalone tender competitions for larger schemes. Examples of key competitively tendered framework contracts are:

- **Underground cable contract**: The works associated with this contract involve: Excavation, cable installation LV to 132kV; customer funded connections and diversions; jointing (if required); design (if required); backfill & reinstatement; fault responses; cable pits; grab wagon provision and spoil removal; and traffic management support.
- **Buildings and minor civils**: Typical works associated with this contract would be: New build and repairs and maintenance; brickwork; roofing work; joinery; building and maintaining concrete plinths; and vegetation control.
- **Overhead lines**: This contract delivers the refurbishment of overhead lines at 33kV and below across the North West of England.

We support and utilise both early and late competition models where currently appropriate, such as:

- All our load related proposals seek flexibility alternatives adopting the flexibility best practice established by the ENA (early competition)
- We tender all our framework contracts, and comply with OJEU rules as set out earlier (late competition)
- Certain construction projects are also competitively tendered to ensure best value (late competition)

We support the use of these models and apply them to all of our supply chain. We utilise tendering and competition testing extensively on our procured expenditure with circa 80% covered by framework agreements and much more on top of this tested separately. We understand that every pound we spend is funded by consumers and as such we are targeting to increase the percentage we test in RIIO-ED2 from our already strong current position in RIIO-ED1.

These examples demonstrate how we utilise and support competition where appropriate and in the best interests of customers and will continue to do so in the future, however we do not support artificially creating competitive processes where there is no customer benefit in doing so.

Where a holistic approach to option evaluation is required, and in the interests of customers to ensure the efficient and integrated development of the natural monopoly network, we believe that DNOs are best placed to undertake this activity and therefore we disagree that there is a requirement for "more projects tendered for competition where this competition is managed by a third-party, which requires the DNO to compete with others to design and deliver the best solution"[7]. Ofgem has not provided any evidence of potential consumer value through this or set out what the issue is. There is a risk of blindly applying thinking from electricity transmission without careful consideration of the completely different circumstances prevailing in ED.

A combination of the TIM combined with other safeguards within the distribution licence and competition legislation ensures that networks act in the best interests of customers to deliver an efficient and economical network.

[7]https://www.ofgem.gov.uk/system/files/docs/2019/08/open_letter_consultation_on_the_riio-ed2_price_control.pdf

Further to this:

- A third party body running a competition process parallel to the competitive processes run by DNOs is likely to add another layer of administration with associated costs and we would question whether this would represent best value for money for customers.
- Every interface adds co-ordination and hand off risk along with complexity.

We intend to show how we use competition in delivering our business plans. This will increase trust and transparency in the sector.

13. To what extent should we set (and incentivise performance against) baseline totex allowances for activities where flexible solutions could be provided?

We have proposed the development of an uncertainty mechanism which protects customers and negates the need for substantial ex-ante allowances by remunerating DNOs based on kW of capacity released. We anticipate a hybrid allowance/ uncertainty approach should be applied which reduces the risk of forecasting accuracy leading to unpredictable gains or losses for both DNOs and consumers. Under such a mechanism DNOs will only deliver what is required in the foreseeable future with a clear set of rules agreed in advance for defining this. This approach will also create a secondary market where DNOs will be willing to buy unused capacity back from customers or create capacity in novel innovative ways including through energy efficiency and other mechanisms. Further detail on this proposal is being developed with Ofgem and stakeholders and its consideration will form part of our business plan submission.

Funding DNOs only for the delivery of required network capacity will provide equal opportunity for flexible services compared against asset intervention. The 'standardised products' which we will use for flexibility are still being determined at Open Networks and this will evolve over time. Many stakeholders and potential market participants have stated that there is a need for consistency across DNOs in the decision making criteria used to assess flexible versus permanent resources and on market operation and liquidity. In particular, we would view the finalisation of the whole system CBA model and decisions around market priming as core to ensuring customers interests are best served.

14. Should we instead set allowances based on the costs revealed through the flexibility tendering process? How might this work?

Under our proposed capacity mechanism, a £/MW by voltage level could be reliably established for capacity provision. The existing regulatory reporting already contains much of this information, and the remaining years of RIIO-ED1 reporting could be used to provide a robust and efficient target cost per MW. Such a mechanism would ensure that the target costs ensure the actual blend of flexible and permanent capacity provision is properly reflected whilst ensuring the DNO is incentivised through the totex efficiency sharing mechanism to seek maximum efficiency and lowest costs for customers.

Some elements of providing network capability might continue to need baseline allowances such as managing fault level.

15. To what degree should DNOs modernise their handling practices to adhere to data best practice, and therefore (among other things) provide available, transparent, and interoperable data about their networks? What measures will be needed to ensure data remains secure?

We support this objective and endorse the requirements for publishing digitisation strategies. Electricity North West has made significant progress in sharing our data and in ensuring its quality, completeness and accuracy is fit for purpose as data becomes even more integral to our business. Further to this our stakeholder engagement provided this feedback from Eden District Council:

"ENW[L] supports Members and Partners to fulfil their own specific objectives of supporting vulnerable residents, by sharing information with them. For example, Eden District Council uses ENW[L]s datasets, i.e. areas with high levels of low income, to identify areas in which to target delivery of Fuel Poverty surgeries, in support of the District's vulnerable residents."

We recognise that with decarbonisation aims this will need to continue and as such we are committed to sharing data more widely with industry stakeholders in standard and open formats in order to enable industry development. Having already invested significantly during RIIO-ED1 in data cleansing we recognise the considerable challenges and costs in achieving this across the whole DNO estate and this needs to be carefully considered when Ofgem is setting timescales, allowances and mandating that this work be undertaken.

In many legacy DNO operational systems data is stored in closed formats using supplier specific data schemas and protocols such as:

- Network Management Systems
- Asset Management Systems
- GIS Systems
- SCADA systems

This arises because at the time of implementation, no specific interoperability standards existed.

Due to the cost and complexity of replacing such systems the refresh cycle is long and interfaces between such systems are normally point to point and generally bespoke.

Data Exchange Standards such as CIM (Common Information Model) and ICCP (Inter Control Centre Protocol) allowing open data exchange between systems are relatively recent developments as are improvements in 'big data' analytics. Implementation of these technologies is generally done as part of the technology refresh of complete systems as standards mature and the need arises to implement such technology.

Enabling DSO capability in order to connect and manage more renewable and low carbon technology is significantly accelerating, the need to implement such standards into DNO systems both internally and across the stakeholder community. The previously closed nature of such systems and lack of interoperability standards led to a fit for purpose data model which is less integrated and whilst these have historically been efficient and met customer needs, they are less optimal for meeting consumers future needs. There is now a clear need to move to open platforms and access arrangements.

We recognised this challenge some time ago and we are undertaking some timely investment during RIIO-ED1 to position us to meet the data transparency needs that are appropriate from us as a DNO and for our stakeholders during in RIIO-ED2. Much of our technology refresh investment in RIIO-ED1

is focussed on improving data mastery, data governance and system inter-operability across the IT estate. Despite the considerable progress we have made we are also concerned about potentially more substantial expenditure being required without adequate funding consideration in RIIO-ED1 and RIIO-ED2.

Notable investments during RIIO-ED1 include the refresh of our GIS system (completed) and replacement of our Network Management and SCADA capabilities which, when completed later this year, will provide a single static network model mastered in GIS which is extracted in a CIM compliant format and forms the static network model for Network Management and SCADA for Network Operation in real time.

These developments will also support ICCP for real time data exchanges internally and externally and support CIM compliant extract capabilities for other purposes such as network model and planning data exchanges. These capabilities will facilitate much improved data access both internally and externally in RIIO-ED2.

In addition to the above we have also standardised on IP based Open Standard communication protocol (DNP3) to our primary and secondary RTU (Remote Terminal Unit) population whilst migrating these to the new SCADA system. These investments provide the foundation for the open exchange of data between parties; however considerable work remains to define the access arrangements and rights for the various stakeholders. We envisage considerable additional investment will be need to freely exchange data once these have been defined.

Security of DNO operational systems from third party access in line with the Network and Information Systems ('NIS') Regulations 2018 has always been considered paramount due to the nature of the assets these systems monitor, control and manage. This remains the case with advanced encryption and firewall technology on communications between field technology and central systems. However, ICCP capability will facilitate exchange of information in real time with similarly secure systems using appropriate security technology and CIM compliant data can be extracted from these core systems and stored in data repositories whether internally or externally hosted and made available to other stakeholders meaning third parties never require access directly to core systems.

Whilst we generally support the principle that data about the network is presumed open we would advocate at least a process of registration in order to access the data repositories and a system of username and password in order to understand who is using data and to what extent. This will also give us insights as to what sorts of data are most useful to stakeholders.

With reference to the conclusions of the Energy Data Task Force (EDTF), we recognise that for certain applications others may be better placed to undertake specific analysis based on network and flexible resources data.

We believe therefore that it is in customer's best interest to follow a strategy of publishing as much data as practicable whilst considering accessibility and usability. Such publication requires additional investment in systems and security measures and therefore it is important to establish robust IT investment business cases which meet the forecast benefits profile. We are working to ensure that the costs and timing of any such specific investments, such as the detailed EDTF objectives are identified and included in our RIIO-ED2 investment plans.

16. How should we structure RIIO-ED2 to encourage metadata to be made available, and for data to be presumed open? How should we measure DNO performance in this area, and on what basis should funding be set to deliver relevant outcomes?

Within a DNO there are many data sets and whilst we are implementing strategies internally to rationalise and master data in appropriate systems, industry guidance on what data sets are considered important and in what timescales is essential to ensuring delivery of value for customers. The DSO position paper running in parallel with this consultation proposes to include significantly more data then the ENA Open Networks project has currently defined and we also note that the Energy Data Task Force has modelled a much wider data set than is shown in the extract contained in the EDTF report 'A Strategy for a Modern Digitalised Energy System' and between a much wider group of stakeholders.

As stated in our answer to question 15 above, we support the principle of data openness subject to appropriate openness triage and acknowledge the Dublin Core model as an appropriate framework for provision of metadata. Provision of metadata for a particular data set that describes the data set owner, location and how to access or request the data set would allow any metadata repository to be populated in advance of populating any internal or external data repository with the actual data set; therefore information about the existence, content, format and location of a particular data set would be a useful starting point.

For the reasons outlined in the answer to question 15 above there is a rationale behind the current data landscape and whilst provision of metadata is a relatively simple process, provision of the actual data in a discoverable, searchable and understandable format is often associated with considerable investment in IT Systems and Technology with significant complexity.

Whilst standards such as ICCP and CIM have been implemented and tested at relatively small scale on test and simulation systems through innovation funding, we recognise that it is often an order of magnitude more complex and costly to implement this learning into core DNO systems with complete datasets often involving complete system replacement to make the data fully interoperable across GB.

Clarity around the specific needs and benefits, the format and scope of data and the implementation timescales is essential to allow business plans to be formulated for the necessary milestones, metrics and allowances.

Allowances should be set at an appropriate level to enable DNOs to meet these obligations, and to actively seek out improvements which would be the strongest performing ‘cost versus benefit’ to stakeholders’ measures.

17. Do you agree with the themes we plan to include in our guidance on data best practice?

We consider that the emerging Data Best Practice themes are appropriate and provide useful stepping stones towards unlocking energy systems data however the challenge in applying appropriate standards such as CIM and ICCP to DNO Systems and Data wholesale across the UK should not be underestimated.

For the reasons we have outlined in our answers to questions 15 and 16 we see challenges considering the orientation around greater digitisation of our business, even with the steps we are already proactively taking. Hence appropriate and supportive regulatory arrangements for RIIO-ED2 to enable us to move from a cost minimisation IT approach to one which places greater priority on

digitisation and data transparency will be a material change going forward. We support achieving the full extent of the ETDF goals and expect it will require some time and investment to resolve. This will be, in part, impacted by the way in which operational technology has evolved in the past.

Our IS and technology investments in the current RIIO-ED1 period and our IS and Technology Strategies going forwards are focussed on underpinning a Smart Grid and include replacement of legacy systems (NMS, SCADA, GIS) and technologies (Legacy RTUs and Monitors) that cannot be adapted to meet Smart Grid requirements, implementation of both Data and Communications protocol standards (CIM, ICCP, DNP3), improved data governance, improved data mastery and improvement of the both the quality and mobility of data across the enterprise through an enterprise integration platform.

We believe all of these activities will place us in good position to meet the challenges in RIIO-ED2 and are aligned to the Data Best Practice themes outlined in the DSO Position Paper and this consultation.

18. We welcome views on our proposed position of a five-year price control for RIIO-ED2.

We agree that a five-year price control is appropriate for RIIO-ED2, although the wider framework needs to consider and facilitate activities and investment that spans multiple price control periods given the prevailing changes required to deliver government and stakeholder objectives. Appropriately linked provisions to the start of RIIO-ED2 in the regulatory arrangements of ET2 and ESO2 in particular, need to be made as they are on a different timeline.

19. Are there any elements of RIIO-ED2 price control that we should consider setting over a longer or shorter period? Please give reasons.

Whilst there are no specific single elements or categories that we would propose at this stage to be set over a longer or shorter period, we would suggest that Ofgem consider wider work being undertaken in terms of environmental impact which is looking decades ahead such as; the flooding review being undertaken by the Environment Agency, Resilience Study by NIC, or Climate Change Adaptation report by DNOs. The outcomes of this work may result in work being required to be undertaken by DNOs with a longer deadline with incremental targets or milestones, and there may be merit in such areas being set over this extended timeframe. Our stakeholder engagement could identify that there are aspects that should be considered over a longer period so Ofgem needs to be open to this when business plans are submitted.

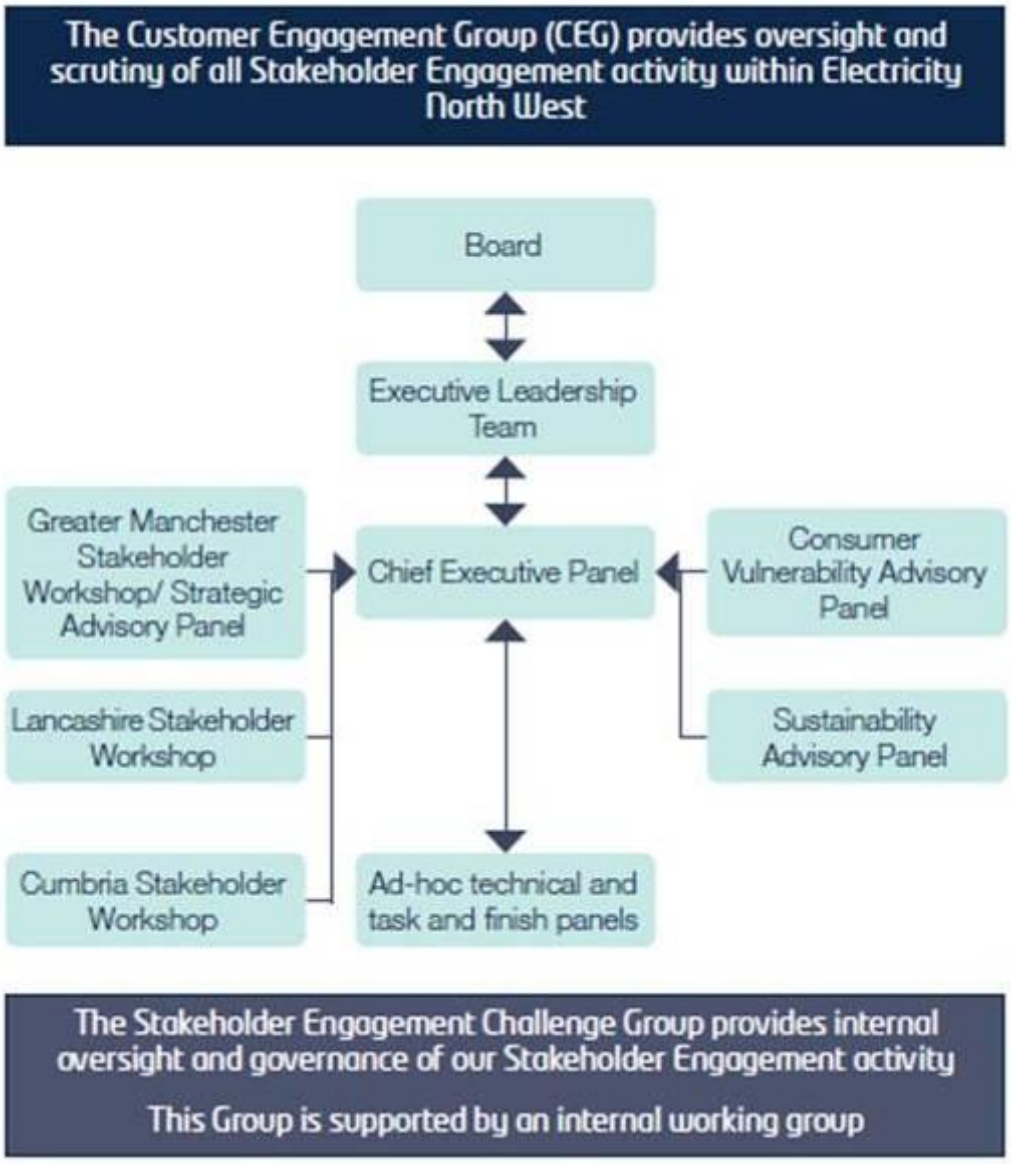
Equally, the framework and decisions for RIIO-ED2 should not preclude or detrimentally impact those activities that will span multiple price controls to support key policy objectives such as decarbonisation.

20. We welcome views on whether these enhanced engagement arrangements are appropriate for RIIO-ED2.

We agree that engagement with customers and stakeholders is central to the RIIO price controls. Stakeholders and consumers' needs and expectations are central to everything we do and it's important to give consumers a stronger voice.

Indeed, we have already established an independently chaired Customer Engagement Group (CEG) and are already benefitting from the challenge and scrutiny that this group is bringing to the development and delivery of our stakeholder engagement/ consumer research activity. We have

long-standing Advisory Panels to support the development of our approach to sustainability and vulnerable consumers which we have just refreshed, and integrated with our CEO Advisory Panel. These panels are independently chaired and these Chairs also have a place on our CEG. This further strengthens the consumer and stakeholder voice on these issues in our area. We have provided a diagram below to summarise the structure:



We also ran a process of stakeholder engagement on the Open Letter as we felt it important to understand our stakeholders' views and suggestions at the very start of the process for RIIO-ED2. We have considered that feedback in the development of our response to the Open letter. That process has also provided the following response from Auriga Services ltd:

"ENWL's existing stakeholder forums (the Consumer Vulnerability Advisory Panel, Sustainability Advisory Panel and the Chief Executive Panel, along with Regional Stakeholder workshops) and are already robust and vibrant institutions which encourage a high level of stakeholder engagement within ENWL's catchment area. It is important that the new engagement approach encourages a

diverse range of stakeholder forums in addition to the CEG format, rather than limiting the options available."

We welcome the clarity that has been provided in the Open Letter which stated '*they should consider, for example, whether companies have properly reflected the requirements of local stakeholders and [North West] customers but they should not be used in identifying those requirements.*' This is a helpful distinction and one which has been built into the terms of reference for our CEG.

We are committed to creating a plan that demonstrates a robust understanding of the distinct needs and expectations of our local stakeholders. It's important to recognise that local needs may vary and therefore different network companies may include distinct needs in their plans which are not reflected in those of other companies.

We agree that the proposed engagement arrangements will lead to a stronger voice for network users, consumers and consumer advocates in the overall price control process and will ensure that we can demonstrate that we have achieved this understanding and reflected it in our plan. An important consideration has been raised as part of our stakeholder engagement on the Open Letter, with specific regards to open hearings. The KYP (Kashmir Youth Project) has raised that the process "need[s] to be mindful of language, literacy and communication needs of attendees so that they are inclusive to all. Use of simple and clear English language should be made avoiding all technical language (such as RIIO-2)." We agree with this sentiment that open hearings need to be accessible.

21. We welcome views on whether the proposed output categories and incentive arrangements are appropriate for RIIO-ED2.

Broadly, most activities can be, if not perfectly, allocated to the three output categories that have been established by Ofgem. We have suggested some potential improvements to the three output categories in previous responses. Our previously suggested alternative proposals have not resonated with Ofgem so we now think the framework needs to be, and looks to be, flexible; having the ability to incorporate needs that emerge out of engaging customers and stakeholders on our business plan.

That said the incentive arrangements for RIIO-ED2 need to be very carefully considered given the unique nature of the challenges facing the sector when compared to the early price controls of GD and T. We agree that use of Price Control Deliverables (PCD), Licence Obligations (LO) and Output Delivery Incentives (ODI) are appropriate, however, the balance of these needs to be carefully considered. This is because depending on which customer facing outcome is utilised (PCD, LO or ODI) this will encourage or drive different behaviours through the incentives embedded within the outcome type. For example, PCDs may lower the incentive to implement innovative solutions where companies are focussed on the output and potentially not the outcome for consumers as they seek to deliver exactly what the licence obligated PCD is in the lowest risk efficient way.

The balance for RIIO-ED2 will need to be gauged carefully, although we believe that a regime with strong incentives for companies to improve outcomes, drive innovation and deliver efficiencies is in the best interest of consumers and stakeholders. As a core regulatory principle strong incentives are in customers interests by revealing savings for future price controls, which is even more relevant in a five year price control cycle. Furthermore, incentives can provide a mechanism to fund improvements where risk is transferred away from customers who only pay for successful outcomes, rather than unsuccessful attempts to deliver outcomes.

We do not agree that the changes proposed for ED represents a de-risking of the sector and as such incentives need to be appropriately calibrated for ED specifically. Incentives need to be strong enough to support significant investment requirements over the period given the changes required and the uncertainty associated with these changes.

Further we do not support an incentive arrangement that includes a relative performance requirement. This is because we strongly support enhanced stakeholder engagement and are striving to put our customers at the heart of our business plan, reflecting their regional needs and preferences. The use of relative performance requirements would weaken this link between business plan and consumer preferences. In cases where improved customer outcomes must be delivered by enhanced investment, relative performance incentives can undermine the investment case and prevent the delivery of the desired outcome.

Similarly we are against the use of dynamic incentive arrangements as these will undermine the certainty required for business planning, adding an additional layer of complexity and uncertainty in an already rapidly changing operational landscape for RIIO-ED2 and beyond. We believe this is an example of an area where regulatory focus is better placed on ensuring a framework that is fit for purpose given the well known challenges facing the distribution sector.

22. We are interested to hear if there are new elements of the services DNOs will need to deliver that should be included in the current output categories. Alternatively, we welcome views on whether these should be captured by a new output category. For these new elements, we are interested to hear how delivery of these services should be valued and measured.

This answer should be read in conjunction with our response to question 21.

Any new services or elements of services that DNOs deliver will naturally be included in the current output categories given these are currently worded broadly enough to capture all activities. Stakeholders and customers will be central to our plan development and we are already undertaking extensive stakeholder engagement to ensure our business plan meets their needs and therefore believe that this aim is thematically covered in the existing output categories.

Developing DSO functions are likely to be one of the ways we meet/deliver these central output categories. However, the DSO functions as currently set out in the DSO position paper[8] are inherently linked, interrelated, and nuanced with the potential for unclear boundaries. We provide our DSO position paper response in annex 2 to this response; however, for brevity DNOs should provide significant input to this transition and development of DSO functions. This is particularly important given the defined responsibilities of DNOs within the Grid Code, Distribution Code, Electricity Distribution Licence and the Electricity Act. Whilst we agree that not all functions of DSO need to be directly delivered by a single legal entity, it is preferable for a single entity to have clearly defined accountability for their delivery including deciding how functions are delivered.

23. We welcome thoughts on how to ensure that we continue to protect the interests of vulnerable consumers, particularly in light of the energy system transition.

The best way to assist vulnerable consumers is to coordinate between different sectors and to ensure an efficient service offering appropriately tailored for their needs. Ofgem is separately developing charging and access reform proposals and should consider vulnerability as part of that,

[8]https://www.ofgem.gov.uk/system/files/docs/2019/08/position_paper_on_distribution_system_operation.pdf

such as if and how to address fuel poverty vulnerability. The current effort across the industry to collect clear data to deliver Priority Services Register (PSR) services from multiple sectors is creating a significant volume of work introducing additional costs to consumer bills. Suppliers are ideally placed to manage a central PSR, if they allow access to it for other utility companies and charities. We believe that Ofgem should amend supplier licence requirements to improve the quality of their PSR data with standardised processes including how data is captured and removal of it when it is no longer valid. Data must be recorded by suppliers on the vulnerabilities of individual consumers and not aggregated so that all vulnerabilities for multiple consumers in a property are recorded against the Meter Point Administration Number (MPAN) or the bill payer. In electricity and gas where the network and suppliers are separate, introducing additional contact with network companies can create disruption, inconvenience and confusion for people in vulnerable circumstances. A single source of data should lead to reductions in costs across the industry in managing poor data, and less inconvenient or intrusive contact for the customer.

Treating customers according to their needs should be business as usual for all parties and is for us. The accessibility of customer support services for vulnerable customers is a licence condition for all DNOs, and we support a continued focus on enhancing services tailored to meet the needs of each consumer. No supplier or network company should be limiting their communications largely or solely through digital channels as this creates exclusion. As part of the data capture standard, suppliers should share individual customer's communication preferences with network providers, allowing network companies to utilise the information to ensure a speedy and appropriate response to customers if their supply is lost. Development of a clear data capture standard for information sharing between suppliers and network companies would create a seamless level of customer service in the industry.

There should be a distinction between vulnerability and specific customer needs such as communication and accessibility barriers on the PSR. There is a clear need to ensure these customers receive support tailored to their specific needs. Currently we have 1 in 4 of households on our PSR, we note that there has been an increase of 36% in the number of customers on the PSR nationally, and recognise there is still a gap between network registers and the anticipated number of vulnerable households. With the potential future growth in the number of vulnerable customers, it will become increasingly important to record the difference between a household with a vulnerability compared to a bill payer with vulnerability. For example, individuals may require a bill in braille; however they may choose to not actively register with other companies on their PSR if they are not billed by that company, such as an electricity network company.

Evidence suggests that vulnerable customers are often reluctant to identify themselves as being in a vulnerable situation and are also likely to demonstrate a greater level of caution towards organisations who are seeking access to their data. It will be paramount that companies using smart data maintain trust and reputation with customers including those classed as being vulnerable. A rogue third party who gains access to smart data to miss-sell or exploit vulnerable customers will likely reduce the willingness of all customers, not just those in vulnerable circumstances, to participate in any future smart data initiative.

Regarding smart data, one area that would benefit customers is to set clear data quality standards so that there is consistency on what data can be collected, how it should be collected and how it should be maintained. We are supportive of Ofgems' Switching Programme with the aim to deliver reliable and fast switching for consumers. One issue identified in this process is that plot address records, attached to MPANs, may not reflect accurate postal addresses. This can result in switches being delayed, or in certain cases abandoned, which therefore undermines consumers' perception of switching and weakens consumer engagement in the process. We have made near term data

improvements to reduce the number of plot addresses associated with a metering point prior to the creation of the database of the Central Switching Service (CSS) and are a leading DNO performer in this area. We have achieved this because we are already conducting data cleansing as part of our business as usual data management.

Another area of focus is the national roll out of smart metering. We are keen for the mass rollout of SMETS2 compliant meters to continue building scale as soon as possible in order to increase the penetration levels of SMETS2 meters within our footprint, subject to customers' appetite. This would enable us and our customers to gain the maximum benefit from these types of meter. We have extremely low volumes of SMETS2 meters installed on our network at this time. It appears suppliers are not planning major penetration of SMETS2 compliant meters onto our network in the short term due to continuing issues with integrating smart meters onto the Data Communication Companies (DCC) infrastructure in the North region. We now understand these DCC communications network issues in the North will be resolved by Christmas 2019 so expect an increase in SMETS2 installations in the North region to start in 2020. However, given this starting point our share of the SMETS2 installs it is unlikely to be level with other DNOs and once the communications problems are resolved it will take time to equalise to other geographical regions that are seeing higher levels of installations at present.

DNOs can contribute to reducing customer bills via fuel efficiency measures by investing in network improvements focusing on addressing fuel poverty and other innovative ideas. Our initiatives such as the Smart Street project can have a positive impact on customers by reducing bills. It is essential that both network companies and suppliers are incentivised to continue to work within their communities, using partnerships and innovation to build resilience. DNOs and suppliers are well placed to help vulnerable customers increase their understanding of how they can reduce their bills through efficient management of their energy, or improve access to transparent information regarding different payment options.

The protections and actions within the above proposals will go some way to ensuring that vulnerable consumers are not left behind as we enter this pronounced period of change, however there is more that we can do. As an industry we need to work with Local Authorities to ensure that communities understand, and have accessible strategies about, how to engage in the energy system transition.

24. We welcome views on how DNOs should continue to ensure their networks are resilient, particularly in the context of the new or changing way assets are used.

As we move to a net zero carbon society, we will become increasingly reliant on a reliable, resilient electricity supply:

- There is an expectation that road and rail transport will be predominantly electric powered
- Electricity is expected to displace gas for some customers as their main heating energy source
- Modern day life is increasingly reliant on a reliable connection to the internet for many essential services

Our recent work on exploring the Value of Lost Load (VoLL) has considered the impact of changing network use and customer demographics on the valuation of service. It is clear that the current VoLL value is both significantly higher than that used to set incentive rates in RIIO-ED1 and significantly disaggregated around an average value. Using an updated and disaggregated VoLL function would enable DNOs to accurately reflect the new and changing use of networks in their investment decisions.

Events on 9 August 2019 provided a prime example of the impact that a major outage could have. Despite, based on reports published to date, the view being that the electricity system broadly responded as it was designed to do, there were a number of unforeseen consequences of the outage, particularly on the rail network. Similarly the other outages, such as those following Storm Desmond, produced a high number of unexpected events, once again emphasising the increased reliance on the electricity system.

The major threats to the resilience of the network that electricity companies are currently managing are:

- Cyber security
- Lightning resilience
- Resilience to wind and significant rainfall events
- Resilience to flooding events
- Physical security

DNOs will continue to use four differing approaches to ensure resilience:

- **Removal:** taking away the risk altogether, for example putting substations on raised platforms to remove the threat of flooding
- **Resistance:** improving defences against a threat, for example building a wall around a substation to resist the impact of flooding
- **Redundancy:** ensuring that alternative supply points are available, so that if electricity supply is lost through one route, it can be restored through another.
- **Response:** if supply is lost we have to have the staff and resources available to restore supply in as short a time as possible. This would include the provision of backup generators.

We will continue to assess the risks to our network and produce plans to invest in a proportionate way on assets where there is a significant risk of failure combined with a significant consequence. It is important that the RIIO-ED2 framework gives appropriate consideration to resilience under both normal and abnormal conditions. We are concerned that Ofgem's equating of network resilience with the Network Asset Resilience Measures (NARMs) approach is partial. Whilst we are supporters of the NARMs approach, it only covers network operation under 'normal' conditions and Ofgem need to ensure appropriate consideration of supplementary measures and investment in improving resilience under abnormal conditions to ensure a holistic approach to improving network resilience in the context of the increasing reliance on a reliable electrical supply.

25. We are interested to hear stakeholder views on how DNOs should ensure their networks are resilient to physical and/or virtual threats, as well as being able to withstand the effects of adverse weather and the impacts of climate change.

The requirements for cyber security set out in the Network and Information Systems (NIS) Regulations 2018 form the cornerstone of DNO resilience to virtual threats. DNOs will need to continue to work with the relevant government departments and agencies to agree the ongoing requirements for cyber security, including investing in infrastructure and staff training to minimise risk due to cyber security.

In terms of the physical security of strategic network locations, we will continue to work with the relevant government departments and agencies to agree and implement the requirements for physical security.

As noted in the response to question 26 below, DNOs will also have to continue to invest in the resilience of networks to the impacts of a changing climate including a forecast increased frequency of extreme weather events.

26. We would also like to hear how stakeholders believe climate change mitigation and adaptation may affect network maintenance and development in the short, medium, and long term.

Climate change mitigation

DNOs are working to facilitate the move to a low carbon economy, particularly through innovation projects and the move from DNO to DSO. Funding for this work needs to be available to ensure that energy networks do not become 'blockers' to new developments.

The connection of low carbon technologies to the network may change the frequency of faults on the network, requiring changes to the resources for fault restoration. In addition, as the DNOs evolve to DSOs they will take a more active role in the management of the network. The equipment which will manage these activities will be more automated and shorter-lived than the electrical assets which currently form the majority of the network. This type of equipment will generally require greater amounts of inspection and maintenance than we see with the current, largely passive, network.

DNOs should also take responsibility for their own business carbon footprints.

Climate change adaptation

Despite the mitigation actions described above, there will be changes to future climate that infrastructure systems need to adapt to and such adaptation actions should not be overlooked with the growing emphasis on mitigation.

DNOs have reported extensively on their understanding of the potential impacts of climate change and the responses to those challenges through the Climate Change Adaptation Reports submitted to Defra in 2011 and 2015. All electricity network companies collaborated through the ENA to develop an engineering report showing the industry view and each company then adapted or used this report as a reference document for their own reports.

The two Electricity North West reports are available online:

https://www.enwl.co.uk/globalassets/stakeholder-engagement/documents/engagement-publications/climate-change-adaption-report/2011--climate-change-adaption-report.pdf

https://www.enwl.co.uk/globalassets/stakeholder-engagement/documents/engagement-publications/climate-change-adaption-report/2015--climate-change-adaption-report.pdf

Network companies are currently collaborating to produce the report for the third round of reporting.

Current significant climate change adaptation issues facing DNOs include the impacts of more frequent extreme events and longer-term changes to parameters that affect network operation, e.g. effect of temperature on ratings and impacts on tree growth.

We have seen an increase in the number and size of flooding incidents, so we are working to improve the resilience of our network to the impact of floods. This is the major focus of our

adaptation work, but is currently limited to the defence of major substation sites. With increasing flood frequencies, extension of these approaches to lower voltages should be considered by the DNOs.

The expected increase in temperature will see a reduction in the capacity of the network, but this is expected to be less than 0.2% per annum. In the long term we are expecting demand on our network to increase by up to 2% per year, so we plan to factor in the impact of climate change in our plans to provide increased capacity.

Warmer, wetter summers will increase the rate of vegetation growth, so we are expecting an increase in activity to inspect and cut back trees. This will need to be considered in assessments of vegetation management costs where historic trends may not be a reliable guide to future requirements.

There is a consensus that there will be an increase in the number of storms, but no evidence of an increase in the intensity. What may change is the frequency of storms in summer, which may have a more severe impact if trees which are in leaf, and consequently heavier, fall on to lines.

27. We would like to hear views on how we ensure DNOs remain resilient to the challenges presented by an ageing and changing workforce.

Our experience is that whilst the nature of DNO activities are changing; for example greater adoption of digital and commercial flexibility functions, the core asset operational function remain broadly the same.

Many of our legacy teams have proven able to adopt new skills such as management of digital equipment and this is a key element of our resourcing strategy as we are increasingly integrating power and digital asset operations. New areas such as commercial flexible market operation require us to onboard new skills and these feature in our external recruitment activities.

The age profile of our existing field workforce will likely result in an increased number of staff retirements during RIIO-ED2 and as such we have increased our apprentice intake to reflect the number of craft and higher level apprentices we forecast to need. This does produce a small increase in our operating overhead as can been seen from our RIGs return. We envisage this trend will continue until 2025 but be offset to some extent by efficiencies in other indirect areas. Increasingly apprenticeships are viewed as being an attractive proposition to school leavers and as such we need to make sure that we are competitive in our offering and have a pipeline of candidates that are representative of the communities we serve. This needs engagement within our communities such as partnering with local schools to increase awareness of our sector and the work that we do.

To complement apprentice recruitment we have introduced highly specialised roles such as cut-out only jointers who can carry out a very narrow range of duties. This has enabled us to meet specific high-volume lower-skills challenges such as supporting the smart meter programme. We see this trend and the use of contractors for specialist programmes continuing in RIIO-ED2.

For the bulk of our asset replacement programme we see direct labour as the most efficient resource strategy.

In non field areas, whilst we need more employees with commercial, digital and data skills we are able to recruit good quality staff and trainees in the market.

28. We welcome views on how DNOs should work to minimise the impact of what they do on the environment and facilitate the transition to a low carbon energy system. We are particularly interested in the implications of the government's updated target of net-zero emissions by 2050.

Please read the response to this question and the answers provided to questions 29 and 30 jointly.

We have interpreted this question as relating to the impact of our own operations and facilities as opposed to our wider role in the regional and national energy and carbon agenda.

As a business we are leading the way to move to net zero carbon and supporting others make the necessary changes. We recognise that the pace of transition will vary across Great Britain and indeed across our region as different county and local councils change the local planning regulations to meet their targets. We note that initiatives such as clean air directives will also directly impact the operations of DNOs.

In respect of the energy we consume our opinion is that all DNOs should move immediately to a zero carbon energy supplier. This creates a small marginal cost but has a material effect on the emissions of the business.

Similarly all DNOs directly operate large vehicle fleets including passenger cars, small vans, larger vehicles including HGVs and similarly via their supply chain partners. All DNOs must continue the transition of these fleets to clean transport through a range of measures including EV adoption, encouraging travel minimisation by use of IT and adoption of all electric plant e.g. electric mini–diggers. Our view is that DNOs should be required to agree a range of such measures with their stakeholders and implement the transition plans to align with these agreements.

In respect of the materials used by DNOs, cables, electrical plant and materials packaging all have substantial environmental consequences. Again the actions required to reduce environmental impact are numerous and we believe DNOs should be required to agree a programme of measures with relevant informed stakeholders.

29. We also welcome views on what this may mean for the type of activities networks undertake, how these may be funded, as well as the outputs and/or incentives they should be exposed to.

In addition to our answer to question 28, DNOs should be enabled to adopt the technologies and measures required to reduce the emissions of their buildings and substations towards achieving net zero carbon. New substations should be constructed to minimise whole-life carbon emissions and DNOs should be required to implement an agreed programme of office and depot decarbonisation which we are making progress on now.

Our stakeholders tell us they wish to see these measures implemented and DNOs used as exemplars to other businesses.

Securing customers' support and confidence in low carbon technologies will be key to maximising the pace of the transition and we expect that some customers will require assistance to make this change. This support will include the availability of objective information and technical support to enable informed decision-making.

We have learnt from our stakeholder engagement that network operators are uniquely placed to provide objective information and technical support to customers on low carbon technologies and associated equipment e.g. electric vehicle chargers. The availability of impartial and practical advice

to support customers is essential in order to facilitate the rate of adoption of LCTs and is therefore of benefit to all customers.

30. Finally, we are keen to understand how DNOs' performance should be measured, and how we should assess the value that consumers place on the provision of these services and activities.

There are a number of established mechanisms for measuring progress and performance against some of the activities identified in this section and where such measures can be identified they should be utilised. Networks can, for example, set stretching targets for reducing their operational business carbon footprint, for reducing their embedded carbon and the embedded carbon associated with replacement of assets and for reducing pollution. Well-established circular economy techniques can also be applied to measure the effectiveness of companies' strategies for dealing with issues like resource waste, bio-diversity loss and other local effects.

Here simple incentives and outcome measures can be developed and applied against company performance.

It may, however, be more difficult to measure the performance of a company against some outcomes that are important to stakeholders and consumers where the network company has a facilitation or enabling role but cannot directly affect the proposed outcome. We agree, for example, that network companies should play a proactive role in facilitating the low carbon energy transition by working closely with customers, suppliers, partners and other stakeholders in overcoming the challenges this transition brings; but it is more challenging to develop a performance measure against this outcome.

In these instances, the development of a strong consumer value proposition will be key. Companies will need to work with stakeholders and consumers to agree what outcomes are valued and how these should be incentivised. This approach will capture and reflect local needs and priorities and ensure that outcomes are delivered which are appropriate to the region being served.

We note the significance of Ofgem's statement in the Open Letter that they expect all network companies to put the Government's 2050 'Net Zero' target at the heart of all decision-making, whether this may be of a financial or operational nature. This is a very important public interest decision by Ofgem. Given this, there will have to be a clear understanding of how Ofgem respond to outcomes designed to deliver against this public interest requirement where there may not be strong consumer support.

31. We welcome views on how RIIO-ED2 can best capture the benefit of whole systems solutions. We are also interested in views on how these benefits should be measured.

With the appropriate regulatory tools in place, alongside a clear defined scope and ambition for RIIO-ED2, companies will be able to better incorporate their whole system thinking, planning and processes within their RIIO-ED2 business plan proposals.

Early RIIO-2 companies may not have had sufficient time to fully embed whole system solutions into their RIIO-2 plans submitted in December 2019, and therefore the timing of the RIIO-ED2 business plans two years later will be better placed to maximise the benefits for consumers of whole system planning. Whilst there are merits in aligning the transmission and distribution price controls, at this point in time, this time-lag does provide an opportunity for the sectors to work together to ensure whole system solutions are maximised and built into distribution business plans. Therefore the

regulatory framework, especially for electricity transmission, needs to have the flexibility to allow this to take place.

Whole system solutions, by definition point to one particular 'thing' to be done which is a solution to an issue. However, it likely that as the processes of whole system consideration and assessment evolve the benefits of greater co-ordination will be incrementally discovered and will, therefore, naturally be harder to quantify. For example rather than one party regularly 'solving' an issue for another party, consumer benefit may be found in avoided costs or consideration of the timing of interventions.

We recognise that there is already good quality and effective coordination between electricity network parties which is increasing in prominence and maturity with the creation and ongoing work within the Open Networks project. However, we acknowledge there is more that can be done. Equally the industry has been looking wider than its own specific sector for some time now, and for Ofgem to formally consider enablers and incentives to bring whole system solutions into the price control framework is the logical next step. It is essential that the RIIO-2 framework enables whole system thinking to be taken forward with the appropriate incentives, an investable regime and the funding of new activities to ensure the benefit is accrued for consumers.

Ensuring that the scope of innovation funding allows whole system solutions to be developed will support the goal of focus in this area and we are supportive of this proposal.

Whilst we agree that the Totex Incentive Mechanism (TIM) provides an incentive for supporting whole system solutions, we remain unsure whether this is sufficient in isolation and would add that a future lower TIM strength has the possibility to reduce these developments. The interaction between whole system solutions and the potential for costs to be disallowed by ex-post assessment will affect confidence in decision making and is an area that needs to be explored to ensure that this does not generate perverse incentives for companies.

Care should also be taken when benchmarking companies' proposals; low cost for one company, may not equate to low cost for the whole system and different whole system solutions should be compared through the same assessment lens. In order to facilitate the benefits of whole system thinking a suite of tools is required. Tools such as the Coordinating Adjustment Mechanism is one aspect, and we would suggest that other options, such as wider incentives, are explored with all parties given that there needs to be relative arrangements within the other sector price controls which are equal to and complementary to those mechanisms set for ED.

One of the key enablers for whole system decision making is the existence of a whole system cost benefit analysis (CBA) and careful consideration is needed as to what and how this is captured within a CBA model. We are seeing greater emphasis from local authorities, in their CBA thinking, on societal benefits and economic cost of disruption for example. We support the inclusion of wider benefits; companies need to have clarity and clear guidance as to what the criteria they must consider when making their operational and investment decisions. Some options may be delivered at greater cost to DUoS customers but show net benefit to other sectors, or net societal benefits. How such decisions should be assessed and how these can feed into companies business plans need to be set out ahead of 2021.

Without this clarity in place and a supportive whole system CBA there is no ability to quantifiably conclude that the solution selected is the most efficient given whole system consideration.

Where a network operator can demonstrate a positive benefits case then we propose that funding is made available through appropriate allowances and/or uncertainty mechanisms to enable timely deployment of solutions. Although a positive benefit case should not be the only qualifying criteria, indeed in some case a net beneficial case may not be able to be presented. This should not preclude allowance if other key considerations are met, such as compliance.

We believe that it is essential that whole systems outcomes are, as a minimum, not precluded by regulatory arrangements and, where appropriate, should be strongly incentivised to ensure that all network companies are focussed on delivering the most optimal outcome for all relevant consumers.

32. We further welcome stakeholders' opinions on whether the electricity distribution sector's approach to whole systems should be different from the other sectors and, if so, why.

We agree that the approach should be broadly consistent across all sectors to ensure true whole system thinking. We would add that there are some differences for electricity distribution which means that more stakeholders are affected than in other sectors. Therefore electricity distribution may have differing requirements in terms of stakeholder engagement and consideration of those affected by any decisions made.

The pace of change is also seen to a greater extent on the electricity distribution network than elsewhere in the regulated energy sector. For example transmission companies tend to have lower number of connected customers, and are less impacted by external forces such as a change in government policy. Whilst such things do affect the transmission network, they are more likely to manifest in the distribution network first, before moving up-stream to the transmission network.

Whilst Gas Distribution has similar number of domestic connections to electricity distribution, the volume of connected generation, industrial and commercial are significantly less. It is true that whilst this sector is facing their own unique challenges it is not seeing the major impact of changes such as Distributed Energy Resources (DER) connections to the electricity distribution network, market for flexibility services growth, DSO development and greater liaison with ESO.

For the reasons explained above, electricity distribution is generally affected first and to a greater extent by external change drivers. As a result there is a continued and urgent need to engage with specific stakeholders and significant decision makers so that companies business plans can be driven by; regional aspirations, differing rates of change, development, policy and ambition. Therefore even within DNO service areas there will be regional differences and subsequently drivers for potential of differing approaches to whole system thinking that need to be recognised and understood.

The transition to DSO and issues emerging on the distribution network will ultimately impact transmission requirements. These are current and pressing and this is the reason for Open Networks current focus on electricity only. We maintain our view that RIIO-2 will see the greatest benefits within electricity transmission to distribution liaison and learning, however this will not prevent us exploring cross-vector opportunities and we recognise the decision taken by Ofgem to take a broad view of whole systems in the May 2019 Sector Specific Methodology Decision[9].

Some of the potential issues facing the sector which will benefit from whole system coordination are still dependant on government policy and we propose increased co-ordination between BEIS, other

[9]https://www.ofgem.gov.uk/system/files/docs/2019/05/riio-2_sector_specific_methodology_decision_-_core_30.5.19.pdf

government departments and Ofgem so that Ofgem can make price control decisions with the best possible view in this period of uncertainty.

Within RIIO-ED3 we expect to see a government policy decision on the decarbonisation of heat, clear direction on hydrogen development and greater exploration of the benefits of greater co-ordination across energy vectors. Therefore, we expect to see the benefits of the learning and progress made within RIIO-ED2 bear fruit in the following period.

33. We welcome views on how we should manage the uncertainty associated with forecasting allowances, and whether there are any mechanisms we could or should consider in helping to manage this uncertainty.

A combination of Price Control Deliverables (PCDs), re-openers, volume drivers and the use of indexation have the ability to appropriately manage uncertainty in RIIO-ED2.

The mid period review within RIIO-ED1 to cover material changes to outputs driven by government policy, whilst arguably may not be needed in a five year price control, did allow for a broader range of changes to be considered as an adjustment to companies allowances and outputs. There is merit in having a carefully defined re-opener akin to the Mid Period Review where the parameters should be considered given the impact government policy has on the electricity distribution sector and speed at which this is evolving.

As we explain in our answer to Q14, we have proposed a 'Capacity Mechanism' to manage the uncertainty of load related requirements.

In general we think uncertainty mechanisms, including reopeners, may have a bigger role to play in RIIO-ED2 than RIIO-ED1. Although a five-year period of control mitigates some of the forecasting risk, appropriate mechanisms can transfer risk from consumers to companies where this is appropriate. Clearly defined reopeners and uncertainty mechanism more generally will be needed due to increasing rate of change (increasing external risks to the sector). To ensure external risks are not compounded by regulatory risk, framework clarity and certainty will be more important than in previous price controls.

34. We seek views on the use of indexation, particularly on any adjustments for labour and construction cost inflation.

We are supportive of the use of indexation where appropriate, although it is important to recognise that this only works where the index utilised is suitable. For example, we recognise the inherent challenges in setting an allowance for costs such as Real Price Effects (RPEs) and see benefit in the use of indexation for costs of this nature. Indeed this is proof of the requirement to consider the index that is used, acceptance of the need for an RPE allowance proves that a general consumer index, and the goods considered in that basket, are not reflective of the indexation risk that network companies are exposed to.

Where the use of indexation is identified as appropriate, it is important that Ofgem consults and works with stakeholders on the suitable index for that cost element. It is likely that some elements will require consideration of regional differences and locally specific inflationary effects.

It is important for trust and legitimacy issues that stakeholders are able to work with Ofgem on the use of indexation and the appropriate index to be used. We look forward, in anticipation, to working with Ofgem and others on this further as part of the RIIO-ED2 framework development.

35. We welcome views on our approach to highly anticipatory investment projects. We are interested to hear whether stakeholders would suggest additional processes or regimes for facilitating such investments that support the energy system transition whilst protecting consumers from potentially inefficient investments.

As we explain in our answer to questions 7 and 8 it is important for Ofgem, companies and stakeholders to be clear about what is meant by the various terms being used in relation to investment.

There are a range of tools which can be used to assess proposals for anticipatory investments and continue to develop our approach and tools in this area

When considering proposals for strategic investment, we would expect Ofgem to consider the extent, to which such proposals have been shaped and challenged by customers, as well as local and regional stakeholders, and views from the Customer Engagement Group on these proposals. This approach will ensure that network companies are well placed to facilitate growth aspirations at a regional level, whilst ensuring plans are within the bounds of that which customers are prepared to support. We have engaged with stakeholders as part of considering our response to the Open Letter and its contents and Auriga Service Ltd provided this insight:

"... strategic investments are required to continually ensure a reliable supply is delivered effectively and react to demand growth. The core outcome must always be to maintain a safe and resilient network."

36. We welcome views on the type of issues that should be considered through an inter-institutional group.

It is our view that an inter-institutional group would be unlikely to be able to form a consensus in some areas and should not be an approval group for specific investment cases. We consider that if a group were set up immediately that it would struggle to conclude in time for our business plan development with customers and stakeholders and submission to our CEG and Ofgem's RIIO-2 challenge group. We do, however, see a role for such a group which should have a clear scope, agreed with industry. There is potential for this group to review guiding principles as to what constitutes highly anticipatory/strategic investment, the level of risk consumers should take in delivering 'Net Zero', how companies could approach such decisions and the range of tools which are appropriate to inform such decision making. The group could also influence DNO actions through advising the Government to implement policy changes that companies would then respond to.

Ultimately GEMA are the deciding body on ex-ante allowances and the regulatory framework. Given that there are increasing calls for action from networks from some of the institutional bodies discussed; it would be constructive to bring these bodies together so that wider stakeholders' views can be transparently considered. It would aid clarity if the varying arms of government could be brought together to provide both Ofgem and networks with one set of guidance and expectations. It should be for BEIS and Ofgem to determine who joins this body.

This wider principle of the alignment and closer working between government departments and Ofgem is crucial to RIIO-ED2 and beyond. This should not be limited to just an inter-institutional group. Ideally this would manifest as a new and closer way of working as we move forward, with wider networks actors driving network requirements and clearly communicating requirements which understand the tradeoffs and implications for consumers over the long term.

37. We invite stakeholders to advise what type of expenditure they believe should be subject to alternative arrangements for sharing risk, and what these arrangements may look like.

With the control measures referred to within questions 7 and 8, and our proposals on a capacity mechanism referred to in question 13, we believe there will be limited investments where alternative arrangements would need to be considered. We will continue to review this in light of consultation with customers and stakeholders and the development of our business plan.

For known needs, but uncertain timing or volumes, or a combination of timing and volume, then the use of volume drivers is appropriate. Some reopeners may also be relevant, and we would suggest that these tools within the existing framework would be a better option than, for example, an adjustment to the totex incentive rate as a risk sharing adjustment. Differing levels of TIM would add unnecessary complexity to the framework.

38. We welcome views on the proposed innovation stimulus. We are interested to hear views on the types of projects that should be funded through either the NIA funding or a new funding pot.

We feel that it is important that the NIA can continue to fund different project types and that proposed changes do not prevent/stifle truly innovative projects from progressing because they do not meet closely defined selection criteria. To ensure networks are able to meet the complex and rapidly evolving needs of customers, future innovation funding mechanisms should provide the flexibility to focus projects on addressing challenges and un-met requirements across all aspects of service provided to all customer types; this should include access to the benefits beyond the meter.

It is important that all projects should consider the impact to vulnerable, fuel poor and difficult to reach customers to ensure they also benefit from innovation and are not disadvantaged in the transition to a zero carbon economy.

While we are supportive of a whole system approach to innovation, we are concerned that the proposed innovation stimulus, totally focussed on strictly defined parameters, will stifle truly innovative technical and commercial initiatives that could deliver significant network and customer benefits and as a consequence, result in benefits being lost in other areas.

Further, we are also supportive of the Innovation Rollout Mechanism (IRM) in the current framework, and see its benefit in a longer price control period. Whilst IRM may still be applicable in a five year control, the shortened time frame may limit its usage. Framework flexibility to support the transition from innovation to business as usual is important, and in the proposed absence of an IRM, needs to be considered.

In order to ensure the continued ability to innovate across wider business areas, we would call for the proposed criteria to be extended sufficiently such that truly innovative projects with strong consumer benefits are not unduly constrained by tightly defined parameters.

39. How can the benefits of the innovation stimulus be maximised by supporting schemes proposed by non-network parties?

We are keen to better understand the increased third party engagement area as we are currently unclear what issue Ofgem is seeking to address with this proposal. Our 'Innovation Strategy' ensures that all of our innovation projects are developed with and informed by third party engagement; we believe that this interaction results in positive and demonstrable outcomes that respond to real issues, which can be supported by customers and stakeholders.

Allowing third parties to directly access RIIO innovation funding would not necessarily be a more effective model as this is likely to create a disconnect between the needs network companies are experiencing or expecting to experience and a solution that is developed in isolation of this.

Innovation and transformation involves considered risk and DNOs have learned to adopt an agile approach to overcome unanticipated challenges, in order to deliver positive long term network and customer outcomes. Whilst working collaboratively with third parties is commended, we believe that third parties, with a commercial, short term focus, may not possess the requisite level of expertise, agility and commitment to deliver proposed benefits efficiently.

Our recent experience of supporting a third party through the current NIC selection process has highlighted that DNO engagement in these projects is required to enable practical network experiences to be shared. This will significantly increase the likelihood of a successful innovation being rolled-out on the network and providing benefits back to the customer.

40. We also welcome views on our proposals for the different competition models in RIIO-ED2, and what, if any, criteria should be set out for the use of early or late stage competition models.

We have provided a detailed answer in question 12 to our views on current competition arrangements. We do not believe there to be further regulatory requirements/interventions required to encourage the use of all types of competition model for RIIO-ED2. We currently utilise all models where appropriate and are continuously reviewing their uses as a business as usual practice.

41. We also seek input from stakeholders on how native competition obligations and best practices can be used to ensure the best outcomes for consumers and to drive changes in the role of the networks in a transforming energy system.

As set out in question 12 we believe that the current arrangements for supporting and driving competition are fit for purpose and do not require any specific intervention. The incentives are already strong for us to deploy competition wherever required and indeed there is a legal obligation for tendering services by utilities such as OJEU. Sharing best practice is always welcome, but a regulatory obligation or requirement is not required. We extensively use competition as set out in question 12, and this includes our commitment to seek flexibility alternatives to all our load related proposals which is adopting the flexibility best practice established by the ENA.

We always aim to deliver best value to our consumers and stakeholders, and will continue to do this.

42. We welcome views on our approach to planning, forecasting and scenarios for RIIO-ED2. In particular, do stakeholders have other suggestions as to how we can best manage forecasting risk for consumers?

We recognise that the RIIO-ED2 period is likely to see a significant evolution in how energy networks are used in Great Britain. To help us understand what this might mean for our customers, stakeholders and our network itself, we are undertaking a number of pieces of work.

We have worked at industry level through Open Networks to share our best practice for forecasting with the publication of our Distribution Future Electricity Scenarios (DFES)[10]. This showed strong regional variations from the common national scenarios. For example, Greater Manchester's stakeholders have a far more aggressive timeline for the decarbonisation of transport than many

[10] https://www.enwl.co.uk/get-connected/network-information/dfes/

other regions. To ensure all such stakeholder requirements are adequately reflected in our forecasts, we engaged with stakeholders on their plans and policy direction including:

- Local Authorities,
- Planning Authorities,
- Transport Authorities,
- Large customers, and,
- Distribution-connected generators.

We have previously shared other modelling initiatives developed by Electricity North West and share these again for completeness.

Through the ATLAS Network project[11], we have developed a long term forecasting model that identifies, 'true demand' on our network by taking account of the connected generation using profiles of the generation connected to our network and also takes account of other Low Carbon Technologies (LCTs), like heat pumps and electric vehicles. It uses four scenarios to undertake sensitivity testing around a central outlook.

Our work on the management of uncertainty for our future options model demonstrates how customers' interests can be better represented in key infrastructure decisions. By taking the investment profile for an asset based solution, including the impact of losses, and comparing to potential flexibility options, it can consider a range of viable outcomes and models the potential costs (including set up costs) of these different solutions.

Finally, our work on reactive power forecasting techniques has developed the first robust forecasting tool to allow the impact of Distributed Generation (DG) and storage to be forecast for reactive power flows. As the dominant cost driver in the connection of additional DG, this provides a unique understanding of these flows and their potential impact. This tool enables us to identify what the reactive power needs are on the network, by considering the impact at different distribution voltages, and can also be used to identify potential transmission solutions. Whilst we are undertaking the modelling for our own investment requirements, we are also sharing the outputs with the ESO to assist their work who have now adopted and utilise our approach to enhance their forecasting.

This work shows that risks can be considered utilising the range of tools developed to support scenario modelling and decision making in time for RIIO-ED2 allowance setting.

43. We welcome views on our proposal to remove the early settlement process for RIIO-ED2, instead focusing on alternative mechanisms to receive high-quality and ambitious business plans

We support the removal of the early settlement process as we are uncertain of the consumer benefits that this brings.

The alternative incentive mechanism of the business plan incentive (BPI) needs to be clearly defined showing how companies will be assessed for qualification against an appropriate benchmark. Currently, whilst the criteria for the downside are slightly better defined, the definition of how to achieve the upside of the BPI is far too subjective. A lack of clarity around this element would weaken the incentive strength of the BPI. Strong incentives are in consumers' long term interests

[11]https://www.enwl.co.uk/zero-carbon/smaller-projects/network-innovation-allowance/enwl008---architecture-of-tools-for-load-scenarios-atlas/

through continuing to reveal ongoing efficiencies and information that can be used in future price reviews.

A clear definition of how a reward is achieved as well as how a penalty is avoided is clearly in the interest of all stakeholders and would support an effective BPI implementation. Learning's from the early RIIO-2 price controls should be fed into the definition of the RIIO-ED2 BPI as this could improve the effectiveness of this incentive.

44. We also welcome views on our proposals to use the Business Plan Incentive and the confidence-dependent incentive rate arrangements for RIIO-ED2. In line with this, we are interested to hear stakeholder views on the range that should be used for both of these

As set out in question 43 we are comfortable with the BPI replacing fast tracking if there is additional clarity provided to companies on the rules and assessment criteria which business plans are assessed against.

We disagree with the current form of the confidence-dependent incentive rate as it will significantly weaken the TIM in comparison to the strength of this incentive for RIIO-ED1. As a core regulatory principle having a strong Totex Incentive Mechanism (TIM) is in customers' interests as it drives companies' ambition, encourages the delivery of further efficiency as well as encouraging innovation and competition. This in turn, 'reveals' savings for future price controls which is even more relevant where the period of control is shortened to five years from eight.

A TIM where the incentive strength is weakened risks the removal of these benefits. The introduction of a blended sharing factor with its reduced incentive strength, even for higher confidence costs, weakens this incentive and therefore has potential to reduce benefits for current and future consumers through the loss of bankable consumer benefits for price controls beyond RIIO-ED2.

We expect the core business areas will remain as is, with substantial benchmarking and historical costs available and therefore high confidence. However given the structure of the blended sharing factor there is a risk of being penalised for seeking innovation to achieve alternative methods of working or new areas of activity (with their uncertain costs) as these could then be deemed low cost confidence attracting the lower cost sharing rate. This could lead to perverse incentives for the status quo to remain and minimise the amount of cost in a business plan that could be determined as low confidence such as innovative or whole system solutions.

Further there is a potential risk of inadvertent mis-categorisation for companies to put costs in one area or another to ensure that costs attract the preferential sharing rate at the margin. Additionally there is a challenge for companies to ensure consistency in terms of Ofgem assessment of cost certainty and risk of companies being penalised during the benchmarking process if treatment of cost categorisations are inconsistent and/or incomparable.

It is clear that the blended sharing mechanism cannot and should not be considered in isolation. For example the interaction of the TIM and BPI is crucial. Where the BPI incentivises and encourages a whole system approach, it is likely that this will have a lower cost confidence and as such affect the TIM, lowering the incentive strength in this area. Currently we are not clear how these will work in a complementary way and they may potentially work against each other in an overall incentives package.

Further to this we would like to see both the low and high boundaries for TIM to be increased (from 15% and 50%). We consider the low boundary Ofgem uses for illustration of 15% as far too weak an incentive rate. This is consistent with our position that strong incentives are in consumers' long term interests through continuing to reveal ongoing efficiencies. Previous price controls have reduced costs and driven innovation due to strong incentive based regulation and this strong incentive should continue to be the leading way to drive efficiencies for customers. We would like to see the high boundary to be increased more than the low boundary such that the range of outcomes is greater. We believe that a wide range of potential TIM incentive rates is important to encourage the most efficient DNOs to reveal highly efficient business plans that can be used to improve the customer benefit for customers served by DNOs with lower efficiency.

There could be an appropriate way of calculating TIM, given the interaction with BPI and other framework incentives, however, the issues are in the detailed scoping of this and the mechanisms needs careful consideration between Ofgem and stakeholders. We urge that Ofgem consider utilising a working group with stakeholders to ensure that the incentive strength of TIM is calibrated appropriately to drive optimal behaviour and outcomes for customers.

45. We welcome stakeholder views on our proposals to introduce measures to enable network companies to finance their activities whilst ensuring they receive a fair return.

We agree that an essential part of economic regulation and regulatory settlements is that companies are, and continue to be financeable. Ofgem's duty in this regard ought to be central to any framework decisions for RIIO-ED2 given that RIIO-ED2 creates a riskier environment for DNOs due to the significant investment required to achieve strategic objectives and government policy such as 'Net Zero'. A price control that balances the following three areas will ultimately be the most successful:

1. Networks are financed through a combination of debt and equity investment. The price control needs to ensure that networks can attract new debt and equity investment throughout the regulatory period, especially during periods of uncertainty, without impeding future price controls.

2. Electricity distribution is faced by distinct challenges and uncertainty in RIIO-2. To the extent that debt and equity investors are exposed to cash flow risk associated with these challenges, then returns will need to be increased to compensate. Price control uncertainty mechanisms will help manage this risk, but care is needed to ensure that the full cash flow risk is mitigated.

3. In addition, the potential rewards for the wider economy are much greater for Electricity Distribution (ED) than other energy sectors. The balance between fair returns for investors and protecting customers through lower bills is a hugely important consideration. However, Ofgem should also seek to incorporate the wider economic benefits associated with delivery of the decarbonisation agenda and the increased role of system operators and active network management. Appropriate incentive mechanisms that encourage this innovation and investment, allowing equity holders to share the benefits with consumers will help deliver on this aspect.

With regards to fairness of returns, any assessment needs to be viewed from both debt and equity perspectives. Any attempt to unduly protect one set of investors at the detriment of the other should be avoided.

Investment risk is often defined as the probability or likelihood of losses relative to the expected return. Regulatory precedent over many years has helped define the returns expected by equity investors.

Material changes to the regulatory framework, as proposed by Ofgem in RIIO-2 for the Gas Distribution (GD) and Transmission (T) sectors, will impact both the predictability and overall level of returns, particularly for equity investors. It is not clear to us how this correlates with the assertion of a lower risk investment environment

Any move to reduced equity returns in RIIO-2 needs to be justified by lower investment risk. Ofgem would need to demonstrate that volatility of the cash flows is indeed lower in RIIO-2 and cash flow predictability increased.

We believe that any assessment for fair return needs to be the same across existing and new investors, while also being confined to the regulatory period under determination. It is not appropriate for Ofgem to set returns lower in RIIO-2 to offset any perceived outperformance in earlier regulatory periods. This would severely damage investor confidence in the UK regulated sectors and is likely to lead to high overall customer bills in the long-term.

46. We are interested to hear from stakeholders on how they believe we should set allowances for the cost of debt, particularly around the method of recalibrating the index.

The setting of the cost of debt allowances needs to be based on Ofgem's financeability duty to ensure that each licensee is financeable, based on its particular circumstances subject to an efficiency test. This fundamentally under pins the trust and legitimacy in the sector for all stakeholders.

We do not support the proposal to retain full indexation as the methodology for setting the cost of debt allowance, or that calibration of the allowance should be based on sector averages. Sector averages will give rise to winners or losers, which may then require adjustment to losses as a result of Ofgem's financeability duty. Overall this approach would result in customers paying more than would be justified on a licensee by licensee approach.

There are limited practical opportunities for companies to 'match' existing debt portfolios to any roller or trombone debt allowance setting mechanism, particularly for smaller companies, and we believe that there will continue to be a wide level of dispersion of financing performance in RIIO-2 under full indexation.

When assessing the appropriateness of any debt allowances, it is critical that Ofgem include all relevant costs in any estimates for future financing, including:

1. **Derivatives:** These are primarily risk management tools to protect against inflation risk.
2. **Direct and indirect issuance costs:** including legal, advisory and rating agency fees.
3. **Liquidity costs:** including carry costs on operational cash.
4. **Appropriate refinancing assumptions**: including periods of pre-financing and/or commitment fees.
5. **Financing rates based on current credit ratings, not simple sector average:** Any Halo effect should be evaluated and only incorporated if appropriate based on evidence. As we

explained in our response to FQ1[12] we do not currently believe an adjustment for Halo costs is justified.

6. **Any appropriate non-issuance cost:** including adjustments for premiums or discounts on issuance or redemption. For the avoidance of doubt, we do not believe it is appropriate to adjust interest costs to reflect current Yield to Maturity on public debt, only the actual cash impact on issuance or redemption.

We would support the consideration of whether a smaller company allowance is appropriate for the electricity distribution sector. We would therefore like to offer the following points for consideration by Ofgem:

- **Financing costs for smaller companies:** Small companies may face additional costs across all six areas noted above and any assessment must extend outside of simple differences in coupon and relative transaction costs.
  Larger groups often have central Treasury functions that benefit from the portfolio effect of several companies, accessing markets frequently and aligning debt profiles with any roller/trombone mechanism.
- **Legitimacy:** It is not in the interests of customers to set a debt allowance in line with weighted-average debt costs for the sector as a whole, and then to offer small companies extra allowances. If a small company adjustment is allowed, absent of adjustments for "larger companies", customers would then end up paying more than they would do if allowances were set fairly on a licensee (or group) by licensee basis.

Regarding assessment of company financing costs we support RFPR data being used to assess pre-tax financing costs providing that:

- RFPR data incorporates all costs noted 1-6 above;
- And that methodology is aligned between companies (but still allowing for company-specific variations).

We strongly disagree with Ofgem's proposal for sector average calibration however, should it be implemented, we believe it should be in the context of the following objectives:

- Limit the dispersion in performance between licensees
- Limit the performance impact arising on sharp changes in financing rates (gilts, credit spreads, inflation)

We do not believe that simplicity should take precedence over these objectives and it is far more important that financeability and fairness are achieved. We would suggest that Ofgem should tailor its methodology to achieve this, including the introduction of company specific adjustments where appropriate, such as adjustments for both smaller and for larger companies, or indexation weighted according to issuance.

Ofgem should state how it will apply a sector specific average approach when certain larger groups dominate a sector (such as transmission), and how, in that case, the policy does not mathematically result in quasi company specific allowances for the largest group.

As an alternative to the methodology proposed by Ofgem we would support an indexation methodology that reflected an individual company's profile of issuance. This would eliminate the

[12] Sector specific methodology consultation response from Electricity North West.

windfall gains and losses derived from fortunes of timing and remove the motivation for companies to conform financing structures to unrealistic roller or trombone mechanisms. In addition, by retaining external benchmarks for financing costs, it would continue to incentivise companies to outperform without being unduly complex.

An appropriate debt allowance is a cornerstone of individual company financeability, therefore it is imperative that Ofgem give the methodology and calibration due consideration, including the impact of derivatives.

It is essential that Ofgem undertake a full, stress tested impact assessment on how the debt allowance will impact individual company financeability. The RIIO-ED1 debt performance figures provide a basis for this. An impact assessment for all licensees should be carried out before RIIO-2 methodologies are finalised in order to ensure that the methodology results in conformity with Ofgem's financeability duty. With Ofgem also guiding towards a 50% reduction in equity returns we believe that this and a full indexation approach for cost of debt could lead to financeability issues for companies in RIIO-2.

47. We also welcome views on our proposed approach to setting allowances for the cost of equity, as well as our proposal to move away from RPI.

With regards to the modelling basis for estimating the cost of equity we agree that Capital Asset Pricing Model (CAPM) is a potentially appropriate estimation tool for cost of equity. It benefits from being understood and well established within UK regulation as a whole. It is also widely-used within the investor community, supporting decision making through benchmarking.

While this is so there are limitations associated with CAPM as:

- Significant variations in the estimation techniques and datasets used in the CAPM calculation remain. Therefore there is a risk that CAPM results can be interpreted with an unrealistic level of confidence.
- CAPM only estimates the required minimum return to reward investors for systematic risk only.
- The theory of CAPM requires that investors have the ability to diversify away non-systematic risk in a portfolio.
- This assertion is flawed for investors in UK regulated utilities as they are unable to efficiently diversify away some material company-specific risks including, but not limited to; the threat of nationalisation as an example.

Therefore Ofgem should:

- **Estimate and include an addition return premium:** to compensate for these non-diversifiable risks.
- **Calculate error ranges and understand these fully:** with the resulting equity calibrated based on this and against other estimation methods/ observable data.

Considering the indexation of the risk-free rate we believe it is largely unnecessary to index the risk-free rate component of the CAPM model given other proposed regulatory framework changes and the existing RIIO toolkit.

If this is all applied appropriately, it contains all the controls necessary to maintain an appropriate return to shareholders. This is underpinned by shortening the price control period from eight to five years, as this will limit risk of material unchecked movement in the risk-free rate.

Further, regulatory stability and decision-making are crucial components in attracting equity investment. Equity investors deliver patient capital for the long-term, basing their investment decisions on long-term averages. Unnecessary changes that undermine stability and confidence in the regulatory framework should be avoided.

While we consider indexation unnecessary, rating agencies have suggested that equity indexation may be marginally credit positive, because it constrains a regulator from setting an inappropriate equity allowance. Given the material financeability pressures inherent in the RIIO-2 package as proposed we feel it necessary to support indexation for this reason.

If a trailing indexation is to be used then it should ensure that the underlying data sets are robustly accurate and not subject to presumptions to make up for gaps in data or research. The introduction of such a mechanism will require a long term commitment from Ofgem to maintain legitimacy and fairness. This should go well beyond RIIO-2 price controls to apply the mechanism throughout all market conditions in the future.

Care needs to be taken to ensure that returns remain sufficient particularly during periods of market distress or significant market change. For example NERA's paper for the ENA[13] recommends using 20 year nominal gilts based on 12 month averaging prior to the charging year. We support NERA's position and recommendations on using nominal gilts. We note that the current RIIO-1 framework has a disconnect between:

- Long-term inflation expectations being used to adjust nominal datasets to a real basis;
- And RAV and revenue growth being inflated based on actual outturn inflation.

This results in cash flow risk for networks. This is particularly the case in periods where short term inflation expectations diverge from the long run average. We would urge that Ofgem should seek to address this disconnect for RIIO-2.

The current use of RPI breakeven as a proxy for long term inflation expectations is flawed due to supply-demand imbalance for RPI linked debt. The supply-demand balance for long-dated index-linked government debt is currently unequal. Demand far outstrips supply, increasing prices and suppressing inflation linked yields. Pension funds and life companies have unfulfilled demand for index-linked income and, most importantly, for the inherent liquidity risk protection that is actively encouraged by the Government and Pension Regulator. This has implications for the use of gilt spreads when estimating market expectations of inflation.

Considering Total market return (TMR) we believe it is important for Ofgem to consider the full weight of evidence. This is to enable a fair, reasonable and objective conclusion to be drawn. A sole reliance on the UKRN report conclusions does not in our opinion demonstrate a reasonable regulatory assessment, given that this has been shown to be subjective.

[13] Cost of Equity Indexation Using RFR, March 2019

NERA has concerns about some of the UKRN conclusions that we share. This includes Ofgem's interpretation of the study and historical data. Further, we support NERA's conclusions[14] which highlight the flawed nature of the UKRN report on this matter. Therefore the TMR ranges that Ofgem has previously presented in the earlier price control consultations are also flawed given these judgements rely on:

- "NERA's analysis shows that the Millennium CPI dataset does not provide a reliable measure of historical CPI inflation. This has been clearly acknowledged by the ONS and academic research. We conclude that the historical TMR back to 1900 must instead be calculated relative to the "official" RPI inflation."[15]
- "The UKRN's assertions on the issue of the "predictability" of returns do not appear to be well founded. NERA conclude that the CMA's (NIE, 2014) position on this issue is much more robust."[16]
- "A Real TMR deflated by RPI cannot be used in a CPI framework without adjustment"[17]

It is our belief that Ofgem should also consider the alternative views advanced by NERA and others to gain a consensus in approach given the extent that matters in this area are subjective. In order to maintain a balanced and fair approach to the underlying arguments, Ofgem should instruct a third party academic review to independently assess the UKRN approach and stakeholder issues.

For Equity Beta the approach presented by Ofgem for the early price controls is fundamentally different to beta estimation used in previous determinations (notably, placing significant weight on the use of GARCH modelling techniques). This thereby breaks with established regulatory and CMA precedent. Given the degree of subjectivity involved in the assessment and difficulties with modelling assumptions and specification, we believe that this is inappropriate. With the lack of compelling evidence of a consistently superior modelling approach, any starting point for beta analysis should be established regulatory precedent[18] to avoid the problem of including data points that may not be representative of the current systematic risk of the business.

GARCH techniques, employing long term data at a reduced frequency level, have their own drawbacks for the reasons outlined by Oxera[19]. Using such datasets introduces complications. This is with regards to structural breaks, utilising data from very unusual economic circumstances and the disregard of data points by moving away from the use of daily data. Issues arise from specifying the correct model. None of this leads to superior, clear, consistent and reasonable answers – quite the contrary, it complicates the picture. Placing significant weight to the GARCH techniques without firm justification we believe to be unreasonable.

We also have concerns about the 'adjusted' gearing ratio approach. We believe each company should be separately de-geared using its own gearing ratio rather than apply a blanket and subjective EV/RAV (1.1x) approach. This is necessary to control for individual company circumstances such as their capital structure and financial risk. Implementing the 'adjusted' gearing

[14] Review of UKRN Report Recommendations on TMR, December 2018
[15] Ibid, p4.
[16] Ibid, p4.
[17] Ibid, p5.
[18] The use of OLS and daily data over a time period no greater than five years
[19] The cost of equity for RIIO-2, February 2018

approach potentially ignores the spread of raw equity betas and gearing across UK utilities, whilst also departing from established practice without adequate supporting justification.

With regard to the use of UK data, we remain supportive of Oxera's stance[20] that given the small sample set of relevant comparator companies, it is desirable to include relevant international data. We believe this approach is justified given the international nature of infrastructure investors. We find it difficult to understand why arguments are advanced by Ofgem to limit the use of such data, when there are also compelling reasons for disregarding the UK utility comparison data actually used, such as:

- Differing regulatory jurisdictions within the same groups
- Use of water companies as proxies for energy companies, etc.

There will always be limitations of any given dataset, which supports the use of all available relevant datasets.

Considering the use of RPI versus CPI(H) the energy sector averages less than 30% index-linked debt. Currently we operate with close to 65% index-linked debt on a post-derivatives basis. As this is not part of a wider group, the choice has been made to hedge the RPI exposures arising from the debt allowance mechanism[21]. As a consequence, with the switch from RPI to CPI(H) we are amongst the most exposed to the proposed change to CPI(H) without any transition mechanism. Index-linked debt provides inflation protection in price controls. The UK price control framework has for many years been linked to RPI and as such our structure is based on minimising financial risks, through effective risk management.

Switching immediately without transition arrangements, will result in basis risk for networks. This is especially true where a licensee has hedged inflation risk. While it may be considered that an immediate switch is manageable on a sector basis, consideration of individual company positions and impact should be considered by Ofgem.

Previously Ofgem has indicated that it is not convinced the proposed change to CPI(H) without any transition mechanism will have a material impact on either consumers or networks. While the impact assessment published in July 2019 considers the consumer impact, we urge Ofgem to also consider the impact of the proposed changes on individual networks, including those with materially different proportions of index-linked debt compared to the notional sector average. This impact assessment should consider; the additional basis risk introduced to those companies from the proposed changes, the potential cost of hedging this risk and whether a transition mechanism could be in the interests of all stakeholders.

Pension funds need RPI linked debt and it is held to hedge the pension liabilities frequently written into trust deeds as RPI. CPI(H) debt markets are still in their infancy, and as such CPI(H) debt will not offer this same protection. Consequently, the appetite and/or cost shown by pension schemes for such network company debt will be impacted.

Swaps are available for RPI-CPI(H) but these are costly. If the intent is to move to CPIH without a transition arrangement these additional swap costs should be factored in to any debt allowance assessment.

[20] Ibid
[21] The mechanism strips out embedded (fixed) RPI at debt issuance and pays variable RPI through RAV accretion.

We also note that there are potential complications elsewhere in the price control, for example the absence of breakeven CPI inflation. These are not inconsequential and as such due consideration should be given before proposing sector specific arrangements for consultation.

48. Finally, we would like to hear stakeholders' views on our proposed introduction of a 'sculpted sharing factor' in instances of high out- or under-performance, or whether an alternative mechanism could be more effective.

We are still of the opinion that Return Adjustment Mechanisms (RAMs) are not required for RIIO-ED2. The returns in ED are the lowest of all sectors with improvements in returns explicitly and intangibly linked to improvements in outcomes for fewer and shorter power cuts and better customer service as the drivers of returns through the associated incentive mechanisms. As long as this process occurs as part of the development of the RIIO-ED2 framework then confidence in the ranges of risk and reward expectations should be improved.

However, the sculpted sharing mechanism remains the 'least worst' of the RAMs. If companies are earning rewards above the range it is not necessarily as a windfall due to information asymmetry. Indeed there could be a scenario where a company is earning 'legitimate' rewards up to the threshold where a sculpted sharing mechanism would apply. If it also had a truly innovative efficient solution which could deliver further consumer benefit and rewards a sculpted sharing mechanism in this case could remove the incentive to deliver this in that period. That benefit and regulatory benchmark would then not be able to be utilised in the next price control period. Overall reducing the benefit to consumers in future price controls.