

Energy Networks Association Response to Ofgem's Open Letter Consultation on approach to setting the next electricity distribution price control (RIIO-ED2)

Introduction

1. Energy Networks Association (ENA) represents the companies that operate and maintain the gas and electricity grid network in the UK and Ireland. Serving over 30 million customers, they are responsible for the transmission and distribution network of 'wires and pipes' that keep our lights on, our homes warm and our businesses running.
2. Understanding the strong track record of our energy networks since privatisation in 1990 in improving services and lowering costs is key to understanding the role that they can play in the future. Continued high quality and efficiently delivered energy networks services are essential for consumers and to help the government meet its short, medium and long-term objectives for energy policy.
3. Our energy networks are recognised around the world for their strong track record of safely and securely providing the UK with the heat and power it needs in three key areas.
 - I. *Trusted performance.* The average gas customer will experience an unplanned interruption once every 140 years. For electricity customers, since 1990, there has been a 59% reduction in the number of customer interruptions, and an 84% reduction in length of customer interruptions.
 - II. *Reduced costs and increased investment.* Network costs are now 17% lower than they were at the time of privatisation. By 2020, the UK's energy networks will have attracted some £100 billion of investment since 1990. A significant proportion of which is spent with UK companies. New investment in the networks is forecast at £45bn between 2013 and 2023.
 - III. *Strong innovation.* As set out in Ofgem's recent State of the Market report, independent research carried out by Pöry for Ofgem has shown that innovation projects by electricity Distribution Network Operators (DNOs) could deliver up to £1.7bn of benefits by 2031. Additional benefits will also flow from the innovation undertaken in the other network sectors which was not quantified by Pöry's last study but was acknowledged.
4. We welcome the opportunity to respond on behalf of our electricity and gas members to the Open Letter Consultation on the approach to setting the next electricity distribution networks price control (RIIO ED2). This response sets out a collective view in response to the content and questions raised, central to which is a strong consumer focus and the need to remove barriers so that networks play the fullest possible role in delivering decarbonisation, digitisation and decentralisation supporting the low-carbon economy of the future.

5. Our members provide a critical service and operate long-term asset businesses so it is clear to them that meeting consumer needs and enabling government policy is at the heart of how they succeed. It is critical that this is facilitated by the RIIO-ED2 framework. Consistent with this, our members value the ongoing direct discussions taking place between ENA, the regulator, the Consumer Engagement Groups (CEGs) and the Ofgem RIIO-2 Challenge Group. This level of engagement builds upon and goes further than previous price controls and is focused on delivering beneficial outcomes for both current and future consumers. The views in this response are representative of DNOs views but not all views are shared by all companies.

This response is aligned to the sections of the Open Letter for ease of consideration.

Context for RIIO ED2

6. The UK faces a number of uncertainties and challenges over the RIIO-ED2 period as the decarbonisation, decentralisation and digitisation of energy gathers pace, central to which is the pivotal role of energy networks in the decarbonisation of power, heat and transport. The decisions made by the regulator on RIIO-2 price controls will have a major influence on our future energy system and the economy that it serves. ED2 should not therefore be considered in isolation but recognised as a key enabler of a wider strategy for delivering investment, the energy system transition and meeting consumer and stakeholder wants and needs now and in the future.
7. The government's Industrial Strategy¹ recognises the challenges and opportunities of decarbonising our economy and sets out a strategic framework together with a range of initiatives for achieving clean growth, while ensuring an affordable energy supply for businesses and consumers. In addition to this, the government's Clean Growth Strategy² sets out ambitious proposals through the 2020s that seek to ensure economic prosperity while cutting carbon emissions. The UK has been at the forefront of encouraging the world to move towards clean growth, a commitment strengthened by government's adoption of the Committee on Climate Change's 'Net-Zero' recommendation³.

We therefore ask that the ED2 framework is reflective of the integral role that DNOs will play in the delivery of these strategic objectives.

¹ BEIS 'Industrial Strategy: building a Britain fit for the future'

<https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future>

² BEIS 'Clean Growth Strategy' <https://www.gov.uk/government/publications/clean-growth-strategy>

³ Committee on Climate Change 'Net Zero – The UK's contribution to stopping global warming'
<https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/>

Delivering a smart low-carbon whole energy system

8. The Ofgem-BEIS Smart Systems and Flexibility Plan⁴ recognises the world-leading capability of our networks and the benefits already being realised through the transition to a smarter flexible network.
9. Our members believe efficiencies in delivering a secure, low-carbon energy system will be realised through the adoption of a whole system approach. This means looking at optimal network investment and operational decisions across the entire energy network, not just the component parts. It also means considering interactions across energy vectors (e.g. heat networks, power, gas, energy storage and transport) so that wider requirements of electricity networks, options and consumer value can be taken into account.
10. Networks are the arteries of our economy and their defining characteristics (safety, reliability, efficiency, low-carbon with a strong customer focus) must be maintained while also achieving the ambition and realising further opportunities that include the creation of new industries, jobs and growth consistent with the government's industrial and clean growth strategies. We ask Ofgem to recognise that it is essential ED2 supports these government and consumer goals by ensuring that the funding arrangements are reflective of core and strategic priorities and can accommodate major changes such as the electrification of transport and heating, while maintaining the current integrity of the network.
11. If Ofgem commits to supporting the government and consumer objectives, it must incentivise investment and recognise new challenges and risks by increasing its proposed cost of equity, the primary incentive for investment. From the outset Ofgem should ensure that the changes made to asset lives at ED1 remain fit for purpose and provide equitable treatment for current and future consumers in terms of the charges they face.

RIIO ED2 – setting a balanced framework

12. It is clear that setting the right framework for ED2 is key. Failure to 'get it right' will result in significant impacts on our electricity distribution networks, the wider energy system and society at large, and could put at risk:
 - decarbonisation of the economy
 - meeting the needs of customers, some of whom are vulnerable
 - resultant social and economic benefits – for example, cleaner air through uptake of electric vehicles
 - gaining regional stakeholder buy-in recognising the role networks play at a local level
 - increased productivity
 - creation of new high value jobs, industries and companies
 - innovation – both technologically and in other areas
 - continued improvement in customer service.

⁴ Ofgem & BEIS Upgrading our energy system: smart systems and flexibility plan
<https://www.gov.uk/government/publications/upgrading-our-energy-system-smart-systems-and-flexibility-plan>

13. Failure is not an option so it is essential that Ofgem creates a sufficiently strong funding and incentive package, a framework that attracts the required investment, and encourages companies to drive efficiencies and improvements in services e.g. through further innovation, to deliver our national strategic priorities.

RIIO-ED2 an evolution of RIIO-ED1

14. RIIO was intended to drive improvements in network performance, foster innovation, encourage engagement with stakeholders and reduce customer bills. The evidence from the RIIO-ED1 annual reports produced by Ofgem is that it has proven successful in creating the conditions and incentives for networks to deliver the intentions behind RIIO. Across distribution (and transmission), the strong incentives placed on networks have delivered high levels of performance for customers against key outputs for reliability, safety, customer satisfaction, connections, social obligations and the environment and are on track to deliver by the end of ED1. The *Ofgem RIIO-ED1 Annual Report 2018*⁵ states that DNOs 'continue to perform strongly', with customer interruptions having fallen by 11%, their duration falling by 9%, and networks reliability sitting at 99.99%.

RIIO-ED2 Planning and Process

15. The development of the framework for RIIO-2 has seen the introduction of a number of new aspects. These include enhanced stakeholder engagement and challenge through the CEGs and RIIO-2 Challenge Group as well as the need to take into account wider policy developments such as "Net Zero ambitions" and the report and recommendations of the Energy Data Taskforce⁶. The early development and availability of Ofgem's Business Plan Guidance will be key to ensuring the process supports delivery of the outcomes and ambition for ED2.
16. For ED2 we would like to see a review of the earlier price controls processes for GD2/T2 to look at what went well and where appropriate, how the process can be improved to ensure ED2 maintains momentum going forward. This will necessarily require timely decisions that allow DNOs to include these within their planning, including their stakeholder engagement plans to ensure that the enhanced stakeholder engagement truly informs and shapes companies plans. Therefore, where lessons have been learnt from the GD2/T2 process we would encourage Ofgem to consider removing or revising (including simplification) those aspects of the RIIO2 process within the next 6 months.
17. Consistent with this we acknowledge and welcome Ofgem's recognition that lesson can be learnt from the RIIO-2 process to date. We also note that Ofgem is cognisant of the need to ensure that plans for major reforms already underway such as Ofgem's Access and Forward Looking Charges Significant Code Review and Smart Flexibility Plan including the transition to Distribution System Operations (DSO) are coherent with the ED2 process and timeline.

⁵ Ofgem RIIO ED1 Annual Report 2018 https://www.ofgem.gov.uk/system/files/docs/2019/03/riio-ed1_annual_report_2017-18.pdf

⁶ Energy Data Taskforce: 'A Strategy for a Modern Digitalised Energy System'
<https://es.catapult.org.uk/news/energy-data-taskforce-report/>

18. Whilst we recognise there are aspects of the RIIO-2 framework that have been developed with all sectors in mind, it is important that decisions for ED2 are considered separately from those made for GD2/T2. Where there are aspects which do not need the same level of consultation and new sector specific evidence, these could be settled early to allow companies, Ofgem and stakeholders to discuss more broadly some of the new and emerging issues that need greater consideration.
19. The fact that DNOs have a number of unique characteristics in their role within the energy system, now and in the future, dictates this approach. For example, the regulatory framework for ED2 will need to take into account the evolution from DNO to DSO, the development and implementation of whole system approaches and enablement of significant progress on decarbonisation of transport and heat.

Proposed Objective for RIIO-ED2

20. We acknowledge the overarching objective for ED2, the rationale behind it and how Ofgem intends to achieve it. However, the proposed overarching objective for ED2 as currently drafted places a focus on *'value for money services that both existing and future consumers need'* and goes on to indicate that delivery of ED2 outcomes should be met *'while keeping bills as low as possible'*.
21. Whilst it may not be the intention, if keeping bills as low as possible were to be the primary driver it risks driving DNO behaviours that may be inconsistent with meeting other core stakeholder and statutory requirements as well as the enabling role needed to deliver Net Zero or other wider objectives referenced. If DNOs are to be expected to play the fullest role in ED2 the fact this is likely to place an upward pressure on the network component of energy bills should be acknowledged, with cost pressures minimised through setting a framework for ED2 that drives innovation and incentivises efficiencies while delivering stakeholder priorities. Government, Ofgem and networks have a responsibility to ensure a clear and consistent message is given to stakeholders, particularly customers, on this point so that it is clearly recognised there will be potential impact and trade-offs.
22. RIIO-2 must be complementary to the Government's wider policy objectives of delivering secure, affordable energy and clean growth. The shift to a holistic approach that recognises and takes account of the 'full value' of investment in networks in terms of the benefits delivered to consumers and assessed on a 'value for money' basis is an approach that could be explored.

Strategic approach to RIIO-ED2

23. As a principle the ED2 price control must be set so as to support the nation's decarbonisation goals. Ofgem's letter 'RIIO-2 response to Committee on Climate Change's Net Zero Report'⁷ and recognition that Net Zero will have implications for the role of networks and their investment planning is welcomed.
24. The framework for ED2 should not therefore place networks in the position of being a 'blocker' to investment in decarbonisation of the economy. The delivery of decarbonisation whether as a direct or indirect result of network investment should be recognised. The starting point for the design of the regulatory framework should be to ensure DNO's ability to contribute to the delivery of our strategic objectives.

Supporting Strategic Investment

25. We recognise there are uncertainties over the ED2 period and beyond, but this is something network have always had to accommodate in price controls. The challenges with ED2 relate to the nature and scale of uncertainties.
26. Whilst there have been examples and recommendations by the Committee on Climate Change and the National Infrastructure Commission of the type of actions and investments needed and that might be considered to fall within the category of 'strategic investment' further guidance will be needed as to what Ofgem deems 'strategic investment' and how DNOs should approach, versus what would be normal BAU investment (given all investment in network assets could be argued to be ahead of need to some degree). However, it is key that Ofgem ensures that the ability to invest strategically is fully embedded within the framework otherwise this risks becoming a blocker to company decisions, the evolution of the sector and achievement of Net Zero.
27. The RIIO framework must be able to support proposals for strategic investment, with mechanisms in the RIIO toolkit to deal with uncertainties. These will need to be applied, and where appropriate suitably adapted, whilst recognising there are many factors that influence investment decisions and sufficient flexibility should be provided to each DNO to determine the right course of action.
28. Ofgem propose that decisions on these types of investments could be guided by a new Inter-institutional Group comprised of experts from across Government and other institutions. There is some scepticism as to the need for this type of group and the potential role envisaged for it by Ofgem. More detailed proposals would be needed on the rationale, purpose and role for any such group, part of which is a clear understanding of what such a group could add over and above the CEGs, RIIO-2 Challenge Group, DNO expert stakeholder groups and Ofgem. Were a decision taken to establish such a group it should be

⁷ RIIO-2 response to Committee on Climate Change's Net Zero Report
https://www.ofgem.gov.uk/system/files/docs/2019/08/letter_to_networks_on_achieving_net_zero.pdf

early in the process to ensure business plan development is fully informed. Care would also need to be taken to ensure that the establishment of such a group would not slow down the decision making process or discretion of individual DNOs in determining how best to meet their obligations and requirements. This would be necessary to avoid ongoing uncertainty and the ED2 process inadvertently becoming a barrier to advice received from such a group being taken into account in DNO business plans.

How to set price controls for DSO functions

29. ENA's Open Networks project is delivering progress towards a smarter energy system, with action now to support the implementation of Distribution System Operations (DSO). Ofgem & BEIS recently published an Open Letter⁸ to ENA on Open Networks that set out priorities and next steps. As set out in our response⁹, ENA members will:
- Facilitate flexibility markets, provide decision-making transparency and standardise processes and commercial arrangements across network and system operators for flexibility services;
 - Plan for the implementation of electricity Distribution System Operations to deliver the least regrets pathway set out in the clear direction from our electricity Future Worlds Impact Assessment consultation¹⁰;
 - Increase transparency of data as part of a wider ENA gas and electricity initiative to progress digitalisation and Energy Data Task Force recommendations; and
 - Continue to deliver interoperability and whole systems development for transmission and distribution, as well as continuing the work between electricity and gas networks on whole energy system.
30. We agree with Ofgem's conclusion that it is too early to make decisions about potential future institutional arrangements for DSO at this stage as DSO functions are still developing. However, it should be clear where costs and revenues relate to either 'traditional' DNO functions or new extended DNO / DSO functions.
31. Ofgem and others have acknowledged the operational strengths of DNOs resulting in reduction of power outages and increasing reliability and resilience. The natural strengths and inherent capabilities that DNOs have mean they are best placed to develop and provide the majority of DSO functions. Fragmenting or delaying this transition is not in consumer interests.

⁸ Open letter to the ENA Open Networks project from Ofgem and BEIS
<https://www.ofgem.gov.uk/publications-and-updates/open-letter-ena-open-networks-project-ofgem-and-beis>

⁹ ENA response to Ofgem and BEIS Open letter to the ENA Open Networks project: Upgrading Our Energy System' <http://www.energynetworks.org/assets/files/ON-PRJ-%20Response%20to%20Ofgem%20BEIS%20Open%20Letter-Published.pdf>

¹⁰ <http://www.energynetworks.org/assets/files/Impact%20Assessment%20Consultation%20-%20ONP%20Response.pdf>

32. Were DSO functions delivered by a separate party or where a DNO is undertaking a DSO function, the types of arrangements that might apply will require development. However, as a starting point any new approach should be a necessary addition to the current RIIO framework and be clear on aspects such as funding models, revenues and outputs and performance metrics, roles and responsibilities. Where the current framework is suitable it should be used. Where DNOs can propose new and innovative approaches these should also be considered. We would ask that when considering any regulatory approach for DSO type functions that Ofgem fully consider the opportunities and benefits that a DSO led approach could deliver. Early clarification on this aspect of ED2 will be needed to inform stakeholder engagement and business planning. See comments under paragraph 43 below.

Telecommunications systems

33. Reliable operational telecommunications systems are essential to facilitating a reliable and safe energy network; this will become increasingly necessary as local and low carbon generation is connected to the distribution networks and the use of EV's and heat pumps increases. Significant increase in control at HV and LV network levels will be required to ensure generation is exported onto the network when it is required and demand for charging and storage is available at the correctly allocated or contracted times. Control is required to avoid overloading the network and to minimise the requirements to extensively reinforce the network necessary to manage the supply and demand flows thus minimising end costs to customers.
34. Control of generation and demand at domestic, local and grid levels requires a significant increase in the number of control assets which in turn will require the support of a suitable and robust telecommunications system.
35. With the increase in the number of assets and connections to the network and telecommunications systems comes the requirement for a significant enhancement in operational telecommunications availability both to manage the increase in information being processed but to also provide encryption protection to data flows in order to avoid compromising the safety and security of the network. This will require investment over and above ED1.

How to set price controls that drive innovation and competition

Innovation

36. Ofgem has a strong track record of incentivising innovation for the benefit of consumers, particularly when considered in comparison with other sectors. Given the significant challenges and additional risks faced in ED2, it is imperative that this progress is maintained, and that innovation in networks continues to be strongly incentivised under ED2 given the benefit to consumers.
37. Ofgem should not limit the use of innovation funding to the limited strategic issues proposed. We believe there are still significant opportunities in other areas. This could limit the innovation undertaken in the sector and risk oversight of nearer term issues and opportunities during the ED2 period that could deliver wider consumer benefits. This

necessarily will need to include exploring new opportunities for change to the existing ways of working. Current examples of this include, CLASS and Smart Street that bring a whole system approach to network issues; and Optimise Prime the world's biggest trial of commercial EVs.

38. The RIIO innovation stimulus has had significant success in encouraging network companies to bring forward innovative projects and embed a culture of innovation within their organisations. This has led to significant advances in the application of new technologies and techniques as business as usual, the development of skills and capabilities within the organisations involved, and the development of new partnerships to the benefit of current and future consumers.
39. Indeed, a key feature of the RIIO-1 innovation mechanisms has been the collaboration and sharing of best practice delivering both short term benefits shared with the customers of the innovating network and subsequent longer-term customer benefits across all networks. New approaches, including the development of whole system incentives designed to drive innovation, used in combination with the current type of innovation support measures, may be beneficial in helping to deliver the future energy system we need.
40. The current RIIO-2 framework proposals provide for a range of complementary innovation initiatives, which, once live, the DNOs can participate in ahead of ED2. The detailed operation of these initiatives and the levels of investment supported under them will be major determining factors in effectiveness. It will be the detailed design (including the financial value) of these innovation initiatives that determine the extent to which these drive greater innovation in all its forms over the course of ED2.

Competition

41. Competition is already well established in a range of areas across distribution networks (such as for the provision of new connections and the 2018 DNO commitment to openly test the flexible services market for significant investment) and our members agree that competition should be used where it can drive value for consumers. Competition can deliver benefits for consumers where applied appropriately, for example, third party providers of innovative network solutions. However, it may also risk creating greater complexity and cost, delays and introduce new risks or asymmetrical allocation of risks, with little or no net gain for consumers. Therefore, how and where competition might be applied in the future needs careful consideration with a thorough evaluation undertaken of the applicability of new models to the distribution sector and their relative merits, and drawbacks, when compared with the greater number of companies and scope for comparative benchmarking that exists in electricity distribution. Full consideration should also be given to market maturity.
42. It is clear that the introduction of structural change of this type at this time of major transformation of our energy system as we create the conditions to accelerate decarbonisation, digitalisation and decentralisation should be considered very carefully, and only pursued if the benefits are absolutely clear. Full consideration should also be given to market maturity.

How to set price controls for a smart, flexible energy system

43. It is appropriate to distinguish costs which will be associated for undertaking DSO activities, however at this point we do not believe it is either appropriate or in the interests of customers to apply a separate funding model or link output streams to a separate funding model within the ED2 price control.

How to set price controls in a big data environment

44. Our members fully recognise the need to evolve their handling practices to adhere to data best practice, and (among other things) provide relevant available, transparent, and interoperable data about their networks. The framework for ED2 needs to support this evolution with companies appropriately incentivised and performance measured in this area. The recent report and recommendations of the Energy Data Taskforce are welcomed as a major step in driving these changes. ENA members have already developed and launched a common initiative for modernising energy data and this is described in more detail below.

Common Network Initiatives for Modernising Energy Data (Digitalisation Strategies)

45. The recent report and recommendations of the Energy Data Task Force (EDTF) focuses on network infrastructure data. Consistent with this, and recognising other initiatives, network investment in modernising energy data is essential for continued security, reliability, whole system approaches, flexibility, decarbonisation of our energy system and delivery of Net Zero. Networks are committed to advancement of the EDTF's recommendations and this requires network operators to work collaboratively to identify and unlock common opportunities to deliver efficiencies and facilitate the wider whole system environmental, economic and consumer benefits.
46. Network companies are taking the opportunity to co-ordinate activities to deliver these benefits through Energy Networks Association (ENA) with wider stakeholder engagement. ENA has established a new Data Working Group that incorporates gas and electricity networks (distribution, transmission and ESO) and will include in its Terms of Reference how we can collectively:
- Deliver against the objectives above;
 - Work with Ofgem, BEIS and InnovateUK to assist in the delivery of the EDTF recommendations; and
 - Progress the themes set out in paragraphs 2.36-2.47 of Ofgem's business planning guidelines.
47. Through ENA network companies are collectively developing a Digitalisation Strategy that will provide a consistent view of modernising data across all energy networks. Individual network companies will tailor their own Digitalisation Strategies and implementation plans with the needs and wants of their stakeholders and customers, aligning with the central ENA Strategy. ENA will host a stakeholder event in spring 2020 to communicate and engage stakeholders on the progress of the Data Working Group and ENA Digitalisation Strategy.

48. ENA is taking an approach of incremental change in order to deliver benefits to customers early and to learn as we go in systems, process and data development so we can optimise benefits through continuous improvement. As part of the digitalisation strategy, network operators and ENA will also analyse and take action on the themes set out in the RIIO-2 business planning guidelines. Energy networks are committed to the significant work needed to plan for the practical implementation of the required scale of change in RIIO2 timescales and making the necessary provisions for systems and process change. The Annex to this response sets out progress to date.

RIIO-ED2 Framework Consultation

Giving consumers a stronger voice

49. The RIIO-2 Challenge Group (CG) is established with electricity and gas transmission and gas distribution network companies recently submitting revised draft business plans. Both the CG and our members will need to understand the ongoing role and remit of the Group in the scrutiny of policy and plans and working arrangements over the period of transition to ED2. The experience and learning from the electricity transmission and gas price control reviews should serve to inform the need for change so that the RIIO-2 Challenge Group can best meet its objectives in the context of ED2. We suggest that the approaching contract renewal of Group members provides an opportunity to review the scope and composition of the group and the planning and process for its operation. We welcome Ofgem's acknowledgment that lessons can be learnt from the current RIIO-2 process, we view this positively and would welcome the opportunity to provide feedback on the process to date.
50. Our DNO members have either set up or are in the process of setting up the CEGs that will scrutinise their ED2 business plans and the processes by which they are developed. The CEGs will provide challenge to the networks across a range of areas in their business plans. A key output is to produce an independent report for Ofgem that will sit alongside each network's business plan and outline areas of agreement and disagreement. Given the learning from transmission and gas distribution to date, it is essential that the resultant revision and update to Ofgem's guidance in this area is undertaken in 2019. We suggest further consideration is given to the role and interactions of this group and other stakeholder groups, in the lead up to the submission of business plans and final determination.
51. We note that the Open Letter does not make reference to willingness to pay research. One aspect of consumer engagement is to ensure consumers have the opportunity to influence network business plans, including options for investment and product and service levels. For ED2, DNOs and Ofgem will need to understand the value consumers place on these and their overall acceptability and affordability in terms of consumers' willingness and ability to pay for them. Given that networks will be starting their engagement process imminently, we ask Ofgem to consider whether it intends to conduct any willingness to pay exercise of its own and if so, how DNOs' research in this space will be evaluated or integrated. An early decision on Ofgem's intentions in this area is essential.

Meeting the needs of consumers and network users

52. Our members acknowledge that the consolidated output categories developed for RIIO-2 provide a high-level framework against which to develop outputs and related incentives specific to ED2. At this stage, there is a broad range of emerging issues that need to be considered under the ED2 framework, not least environmental, commercial, technical issues and the overarching policy direction.
53. The balance between the three output types is crucial, and clear consideration needs to be given to this and the impact it has on company incentives, ways of working and innovation. In this respect there is a need to take into account the circumstances of vulnerable consumers.
54. Consideration should be given to taking forward the evolution of Value of Lost Load better reflecting the impact to customers whilst energy efficiency is another area to be further explored. We believe that this is an area of the ED2 price control framework that must adapt to reflect and respond to the challenges and opportunities of the energy system transition.

Maintaining a safe and resilient network

55. The economy and consumers rely upon a resilient energy system, having enjoyed this for decades. Resilience is vitally important as energy becomes more central to them being able to live their lives. New types of threat are emerging such as cyber risks which are growing as the energy system decarbonises utilising more technology and data as well as climate change accentuating traditional network threats to resilience through extremes of weather. It is essential ED2 is an investable regime that stimulates innovation so that customers continue to benefit from resilient energy supplies.
56. The development of the new Network Asset Risk Metric (NARM), should be done in such a way that companies and customers are clear ahead of business plan submission as to the regulatory arrangements for RIIO-ED2. Networks wholeheartedly understand the importance of accurate data and robust models, these go hand in hand with clear, up front guidance from the regulator as to the arrangements and funding that will be in place. Any proposed data accuracy incentive should be proportionate to the issues it seeks to address and clearly factored in to Ofgem's overall incentive framework for RIIO-ED2. Arbitrary or mis-calibrated incentives, however well intentioned, run the risk of creating fundamental distortions between risk and reward, ultimately resulting in additional costs to customers.

Delivering an environmentally sustainable network

57. DNOs need the ED2 framework to clearly accommodate and incentivise the behaviours that will deliver an environmentally sustainable network. This should be considered from two broad aspects; firstly environmental impacts of the physical network and its operation and secondly the wider energy system to which networks are intrinsic and therefore the central enabler of a whole system approach and decarbonisation of the economy consistent with the legal requirement to meet Net Zero.

58. We are therefore of the view that DNOs should be allowed to innovate and propose new approaches across these two aspects consistent with achieving this overarching objective. Ofgem will need to play a key role in enabling new ideas and approaches that up to not may not have been considered within the scope of a DNOs 'typical' functions or activities to come forward.
59. We know that work¹¹ is underway in Brussels to develop proposals to guide investors on appropriately 'sustainable' energy investments. Even if the UK leaves the EU with 'no deal', this is likely to be a growing international trend that should be acknowledged. This work recognises that electricity network investments should generally be considered sustainable, and we take this to mean potentially that ENA members will be competing with European companies for these investments.

Enabling whole system solutions

60. ED2 will need to support new approaches, including the development of whole system incentives designed to drive innovation as well as the identification and application of whole system solutions and the need to deliver Net Zero most effectively and efficiently.
61. We support Ofgem's ambition to harness the benefits of whole system thinking, and believe that getting a whole system approach right can, with the correct incentives, deliver benefits to consumers. Indeed it is only by understanding the UK's energy systems as one interlocking network that the greatest efficiencies in delivering secure, low-carbon outcomes can be achieved.
62. Our members therefore welcome Ofgem's recognition of the whole systems approach and its proposal to focus on the levers within the price control that could support the delivery of whole system outcomes across the energy system for the benefit of consumers. We believe the greatest efficiencies in delivering a secure, low-carbon sustainable energy system will be best realised through the adoption of a whole system approach. For us a whole system approach means looking at optimal network investment and operational decisions for the whole energy network, not just the individual parts in isolation. It also means considering interactions across energy vectors (e.g. heat networks, power, energy storage and transportation) so that wider options and consumer value can be taken into account and the use of commercial and flexible services. This work is supported by consideration of the connections, data links, interfaces, coordinated planning opportunities, potential impacts and shared learnings across transmission and distribution, electricity and gas networks and other energy vectors, both currently and in the future.
63. Our members believe that if our power, heat, transport and waste sectors are all interdependent, then so are the solutions for their decarbonisation. A whole system approach is based on our energy networks using new smart technologies, co-ordinated forecasting and planning that work together in an integrated way, building on the strength of our existing gas and electricity network assets. With the population expected to increase by

¹¹ <https://www.unepfi.org/news/industries/investment/teg-reports/>

22% by 2050 and other developments such as increased uptake of low emission vehicles, total energy demand will increase significantly. We therefore need to look at the energy system as a whole, by delivering on future investment and developing smarter solutions needed to meet our energy objectives and clean growth.

64. Electricity and gas networks are currently delivering an energy transition and are well placed to play a central role long into the future. How to harness the capacity of networks to bring about the desired outcomes is a fundamental question though an evolution of RIIO1 can achieve this. Realising the benefits of whole systems thinking requires robust incentives that provide clear signals for companies to invest in innovative activities, and are of sufficient strength to overcome networks drivers that guide company behaviour towards conventional solutions whilst managing the inherent uncertainty. Under Ofgem's proposed definition of 'whole system', the primary focus must be on facilitating data sharing, coordination of forecasting and planning and reducing barriers between transmission and distribution and between energy vectors.
65. We believe that the proposed mechanisms for unlocking the benefits of a whole system approach are going broadly in the right direction though this urgently needs to be developed into a more concrete RIIO2 proposition. This should necessarily include robust cost benefit methodologies.

Managing uncertainty

66. RIIO1 includes effective mechanisms that were designed to manage uncertainty across an eight-year price control period. These mechanisms have for the most part worked well, and where appropriate should be refined and extended for ED2 together with new uncertainty mechanisms if necessary. These approaches will be necessary to be able to respond to the uncertainty surrounding the scale and timing of the decarbonisation that networks will need to facilitate and deliver. Care needs to be taken with any uncertainty mechanisms to ensure they allow Ofgem and networks to work together to genuinely do the right thing for consumers and do not inappropriately stifle and act as a barrier to investment due the mechanistic nature of the process. They should act to support investment in the sectors as required and not create undue risk. Again, early clarity and certainty around uncertainty mechanisms and their application and treatment would reduce risk for companies.

On the question of strategic investment and the role of Ofgem's proposed inter-institutional group also see paragraph 28 of this response

Driving efficiency through innovation and competition

67. As a principle, our members support considering new approaches that will deliver clear benefits to consumers. It is worth noting that network companies are already subject to EU procurement law and applicable financial thresholds over which projects are required to go to market under open tender. Where projects fall below the EU threshold competitive processes are also very likely to be used, where transactions costs are not disproportionate and they can help to minimise costs due to the totex incentives. Also much of the new network connections market in gas and electricity distribution is already competitive.

68. Any introduction of new competitive models across networks needs to be considered carefully given the physical and operational characteristics of our networks and the technical, commercial, regulatory and legal requirements that must be met by those who own and operate them. Ahead of any consideration of competition being extended to new areas a robust cost-benefit analysis should be developed and consulted upon to ensure there is a strong evidence based consumer case relative to a realistic counterfactual. This necessarily would need to consider factors such as allocation of risk and associated financial impacts, appropriate safeguards for consumers, protection of assets given criticality and ensuring a level playing field with DNOs not disadvantaged.
69. In terms of price finder competition type proposals, we are unclear how these proposals would further enhance existing native competition and the drivers created by the TIM.
70. Any introduction of competition into new areas would therefore need to be a) supported by the evidence that benefits outweigh risk and cost (i.e. quantitative impact assessments that demonstrate proposals will lead to consumer benefit) and b) underpinned by legislation ensuring Ofgem operates within its statutory remit and providing the aforementioned protections.

Forecasting and scenarios

71. Ofgem and the RIIO-2 Challenge Group requested network companies agree a set of common factors and assumptions for developing their core view of the future for RIIO-2. In order to achieve this, the networks have come together in a manner not seen in previous price controls. This close collaboration and sharing of knowledge will provide the regulator with the information it needs to understand the background to company forecasts. Through this experience companies have developed a common reference point that will strengthen their business plans, benefitting Ofgem's decision making process and ultimately, consumers. The ENA Common Scenario Report¹² published in March 2019 and updated in September highlights the drivers that networks consider most materially impact RIIO-2 and subsequent price controls, together with supporting evidence. It also provides numerical ranges behind their uptake assumptions, with highlights ranging across the energy system, from anticipated electric vehicle uptake to changes in electricity generation and gas supply. This work will be refreshed and updated ahead of ED2 and will have the added benefit of being able to draw upon the Distribution Future Energy Scenarios being developed by DNOs. In any scenario regional variations will need to be recognised.

Business plan and totex incentives

72. The Business Plan Incentive needs to be transparent and achievable with as much clarity as to the criteria on the upside as it does on the downside. We welcome the opportunity to learn from and enhance the arrangements being trialled in GD/T2.

¹² ENA Common Scenario Report September 2019
<http://www.energynetworks.org/news/publications/reports/>

73. It is widely recognised that TIM is the strongest incentive to drive efficiency in the interests of customers, and it is important that this incentive strength is not diluted and that careful thought is given as to how this will happen in practice. Care needs to be taken to ensure that the BPI and blended sharing are complementary to each other and do not work against each other, this is particularly relevant for ED given there may be a number of new business areas where there are less historical points of reference, but are necessary to reflect whole system options, DSO activities and others.

Fair returns and financeability

74. RIIO-ED2 must be designed to enable DNOs to attract the required levels of investment at efficient cost needed to deliver both existing and new requirements such as DSO, cyber resilience, whole system decarbonisation and greater digitalisation in pursuit of the UK's strategic outcomes. This necessarily will require the framework to appropriately balance the interests of current and future customers, with the temptation to focus on short term price reductions needing to be tempered.
75. Our members remain concerned that the significant body of independent expert analysis and evidence developed to support the RIIO-2 process has not been fully reflected in Ofgem's current proposed approach as set out in the RIIO-2 Sector Specific Methodology Decision and public messaging regarding future costs, risk and returns is inaccurate and misleading.
76. We therefore wish to ensure Ofgem's consideration of the financial parameters is fully informed and intend to respond to those aspects that are of concern. Over the remainder of the RIIO-2 process ENA and its members will provide further evidence to that already submitted, including through continued engagement, business plan submissions, open hearings and before Ofgem make final determinations for non-electricity distribution network companies next year.
77. It is essential that Ofgem consider fair returns and financeability for ED2 in its own right with recognition that there are differing characteristics across gas and electricity transmission and distribution companies. We do not believe sufficient engagement has taken place between Ofgem, stakeholders and investors based on our members understanding of stakeholders' needs and their own investors' views' and this is something we would ask Ofgem to address going forward along with due consideration of Business Plans.

Return adjustment mechanisms

78. The majority of our members remain of the view that Returns Adjustment Mechanisms (RAMs) are unnecessary and would punish outperforming companies for their successes. It is a fundamental principle of an incentive-based price control that outperformance should be encouraged, not penalised.
79. It is not clear, and Ofgem have provided no evidence, that these types of mechanisms can be relied upon to create net-benefits for consumers. Any savings for consumers that might come about as a result of applying a RAM would need to be weighed against any reduction in value for money that would flow from reduced incentives to innovate and improve

performance as well as any increase in uncertainty, and the cost of capital caused by increased perceptions of risk. The proposed approaches continue to be set out at a very high level and the detailed working and impacts would need to be properly understood before they could be applied.

80. We therefore urge Ofgem to consider carefully whether adopting any new approaches that in general seek to remove or reduce any risk associated with forecasting financial aspects of the price control and 'fail safe' measures that restrict the level of achievable outperformance is on balance the best all round approach. It should be recognised that they carry significant risks and uncertainties. We think this needs to be weighed carefully against applying well understood RIIO-1 mechanisms that Ofgem is able to calibrate using several years of sector data on costs and performance.
81. The proposed shorter five-year price control will assist in reducing forecasting error, as would the use of existing uncertainty mechanisms. For example, downsides created by ex-post mechanisms that would limit or adjust returns could have a cooling effect on RIIO incentives designed to drive innovation, efficiencies, costs reduction and higher standards of customer service. These risks and their impacts would also manifest themselves at a time when companies will be required to be adaptable and adopt behaviours to facilitate and enable major changes to our energy system.

Conclusions

82. ENA on behalf of its members welcomes the opportunity to respond to this ED2 Open Letter consultation. The experience and knowledge gained through the ED1 period will stand companies in good stead for continuing to meet core network requirements and meeting some of the future challenges in ED2, laying the foundations for providing the best outcomes for consumers, including the fullest contribution to the realisation of Net Zero.
83. We strongly advocate that Ofgem set a framework that delivers a fair deal for both consumers and investors. This means creating the conditions to attract new investment and drive behaviours that deliver network services to meet the needs of a wide range of consumers whilst consistent with decarbonisation of our economy. If Ofgem focus on short-term cost savings and lose sight of these longer-term objectives in a way that risks eroding incentives to invest, innovate and improve performance for customers, then we all lose.
84. ED2 must therefore enable the DNOs together with the wider energy sector to meet the future challenges of an uncertain investment and growth future, setting stretching targets whilst providing a stable regulatory regime in which investors can have confidence. Above all this needs a holistic approach driven by objectivity and evidence.
85. Finally, we would like to recognise Ofgem's acknowledgment of feedback received on the RIIO-2 process applied to the other sectors, and on behalf of our members we look forward to continued engagement over the coming months.

If you have any questions on the points raised in this response, please contact John Spurgeon, Head of Regulatory Policy: john.spurgeon@energynetworks.org

Energy Networks Association
15 October 2019

Annex

Progress to Date

Networks have already initiated action to mobilise on the recommendations set out in the Energy Data Task Force Report, as below:

Digitalisation of the Energy System	We understand that Ofgem/BEIS/Innovate UK are looking to develop best practices for digitalisation which will be outcomes-based. Networks and ENA expect to contribute to the collaborative development of best practices and then the responsibility and timing for the implementation of those outcomes will need to be agreed. This initiative also delivers against Recommendation 2 below.
Maximising the Value of Data	Open Data: ENA is embedding the principles of Open Data into its Open Networks developments and is committed to opening data where it is in consumers' and stakeholders' interests. We will continue to look for opportunity for system changes to increase accessibility of data. Common Data: ENA has begun work to try and standardise data formats and data sharing processes under Open Networks. These developments began with data exchanges between transmission and distribution electricity networks but has now begun to consider planning and operational data exchanges between electricity and gas networks. We expect that this work will continue through RIIO1 timescales with the implementation of systems change in RIIO2 timescales. Best Practices: as above in Recommendation 1.
Visibility of Data	We understand that Innovate UK is going to be running an industry competition to develop a digital architecture to deliver the building block recommendations in 3-5 by bringing different data together from disparate systems. ENA proposes to actively participate in the competition and development of building blocks so that we can plan cost-effective implementation. Visibility of Data includes a Data Index which we expect will draw on network data (e.g. ENA Open Networks has established a System Wide Resource Register providing visibility of electricity distribution connected assets and the expectation is that this will be built on with further data sets in future to contribute towards this). On top of the digital architecture, we will work towards consistent data between all networks. ENA proposes to work with industry stakeholders to deliver the proposed Digital System Map to increase visibility of the Energy System infrastructure and assets. We expect to take an incremental approach to delivery of the map so that we can achieve visibility of key data early and then build from there.
Coordination of Asset Registration	
Visibility of Infrastructure and Assets – a Digital System Map	