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Dear Jonathan,

RIIO-2 Framework Consultation

We welcome the opportunity to respond on behalf of the National Grid Electricity System Operator (ESO) to Ofgem's consultation on the RIIO-2 framework. This is a rare opportunity to design a tailored regulatory framework for the ESO: a unique enabling business that provides specialist services; manages significant risk; and delivers, and enables others to deliver, real value for consumers across the energy system. Our main points in response to the consultation are:

- The ESO is a different type of company to the network companies, and needs a separate price control with a different approach to the traditional Regulatory Asset Value (RAV)-based model;
- Whole energy system thinking and innovation are increasingly important to ensure value for consumers, and we are well placed to lead this given our central role in the energy system;
- We want to engage broadly and transparently in shaping our framework, and in delivering it.

From April 2019, the ESO will be a new standalone business within National Grid, legally separate from the Electricity Transmission Owner. The ESO will have its own Board, and staff will be physically separate from all other National Grid plc electricity subsidiary companies. This will provide the right environment to deliver a balanced and impartial ESO that can realise real benefits for consumers as we transition to a more decentralised, decarbonised electricity system.

This is an ESO response. Interactions between electricity and gas are an important consideration for the SO, but specific Gas System Operator points are included in the single response from National Grid Gas (NGG) and National Grid Electricity Transmission (NGET) Transmission Owner.

Our long term vision is to be an ESO that thinks across all energy sources and systems, plays a more active part in and helps to shape frameworks for markets, while continuing to operate the electricity system safely, securely and efficiently. We have a pivotal role to play in enabling new, innovative technologies and business models to continue GB's energy decarbonisation. We understand from discussions with stakeholders that they want an ESO that drives value throughout the energy system by facilitating effective markets; stimulating investments and innovation to meet consumers' changing needs. Our aim is to exceed customers' expectations by becoming more transparent, working with others to find optimal solutions across the whole energy system, and considering all options to deliver what is valuable.

To facilitate this, the new regulatory framework should appropriately fund and incentivise the ESO to realise this vision. We agree with Ofgem that the ESO should have its own framework that will enable us to fully deliver our roles. The ESO is not a typical, asset-based utility and therefore the traditional RAV-based approach is not suited to funding an efficient ESO. In practice, the ESO looks similar to more service-based businesses, which tend to have a blended set of arrangements that recognise assets as well as significant non-asset based value-add activities, such as holding risk on behalf of industry. We have begun exploring alternative approaches and provide some of our emerging thinking in answer to question seven. We are keen to work with stakeholders to develop our thinking further and understand how different approaches would affect them.

Regardless of the form the final framework takes, we believe it is vital that it delivers the following proposed principles. We will continue to test these with our stakeholders.

- Supports and encourages the ESO to take the actions and investments needed to deliver long term value for customers and consumers, using appropriate incentives to drive exceptional performance and value for consumers;
- Provides an appropriate risk-reward framework tailored to the ability to bear risk and the potential value delivered to consumers;
- Sets clear, manageable and measurable outputs, while building in flexibility to manage uncertainty and respond to changes in customer and consumer needs;
- Encourages whole energy system thinking and use of market-based solutions to support the continuing low-carbon transition of GB's energy system;
- Promotes innovation within the SO and across the system and market;
- Ensures the ESO is financeable and credit-worthy, and able to operate;
- Prevents windfall gains and losses that are not justified by underlying performance.

The overall framework will need to reflect the different nature of the ESO. This includes considering an appropriate base funding model and incentives, duration of price control, fair returns measures and mechanisms to manage uncertainty. We and Ofgem must remain open-minded and consider new and bespoke options that best fit the ESO business; for some or all elements of the price control, they may not be the same ones that will work for the network companies. We must learn from the ESO's 2018-2021 incentives scheme and adapt this to create the best overall framework for RIIO-2. We want to take a leading role in shaping our framework.

Giving consumers a stronger voice

We fully support the focus on enhanced stakeholder engagement. Delivering the energy system of the future at best value can only be achieved through working collaboratively across the industry and ensuring we collectively understand and meet consumer needs. We think it is important that the ESO establishes its own User Group to reflect legal separation, and that this should follow the engagement model proposed for transmission companies. We intend to proceed on this basis, recognising that the burden on stakeholders must be managed. In addition, we will continue to engage more widely with stakeholders, building on the enhanced engagement approach we have already implemented in our 2018-2019 Forward Plan, and expanding it to cover all of our roles.

Our stakeholder group is broad and includes new types of businesses; we must engage across this group. It is essential that we think about the consumer experience in everything we do; we refer to stakeholders as all parties that play a role in delivering for consumers, directly or indirectly. Our customers and service providers are those who pay for the products and services they receive from us, and those we pay for providing services to us. In developing our framework we will look at whether there is sufficient clarity on what customers pay for, and whether that is fairly apportioned.

Responding to how networks are used

The emphasis on whole system in the consultation is welcome; it is important to consider how RIIO-2 can enable and incentivise companies to optimise solutions across the whole energy system. The smart, flexible future energy system and the decarbonisation of heat and transport will bring greater interaction between the gas, electricity, transmission and distribution networks; the focus should be across all of these boundaries. We are well placed to lead on whole energy system thinking and solutions given our role at the heart of the energy system.

Fair returns and financeability

It is important to us that our returns are legitimate and that consumers are not exposed to higher costs than necessary. At the same time, we must ensure that the ESO is financeable and credit-worthy as a legally separate business; the different nature of the ESO needs to be reflected as we consider the appropriate measures to ensure fair returns.

We are increasing our engagement with Ofgem and stakeholders to understand what they need and expect from the ESO. Over the coming weeks we will be running events to explore framework options and we look forward to discussing these with a wide range of stakeholders.

Yours sincerely,

[By e-mail]

Fintan Slye

1. **How can we enhance these models and strengthen the role of stakeholders in providing input and challenge to company plans?**

   — **What are your views on the proposal to have Open Hearings on areas of contention that have been identified by the groups?**

In providing our response to this question we have considered the "Enhanced Stakeholder Engagement Guidance" document published by Ofgem on 9 April. This stated the need to further develop the role that enhanced stakeholder engagement could play in the ESO's framework, but didn't commit to a model because of the need to consider different regulation of the ESO.

We agree that we should build on the improvements made during RIIO-1 and learn from other sectors in developing an enhanced approach to stakeholder engagement. The ESO has worked hard in recent years to improve our engagement approach, as demonstrated by the Power Responsive[1] and Future of the System Operator programmes, for which we have received positive feedback from stakeholders. Enhanced stakeholder engagement will help us develop business plans that better serve our customers' and service providers' needs, and will deliver greater consumer value. This is particularly true at this time of change in the energy sector; innovations in technologies, systems and markets present challenges and opportunities that the ESO must be ready to respond to and grasp. An enhanced engagement approach should also provide Ofgem with greater confidence in our business plan and allow scrutiny on specific areas.

On this basis we do not agree with the proposal to delay the decision on the ESO's engagement model. Our view is that the ESO should implement the engagement model that is proposed for transmission companies; our group would be separate from the transmission owners' groups to reflect legal separation and the need to develop a bespoke funding arrangement and business plan for the ESO. So as to maximise the value of the ESO's User Group, it should be established and meet regularly from summer 2018; we intend to proceed on this basis. In order to give this group the legitimacy it requires and to award it the same status as those proposed for the other network companies, we request that Ofgem confirms its commitment to this approach as soon as possible.

We believe this model better reflects the nature of our business than the distribution company model. Under the transmission model the ESO would establish its own User Group with an independent Chair and would be subject to the same scrutiny as the distribution and transmission companies under the Challenge Group. There should be close coordination between these groups and we suggest that all the network companies and Ofgem work together to facilitate this. We agree with the core remits identified for these groups in the consultation and guidance documents, and we would work with the independent Chair to ensure that the membership, discussion topics and governance arrangements reflect our business and status post-legal separation.

We absolutely agree that the work we undertake with the User and Challenge Groups should not replace wider stakeholder engagement activity; indeed we would ask that these groups provide assurance on the wider stakeholder engagement that we have planned. We are committed to engaging the widest possible range of stakeholders as we develop our business plans: we will continue to listen to our customers, service providers and stakeholders to better understand their needs; create credible and well evidenced options for consideration as we build our plan; and set out our proposed business plan to stakeholders before it is formally submitted to Ofgem. We are also keen to work with Ofgem, the network companies and other stakeholders on how best to engage consumers.

2. **Do you agree with our preferred position to set the price control for a five-year period, but with the flexibility to set some allowances over a longer period, if companies can present a compelling justification, such as on innovation or efficiency grounds?**

— **What type of cost categories should be set over a longer period?**

— **How could we mitigate the potential disruption this might cause to the rest of the framework?**

— **What additional measures might be required to support longer-term thinking among network companies?**

[1] http://powerresponsive.com/

- **Do you instead support the option of retaining eight-year price controls with a more extensive Mid-Period Review (MPR)?**
- **What impact might the alternative option of an eight-year price control with a more extensive MPR have on how network companies plan and operate their businesses?**

We agree with Ofgem's preferred position to set a five year price control period for the overall regulatory framework. The pace of change in the energy system is exceptional, and given the ESO's central role in the market, the ability to adapt to meet the needs of customers and stakeholders is vital. Our view is that a longer period for the price control as a whole would not be suitable for the ESO; therefore we do not support Ofgem's alternative option of retaining eight year price controls with an MPR.

We strongly support the ability to set allowances over a shorter or longer period for particular areas if there is justification, to allow for flexibility where needed and to realise efficiencies over a longer term. For example, a longer timeframe could be given to certain innovation activities to provide longer term benefits. It may also be important to maintain the use of uncertainty mechanisms to manage significant uncertainty within any period duration, and we need to consider what those mechanisms should be in the sector-specific stage.

The nature of the ESO's regulatory settlement will ultimately influence the appropriate duration of the price control. A decision should not be made on this until remuneration approaches have been developed in more detail.

3. In what ways can the price control framework be an effective enabler or barrier to the delivery of whole system outcomes?

- **If there are barriers, how do you think these can be removed?**
- **What elements of the price control should we prioritise to enable whole system outcomes?**

We fully support the focus that is being given to whole system outcomes in RIIO-2. The future energy system will see greater interaction between the gas, electricity, transmission and distribution networks, and the framework must reflect that. We want a set of price controls that ensures that companies have obligations and incentives to play their part in whole system thinking, and that consumers only have to pay for services once. With our role at the heart of the energy system and markets we are well placed to lead on whole system thinking and solutions. In our response to question 5 we propose definitions to distinguish between different areas of whole system, noting the importance of differentiating between electricity transmission and distribution, gas distribution and transmission, and gas and electricity.

In RIIO-1, there are a number of barriers to optimising operations and investment across network boundaries:

- Insufficient clarity of who is responsible for decisions and actions;
- Insufficient mechanisms to incentivise the most efficient investment across different networks;
- Multiple industry codes that prevent those who are not signed up to them from having a voice;
- There is also a question over how the move to whole system is formally governed.

Through our work with others in the electricity industry on the ENA's Open Project we are identifying barriers and areas to focus on to improve whole electricity system outcomes. For example, we are already expanding the Network Options Assessment (NOA) process to meet transmission network needs at least cost to consumers, which includes network assets and market-based solutions. However, further mechanisms may be required to allow a wider range of options to be considered as possible solutions to issues on the transmission network, such as investment in DNO-owned network assets to meet transmission network needs.

Incentives, outputs and innovation are areas that could be focused on in RIIO-2 to consider whole system measures across gas, electricity, transmission and distribution. We will explore options for these with Ofgem and stakeholders as we move into the sector-specific stage, ensuring that we prioritise areas that will deliver the most value to consumers. It makes sense to continue the ongoing work focusing on the electricity transmission and distribution boundary, which reflects current issues facing customers and stakeholders. Nevertheless, we must not lose sight of the need for wider consideration of the whole energy system in RIIO-2.

We support Ofgem's proposal to carry out a comprehensive review of price control areas and touchpoints that might facilitate or impede whole system outcomes, and suggest that this review should look wider than the features of the price control to include legislation, industry codes and wider market arrangements. We would be happy to provide our expertise to help with this review.

4. Do you agree with our minded-to position to retain the current start dates for the electricity transmission and electricity distribution price controls, and not align them?

We agree with retaining the current start dates for the electricity transmission and distribution price controls. Delaying the end of RIIO-T1 to align with ED2 would be bad value for consumers as it would delay bespoke regulatory treatment for the legally separate ESO; with Ofgem, we have created a new settlement for our incentives for 2018-2021 and there will be efficiencies in looking at the framework as a whole from 2021. In addition, the short term investment required to align the price controls could lead to increased consumer costs, and would create an additional resource burden on companies.

Ofgem should use the opportunity of developing RIIO-2 to consider setting incentives for different timeframes within the price control, which could help to enable the alignment of outputs and incentives between electricity transmission and distribution.

5. In defining the term 'whole system', what should we focus on for the RIIO-2 period, and what other areas should we consider in the longer-term?

— **Are there any implementation limits to this definition?**

The term 'whole system' means many things to different parties and it is not always clear which parts of the energy system are being referred to. We strongly agree that it needs to be clearly defined.

Within the SO we use the following three definitions, which we propose could be used in RIIO-2:

- Whole electricity system: covering electricity transmission and distribution, including all parties involved in delivering for consumers;
- Whole gas system: covering gas transmission and distribution, including all parties involved in delivering for consumers;
- Whole energy system: covering gas and electricity, transmission and distribution, including all parties involved in delivering for consumers.

It is important to consider the interfaces beyond these networks, such as heat and transport. Within all of these definitions, thinking should not be limited to just systems and networks, but also potential business models and organisations; considering all relevant infrastructure, technologies and parties that deliver for consumers.

An essential next step will be to agree clear definitions, identify the work that will deliver the most value to consumers, who should be responsible and how it will be implemented, for example through obligations and/or incentives. We want to work with Ofgem and stakeholders to identify the focus areas for RIIO-2 as we move into the sector-specific stage. The priorities to focus on will be different between whole energy, whole electricity and whole gas system barriers, as the drivers behind them are different.

6. Do you agree with our view that National Grid's electricity SO price control should be separated from its TO price control?

We strongly agree that the ESO should have a separate price control in which our unique roles, the risks we hold and the value we create throughout the energy system are reflected. We support the aim of creating a more unified package across the ESO's price control and wider incentives, which will involve learning from the 2018-2021 incentives scheme. This new regulatory framework must enable us to deliver customer and consumer value, promote a whole energy system approach and be adaptable to future market conditions, and we want to work closely with Ofgem and stakeholders to identify the best framework for the ESO.

7. Do you agree that we should be considering alternative remuneration models for the electricity SO?

— **If so, do you have any proposals for the types of models we should be considering?**

It is essential that alternative remuneration approaches are considered for the legally separated ESO. The funding model needs to enable the ESO to deliver for consumers, and to fund us in a way that does not introduce excessive risk. A traditional, purely RAV-based approach will not be sufficient to fund the ESO to carry out its roles or ensure that it is financeable.

We have done some work to explore alternative base funding models that might be more appropriate. These are briefly explained below.

- **Margin** – provides a fixed percentage return on operational costs. The Data Communications Company (DCC) is regulated under a Margin model.
- **Layered**[2] – breaks down the business into different layers of capital, business activities and risks, and funds each of them efficiently. The Northern Ireland System Operator (SONI) uses a Layered model.
- **Commitments** – essentially a contract between the company and its customers, rather than with the regulator, supplemented by some light touch regulatory oversight. Commitments (i.e. outputs) and the prices that customers are willing to pay for them are agreed through constructive engagement at the start of the process. Allowances are included within these prices and could be subject to an ex-post review, therefore are not fixed upfront. This model is used by Gatwick Airport.
- **Performance** – essentially a 100% incentives model, with return linked purely to performance against outputs and no return on totex. It differs from the Commitments model because fixed allowances are set by Ofgem for the price control period.

We have performed an initial assessment of these models against a set of criteria including business characteristics; financeability; industry and consumer needs; Ofgem's principles and requirements; and regulatory precedents within and outside of the energy sector. Based on this, our initial thoughts are that the Margin and Performance models may not be best suited to the ESO:

- A Margin appears too crude a measure to apply to a complex business, as it doesn't reflect the different activities and risks within. There is no recognised corporate finance theory for determining the appropriate margin and therefore it can only be calibrated through benchmarking, which is difficult to do for the ESO as there are no direct comparators.
- Being solely dependent on performance in a Performance model means there is a limited margin for error, which could cause the ESO to become a risk-averse business. It is unlikely that the ESO would be financeable due to the lack of baseline remuneration.

We intend to explore the Layered and Commitments models in more detail, given their ability to be fully tailored to the ESO business.

The Layered model recognises that, for businesses with a wide range of different types of activities and risks, a single method of remuneration is potentially too blunt an instrument. Given its application in SONI and EirGrid, it is a relatively familiar financing model; and can be designed to avoid abnormal profits. We believe it is capable of making the business financeable and credit-worthy, due to the targeted remuneration of the varied activities and risks the ESO undertakes and holds.

Defining the different layers would be a complex process, and it would be vital to ensure they are defined and remunerated in a way that drives the right behaviours from the ESO. We would need to work closely with Ofgem and stakeholders to develop these layers and ensure they are transparent.

[2] Alternative names for the Layered model include the Hybrid or Policy Instrument Targeted model. This model provides a return for values, activities, risks and layers of capital.

The Commitments model represents a fundamental change in approach: Ofgem would take a step back, with more responsibility for funding decision-making taken on by customers and consumers. The application of this model in practice is not yet clear, but the general approach is that the ESO would negotiate prices for delivery of commitments with customers and consumers. We would deliver the services that customers and consumers want, at the quality agreed and at the price they would be willing to pay. Allowances would be included within these prices. Some explicit costs could be subject to an ex-post review and therefore would be able to flex in order for the ESO to deliver the level of quality agreed; customers would receive a fixed outcome, allowing for flexibility around certain variable costs outside of our control.

This would enable us to strongly align our activities with customer and consumer interests. We want to give our customers and stakeholders a clearer voice, and we like the principle that they should have more responsibility in deciding the prices they pay for our services. However, the practical application of this model and the commitment required from stakeholders must be more fully understood.

This summary simply represents our emerging thoughts on potential models, and we want to hear all views on them and explore options further in collaboration with others. We are also open to any additional suggestions for how to appropriately fund the ESO into the future.

8. Should we consider alternative remuneration models for the gas SO?

- **If so, why and what models?**

The Gas System Operator is remaining under a single licence with the gas transmission owner due to the benefits this delivers to customers and consumers in GB. There are different drivers in electricity – such as new participants and business models with an increasing range of needs – that mean it is best for customers and consumers for the ESO to be legally separated from the electricity transmission owner, and for the ESO to have its own remuneration approach.

Gas SO-specific outputs should be developed in RIIO-2 to drive the behaviours that deliver what customers and consumers need, reflecting the Gas SO's role. This is an opportunity to consider shared outputs between the ESO and GSO, and we are keen to participate in this through the focus on whole system measures as we move into the sector-specific stage.

9. What options, within the price control, should be considered further to help protect consumers against having to pay for costly assets that may not be needed in the future due to changing demand or technology, while ensuring companies meet the reasonable demands for network capacity in a changing energy system?

The Network Options Assessment (NOA)[3] is an effective and valuable tool that we currently use to help balance the risk of over and under investment in electricity transmission network assets.

We are taking steps over the remainder of RIIO-T1 to increase the value the NOA drives and further reduce the risk of assets being under-utilised or constraint costs rising. The new whole electricity system approach will invite solutions to meet transmission network needs from a wider range of potential participants, including DNOs and market participants. We will compare network and non-network solutions across the transmission and distribution systems to recommend the most cost-effective solution for consumers. We are also expanding the network requirements it applies to through considering the needs across the whole year to a greater extent, as well as incorporating regional voltage challenges.

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[3] https://www.nationalgrid.com/uk/publications/network-options-assessment-noa

Background on the NOA: it looks across the Future Energy Scenarios (FES) to recommend the approach – whether or not to build network – that will result in the least worst outcome for consumers in uncertain futures. By taking a decision on a single year basis, it delays making a decision on investment until there is more certainty in the future. This reduces the risk of under-utilised assets. Making an annual assessment on investment also takes the decision before constraint costs reach an unsustainable level, supporting the move to a low carbon and smart economy.

There is potential for the NOA to drive further value in the future by applying the approach to a wider range of requirements. This could include lower value network developments, applying it consistently across the 132kV level, or additional technical requirements. Innovation funding could potentially help accelerate the developments. We will explore the potential benefits and practicalities of this with our stakeholders, including TOs and DNOs, in advance of the sector-specific consultation.

We are currently of the opinion that the NOA is a good tool to continue to use in order to manage uncertainties that can evolve in line with the developing transmission system, although we intend to keep its relevance under review as we move into the future.

Alongside the NOA we are deeply engaged in promoting reform to the existing Charging and Access arrangements, through Charging Futures. As Lead Secretariat for this programme, our aim is to create the structure that allows the broadest set of network users to be able to understand and contribute to the evolution of these frameworks across both transmission and distribution voltages. As well as facilitating the process, we are fully supporting Ofgem's Network Access Reform project and the work of the Task Forces in determining options for optimal ways to allocate access to the system and putting in place requirements for enhanced cost reflectivity, and the role it will play in achieving this objective.

We continue to advocate options within the Task Forces that will deliver a commercial regime that allows new technologies and business models to play their full part in the future energy system, levelising the playing field and optimising the utilisation of existing network assets. As the Network Access Reform project progresses and likely changes to the charging and access frameworks become clearer, we will need to consider any developments that are required to existing industry processes.

10. In light of future challenges such as the decarbonisation of heat, what should be the role of network companies, including SOs, in encouraging a reduction in energy use by consumers in order to reduce future investment in energy networks?

- **What could the potential scale of this impact be?**

RIIO-2 represents an opportunity for the ESO to evolve and develop new activities for the future, based on customer and consumer needs. As we move towards a future where consumers can pay for their energy in real-time, the ESO could have a role in educating system participants, including consumers, on how their energy is generated and used in real-time. This would include expanding the work we are undertaking on energy efficiency in our Future Energy Scenarios (FES)[4]. Through educating system participants, we would be increasing awareness of how energy usage can cause the cost of energy to change dramatically between peak and trough.

There is the opportunity to build on existing activities such as our delivery of NOA and FES. This would expand our role in informing government policy by defining how strategic decisions would affect the long term network costs. From our current role, we could make a step change to specifically target issues covered in the FES, such as energy efficiency, and carry out further analysis to advise Government. This could be used to educate the industry and Government on understanding how decreasing end consumer consumption, and changing when energy is consumed, could contribute towards decreasing future network investment in infrastructure or balancing operations.

It is also important that throughout RIIO-2 we continue our role in facilitating the Power Responsive Programme[5]. As highlighted in the ESO 2018-2019 Forward Plan, we are looking to grow the programme through coordinating National Grid input into innovation projects and expanding the annual conference and Flexibility Forum to increase participation and develop our markets. To date, the work we have done through the Flexibility Forums has promoted demand side flexibility opportunities across transmission and distribution, including cost saving opportunities for supporting the deferral of network investment. This has provided a platform for large energy users

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[4] https://www.nationalgrid.com/uk/publications/future-energy-scenarios-fes

[5] Power Responsive is a stakeholder-led programme of work, facilitated by National Grid, to promote the growth in demand side flexibility (DSF) in GB markets, including load response, small-scale generation and electricity storage.

to help shape future markets. We are also addressing the importance of having clear pricing signals that enable parties to consider their energy use.

Each of these activities has the potential to significantly affect the need for future investment and provide benefits in finding more efficient solutions. There is significant value in enabling a smarter future, which considering end-use efficiency is part of; any additional roles would need to be tested and developed with customers and stakeholders to ensure they would add value.

11. Do you agree with our proposal to retain dedicated innovation funding, limited to innovation projects which might not otherwise be delivered under the core RIIO-2 framework?

We strongly support the continuation of separate innovation support in RIIO-2. The core RIIO activities allow for us to take investment decisions where the benefit is captured by the ESO at the agreed level of risk. Ring-fenced innovation funding enables us to invest in higher risk activities, and to make investments where the benefits return to other organisations across the energy system.

12. Do you agree with our three broad areas of reform: i) increased alignment of funds to support critical issues associated with the energy transition challenges ii) greater coordination with wider public sector innovation funding and support and iii) increased third party engagement (including potentially exploring direct access to RIIO innovation funding)?

We agree with increasing the alignment of funds to support critical issues associated with energy transition challenges. We also agree that there should be greater coordination with wider public sector innovation funding and support, as well as increased third party engagement. However, we strongly disagree with directly funding third party innovation as we believe that the ability to allocate Network Innovation funding should not be held by those who propose solutions, but by those who own and operate with the problem and have to live with the solutions.

If Ofgem were to take on the role of directly approving funding, it would need to possess a large department of experts who could evaluate the technical and commercial merit of individual proposals, and would still need to pool from the experience and expertise of the various licensees in order to best judge the various proposals. The current status quo allows innovation departments that are embedded within network companies to pool expertise from existing cross-company competencies, allowing for a faster and more efficient process.

Another possibility would be for the creation of a whole system innovation fund to be managed by a single licensee or cross-licensees programme. The ESO could potentially have a role in the management of such a fund because of its holistic view of system needs and concerns.

13. What are the key issues we will need to consider in exploring these options for reform at the sector-specific methodology stage, including:

(i) What the critical issues may be in each sector and how we can mitigate the bias towards certain types of innovation through focusing on these issues?

(ii) How we can better coordinate any dedicated RIIO innovation funding with wider public sector funding and support (including Ofgem initiatives such as the Innovation Link and the Regulatory Sandbox)?

(iii) How we can enable increased third-party engagement and what could be the potential additional benefits and challenges of providing direct access to third parties in light of the future sources of transformative and disruptive innovation?

There are a number of issues that we deem critical that could be addressed to improve the support for innovation in RIIO-2:

- We believe there is an issue related to the type of innovation that is currently pursued in the various regulated entities; mainly that most projects are aimed at improving existing activities and processes – what is normally referred to as incremental innovation – instead of completely transformative new ways of carrying out activities (i.e. disruptive innovation). In order to address this we suggest having an additional ring-fenced innovation fund accessed only by truly disruptive innovation.

- There is an issue with how the Innovation fund is determined i.e. as a percentage of the overall revenue of the licensee. We feel that the actual fund available should not be tied to the revenue itself; instead it should be determined as an overall percentage of system costs, since the benefits realised are aimed at addressing system wide concerns.
- Some years not enough quality projects are started, meaning that the available NIA funding is underspent; whereas some years there is an excess of projects, which results in having to sacrifice or delay these activities. This can be addressed by allowing for a rollover mechanism for NIA funding that enables the allowance to be spent across the full price control period rather than being allocated to specific years. This would create flexibility for funding to address challenges in the year they arise, as well as avoiding the inherent inefficiency of forcing short-term projects and investment towards the end of the price control period.

In addition, we think there is potential for coordinating with other public sector funding. This could be done through cross-industry events and roundtables with agencies that focus on similar issues. We strongly support increasing engagement with third parties and believe this can be achieved through greater transparency, communication and collaboration across industry; for example through our SO Innovation Strategy, at events such as Open Innovation Days and through participation in industry initiatives such as the Open Networks Project and other ENA programmes.

However, we strongly disagree with direct innovation funding to third parties; funding should always be linked to, and directed by, the party that owns and operates the challenge. If third parties are funded in isolation, there is a high risk of developing solutions that do not match any real-world problem, or of developing expensive solutions to problems that have evolved or have been partially addressed through other means. The process to approve a project for funding should be a rigorous one, and it requires resources and a thorough understanding of the various issues affecting the network systems. For a single tender there are often many possible start-ups and universities which differ only slightly in their proposed solutions, so there is a strong risk of over-developing a single area instead of exploring a variety of opportunities.

14. What form could the innovation funding take?

- **What would be the advantages and disadvantages of various approaches?**

We support the continuation of innovation funding in the current allowance structure of NIC and NIA, but we would like the opportunity to work with Ofgem and others to enhance these structures so that they work in a more optimal way for all networks and are tailored to the ESO. This includes a change to the internal/external split. We also propose that an annual rollover mechanism is put in place to maximise use of the allowances, similar to the mechanism provided to SSE in RIIO-1.

15. How can we further encourage the transition of innovation to BAU in the RIIO-2 period?

- **How can we develop our approach to the monitoring and reporting of benefits arising from innovation?**

We believe there is a clear need for an implementation budget to embed solutions so that reduced system costs can be realised. The solutions developed through innovation projects often have the potential to deliver benefits that are either not captured by the ESO (i.e. the system benefits described in our answer to question 11), or not quantifiable (e.g. the cyber-security benefits of blockchain). These issues can then weaken the investment case for implementation into BAU using core RIIO funding.

With regards to benefit tracking, the benefits of each project are different; therefore the measure of successful innovation should be how well projects and portfolio management are conducted and the consumer value they deliver. On a project-by-project basis, a measure of project-specific benefits should be identified at the project proposal stage.

16. Do you agree with our proposal to extend the role of competition across the sectors (electricity and gas, transmission and distribution)?

— **What are the trade-offs that will need to be considered in designing the most efficient competitions?**

Competition has an important role to play in reducing the costs of investment in electricity networks, and we support extending it where it is demonstrated to be in the best interests of consumers. We have focused our answer on the electricity sector given this is an ESO response.

Some types of project are more suited to competition than others; Ofgem should conduct a bespoke cost-benefit analysis for each project meeting the criteria to determine whether running a competition would be beneficial to consumers, and whether an early or late Competitively Appointed Transmission Owner (CATO) model would be most appropriate. The early model of competition should be introduced in the long term as it provides the greatest potential for additional consumer value. Nevertheless, there are a number of factors that need to be assessed in determining the most beneficial point in the process for competition. These include:

- Finding the right balance between sufficiently early competition to drive innovation and sufficient certainty for third parties to bid in;
- The allocation of roles within the process that reflect skills, expertise, access to information and level of objectivity; and
- How to manage uncertainty and the impact this can have on costs.

FTI Consulting produced a report[6] in 2017 on Extending Competition in Transmission that still carries relevance and explores many of the trade-offs.

17. Do you consider there are any reasons why our new, separable and high value criteria might not be applicable across all four sectors?

— **If so, what alternative criteria might be suitable?**

We do not believe there are any reasons why the criteria could not apply across electricity transmission and distribution. As a result of the developments to the NOA process outlined in response to question 9, we will in future be assessing distribution network solutions to meet transmission network needs. Therefore it would be beneficial if the criteria were the same across the electricity transmission and distribution sectors, while ensuring that areas with the most costs are focused on. The threshold for the high value criterion should continue to ensure there are benefits for consumers once the costs of running the competition are factored in.

It is also important to ensure that the separable criteria are applied in a meaningful way, with clear electrical separability between different owners' assets.

18. What could the potential models be for early stage competitions (for design or technical solutions)?

— **What are the key challenges in the implementation of such models, and how might we overcome them?**

There are two potential options for an early stage competition: the early model and the very early model. Following the very early model approach, running a competition earlier in the development process maximises the potential for innovation, and therefore maximises cost savings. However, it means there is more uncertainty surrounding the need, scope and timing of the solution at the point at which the competition is run.

In the long term we would be keen to explore the potential for a very early model, but suggest that a good interim step would be to follow an early model. As we are still in the early stages of the CATO regime, we believe this provides the best compromise between innovation and bidder certainty, and the best opportunity to reduce costs for consumers. Once a working early model has been put into practice, options for running the competition earlier in the process and how this could be incorporated into the NOA process could be explored.

We welcome the opportunity to work with Ofgem and other industry parties to further develop a workable early CATO model with clear accountabilities, interfaces and minimal duplication. We

[6] https://www.ofgem.gov.uk/system/files/docs/2017/04/ena_working_group_report_16_feb_2017.pdf

look forward to the greater level of certainty that the legislative changes required in RIIO-2 will bring.

19. What views do you have on our proposed approach to specifying outputs and setting incentives?

- **When might relative or absolute targets for output delivery incentives be appropriate?**
- **What impact would automatically resetting targets for output delivery incentives during a price control have? Which outputs might best suit this approach?**

The RIIO focus on outputs and incentives has delivered value for consumers in RIIO-1 and should continue in RIIO-2. Financial incentives are an effective tool to focus the ESO on innovating and taking risks realise improvements and deliver benefits for consumers; the structure that will be in place following legal separation allows for incentives to drive the right ESO behaviours.

We must define ESO-specific outputs that reflect our principles and roles in the wider energy system. Our 2018-2019 Forward Plan allows us to shape outputs to meet the needs of customers and consumers at that point in time; we need this ability to adjust outputs to continue into RIIO-2 given the rapidly changing system and market environment.

We do not believe that a relative approach to setting outputs and incentives would work for the ESO as we have no direct comparators to benchmark against, and the outcomes that customers and consumers expect from us will change during the price control period. We support the use of absolute targets where they can be defined, and welcome Ofgem's proposal to provide clarity on the consequences of not delivering a target.

The roles and principles we have agreed with Ofgem in our 2018-2021 incentives scheme are more appropriate output categories for the ESO than the six identified in RIIO-1. We intend to learn from the 2018-2021 incentives scheme to further consider and build on these roles and principles, and therefore our identification of outputs and incentives.

20. What views do you have on our general approach to setting cost allowances?

We strongly support the RIIO principle that companies are incentivised to outperform cost and output targets. We need to consider the appropriate approach to setting cost allowances for the ESO as we develop the framework.

We agree that uncertainty mechanisms should be used for costs that cannot be forecasted and we are keen to work with Ofgem and stakeholders to identify appropriate mechanisms in the sector-specific stage.

21. What views do you have on our intention to index RPEs?

We support the suggestion to index RPEs to protect consumers from additional costs that companies have no control over. We agree that further work will be needed to identify the appropriate set of indices in each sector.

22. What impact would resetting cost allowances based on actual cost performance (eg benchmarked to the average, upper quartile or best performer) during a price control have?

- **Which cost categories might best suit this approach?**

We cannot comment on the potential impact or cost categories until we have identified the ESO's regulatory framework.

23. Do you agree with our assessment of IQI?

The IQI currently incentivises businesses to submit accurate business plans. The strong totex efficiency incentive, which is derived through the IQI, is proving to be very effective in driving improvements in efficiency and delivering benefits that are shared with consumers within the period and into perpetuity. Nevertheless, we agree with Ofgem's assessment that IQI is a complicated regulatory mechanism and could be simplified.

In addition, the enhanced stakeholder engagement approach should drive the development of more accurate and robust business plans.

24. Do you agree with our assessment of fast-tracking?

We agree that fast-tracking is most applicable where there is adequate diversity of ownership to allow comparison and benchmarking across plans. We do not believe fast-tracking would be appropriate for the ESO as we have no direct comparators in the sector.

25. What are your views on the options we have described?

- **How might these apply in the different sectors?**
- **Should we retain the IQI, amend it or replace it entirely?**

We support the removal of fast-tracking for transmission; the focus on stakeholder engagement should encourage the development of robust business plans. We look forward to working with Ofgem to explore efficiency incentive rates.

26. What factors should we take into account when assessing plans for example, under fast-tracking (option 2) or a single business plan incentive (option 3)?

We support the option for a single business plan incentive, but this would need to be considered and developed further depending on the regulatory framework the ESO adopts. How the incentive is calculated will also depend on the regulatory framework adopted and the nature of the ESO business.

27. Do you have any views on the factors we should take into account when deciding how to differentiate efficiency incentives for companies if we do not use the IQI?

We think both qualitative and quantitative factors should be taken into account and that consideration should also be given to fair returns and financeability. This, in addition to the enhanced engagement model being proposed for transmission, will ensure detailed scrutiny of our business plans by informed stakeholders. The independent reports resulting from this process will allow Ofgem to come to an even more informed conclusion regarding the efficiency level within plans.

28. Is an explicit upfront financial reward required to incentivise companies to submit high quality business plans, in addition to differential incentive rates or sharing factors?

As mentioned in our answers above, the strong totex efficiency incentive (derived through IQI) is proving very effective, and the enhanced stakeholder engagement approach will further encourage the development of robust business plans. Any framework introduced for the ESO should consider the opportunity to provide a further incentive to submit efficient business plans.

29. Do you have any views on our proposal to remove fast-tracking for transmission?

We support the removal of fast-tracking for transmission. The lack of adequate benchmarking and comparators for the ESO make the validity of fast tracking less applicable. In addition, the process to arrive at the settlement needs to be stakeholder-led and robust. By removing fast tracking (and an early submission deadline) we can carry this out while fully focusing on a single submission.

30. Do you have any views on how we propose to incentivise better business plans from transmission companies, including removing the prospect of an upfront financial or

procedural reward and placing greater reliance on user and consumer engagement and scrutiny?

Please see our answer to question 27.

31. How can we best improve the suite of annual reporting requirements to be as efficient and useful as possible?

We need to know what the regulatory framework will look like for the ESO before we are able to identify the appropriate reporting requirements.

We want to maximise the transparency of the reporting process so that our customers have visibility of the services they are receiving and what they are paying for. Further to this, in order to make reporting as useful as possible, it is important to maintain a consistent format and we should look at having a standardised method of reporting throughout the RIIO-2 price control to constantly drive efficiency.

We will develop our reporting requirements with stakeholders and will test them to ensure they are fit for purpose, deliver value, can be produced easily and cost-efficiently, and meet the needs of our customers and stakeholders. The 2018-2021 incentives scheme is allowing us to trial a new method of annual reporting on our incentive schemes in the form of our ESO Forward Plan; we will learn from and build on this to expand our reporting to cover our entire regulatory framework.

32. How can we make the annual reports easier for stakeholders to understand and more meaningful to use?

We will use our learning from the 2018-2021 incentives scheme to develop our annual reports and identify areas that may need improvement. As part of our stakeholder engagement approach, we will test our reports with stakeholders and customers to ensure they are delivering value and meeting their needs.

33. What are your views on the policy objectives that we have defined with respect to the cost of debt?

34. Which option might help to ensure that the approach to updating the cost of debt methodology delivers best value to consumers and why?

We support Ofgem's proposed principles for setting the cost of debt allowance. Nevertheless, the ESO cost of debt allowance should be considered in the context of its asset life, specific business characteristics and any proposed regulatory capital structure.

35. Do you agree with our proposed methodology to estimate the cost of equity?

While we do not currently know the nature of the framework that will be adopted for the ESO, it may require consideration of the equity mechanism. The cost of equity methodology would need:

- To reflect current and future investor and consumer requirements;
- To consider appropriate ESO specific characteristics, including the additional cash flow risk held by the ESO as a collection agent; and
- To consider asymmetric risks.

The equity range should reflect the specific roles and risks of the ESO, which the current range does not seem to do. We look forward to working with Ofgem to inform the beta for the ESO by using potentially appropriate comparators such as EirGrid and SONI.

Ofgem need to set a robust approach specifically tailored to the ESO that properly assesses risk, giving weight to a range of measures such as:

- Significant exposure to cash flow volatility through our role as collection agent of industry revenues;
- Exposure to rapid industry changes and evolution of the market; and
- ESO operability.

We would welcome further discussions at the sector-specific stage as we develop a clearer view of the nature of the ESO's framework.

36. Do you agree it would be desirable to index the cost of equity?

— **Do you have views on our proposal for indexation?**

Depending on the framework adopted for the ESO, we are open to discussions about cost of equity indexation as we appreciate that the approach is consistent with the focus on legitimacy. We also recognise the requirement that the methodology is logically consistent with the method for setting the initial cost of equity, and believe that it should be transparent, easily replicated, and capable of forming part of the annual iteration process.

37. Do you consider there is merit in removing the indexation of the RAV and adopting a nominal return model in RIIO-2?

— **What would be the benefits and drawbacks?**

The unique characteristics of the ESO require us to consider financeability in conjunction with a funding model that reimburses the business in a more bespoke way. Therefore we support keeping a range of options open for the ESO at this stage, including nominal returns, as this gives us more choice at the sector-specific stage to balance consumer bill impacts and financeability issues.

38. Should the onus for ensuring financeability lie with the network operating companies in whole, or in part?

Ofgem have a duty to have regard to the network companies' ability to finance their activities; in the context of setting a price control this requires Ofgem to make sure that the resulting allowed revenues are sufficient for the notional company to be financeable and credit-worthy. Financeability of a company should be considered within the price control period and over the longer term.

The concept of financeability will need to be considered in light of the legally separate ESO. We must consider the different nature of the ESO, including its working capital requirements, which would include a requirement for funding a revolving credit facility.

39. Do you consider the introduction of a revenue floor, to protect the ability of companies to service debt, to have merit?

We do not support the introduction of a revenue floor as we do not understand how it could work in practice; we do not have the ability to update the charging tariffs during the year. Financeability will need to be discussed as part of the overall framework adopted.

40. Do you agree that Ofgem should review the causes of any variances between tax allowances and taxes actually paid to HMRC (including the treatment of group tax relief)?

— **Which of the options described in this consultation may be worth investigating further to address any material variances?**

The approach to funding corporation tax during RIIO-T1 has been effective, and we support the continued use of the T1 objectives of: providing companies with an incentive to manage their tax affairs responsibly; adequately funding at the point that tax liabilities are due; while ensuring that the risks or benefits of material tax variances outside of the control of the licensee are appropriately shared by licensees and consumers, while considering the ESO financial framework.

We agree that Option A is worth investigating further, although we recommend that Ofgem consider whether concerns could be tackled through enhanced disclosures and policy statements rather than through additional mechanisms. Option B is also worth investigating further, although we suggest that Ofgem considers how a revised ex-post pass-through basis would maintain the principles of the current mechanisms.

Option C would undermine the principle of sharing tax risks symmetrically between consumers and licensees and would leave the licensee to fully bear the risk of increases in corporation tax rates and/or changes in prevailing accounting standards, case-law or HMRC practices. As such, we do not agree with exploring Option C further.

41. Do you agree that we should move away from RPI for RIIO-2 (including for the indexation of the RAV if retained as a feature)?

- **If yes, which of the two potential indices – CPI or CPIH – might be most suitable?**
- **Is a phased transition between RPI and the chosen successor index necessary or desirable?**

We support the proposal to move away from RPI to CPI-based. The specific index to be used can be decided on at the sector-specific stage.

Any transition in inflationary factor should remain neutral from an investor value perspective. A transparent transition process is essential for maintaining investor confidence and needs to be considered as part of the framework adopted.

42. In the light of our proposal not to amend, at a price control framework level, our policies for depreciation and asset lives set in RIIO-1 do you have any views or suggestions that you wish to put forward?

Depending on the framework adopted for the ESO, we support the option of keeping the potential use of regulatory depreciation as a lever to address financeability issues during the sector-specific consultations.

43. We propose to review the fast/slow money split at the business plan submission stage, do you have views that you wish to put forward at this stage?

Depending on the framework adopted for the ESO, we support the review of the fast/slow money split at the business plan submission stage.

44. Do you think existing mechanisms for providing allowed revenue to compensate for the raising of notional equity are appropriate in principle and in practice?

It is important to note that this mechanism is currently included as part of NG ETO and not in the ESO. Depending on the framework adopted for the ESO, we support exploring mechanisms for providing allowed revenue to compensate for the raising of notional equity for the separated ESO.

45. What are your views on each of the options to ensure fair returns we have described in this consultation?

We believe that companies should be able to legitimately outperform against baseline assumptions on the basis of additional consumer value added. The mechanisms that should be applied to the ESO will depend on the regulatory framework. The concept of relative returns should not be adopted as there are no direct comparators for the ESO.

Appropriate absolute measures can drive the correct behaviour and we should apply the learnings from our 2018-2021 incentives scheme to the framework.

46. Is RoRE a suitable metric to base return adjustments on?

- **Are there other metrics that we should consider, and if so why?**

Based on Ofgem's views published through the Final Proposals and RIIO Accounts processes, we agree that a performance measure should:

- Provide transparency of information that enables investors, rating agencies, consumers and other stakeholders to understand whether networks are creating value under an incentive based regulatory regime; and
- Reconcile the relationship between International Financial Reporting Standards (IFRS) reported profit, the regulatory treatment of expenditure and the way we are rewarded.

The RORE is not an appropriate metric for assessing performance for a separated ESO due to its asset-light nature. An appropriate performance measure should be considered as we develop the ESO's framework.

47. Do you have any views on the interlinkages and interactions outlined in this consultation and those that we will need to consider as we develop our sector-specific proposals?

48. Do you have any views on the issues highlighted that we will consider as we develop our sector-specific proposals?

49. Are there any sector-specific issues or policy areas that we should ensure we review and consider as we develop our sector-specific proposals?

50. Do you have any views on our high-level proposals for timing of RIIO-2 implementation, and on our proposals for engagement going forward?

We are excited to work closely with Ofgem and stakeholders as we move into the sector-specific stage and develop the right price control measures for the ESO. These should build on and expand arrangements in our 2018-2021 incentives scheme. In considering all the issues and opportunities highlighted in the consultation, it will be important to take into account the specific nature of the ESO and be open to the possibility of different measures and treatment to enable us to deliver our role at the heart of the energy system. It is essential that we identify and agree an appropriate financing model for the ESO as a legally separate company.

We want to ensure that our RIIO-2 framework enables us to step up to exceed the expectations of our customers and deliver consumer value by operating an electricity system that evolves to meet society's ever-changing needs. We want to build on the increased transparency and stakeholder engagement we are delivering through our 2018-2021 incentives scheme, and continue to enhance our relationship with customers and consumers as we develop our RIIO-2 framework.

We welcome the longer timeframe that Ofgem has set out to develop sector-specific proposals and submit business plans. This gives us the opportunity to undertake detailed thinking and analysis in collaboration with others, and to incorporate more learning from the 2018-2021 incentives scheme, to ensure we can make informed decisions on the best model for the ESO.