



RIO-2 Draft Determinations for Transmission, Gas Distribution and Electricity System Operator

Consultation response

September 2020

This is a response to RIO-2 Draft Determination consultation. Our answers refer to the parts on Electricity Transmission and the Electricity System Operator. The response has been compiled by RenewableUK with input from our membership.

RenewableUK is a membership body with a mission to build our future energy system, powered by clean electricity. We bring them together to deliver that future faster; a future which is better for industry, billpayers, and the environment. We are a UK membership body with a mission to ensure increasing amounts of renewable electricity are deployed across the UK. We support over 400 members to access UK markets and to export all over the world. Our members are business leaders, technology innovators, and expert thinkers from right across industry.

Achieving the UK's legally binding net zero will mean the deployment of renewable energy must increase at a significant and consistent rate over the coming decades. National Grid's most recent Future Energy Scenarios¹ show that renewable capacity could more than double by 2030 and will require at least 3 GW of wind to be built every year from now until 2050 while the Government has committed to the deployment of 40GW of offshore wind by 2030. Achieving this will require all parts of the energy system to align in delivering net zero that provides best value for consumers. The renewable energy sector continues to be in a position to play the most cost-effective role in delivering a net zero pathway, decarbonising the power sector, and providing the solution to challenging issues within heating and transport.

In light of the COVID-19 pandemic and the significant impact on our economy, the Government has recognised the need to stimulate economic growth in a sustainable and resilient way. Clean infrastructure investment in renewable energy, storage and grid modernisation, has been identified as an area that can play an important role stimulating economic growth². The Committee on Climate Change also highlighted in its Reducing UK Emissions Progress Report to Parliament³ published in June 2020 that choices in the coming months must steer a

¹ National Grid ESO, 'Future Energy Scenarios', July 2020 <https://www.nationalgrideso.com/future-energy/future-energy-scenarios>

² Oxford Smith School of Enterprise and the Environment, 'Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?', May 2020 <https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf>

³ Committee on Climate Change, 'Reducing UK Emissions Progress Report', June 2020 <https://www.theccc.org.uk/wp-content/uploads/2020/06/Reducing-UK-emissions-Progress-Report-to-Parliament-Committee-on-Cli.-002-1.pdf>



recovery that drives vital new economic activity, accelerates our transition to net zero and strengthens our resilience to the impacts of climate change.

We welcome the opportunity to respond to the consultation on the RIIO-2 Draft Determinations. We understand and support the approach of provision of baseline funding allowances in combination with uncertainty mechanisms which the RIIO-2 framework is based on. Our ability to meet net zero, and decarbonise the UK economy, is dependent on our deployment of high levels of renewables at pace over the course of RIIO-2 and beyond. The price control framework should drive investor confidence that networks are provided with sufficient and timely allowances which reflect the needs of future consumers as well as the value for money of networks in five years' time. In the long run it may prove to be more costly to consumers if networks are expanded in a piecemeal fashion.

By making the right decisions now we can ensure that RIIO-2 facilitates the journey to meet net zero while delivering long-term value for money and a green economic recovery. We have concerns regarding the proposed package of outputs, incentives and uncertainty mechanisms which could delay the ambition to achieve net zero and green economic recovery. In responding to the consultation, we have set out below the key issues that we believe must be addressed ahead of the Final Determinations in December 2020.

RIIO-2 Core Document comments

Net zero re-opener

Consultation Questions Ref: Q21-23

The introduction of a net zero re-opener is a positive step and uncertainty mechanisms are appropriate where policy and frameworks are still being developed and the requirements are still unknown due to the rapidly changing nature of the sector. However, we do have concerns that a long, onerous processes can seriously risk delaying investment in vital infrastructure and ultimately jeopardise connecting new renewable generation needed to stay on track for net zero. To this point, the 'direction of travel' appears to not be aligned with supporting areas of the UK which already face chronic, long standing constraints such as those in Wales. We further note that the development of offshore grid regime and decarbonisation of heat would require immense amount of work over the upcoming RIIO-2 period.

We support the intention set out in Ofgem's Decarbonisation Action Plan⁴ to make network price controls flexible and adaptable to deliver net zero. At this stage there is little clarity on the design of the specific net zero re-opener or justification for the allocated £10bn spend. Ofgem should clearly set out the materiality threshold, timings and assessment stages which would apply to any project which falls within the scope of the net zero re-opener. Where a need for network investment has been identified and recommended, such as supporting offshore transmission development co-ordination, the uncertainty mechanism process should facilitate the network companies' access to additional funding to meet requirements without undue delay. We welcome more detail on the specific design of the net zero re-opener in the run up to the Final Determination by the end of the year.

⁴ Ofgem, 'Decarbonisation Programme Action Plan', February 2020
https://www.ofgem.gov.uk/system/files/docs/2020/02/ofg1190_decarbonisation_action_plan_revised.pdf

Establishing a Net Zero Advisory Group to inform the decision and timing of big strategic investments is another positive step. However, the group is proposed to meet once every six months⁵ which we do not believe is in line with Ofgem's ambition to make quick decisions regarding projects. It is our understanding that uncertainty mechanisms and particularly the net zero re-opener are the main tool to encourage anticipatory grid investment over the shorter, five-year price control period. While we support the arguments that decision-making needs to be underpinned with valid and justified evidence, we would encourage Ofgem to review the frequency of the Net Zero Advisory Group meetings and recommend the group meets every two months, and ensure it is aligned with devolved administrations. This will be particularly important if an assessment is carried out on case-by case basis as suggested in the Draft Determination. We further note that the potential resource burden could be quite significant and this should not act as a barrier to Ofgem's decision-making process.

Responding to policy changes

Consultation Question Ref: Q20

We question the decision not to implement legislative policy change re-openers. As recognised in the consultation document, a number of such changes emerged in RIIO-1 and introducing a mechanism for RIIO-2 is critical to responding to wider policy changes that may result in unforeseen costs.

The 2020s will be a critical era on the pathway to net zero as the country moves to fully decarbonise heat, power and transport. It is likely that new legislation, technologies and ambitions will require networks and their funding stream to be flexible, ensuring the best possible solutions for consumers. In this regard, we are already seeing areas where policy and legislation may be reviewed, for example the offshore grid regime and bringing forward the ban on the sale of new internal combustion engine and diesel vehicles to 2035. It is important the RIIO-2 determinations do not restrict this wider ambition and change; therefore, we recommend that Ofgem re-assess their decision not to implement legislative policy change re-openers.

In this context, Final Determinations should be aligned to the delivery of the Integrated Offshore Transmission review where a more strategic approach and anticipatory investment may have a wider role to play. Any delay to this work during the RIIO-2 price control period could risk the delivery of 40GW of offshore wind by 2030 harming investor confidence in the UK offshore wind market, and will certainly put at risk the ambition 75GW of offshore wind by 2050.

Data and cost assessment model

It is our understanding that the data underpinning the Draft Determinations does not take account of the impact of the COVID-19 pandemic. The implementation of lockdown measures and the recession that has followed is likely to cause unforeseen cost increases. This must be addressed before the Final Determinations are published in December 2020. It has also been brought to our attention that the network companies believe there are a number of inconsistencies within Ofgem's cost assessment model. If this is the case, we would wish to see this rectified ahead of the Final Determinations.

⁵ Ofgem, 'Terms of Reference – Net Zero Advisory Group', August 2020
https://www.ofgem.gov.uk/system/files/docs/2020/08/terms_of_reference_-_net_zero_advisory_group_0.pdf



Electricity Transmission sector comments

Uncertainty Mechanisms

Over the next decade we will see huge increases in the capacity of renewable generation onto the energy system as we prepare to cope with the demands of electrifying other sectors. With the reintroduction of onshore wind into the Contracts for Difference (CfD) mechanism and with the UK government target to deploy 40GW of offshore wind by 2030, ensuring that transmission network capacity keeps pace with developments and delivers connections and grid upgrades in a timely manner is crucial.

The current design of uncertainty mechanism processes seriously risk delaying investment. Placing greater emphasis on uncertainty mechanisms means that the design must be simplified but also flexible enough to allow projects to be delivered quickly. For example, the RIIO-1 Strategic Wider Works process allows for TOs to apply at any time, while a decision could be reached within 6 months. This is much more favourable to current CfD timelines than the processes proposed for RIIO-2. With the correct alignment between uncertainty mechanisms, the CfD auction process has the ability to unlock private investment in energy infrastructure with long-term funding models that minimise the impact to consumers.

In addition, the pre-construction funding mechanism proposed presents a significant risk to delaying the connection of new projects. National Grid Electricity Transmission has carried out an analysis of the RIIO-2 Draft Determination which indicates that it could put at risk the target to deploy 40GW of offshore wind by 2030. Approximately 8GW of offshore wind capacity across NGET region is contingent on large network reinforcements that Ofgem has not provided the necessary funding for pre-construction activities. We have concerns that a substantial amount of both offshore and onshore wind capacity could similarly be put at risk of having its connection delayed in other TO regions. Implementing an ex-post adjustment places far greater risk on network operators as there is uncertainty over recovering the costs. Combined with downward pressure on TO allowable returns that would not be reflective of the increased risk will ultimately inhibit project progression. We consider this to be contradictory to how uncertainty mechanisms are intended to work.

Pre-construction work (such as comprehensive optioneering, stakeholder engagement and procurement) is a fundamental requirement for the TO to provide the evidence and certainty that Ofgem will look for in order to approve a scheme. The proposals to fund the construction of these reinforcements will lead to delays due to the time required by Ofgem to assess the two stages of information provision they have specified. This could see a delay of between 2 to 5 years for renewable capacity, putting offshore wind deployment targets at significant risk whilst delaying wider offshore wind sector investment and supply chain development opportunity.

Furthermore, the onshore effects of offshore deployment and integration is not recognised in the Draft Determination, and this could add further risk and delay the necessary works. This risk is also one that is perceived by generation project developers, who will face greater uncertainty over connection dates for projects. As a consequence, this will either drive up project costs, which will be passed onto consumers, or prevent projects going ahead. We also believe that it will make shared connections offshore more challenging, as it brings in greater uncertainty to the project planning.



We would welcome clarification as to how TOs are expected to provide sufficient certainty for projects that form part of the uncertainty mechanism in cases where pre-construction funding has been rejected. This issue must be addressed before the Final Determinations are published in December 2020. This is particularly pertinent for Medium Sized Investment Projects (£25-£100m) and Large Onshore Transmission Projects (greater than £100m) due to their scale.

Consultation Question Ref: ETQ10

The Large Onshore Transmission Projects (LOTI) re-opener, which applies to reinforcements and grid upgrades greater than £100m, is proposed to replace the RII0-1 Strategic Wider Works process. The current design and suggested timings for LOTI could significantly delay decision making up to 30 months should Ofgem reach a decision based on Final Needs Case. We are concerned that introducing new models for competition, such as CATO and the new framework for early competition, could introduce further delays to schemes' development and harm investor confidence in the onshore and offshore wind market. The proposed 30-month duration assessment process for the LOTI re-opener and the multiple submissions to demonstrate the need could risk hobbling the industry at the precise moment it should be accelerating. The proposals should consider the CfD timelines where current Draft Determinations could delay projects connecting in mid-2020s by 2.5- 5 years and will have knock on effects into the 2030s. We would suggest that timelines should be shortened to six months and allow consenting to run in parallel with the regulatory assessment. The outputs of National Grid Networks Option Assessment (NOA) should have sufficient weight to reduce the assessment timeline.

Consultation Question Ref: ETQ13

The Medium Sized Investment Project (MSIP) re-opener, which would enable major generation connections and other reinforcements between £25-£100m, will not apply until 2024. This has the potential to cause serious delays to connections. We believe that the fixed window at 2024 should be removed and Ofgem should commit to assessing MSIP applications within a six-month timeframe to avoid delays to connections.

We would also welcome further clarity on the mechanism which would address projects under £25m or those not covered in the NOA. We see merit in considering if the net zero re-opener would be the appropriate tool for these projects which have been removed from networks baseline allowances and would require the necessary pre-construction works to be carried out. Please note our concerns with regards to pre-construction funding expressed at the beginning of the uncertainty mechanism section.

Consultation question Ref: SPTQ11

A number of projects across the Draft Determinations that have been removed from baseline allowances are Load-Related Expenditure (LRE). LRE projects are designed to cater for additional load and will therefore be included in bilateral connection agreements entered or being entered into with customers. This means they will therefore be scheduled to be constructed and completed in order to meet the contracted timescales.

We would note that infrastructure is vastly generation driven. For example, Scottish Power Transmission's proposed Branxton substation is required to link the east coast HVDC and also a number of offshore wind connections. This proposal was rejected by Ofgem as it was felt it

could be delivered through uncertainty mechanisms when the timing became more certain. Pushing such projects toward the uncertainty mechanisms creates uncertainty for applicants and those parties with existing connection agreements. This increase in risk could in turn result in a negative impact on cost reduction and therefore competition. We would suggest that a full review is undertaken to consider the current design of uncertainty mechanisms which is lacking in flexibility.

Incentives and driving customer improvements

We are concerned by the diminishing role of incentives relative to penalties within the Draft Determinations. As the proposals stand, penalties are three times greater than incentives with increasingly tougher targets than RIIO-1. We have concerns that without a sufficient incentive package network operators will be forced to put greater focus on complying purely to avoid penalty, rather than driving service improvements that that could bring real benefits to consumers. We would also note that a number of bespoke incentives proposed by network companies have been rejected. This significantly deviates from the approach taken in RIIO-1 which has driven innovation and a customer focused environment.

Consultation Questions Ref: STPQ5, SHETQ2, NGETQ4

All three TOs and the ESO proposed a number of ODIs relating to outage and constraint management that have been rejected by Ofgem. These proposals had strong stakeholder support and would provide real benefit to ensuring generators can continue to operate and deliver low-carbon electricity to consumers.

There is a strong need for bespoke incentives on TOs to optimise network outages and place greater consideration of system availability to generators. We note that OFTOs have specific incentives in place to ensure generator availability, whereas onshore TOs do not. While we are aware STCP 11.4 is relatively new mechanism aimed at encouraging outage optimisation between TOs and the ESO, we are concerned that code development of both the Grid Code and STCP would need to be refined and significant progress made in order to improve TOs practices which would delay any real benefits to consumers throughout RIIO-2.

Examples exist where large generators have been switched off for up to 9 months with no recompense and no option to consider any alternatives, and where neither the TO or the ESO take into account the additional operation and maintenance costs incurred by the generator or the loss of production. Generators, particularly windfarms, subject to lengthy outages, endure abnormally long stand-down periods that can cause unpredictable operation once redeployed. Solutions such as placing incentives on TOs could help reduce these issues by reducing outage times thereby reducing generators' operation and maintenance costs, system balancing costs, improving generator reliability and therefore security. As no code change proposals have been brought forward by the industry yet we believe that any change to TOs current outage optimisation practices would only be implemented well into the mid-2020s. As such, we see the need for a specific incentive to be in place for RIIO-2 which could be switched off later in the price control once the barriers within the codes have been addressed and changes implemented. Such practice would be in line with wider RIIO-2 incentive proposals to switch on and off the reward and penalty associated with incentives placed on network companies.



Consultation Question Ref: NGETQ3

National Grid Electricity Transmission had proposed an incentive to accelerate low carbon connections to encourage flexible processes and shorter lead time for connections. We understand Ofgem's concerns regarding validation of the TOs genuine efforts to speed up connection delivery. We would strongly encourage any incentives or propositions directly linked to reducing carbon to be worked through to a positive solution. Validation could be provided either by the ESO with the connecting customer agreement in order to mitigate for the risk.

Network reliability

We note that a large proportion of the spending cuts made to business plans relate to operation and maintenance of the network such as inspection allowance as well as deferrals to critical asset replacement schemes. This causes serious concerns around the impact on network reliability and resilience.

Delivering a network fit for net zero goes beyond delivering new capacity. Maintaining a reliable network is vital to ensuring existing generators can continue to operate and deliver low-carbon electricity to consumers. The lockdown restrictions caused by the COVID-19 pandemic have shone a light on the importance of a reliable network in times of crisis. As we move towards electrifying other sectors, the reliance on our electricity networks will be even greater to ensure our electric vehicles can be charged and our homes can be heated.

We have concerns over how long-term value for money has been accounted for in these proposals, which seem to be lost in favour of short-term savings. For example, we are aware that proposals from Scottish Hydro Electricity Transmission to upgrade infrastructure such as transformers have been rejected in favour of refurbishments. Asset health expenditure has been reduced to around 70% from TOs proposals in the Draft Determinations and we question whether whole system costs were considered in this decision. Relying on 'do the minimum' approach such as refurbishments could mean that works need to be carried out every few years to ensure reliability which is inefficient and will result in higher costs in the long-term. Each time an intervention takes place generators will also experience outages which will impact vital revenue schemes, disrupt communities with additional construction works and ultimately mean that consumers miss out on the benefits of the lowest cost form of electricity.

Digitalisation of the network

We are concerned by Ofgem's decision to reduce spending or reject TOs proposals to digitalise their network. Industry has worked alongside network companies to develop solutions and digitalisation strategies which are at risk of not being delivered as a result of Ofgem's decision. The drive towards net zero requires better information, online mapping and different types of contracting and more efficient signalling to improve flexibility to ensure renewable generation can play a part in this. Digitalisation should be able to progress at a reasonable pace so that renewables can play their full role in providing flexibility to the market, the benefits of which will be passed onto the consumers.

Electricity System Operator comments

The ESO has recently commenced assessment of the Integrated Offshore Transmission review. We encourage Ofgem to ensure appropriate funding is made available to the ESO to continue work in this area over the course of RIIO-2 in order to support offshore transmission development co-ordination under the enhanced NOA process. We are concerned that this might not have been taken into account in the ESO Business Plan which was submitted to Ofgem for assessment and sufficient funding not provided in the baseline.

Incentive framework

Consultation Questions Ref: ESOQ1-8

We have strong reasons to believe that the current evaluative scheme is not clear about what success looks like and how it will be rewarded. As such, we are concerned that the two-year incentive scheme could undermine the ability to drive strong performance from the ESO if the link between business plan ambition and ex-post assessment is not strengthened. It is true that an incentive scheme theoretically offers the potential for reward, however rewards and penalties in response to specific actions are unknown and unquantified. As ESO costs are not subject to sharing mechanism, placing more weight on performance-based, ex-post evaluation increases the risk of disallowance. There is a need for a refined up-front performance expectation and on-track delivery of ambition to mitigate for the risk of large financial penalty. We see merit in a refined up-front performance expectation which could include better defined boundaries between grading a high or low score. We would be more supportive of a targeted incentive scheme with a clear definition of success to drive ESO to deliver benefits beyond baseline expectations as well as plan for the long term. This could provide a stronger link between ESO business plan ambition, deliverables, and final evaluation whilst minimising risk-averse behaviour.

Metrics, performance measurement and regularly reported evidence

Consultation Questions Ref: ESOQ7, ESOQ13, ESOQ18

In general, we welcome the approach to streamline performance measurement by reducing the number of metrics from 17 to 6. We do not agree with the proposed evaluation criteria and the particular addition of 'value for money' criteria. The ESO is incentivised to minimise the cost to consumers from its actions as a residual balancer of the power system. As such, value for money is reflected in all its activities and should be captured under each of the proposed criteria rather than on its own.

We recognise the requirement for monthly, regularly reported evidence to inform 'demonstration of plan benefits' criterion. In addition to the proposed record of evidence we see a need for a commitment to report 'lost generation' (MWh) that existing generators will incur during future network upgrades. Network interruptions due to planned maintenance works or outages are unavoidable, but there is currently no incentive placed on the TOs to minimise their length or ensure generators availability during these times. The vast majority of new windfarm connections are 'non-standard' connections without redundancy which according to the rules permit the TOs to de-energise wind sites for unlimited time without any penalty. With the expected growth of renewable generation in Scotland, there could be significant interruption to existing wind generators due to network upgrades. Therefore, we strongly feel there is a need to incentivise Scottish TOs to optimise generation outages through



a specific RIIO-2 incentive as our response to STPQ5 sets out. A regularly reported evidence on 'lost generation' (MWh) due to inefficient outages could serve as an indicator of planning efficiency by the TO and should be considered by Ofgem in addition to placing specific incentive on networks to optimise outage management practices.

Innovation funding and IT ownership

Consultation Questions Ref: ESOQ30 and ESOQ31

We support the proposal for the ESO NIA funding to include projects which consider the challenges across the energy industry and develop innovation with third parties like universities and other network companies. We note that other network companies have access to 5-year innovation funding period as part of the price control. Under the Draft Determination the ESO will have access to £7.2 million of innovation funding over two years. As such, we consider that a two-year innovation funding period may be a barrier to effective partnerships and risks bringing uncertainty for longer-term projects.

Consultation Questions Ref: ESOQ34 and ESOQ35

We agree with Ofgem's assessment regarding the transfer of IT ownership to the ESO. We are concerned that past underperformance and untimely delivery of commitments under the ESO Business Plan is due to the ESO inability to control the necessary IT upgrades.