

Accelerating onshore electricity transmission investment consultation

National Grid response

6 September 2022

This is the response from National Grid Electricity Transmission plc (NGET) to the Ofgem consultation 'Accelerating onshore electricity transmission investment' dated 8 August 2022 (the Consultation). NGET owns the electricity transmission network in England and Wales. We are responsible for ensuring electricity is transported from where it is produced, reaching homes and businesses safely, reliably, and efficiently. We facilitate the connection of supply and demand customers to the transmission system. We are investing to adapt and develop our transmission network to connect new sources of low carbon and green energy to homes and businesses in support of the transition to net zero.

The response consists of three parts:

- Part 1: Executive Summary, setting out our central messages in response to the Consultation;
- Part 2: Supporting Information, providing further context and evidence to support our messages; and
- Part 3: Our responses to the specific questions raised in the Consultation.

PART 1: EXECUTIVE SUMMARY

We welcome Ofgem's consultation on how it can support the accelerated delivery of the strategic electricity transmission network upgrades that are needed to meet the Government's ambition for up to 50GW of offshore wind by 2030. We are grateful that Ofgem is both seeking views on the proposals it has put forward and is open to receiving further proposals to change the existing framework to enable timely delivery.

We agree the changes within the scope of the Consultation form only part of the overall solution required to accelerate delivery of the strategic network infrastructure. We are separately engaging with BEIS and other relevant parties on the additional critical dependencies, in particular the need for a reformed planning regime and how to best reduce and compensate for our impact on affected local communities during the construction of the new infrastructure.

The scale of the delivery challenge is unprecedented

Delivering the Government's 2030 ambition is undeniably in the interest of consumers: constraint costs will be mitigated, more lower cost renewables will be added to the transmission system, reducing dependency on imported gas and its volatile prices, and significant progress will be made on the path to fully decarbonising our energy system.

The scale of work required to unlock these consumer benefits is unprecedented both in terms of the volume of infrastructure to be delivered and the truncated timeframe in which it needs to be delivered. To meet the 2030 ambition, over five times the amount of new electricity transmission infrastructure will need to be delivered in the next seven years (with most construction required in the final few years) than has been built in the past 30 years. At the same time, our international counterparts are also seeking to rapidly expand their clean energy infrastructure, to support the decarbonisation of their own energy systems and respond to the current energy crisis, creating significant competition for allocation of capital, resources and skills across the supply chain.

Timely delivery needs a different approach to delivery

At this stage, we do not know how much of the strategic network infrastructure work could be put out to competition and therefore do not have confirmation over who will deliver this work. Of the 26 projects Ofgem has identified as falling within the scope of an accelerated regulatory framework, absent competition, 19 would fall within NGET's

remit to deliver¹, requiring an estimated £14bn of investment. To ensure we are ready and able to deliver where this work does come to us, we have proactively engaged with the supply chain to determine the optimal way to deliver this scale of work in the timeliest manner possible. Meeting this scale of challenge in short order would require us to fundamentally change the delivery model for this infrastructure, moving from a traditional project-by-project approach to a portfolio or programme approach with much earlier supply chain involvement. This new delivery approach is consistent with the principles in the Government's "Construction Playbook" endorsed by the Infrastructure and Projects Authority (IPA). Further information on the delivery model is set out in Part 2. It would enable us to:

- secure the necessary level of supply chain capacity, against the backdrop of the highly competitive global market environment;
- encourage innovative solutions and more efficient ways of delivering by involving contractors in the design and consenting phase; and
- take advantage of the economies of scale available across the full portfolio/programme of work.

Together this would support a faster pace of delivery and maximise the consumer benefits from this infrastructure.

We also expect this approach to result in wider benefits to the UK economy, enabling the supply chain to grow its UK manufacturing capacity and invest in the training of UK-based specialist labour.

Our current approach to accelerate projects versus the timeline assumed in the Large Onshore Transmission Investments (LOTI) regulatory framework is to seek dispensations from the strict application of the process from Ofgem, as allowed in the LOTI guidance. However, even with such dispensations, the LOTI framework does not support the speed of decision-making nor the portfolio/programme approach to delivery, early supply chain engagement and timely deployment of resources that is necessary to deliver the 2030 projects in the timeliest way possible for the benefit of consumers. We therefore welcome Ofgem's acknowledgement of the concerns that we (and others) have raised about the limitations of LOTI. There is a compelling case to change the current regulatory framework.

Ofgem's proposals are welcome, but don't go far enough

We welcome Ofgem's constructive approach to its proposals and are pleased with the positive moves it has made to help facilitate our approach to accelerating the delivery of the infrastructure needed to meet the Government's 2030 ambitions in consumers' interests, however:

- Ofgem's proposals for the revised regulatory framework, including which projects it expects to exempt from competition, do not yet go far enough to (i) support early engagement with the supply chain and the new portfolio/programme delivery approach; (ii) incentivise the transmission owners (TOs) to adopt the behaviours to encourage timely delivery in the best interest of consumers; and (iii) ensure the TOs will remain financeable beyond the end of the RII0-T2 price control;
- Ofgem's reliance on the competitively appointed transmission owner (CATO) counterfactual does not acknowledge that the competed projects would (i) go to market 18-24 months later; and (ii) would not benefit from the advantages associated with earlier supplier engagement under the portfolio/programme delivery approach, described further in Part 2. The combination of these two elements would result in delivery 1-2 years later than would be possible without competition, which would not be in consumers' interest; and
- the timeframes to which Ofgem is planning to work will not provide the necessary confirmation early enough to allow us to engage with the market this Autumn, and will drive additional risk into our anticipated delivery timeframes.

We recognise that delivery of the necessary scale of infrastructure in the tight timeframes available is complex and not without risk. There are a number of key principles upon which we need agreement from Ofgem by the Autumn, in order to ensure we can engage with the supply chain to start to make meaningful progress and avoid unnecessary delays, in the interests of consumers.

¹ We refer to the "19 NGET projects" or "19 projects" throughout this document as shorthand. We acknowledge Ofgem determined in July 2022 that two of the projects (E2DC & E4D3) should be delivered by NGET (in partnership with the Scottish TOs) within LOTI under RII0-T2. These projects (together with a small number of onshore projects) will not form part of the new delivery model described in this response. Some of the "NGET" projects will be delivered in partnership with the Scottish TOs.

What we need from Ofgem to deploy the new delivery model and avoid delays to timely delivery

We need the following from Ofgem **by Autumn 2022** to allow us to commence formal engagement with the supply chain and avoid unnecessary delays, in the overriding interest of consumers:

1. **Confirmation that the 19 NGET projects will be exempt from competition and our early construction costs can be recovered from consumers:** By Ofgem exempting the 19 projects from competition and, on a 'heads of terms' or principles basis, confirming that we will be able to recover our efficient early construction costs in respect of those projects from consumers, it will allow us to give the necessary early firm commitments to the supply chain and deploy the portfolio/programme delivery approach. This will ensure the needs of all 19 projects are fully reflected in the plans of the suppliers as they scale up the necessary resource and capacity and ensure all 19 projects benefit from efficiencies through areas such as combined procurement, standardisation of approach, and joined-up scheduling of works for connected projects. We also need Ofgem to align on the principles which will be used to set regulatory allowances for the projects and the timescales in which the outstanding details of the project assessment framework will be agreed. Further information on these requirements is set out in Part 2 and our response to Question 7. Together this will ensure we and the supply chain have a more integrated and collaborative approach towards the desired outcome, which will provide a far better chance of timely delivery and consumer benefits than either relying on the current regulatory framework, or pursuing CATO. If any of the 19 projects are not exempt from competition, we will not be able to include them in the supply chain engagement, putting them at risk of resource shortages and delays in the future.

Ofgem's cost benefit analysis (CBA) has a number of shortcomings and limitations in its methodology and fails to capture the full benefits of pre-2030 'earliest-in-service-dates' (EISDs) and accelerating delivery of qualifying projects, as we set out further in Part 2. However, the conclusions from Ofgem's CBA, though conservative, do clearly support our case to exempt the 19 NGET projects from competition.

2. **A regulatory framework that incentivises the right behaviours to encourage timely delivery with an appropriate risk/reward balance:** Ofgem's proposals will not incentivise the right behaviours to deliver for consumers and do not apply a long-term commercially appropriate risk/reward balance. The size of Ofgem's proposed penalties for late delivery (50% exposure to constraint costs, up to a cap of 15% of total project costs), and with potential financial penalties of up to 10% of turnover for breach of licence obligations, would expose the TOs to a disproportionate level of risk, out of line with the risk profile expected by both Ofgem and investors for a regulated network business such as NGET, and will simply lead to companies adopting more cautious delivery models to mitigate their exposure, which is not in consumers' interests. The misalignment in the output delivery incentive (ODI) and totex incentive mechanism (TIM) rates also risks driving perverse behaviours which could be contrary to consumer interests. Our proposal would incentivise the right behaviours with an appropriate level of risk and reward reflecting our allowed cost of capital. Our proposal and how we reached it is set out in more detail in Part 2.
3. **Comfort that the regulatory framework will be financeable beyond 31 March 2026:** It is not appropriate to expect NGET to commit now to c.£14bn of investment required to deliver the strategic network infrastructure without understanding what measures Ofgem intends to use to ensure financeability beyond 31 March 2026, especially as most of the expenditure will be incurred after that date. It is in consumer interests to find solutions now. Some options are more sustainable and better for both investors and consumers than others. We propose applying a shorter asset life of 25 years and starting the depreciation of the RAV in the year of expenditure, as an alternative to providing additional fast money. Depreciating over 25 years is consistent with the offshore transmission owners (OFTO) regime, the proposed CATO regime and reflects the proposal in Ofgem's 'Competition Proxy Model'. We are keen to engage further with Ofgem on our proposals.

Further information on these points can be found in Part 2 below and in our responses to the relevant consultation questions.

We stand ready to deliver and look forward to engaging with Ofgem to reach prompt agreement on these matters.

PART 2: SUPPORTING INFORMATION

This section provides further information on:

- A. The delivery model that will ensure the timeliest delivery of the strategic infrastructure
- B. The decisions on which we need clarity from Ofgem by Autumn 2022
- C. Our proposal on consumer protections; and
- D. The need for clarity on financeability beyond RIIO-T2.

A. The delivery model that will ensure timeliest delivery of strategic infrastructure

LOTI is designed around a linear approach to the traditional delivery model used for network infrastructure, which can be summarised as *design-consent-buy-build*: once the TO knows it needs to construct a new piece of infrastructure, it creates an outline design (using internal and external resources) and then seeks planning consent for that design. Once planning consent is obtained, the TOs would then contract with a supplier to provide the asset, typically using a form of contracting (such as an EPC – Engineering, Procurement and Construction) where one or more main contractors is responsible for the detailed engineering design, procuring some or all the materials they need and then completing construction.

Our current approach to accelerate projects versus the timeline assumed in the LOTI framework is to seek dispensations from the strict application of the process from Ofgem, as allowed in the LOTI guidance. For example, in some cases our programmes assume that we go to market to procure some key assets with long lead times (such as Super Grid Transformers (SGTs)) much earlier in the process, which we have made Ofgem aware of on a project-specific basis. We also routinely start our main procurement events before receiving planning consent, though we typically wait for consent before awarding contracts. To undertake these accelerations, we rely on Ofgem having completed their Competition Assessment and selecting National Grid to undertake the work; until this has happened, we are unable to go to market as our supply chain will not know if we are able to award the work.

The unprecedented scale and pace of infrastructure development required to deliver the Government's 2030 ambitions, coupled with a highly competitive market for supply chain capacity means this approach, even with our existing accelerations and LOTI dispensations, is not appropriate for the current situation for several key reasons:

1. As cost assessment is undertaken following planning approval, TOs cannot commit to construction spend before this point, without taking on considerable risk. This limits the amount of contractor engagement before this part of the process;
2. By committing in an incremental, project-by-project way, there is no incentive or ability to seek efficiencies of scale, or support investment in building Supplier capacity required to deliver the portfolio of strategic infrastructure required;
3. It does not encourage collaborative working practices: Straightforward tendering processes can lead to conflicts of interest between clients and contractors, and between contractors, which does not encourage the collaborative approach needed to innovate and accelerate delivery. When delivering a portfolio of investments individual project tendering is not the most efficient approach for client or contractors, committing valuable time and resources, and can remove focus from other key areas such as developing the critical skills needed to progress delivery; and
4. It does not provide a route for constructors to be involved in creating the application for planning consent, which is likely to limit the opportunity both to apply new and more innovative techniques and technologies and to foresee and mitigate risks, given the need for both what is delivered and how it is delivered to be within the consented solution.

To ensure the 2030 projects can be delivered in the most efficient and timely manner all parties involved will need to find innovative solutions to delivering this volume of work at the required pace. We therefore need to use a delivery model that will facilitate this. We plan to adopt an industry best practice model consistent with the principles in the Government's "Construction Playbook" and endorsed by the IPA, which will be applied across a portfolio or programme of projects, rather than on a project-by-project basis. There may be some differences between the approach used for onshore and offshore projects, but the overall approach and goals are similar.

This alternative model will:

- **Allow for early engagement with the supply chain, ensuring capacity and resource can be secured early across the portfolio or programme.** This will provide opportunities for economies of scale by committing a larger volume of work to the supply chain in one go, for example, by justifying the building of new factories in the UK, removing the need to compete for scarce existing capacity; or justifying contractors to invest in developing and training staff in new techniques and ways of working which can hasten delivery.
- **Involve the contractor / construction partner in both the design phase and the consenting phase,** which will result in optimised processes, a smoother consenting process and more coordinated delivery plan, in turn delivering efficiencies and time savings and reducing potential disruption to local communities during the delivery phase.
- **Create a more collaborative and solution-oriented environment,** where shared contractual incentives encourage both the client (NGET or JVs with the Scottish TOs) and the contractors to optimise their approach and aim for the same outcome.
- **Advance strategic procurement of long lead time items** (as international TOs are already doing), by building and developing UK-based supply chain capacity and capability.

B. The decisions on which we need clarity from Ofgem by Autumn 2022

We need to go to market for the capacity to deliver on the strategic network projects this Autumn. This will involve two forms of procurement exercises: one for the offshore projects not already in procurement – the third and fourth Eastern Links and SEA Link (E4L5, TGDC and SCD1) – and another for onshore projects (excluding a small number of projects where there is insufficient time apply a new procurement approach). Going to market in this calendar year is key, given the tight programmes of work to be delivered as soon as possible.

If we incur delays at this early stage it is likely to directly result in later delivery. The impact of early delays may not be linear; for example, if a one-week delay causes us to miss an opportunity to take parts of the existing network out of service to create a connection, we may need to wait many months for the next opportunity.

To go to market in the autumn, we need to know on a ‘heads of terms’ or principles basis what the revised regulatory framework will be. This will enable us to reflect the regulatory principles into the terms we offer to our supply chain through our procurement process. This needs to include:

- Confirmation of which projects will be exempt from competition and fall within the accelerated delivery framework – see further below.
- Confirmation that early construction spend to secure supply chain capacity will be recoverable from end consumers, where justified in line with the regulatory process.
- Clear principles of how allowances will be set. We acknowledge defining these in full will require further discussion between TOs and Ofgem. To ensure we are collecting the required information from the supply chain when we go to market, the principles should cover:
 - How and when cost allowances should be set and signed off.
 - How contractual incentives to the supply chain should be treated.
- Headline arrangements for incentives and penalties (our proposal is set out in section ‘C’ below).
- Timescales to agree on the outstanding details of the project assessment framework, incentives and penalties.

We do not need all aspects of the regulatory arrangements to be fully finalised and detailed this calendar year. It is vital that Ofgem continues to engage in further detailed discussion on these matters with TOs whilst TOs are engaging in their discussions with the supply chain, as this will help ensure the final regulatory framework aligns with the contractual environment between the TOs and the supply chains. It is important that the incentives and penalties on TOs are not only fair and proportionate, but also consistent and strongly aligned with the contractual arrangements between the TOs and their contractors, so that all parties are incentivised to work in partnership to deliver the best possible outcome for consumers. Contradictory incentives risk situations where the supply chain is incentivised to work against the interests of TOs which could result in suboptimal outcomes for consumers and expose the TOs to disproportionate risks.

By mid-2023, the remaining aspects of the regulatory framework and incentive and penalty arrangements will need to be finalised in order to allow final supply chain contracts to be agreed by the end of 2023.

Exemption from competition

We welcome Ofgem's acceptance that there is a case for providing an exemption from competition to certain projects as part of the accelerated delivery framework and Ofgem's openness to exempting all 26 projects in the scope of the Consultation from competition, if the TOs can demonstrate doing so is in consumers' interests.

We believe the information contained in this response, together with the bilateral conversations we have been having with Ofgem and the information that will be included in the project delivery plans that we will submit on 16 September 2022 will provide Ofgem with all the information it needs to confirm that exempting all 19 NGET projects from competition is in the best interests of consumers.

For the 16 NGET projects that fall within the 20 that Ofgem is minded-to exempt from competition, we agree these 16 projects should all be exempt and that there are clear consumer benefits from doing so.

Of the six projects that Ofgem is not minded-to exempt, NGET is responsible for three of these (AENC, ATNC and SCD1). It is our strong belief that these three projects should also be exempt from competition, in order to allow us to include them in the scope of our early engagement with the supply chain, in turn increasing the certainty of delivering against expected timescales and thereby driving further efficiencies / cost reduction and clearly benefitting consumers.

Our engagement with the supply chain, both individually as NGET, and together with the other TOs, has made it very clear that the suppliers are not able to ramp up the necessary capacity for these projects without firm commitments that they have been selected to deliver the work. A competitive tender would leave us uncertain as to whether we will ultimately deliver the competed projects, in turn preventing those projects from being included in the firm commitments we need to make to the supply chain. We cannot therefore provide these firm commitments unless we know the projects are exempt from competition.

If the projects are exempt from competition and we can provide firm commitments to the supply chain across all 19 projects, this will ensure the needs of those projects are fully reflected in the plans of the suppliers as they scale up the necessary resource and capacity, adding jobs and skills to the UK economy, and ensure the projects benefit from efficiencies through areas such as combined procurement, standardisation of approach, and joined-up scheduling of works for connected projects. This will allow the TOs to drive a more integrated and collaborative approach towards the desired outcome and will provide a far better chance of timely delivery and consumer benefits than either relying on the current regulatory framework, or pursuing a CATO.

The risks to consumers of allocating the 19 projects to NGET and allowing recovery of early construction costs are low – the delivery model we plan to use is designed to find more efficient ways to deliver, through innovation and standardisation, and there is very low risk of abortive costs, as the needs case for these projects to support delivery of the Government's 2030 ambitions has been confirmed by the Electricity System Operator (ESO) in the Holistic Network Design (HND) and wider BEIS Offshore Transmission Network Review (OTNR). The accelerated delivery timescales enabled by exempting the projects from competition will drive clear benefits from reduced constraint costs and an increased level of cheaper renewable capacity connected to the system, which will outweigh the benefits Ofgem perceives would come from competing projects. We also believe Ofgem has been overly optimistic on the benefits it has assumed from the CATO counterfactual. As Ofgem notes in the Consultation, with only seven years left before 2030, and with the enabling legislation unlikely to be in place until 2024 at the earliest, this additional time, together with the added time required to follow the current LOTI process strictly and then compete the projects, would increase the likelihood of delivery delays and, in turn, the risk of prolonged and exacerbated constraint costs for consumers.

Ofgem's cost benefit analysis (CBA) has a number of shortcomings and limitations in its methodology and fails to capture the full benefits of pre-2030 'earliest-in-service-dates' (EISDs) and accelerating delivery of qualifying projects, as we set out further in our response to Question 8. However, the conclusions from Ofgem's CBA, though conservative, do clearly support our case to exempt from competition the 19 NGET projects.

C. Our proposal on consumer protections

The Ofgem proposals set out in Chapter 7 of the Consultation would not currently incentivise the right behaviours to deliver for consumers nor allow a long-term commercially appropriate risk/reward balance. The size of Ofgem's

proposed penalties for late delivery (50% exposure to constraint costs, up to a cap of 15% of total project costs), and with potential financial penalties of up to 10% of turnover for breach of licence obligations, would expose the TOs to a disproportionate level of risk, out of line with the risk profile expected by both Ofgem and investors for a regulated network business such as NGET and incompatible with the allowed return under our price control. It will simply lead to companies adopting more cautious delivery models to mitigate their exposure, which is not in consumers' interests. The high level of exposure to delay penalties and the misalignment in the output delivery incentive (ODI) and totex incentive mechanism (TIM) rates risks driving perverse behaviours which could be contrary to consumer interests.

Our proposal, and the logic we have applied in reaching our proposal is set out below. It is based on sound regulatory principles, taking into account risk, financeability and the market conditions, and would incentivise the right behaviours from the TOs and provide robust protection for consumers without exposing the TOs to levels of risk inconsistent with their allowed returns.

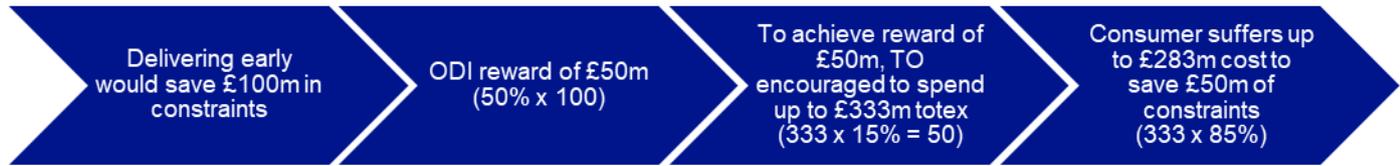
In developing our proposal, we have made a series of key base assumptions:

- Regulated transmission networks are relatively low risk businesses, as reflected in the methodology used (backward looking) and the level set for the cost of capital in our transmission price controls.
- Building the new transmission network at the scale, pace, with new delivery models and potentially with new technology that is required for the 2030 ambitions is inherently more risky than historical build. There is significant uncertainty around some of the key drivers of timelines, for example, how successful planning reform will be and how quickly the supply chain will ramp-up.
- At the same time, the scale of change creates potential opportunities to use a new delivery model, such as a portfolio / programme approach.
- The risk of delivering early or late is asymmetric; projects can overrun by years but the scope to deliver them early is likely to be limited to months/one year, especially key depending on how target dates are set.
- Current constraint volumes and costs are very high and will grow without new network capacity given the locations of the new offshore wind.
- The costs of constraints are much higher than the costs of expanding capacity, as reflected in the very high NPVs of the investments in the ESO's holistic network design (HND).
- Increased levels of cheaper renewables on the system will displace the cost and risk of volatile marginal gas, as well as provide environmental benefits by supporting the decarbonisation of the energy system.

If these assumptions are accepted/agreed then the following principles flow:

1. It is strongly in consumers interests to incentivise TOs to deliver new capacity as quickly as possible and to give them some exposure to the consumer benefits of earlier delivery (reductions in constraint costs, reduced reliance on volatile international gas markets) and the costs of late delivery (increased constraint costs, increased reliance on volatile international gas markets);
2. The incentive rates on cost under/outperformance and constraint cost exposure have to be aligned to align TOs' incentives with consumers' interests. A misalignment in the output delivery incentive (ODI) and totex incentive mechanism (TIM) rates risks driving perverse behaviours which could be contrary to consumer interests;
3. For the incentive to operate effectively the constraint cost / daily rate needs to be set ex ante.
4. For the incentive to have a fair risk/reward balance, the incentive target dates need to be based around what is currently achievable by TOs and their supply chains (taking account of the accelerated regulated framework) rather than aspirational delivery dates;
5. The low risk nature of transmission networks limits the amount of risk that they can reasonably be exposed to, given the methodology used and level set for the cost of capital in the transmission price control;
6. The incentive arrangements need to reflect the asymmetric risks faced and any asymmetry of expected mean financial outcome; and
7. There is an ex ante carve-out for risks outside of TOs' control – to reflect the relatively low risk nature of transmission businesses.

In light of the above, Ofgem's proposals align with principle 1 but do not meet the remaining principles. For example, Ofgem's proposed ODI (50%) and TIM (15%) rates would not align TOs' and consumers' interests to manage the total benefits/costs of early/late delivery, as highlighted below:



At the same time, Ofgem's proposed overall cap at 15% of project cost, coupled with potential financial penalties for licence breach of up to 10% of turnover, would expose the TOs to financial risks that are inconsistent with the current level of allowed returns.

To meet all of the above principles the incentive package needs to be measured against appropriate target dates and have:

1. ex ante fixed rates that align the cost of over/under performance with notional constraint costs;
2. rates set at an aligned level to give TOs sufficiently material exposure to influence their behaviour, but reflecting their low risk nature; and
3. reduced caps on exposure at a project level to be consistent with the low risk nature of TOs and the asymmetric risks in the projects/programmes.

We need to realign the package of consumer protections to ensure it is fair to all parties and has an appropriate risk/reward balance.

Our proposal is set out below. Items 1, 2, 4 and 5 are specific and necessary changes to provide a more balanced risk and reward exposure. For item 3, we believe there are a few options that could be pursued to achieve the necessary reduction in overall risk/reward balance more appropriate for a regulated TO and provide the right incentives for early delivery – we have presented two possible options and we would welcome further dialogue with Ofgem on the different approaches:

1. **Set target dates on a P50 basis based on current ways of working and delivery models, according to Quantitative Schedule Risk Analysis (QSRA) rather than EISDs.** In some cases these dates will likely fall in the same calendar year as the EISD, but in other cases it may be somewhat later, reflective of the risks specific to individual projects. Using the EISD in all circumstances would skew the probability of delivering the portfolio to less than P50, creating asymmetry.
2. **Set the ODI and TIM rates ex ante and align the rates to ensure alignment of cost over/under performance and exposure to constraint costs and set them at a level that gives the TOs sufficiently material exposure to influence their behaviour but reflects their low risk nature** – we propose aligning the ODI with Ofgem's proposed TIM of 15%, as it will provide sufficient incentive on TOs (on both timing and cost) whilst (i) ensuring consumers are protected from the risk that costs have been set incorrectly and (ii) protecting TOs from unsustainable levels of risk. A common 15% rate is illustrated below:



3. **Reduce the maximum penalty and reward to be more consistent with the low risk nature of transmission businesses and provide the right incentives for early delivery**
 - There are a number of ways this could be done. For example, the maximum penalty and reward on TOs could be reduced from 15% of project cost to a level more reflective of the risk profile (and cost of equity) of their business. We believe 3% of project cost would be a more appropriate level. Alongside this, to the extent the TOs secure delay related liquidated damages from the supply chain, the net

benefit of those liquidated damages (assessed ex post, after subtracting direct cost impacts on TOs, e.g. increased project management costs) would flow directly to consumers².

- This proposal would ensure consumers and NGET are not exposed to disproportionate levels of risk. It would see the benefit of liquidated damages passed to consumers while also recognising that it is not always in consumer interests to maximise the liquidated damages that can be placed on the supply chain.
- An alternative proposal is to apply return adjustment mechanisms (RAMs) at a project level and programme level. This would address legitimacy and financeability concerns, is supported by precedent and retains the benefits of incentives while attenuating them.
 - A RAM could be implemented for each project, and use the same thresholds as RIIO-T2: retaining 100% exposure up to 300bps, 50% between 300bps and 400bps, and 10% beyond 400bps.
 - Where a series of projects are delivered as a programme the RAM at the programme level could have amended threshold levels, for example retaining 100% exposure up to 200bps, 50% between 200bps and 300bps, and 10% beyond 300bps.
 - The RAMs would be calculated on a RAV weighted average RORE over the construction period to avoid issues associated with phasing (e.g. due to totex acceleration or slippage triggering the RAM and the delivery incentive likely to be focussed in one year).
- We would welcome further discussions with Ofgem to agree how to best ensure the risk/reward balance is more consistent with the low risk nature of transmission businesses and reflective of the intended delivery model.

4. Set Cost and Output Adjusting Events ex ante

- The TOs must be clear from the outset on the circumstances in which a penalty will not apply, with 'known-unknowns' set ex ante, and the ability to amend outputs ex post for 'unknown-unknowns' through a re-opener.

5. Remove risk of double jeopardy or disproportionate levels of risk by relying only on a Price Control Deliverable (PCD) and not imposing the outputs as separate Licence Obligations (LO)

- We do not agree that PCDs and LOs should be imposed on the same output. Therefore the target delivery date should not be an LO. As noted in the RIIO-T2 Final Determinations, LOs "set minimum standards that network companies must achieve", while PCDs "specify the deliverable(s) for the funding allocated, and the mechanism(s) to refund consumers if an output is not delivered (or not delivered to a specified standard)". As noted in our response to Question 11, Ofgem has said it is considering the use of PCDs concurrently with LOs as providing "an efficient means of allowance adjustments while protecting consumers against the risk of non-delivery" (para. 7.7 of the Consultation). We have assumed the ODI is Ofgem's proposed method of responding to a missed delivery date. If Ofgem intends the PCD allowance adjustment mechanism (i.e. allowance clawback / reprofiling in the case that a PCD was not Fully Delivered) as an additional overlay to the ODI and LO, it would seem to add a potential triple jeopardy risk, which would add to Ofgem's proposal being completely unacceptable in terms of overall risk exposure. We would welcome further clarification on this point from Ofgem.

D. The need for clarity on financeability beyond RIIO-T2

The package of consumer protections described above will ensure we are exposed to a proportionate level of risk, but it is also key that the overall arrangements are financeable beyond 31 March 2026.

- The consultation does not consider whether the proposals will be financeable from 31 March 2026 onwards. RIIO-T2 includes support measures to ensure financeability and equivalent support will need to be put in place for the next price control. We do not think it is appropriate to expect NGET to commit now to c.£14bn of investment required to deliver the strategic network infrastructure without understanding what measures Ofgem intends to use to ensure financeability beyond 31 March 2026, especially when most of the expenditure will be incurred after that date.

² Other contractual remedies (e.g. increased or reduced allowed contractor profit) may be negotiated between the TO and supply chain in addition to any delay related liquidated damages. We are happy to have further discussions on how to take account of these in TO incentivisation.

- Whilst it is in consumers' interests to find solutions now, some options are more sustainable and better for both investors and consumers than others. We propose applying a shorter asset life of 25 years and starting the depreciation of the RAV in the year of expenditure, as an alternative to providing additional fast money. We look forward to engaging further with Ofgem on this proposal.

Conclusions

The scale of work required for the 2030 ambitions is unprecedented both in terms of the volume of infrastructure to be delivered and the truncated timeframe in which it needs to be delivered. Achieving timely delivery of this infrastructure is in the clear interests of consumers, avoiding prolonged and exacerbated constraint costs, bringing more lower cost renewables onto the system and making meaningful progress in decarbonising our energy system. This will require a new delivery model, moving from a traditional project-by-project approach to a portfolio or programme approach with much earlier supply chain involvement.

To avoid unnecessary delays to the delivery of this strategic infrastructure we need to engage with the supply chain this Autumn, but in order to progress this early engagement with the supply chain, it is critical that Ofgem provides us with:

- 1. confirmation that the 19 NGET projects will be exempt from competition and our early construction costs can be recovered from consumers;**
- 2. a regulatory framework that incentivises the right behaviours to encourage timely delivery with an appropriate risk/reward balance; and**
- 3. comfort that the regulatory framework will be financeable beyond 31 March 2026.**

This will allow us to progress the timely and efficient delivery that is in the best interests of consumers. We stand ready to deliver and look forward to engaging with Ofgem to reach prompt agreement on these matters.

PART 3 NGET RESPONSES TO THE CONSULTATION QUESTIONS

The strategic onshore projects in scope

Q1: Do you agree with our criteria for identifying projects in scope for the application of the proposed accelerated delivery framework?

Yes, for the purpose of seeking to identify the key projects for which accelerated delivery is required to support the Government's ambition for up to 50GW of offshore wind by 2030 and unlock the resulting consumer benefits (in terms of mitigating constraint costs, bringing more lower cost renewables onto the system, and supporting the decarbonisation of our energy system), we agree with the criteria Ofgem has applied. We agree with using the HND/NOA Refresh to identify potential projects, focusing on those necessary to deliver the 2030 ambitions, and applying the £100m threshold, as used for LOTI. We welcome the proposal to keep a 'live list' of projects so that any future projects that meet these criteria can be added.

With the objective of enabling timely delivery of the projects required for the Government's 2030 ambitions, we agree the scope does not currently need to extend to onshore ET projects that are not needed for those ambitions. However, there could be other circumstances where there is a clear benefit to consumers in accelerating that delivery, for example to bring forward certain customer connections, and for which an accelerated framework could be deployed to help speed up those projects, as we have noted further in our response to Question 2.

Q2: Are the 26 projects identified the correct ones to initially focus on?

Yes, we agree that with the objective of accelerating the projects required for the Government's 2030 ambitions, the 26 projects are the correct ones to initially focus on. However, in line with Ofgem's proposal to keep a 'live list' of projects, we do not anticipate the 26 projects should or will be the only projects to which the accelerated delivery framework ever applies. We also think there may be circumstances where it is appropriate and in the clear interests of consumers to flex some of the qualifying criteria and open the accelerated delivery framework to other categories of projects.

For example:

- there may be projects with a value of <£100m where an expedited regulatory process would allow accelerated/on time delivery which would provide a clear benefit to consumers;
- projects that are linked to the 26 projects but don't necessarily need to be accelerated might benefit from falling under the same regulatory delivery framework to allow efficiencies and follow the same regulatory timetable to avoid disruption to local communities that could arise if the process was not coordinated;
- the ESO identified a number of offshore projects within the HND as potentially best classified as "onshore transmission" (specifically, T-point to Hunterston and Hunterston to Pentir); if this were to be the case it would be important for TOs to understand this and to consider if these projects should be within scope; and
- new offshore HVDC infrastructure identified in the HND as necessary to meet the 2030 ambition, but will be delivered by offshore wind developers or by offshore transmission owners (OFTOs), will also need accelerating and clarity on who the delivery body will be, as soon as possible.

The role of competition and exempting projects

Q3: Do you agree that it is in the consumer interest to consider exempting projects from competition?

Yes, we agree that it is in the consumer interest to exempt projects from competition.

Given the scale of the delivery challenge both in terms of volume of work to deliver and the urgency with which it needs to be delivered, the incumbent TOs are the best delivery bodies for the 26 projects in question in order to deliver the work in the timeliest manner.

The ability to accelerate this package of work needs a different approach from the current delivery model, allowing for early engagement with the supply chain and moving away from the current project-by-project approach to a portfolio or programme approach. This delivery approach relies on upfront certainty over who is delivering so that the supply chain has confidence and clarity on the volume of work that it is being asked to deliver and so it can work with the TOs to find innovative solutions and more efficient ways to deliver at that scale. Many of the benefits from adopting a portfolio or programmatic approach come from committing a meaningful volume of work to the

supply chain, for example, by enabling volume based price savings and efficiencies from repeatability and standardisation of approach. This is in line with a 'Modern Methods of Construction' (MMC) based approach (see further detail in our response to Question 5 below), and will help lead to lower overall costs in the interest of consumers. These efficiencies in approach are what will also support accelerated delivery timescales, allowing more timely completion of the work and mitigation of constraint costs for consumers.

At this stage, in the absence of an exemption from competition, we do not know how much of the strategic network infrastructure work could be put out to competition and therefore do not have confirmation over who will deliver this work. Exempting the projects from competition will provide the certainty needed to enable us to engage with the supply chain on a more formal basis and engage across the full package of work.

We also believe competing the projects, with a strict LOTI process (i.e. with a competition assessment at latest after a Final Needs Case, which in turn would follow the grant of planning permission) followed by a CATO tender process, will lead to delays in the pace at which the projects can be delivered. Even if we assume that a CATO process does not take longer than a strict LOTI process, the derogations from the strict LOTI process we assume in our current base timescales are incompatible with a move to CATO.

As noted by Ofgem in the Consultation, the legislation and associated regulatory arrangements to allow for onshore competition are not anticipated to be in place until 2024 at the earliest. Furthermore, as we explain more fully in our response to Question 8 below, we disagree with Ofgem's view that there is no evidence that third-party delivery of projects through onshore competition would take any longer to deliver than TO delivery. Even when the CATO arrangements are in place, the competitive tender process would add unacceptable delays to an already tight timeframe that don't exist if the project is not competed. In the BEIS consultation on Competition in Onshore Electricity Networks, they suggested the tender process itself could last 9-15 months, with a further 3-6 months to select preferred bidder and award contracts. A competitive tender would also leave the TOs uncertain as to whether they will ultimately deliver the competed projects, in turn preventing those projects from being included in the firm commitments that need to be made to the supply chain. A competitive process could therefore lead to delays and constraint costs that are likely to be greater than the level of consumer saving that might be achieved from applying competition. We do not believe these delays have been factored into Ofgem's CBA.

We therefore welcome Ofgem and the Government's openness to exempting certain projects from competition, but the necessary exemptions must be confirmed by the Autumn 2022 in order to allow the TOs to progress at pace and ensure consumers can be protected from prolonged and exacerbated constraint costs, while keeping the Government's decarbonisation ambitions on track.

Q4: Which of our options for exempting projects from competition do you favour?

Our strong preference is for Option 1 – to exempt all 26 projects from competition, of which NGET (solely or in partnership with the Scottish TOs) will deliver 19.

Providing confirmation now that all 19 NGET projects³ will be exempt from competition can allow us to make meaningful progress on these projects at an early stage with a view to delivering them all in the timeliest fashion. It will allow us to ensure they are all included in the scope of our early engagement with and commitments to the supply chain, in turn ensuring the requirements are reflected by the suppliers as they ramp-up capacity and resource. This will help to avoid delays down the line from limitations in supply chain capacity which could put timely delivery at risk and in turn expose consumers to unnecessary risks.

We welcome and agree with Ofgem's minded-to position to exempt the 20 projects it has identified, but we also strongly believe the remaining six, of which NGET would be responsible for delivering three (AENC, ATNC and SCD1), should be exempt from competition and that there are clear consumer benefits in doing so.

We agree with Ofgem's assessment that there are different reasons why projects should be exempted from competition.

Firstly, there are projects within the scope of 'strategic onshore electricity transmission' projects that do not meet the criteria for competition (>£100m, new, separable). This includes (as Ofgem identified) EDEU, HWUP, PTNO, TKRE and also PTC1 (as identified by ESO in the NOA7 Refresh, but not included in Ofgem's list within the Consultation). Therefore, these should all be confirmed as allocated to NGET.

³ See footnote 1.

Secondly, there are projects that need to be progressed in advance of the enabling legislation and regulatory changes for competition having been implemented, to avoid the risk of delayed delivery. This includes (as Ofgem identified) BTNO, E2DC, E4DC, OPN2. We also consider AENC, ATNC, and SDC1 should fall within this category.

AENC and ATNC are well suited to the new delivery approach that NGET intends to deploy, but would also provide the opportunity to ensure we can take learnings from this approach to other projects. Implementing a new collaborative organisation will inevitably provide some early learnings, so the opportunity to implement on these two projects (as the only ones both still sufficiently early stage to allow for a new approach but sufficiently advanced to not require acceleration to hit 2030) is vital to allow us time to make these learnings and apply them to later projects, to ensure they can be delivered as quickly and effectively as possible. These lessons can then be applied to the third category of projects where acceleration is required, and without this learning, later projects are at greater risk. For SDC1 as well as for AENC and ATNC as individual projects, the main risk is that we are not able to place orders early enough for items with long-lead time, and unless these projects are exempted from competition, such orders will not be placed in time to allow 2030 delivery.

Thirdly, there are projects where it is in consumers interests to advance delivery ahead of the current EISDs and where our analysis shows that exemption from competition and delivery by NGET would result in project delivery earlier than through a competitive process. This includes (as Ofgem identified) CGNC, E4L5, EDN2, GWNC, LRN4, PSNC, and TGDC.

Further information will be included in the delivery plan for the 19 NGET projects that we will submit on 16 September 2022. This submission will explain the practical benefits that would result from the exemption of all projects.

Q5: Do you agree that without upfront certainty that they will be delivering enough of the investment needed for 2030, TOs will face significant difficulties mobilising the supply chain to deliver the works on time?

Yes, we agree that without providing upfront certainty for the TOs that they will be delivering the investment needed for 2030, they will in turn face significant difficulties mobilising the capacity and capability of the supply chain to deliver the works on time.

Through our engagement with the supply chain, both individually as NGET, and together with the other TOs, the suppliers have made it very clear that they are not able to ramp up the necessary capacity and capability without early firm commitments that they have been selected to deliver the work.

The suppliers are currently sized for 'business as usual' work volumes and the current market environment means they are already struggling with resources. Many suppliers are preferring attractive sectors and terms and we are starting to see a risk of 'no-bid' situations, where no-one is willing to tender in for the work, as they can get better terms elsewhere. Suppliers are not prepared to scale-up resources and capabilities in the hope they are selected for work; they need firm orders.

Our international counterparts are also seeking to rapidly expand their clean energy infrastructure, creating significant competition for allocation of capital and skills across the supply chain, as are other large scale UK infrastructure projects such as Sizewell C, Network Rail Midland Mainline Electrification Programme and the Lower Thames Crossing. Many suppliers are currently tendering for multiple projects and their ability to scale up capacity and capability in the UK market will be influenced by their success (or otherwise) in those tenders.

In the offshore space, the HVDC market has particular challenges, playing in a global market, where the UK is not the only country seeking HVDC supplies. Market analysis suggests that over the next five years, the global demand for HVDC technology will outstrip supply by 20-40% and will continue to be in excess of supply out to 2030.

To take on the scale of work required, suppliers will need to ramp-up and retain the appropriately skilled, competent workforce in a competitive environment and secure materials and equipment in a world where they are becoming ever scarcer, with increasing lead times and prices. The current project-by-project approach makes it harder to offer job security to the workforce and will prevent acceleration and other procurement benefits, such as volume price savings.

Infrastructure promoters are embracing lessons from other major UK infrastructure projects, such as the Thames Tideway Tunnel and Crossrail stations, where delivery models have shifted away from traditional "client / contractor" relationships to more collaborative portfolio or programme approaches with aligned interests and objectives, such

as through including contractors in the design and consenting phase. This approach better lends itself to efficiencies and improvements, leading to greater innovation in, and repeatability and standardisation of, design, modularisation and offsite construction, parallel working, interface optimisation to reduce or eliminate client/contractor duplication, minimising downtime of resources, securing downstream supply chains and improving consent outcomes. This is in line with the 'Modern Methods of Construction' (MMC) approach which is detailed in the Government's Construction Playbook as key to unlocking efficiencies and modernise construction and is fully endorsed by the IPA and BEIS. Projects that have successfully used the MMC approach and have saved time and money include Network Rail's Box structure flyover (East West Rail) and the National Highways Smart Motorways Programme. Engaging early with the supply chain and adopting new approaches to delivery will all support us in delivering the projects in the timeliest and most efficient way possible, in the interests of consumers.

Changes to Ofgem's assessment process that could support accelerated investment delivery

Q6: Do you agree that it is in consumer interest to consider streamlining our regulatory processes?

Yes, we agree that streamlining the regulatory process is in the interests of consumers.

As it is currently designed, the Large Onshore Transmission Investment (LOTI) regulatory process is geared towards managing projects where there is uncertainty over need, timing, scope and costs of large network reinforcements, and as such leaving confirmation of that need, timing and scope until very late in the process ensures optimal investments and avoids passing on the burden of abortive or inefficient costs to consumers.

Today's challenge is different. The need, timing and scope is clear: the strategic projects in question are clearly defined and have been confirmed by the ESO as required to accommodate the material increase in renewable generation, in line with clear UK Government policy ambitions, in turn supporting the decarbonisation of the energy system, providing greater energy security and reducing material constraint costs for consumers. While the risk of abortive costs is not removed entirely, and we note Ofgem's concerns that less scrutiny over project funding could result in inefficient or excessive costs, this risk can be mitigated further still by carefully designed consumer protection measures, as described further in Part 2 of this paper and in our responses to Questions 10 and 11 below.

We therefore strongly support Ofgem's recognition that streamlining the process could enable accelerated delivery relative to the existing LOTI framework.

We note that the EISD we have quoted in past work and which are reflected in the ESO's HND and NOA analysis are already based on some acceleration over that achievable in a strictly applied LOTI process. In line with Ofgem's past practice and guidance to us, our timings already assume some regulatory flexibility will be granted where it is in the consumers' interest to do so. We are in the process of quantifying the extent to which the changes from the accelerated regulatory framework might enable us to further accelerate (e.g. through enabling us to undertake activities in parallel rather than sequentially under the LOTI process) and estimating by how much it will enable us to work with our supply chain to deliver more rapidly (e.g. through finding ways to complete construction faster). We will share this analysis with Ofgem separately once completed.

In some cases Ofgem's one year assumption is conservative given that failure to give early certainty will likely cause even longer delay (e.g. in our recently submitted Yorkshire GREEN (OPN2) Final Needs Case, we demonstrate that failure to place equipment orders will lead to a 22-24 month delay to the EISD).

The streamlined process and early certainty it would provide also unlocks further opportunities that are not possible under LOTI, such as adopting a portfolio/programme-based delivery model as described further in Part 2 of this paper and our response to Question 3 above.

Q7: Which of our options for streamlining our regulatory processes do you favour?

Of the four funding model options presented by Ofgem, we believe there are merits in each and propose a combination of these, with other enhancements, would deliver the right framework. The elements together need to be appropriate to enable the portfolio/programmatic delivery model required to allow the necessary early engagement and collaborative working with our supply chain. The regulatory framework needs to drive innovative solutions to deliver in the timeliest fashion, whilst creating volume-based efficiencies and cost savings. This requires a staged approach that (i) provides early certainty of need (as already proposed in Ofgem's Approach 1) and confirms TOs as the delivery vehicle by exempting the projects from competition (already proposed by Ofgem

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except for 6 projects), but also (ii) locks in unit costs and benchmarks (where practicable) and incentives at an early stage and (iii) sets volumes once these are known. We therefore believe that a hybrid approach of all options, but with strong ex ante incentives, is the optimal approach as described further below.

To support our proposed delivery model, the streamlined regulatory approval process needs to deliver four key things by Autumn 2022:

- i. **Confirmation that we will deliver the work**, by confirming the 19 projects NGET is responsible for (solely or in partnership with the Scottish TOs) are exempt from competition, so we can give firm commitments against all 19 projects to the supply chain. We have set out our full reasons for why we think this is justified in our response to Question 4 above.
- ii. **Confirmation that we will be able to recover from consumers our efficient 'early construction' costs**, so that we can place firm financial commitments with the supply chain without exposing ourselves to unacceptable risks of non-recovery (noting the total value of the capital investment required is significant versus the size of the current TOs).
- iii. **Confirmation on how cost allowances and incentives for the projects will be set, including on how the detailed design choices that drive cost will be agreed**, so that when we engage the supply chain at an early stage we are able to ensure they are appropriately targeted. This is a critical feature which is an enhancement on Ofgem's current proposals. The nature of a portfolio/programme-based procurement approach means that conventional LOTI Project Assessment cost assessments are not possible, but different types of cost modelling can be used whilst retaining scrutiny on unit costs. We have set out below our proposals for how allowances could be set. We recognise that it will be too soon to finalise details on these arrangements in the Autumn but will need confidence on the key principles of these points so that we can reflect them as we start to engage with the supply chain. The early results of this supply chain engagement can then inform the detailed framework design.
- iv. **Agreed timescales to determine the remainder of the project assessment framework** including confirmation that the revised process will allow for more rapid decision making, reflecting the need to secure capacity rapidly in a more dynamic market where suppliers may be unwilling or unable to hold prices for the six-month periods assumed in current regulatory processes.

Ofgem's minded-to position of a combination of Approach 1 (early acceptance of strategic project need) and Approach 2 (approval of allowances for projects in stages) does not provide the required upfront certainty on funding and will therefore not be sufficient to enable the step change in delivery needed to enable accelerated delivery.

This is because it provides:

- 1) **Insufficient certainty of scope/volume:** Without confirmation on how cost allowances will be set, we cannot give certainty to our supply chain on our expectations and contractual arrangements to deliver optimal performance for consumers. Further, whilst we expect to engage our supply chain on the basis of some uncertainty in the volume of work, we need to provide transparency on how the volumes will ultimately be set. In particular, we are concerned that Ofgem's Approach 1 would not include endorsing 'particular design choices', which seems to imply that Ofgem would reserve its position on key strategic decision points such as point-to-point location options or technology (e.g. overhead line/underground cables/subsea cables), driving ongoing uncertainty.
- 2) **Insufficient allowance certainty:** The reference in Ofgem's Approach 2 to retaining the current Project Assessment phase ("the full cost assessment would be consistent with the current project assessment phase of the LOTI process") would maintain the issue identified in our response to Question 6 above in relation to TO exposure to price fluctuations. We also believe the intensity of the LOTI process would be overly burdensome for the TOs against this volume of projects and scope of work. To gain maximum benefit from involving contractors at an early stage through a portfolio approach, it will be necessary to set allowances upfront (as per Ofgem's Approach 3), subject to uncertainty mechanisms and consumer protection measures (as covered further below), to incentivise supply base efficiency and innovation.

An ex ante settlement is the best way of retaining cost control incentives on TOs while allowing accelerated delivery. **We therefore consider that a hybrid version of Ofgem's different Approaches is the optimal model for setting allowances.** This would reflect parts of Approach 3, subject to adjustment mechanisms and review after planning permission if there are material changes in project scope or costs, and incorporate features of all three

other approaches, including the phasing of Approach 2, but with earlier setting of portfolio arrangements relative to Ofgem's proposal. In designing this new option, it will be key to ensure the risk of consumers being exposed to costs is carefully managed, and we would expect the approach to include some ongoing Ofgem controls on expenditure outside of a pre-agreed envelope.

We recognise Ofgem's concern that setting early ex ante allowances could result in higher risk to consumers, and agree with Ofgem's view that consumer protection measures would be necessary. These would also ensure TOs are not exposed to undue risk of cost escalation due to poorly defined scope.

We propose allowances are set using the following staged approach – which also assumes all 19 projects NGET is responsible for are exempted from competition:

Step 1: Market engagement and tendering by Autumn

As a matter of urgency and by Autumn 2022, to enable early portfolio-level engagement with the market, it is necessary for Ofgem to confirm the key principles of the following:

- **Confirm volume:** Acceptance of incumbent TO delivery and strategic project need on a programmatic basis for all qualifying projects, as suggested in Ofgem Approach 1. This should ensure that key strategic design choices are also confirmed – for example, the point to point locations being connected by particular strategic options.
- **Confirm early spend:** Allow sufficient early construction spend (i.e. in advance of planning permission) for qualifying projects to allow market engagement (as suggested in Ofgem Approach 2). This will allow activities currently prevented until beyond the LOTI Final Needs Case stage, such as long lead time equipment orders. The level of spend required may increase over time (e.g. if we see more markets within our supply chain becoming constrained as the world reacts to the current energy price crisis and need to pre-order more equipment) and an agile mechanism should be developed to release spend quickly but only when truly required. This could be subject to an evaluative PCD similar to the current arrangements for Pre-Construction Funding in the RIIO-ET2 settlement.
- **Confirm incentive package and caps on under/outperformance:** Confirm the proposed package of incentives as described in Part 2 of this paper and in our response to Question 11 below. We also consider that it will be in consumer interests to incentivise TOs to optimise detailed scope during the design phase to ensure that economical and efficient volumes of work are progressed, and we would welcome further discussion on this point.
- **Confirm approach to setting allowances for the 19 NGET projects:** Confirm agreement to the approach and principles outlined here and below to set expectations with the potential supply base.

This, along with clear timescales to agree details within these principles, will enable early market engagement and tendering at onshore and offshore portfolio levels to be initiated in the Autumn in the confidence that suppliers understand and contemplate an agreed incentive package. This market engagement can inform definition of the precise approach to using the above levers (likely to differ onshore and offshore, given the different supply chain structures), on a principles basis. It is essential this early engagement is completed by the middle of 2023, to allow for the finalisation of supply chain agreements and the formation of partnerships during the second half of the calendar year 2023, in order to keep the target delivery dates on track. This approach should also establish key cost drivers, including various unit rates (e.g. using a 'Should Cost' model as referred to below), and subject to agreed excluded cost drivers (e.g. commodity prices, inflation).

Step 2: Set portfolio allowance framework at completion of procurement (i.e. target late 2023 / early 2024)

An ex ante portfolio allowance framework could then be set for all qualifying projects, with uncertainty mechanisms to ensure no excessive exposure to either consumers or TOs, applying the following features and principles:

- Detailed scope and volume are not agreed at this stage, the intention being to set unit cost allowances wherever possible, whilst recognising that for some activities it will not be possible and/or desirable for consumers.

- Unit rates for equipment and installation set where market data and appropriate benchmarks are available, for example by using HM Treasury's 'Should Cost Model'⁴, which is considered best practice on major infrastructure projects. This would involve appropriate engagement with Ofgem and BEIS.
- Mechanistic adjustment factors used where drivers of cost fluctuation can be easily identified and reported – e.g. Real Price Effects on commodities, labour costs etc.; inflation; foreign exchange. An agreed materiality threshold should also allow project-specific adjustments at the point the allowance is set for each individual or group of projects.
- Portfolio level schedule of Cost and Output Adjusting Events (COAE) agreed, including 'unknown unknown' risks that are not possible to foresee.
- Contingency set based on previous outturn costs and informed by current analysis of project risks – set at P50 and at this point including potential COAE risks.
- Project Management costs set with reference to the Should Cost Model, drawing on guidance such as the IPA (Project 13 etc.). Under some delivery model options these costs may not be comparable to TO project management costs in prior assessments due to greater transparency on the project management costs embedded in our contractors' work. This would apply mechanistically to each project in a similar way to the Opex Escalator already in operation in the RIIO-T2 settlement.
- Mitigation and additionality costs (community benefits, landscaping, biodiversity net gain) provisionally agreed generically (e.g. per km or % of capex) on a Use It Or Lose It (UIOLI) basis to avoid incentive to minimise these costs. This would have the advantage of approaching these issues in the planning process with comfort that Ofgem endorses these costs.

Step 3: Project specific allowances set at the point we're ready to fix the settlement for each project

Project specific allowances could then be set when further detail on each qualifying project is known, applying the following features and principles:

- The default position should be that allowances are set mechanistically drawing on the rates already agreed at an onshore or offshore portfolio level (subject to mechanistic adjustment factors), with requirement to reapply to Ofgem for adjustment where scope and/or costs have changed materially (e.g. exceed a particular cost threshold once other indexation etc. has been taken into account). This would retain an incentive to control costs whilst ensuring no party is exposed to unacceptable risk. However, this is likely to not be possible and/or desirable in all circumstances (e.g. where challenging ground/seabed conditions or environmental constraints affect a particular project).
- Once planning is granted, the final costs and ODI output date would be set using the method agreed in Step 2 above – i.e. largely mechanistically. Where an agreed cost threshold has been exceeded, a project-specific review would be needed to set the final allowance (as suggested in Ofgem's Approach 3).
- Third party independent expert review of detailed technical scope (prior to the final application for consent) to ensure it is efficient and economical.
- The process could be used by the TOs to test key scope decisions with Ofgem at an early stage without causing project delay – e.g. ratings and specifications, routing, extent of undergrounding.
- Where projects are cancelled, unused allowances would be returned or revisited (e.g. where the need falls away or planning permission is refused in principle).
- Project-specific changes to COAE would be made where necessary. Final contingency set, reflective of impact of any COAE exclusions and further project-specific risk analysis.

Step 4: Reporting

Progress would be reported on an agreed basis, covering general performance against agreed outputs and allowances, and COAE reporting. This would add additional comfort for consumers on top of the greater transparency from the new delivery models we propose. However, we do not believe that interim/milestone based

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/987128/Should_Cost_Modeling_guidance_note_May_2021.pdf

PCDs for each project would be necessary. We would welcome the opportunity to discuss how this process could work.

Cost Benefit Analysis

Q8: Do you agree with the costs and benefits methodology we have established?

We consider that the CBA methodology has a number of flaws and limitations, but that ultimately it adequately captures the broad order of magnitude of the significant consumer benefit in meeting EISDs and acceleration of qualifying projects for the purposes of this Consultation. Given the methodology used by Ofgem, we believe the CBA is actually much clearer and more definitive than the case presented by Ofgem. As explained further below, Ofgem's method underestimates consumer benefit and overestimates the likely costs. It also excludes the wider societal benefits of prioritising the Government's 2030 offshore wind ambitions (such as carbon reduction, greater energy security and the benefit of cheaper renewables replacing highly priced gas) as they are 'difficult to quantify' in Ofgem's judgement. These wider benefits could be vast.

Understatement of constraint benefit (Ofgem's "constraint saving" assumption)

The constraint benefit in Ofgem's analysis is based on January 2022 NOA delay analysis. The use of the 2021 Leading the Way (LtW) FES in this iteration of NOA likely understates the benefits of acceleration and/or avoiding delay, relative to the 'LtW+' background used in the July 2022 NOA Refresh carried out alongside the HND process (the 2021 LtW scenario narrowly misses 50GW of offshore wind by 2030, with 46.6GW in 2030, and 53.8GW in 2031). This means that the value of constraint saving (relative to the counterfactual) in best, central and worst cases is likely to be somewhat pessimistic.

Where projects were not included in the January 2022 NOA Ofgem has "applied the average delay regret value as a percentage of the total cost (calculated from the projects that have this data)", resulting in average annual constraint delay costs at 35-40% of capex costs. However, although the two are likely to be correlated, constraint costs do not have a direct and linear relationship to capex costs – i.e. it is possible that relatively less costly projects can deliver significant constraint relief, or relatively more costly projects can deliver less constraint relief. This method may therefore somewhat under or overstate the benefits in timely delivery of these projects. However, we consider that Ofgem's method is a sensible approximation for the purposes of the Consultation in the absence of more robust data from ongoing ESO analysis.

Ofgem's method also assumes that all projects with EISDs of 2030 or earlier are delivered on time. It is likely that in at least some cases there will be significant consumer benefit in bringing delivery dates forward, where this is possible. We agree with Ofgem's view that capturing the potential benefits of accelerating these projects is challenging given the lack of existing data from the ESO NOA process. However, the lack of incorporation of this factor into the analysis means that the value of constraint saving in the best case is likely to be pessimistic. We are working with the ESO to ensure that data is available to quantify this benefit in the near future.

Optimistic probability of delay in 'BAU' LOTI (Ofgem's "delivery assumption")

Ofgem assumes that, under current regulatory arrangements and planning processes, half of the projects would be delayed (based on the logic that EISDs are provided on a P50 basis). This further underestimates the benefit of an accelerated delivery framework.

Firstly, most programmes underpinning EISDs implicitly assume regulatory flexibility, rather than accommodating the 'default' LOTI timings. For example, the EISD for Yorkshire GREEN (OPN2) assumes that it is possible to place timely orders for equipment with long lead times such as transformers in advance of planning approval. According to current market intelligence on lead times, if the default LOTI process were to be applied (where these commitments cannot be made until after Final Needs Case, which in turn must follow planning approval), a delay of 22-24 months would be created to the EISD. This situation is likely to be repeated in some form in most projects across the portfolio.

Secondly, it is incorrect to assume that EISDs have a P50 level of confidence. Strictly, the confidence in any date cannot be measured without a full schedule risk assessment, which is not undertaken through the NOA process given the level of schedule risk detail available and the number of schemes assessed. The EISD programmes

instead use generic assumptions on various activities (planning, procurement, route length, installation rates etc.) to arrive at the earliest a reinforcement might realistically be constructed according to these assumptions.

Any updated analysis should compare 1) the acceleration proposals in the Consultation against a range of other scenarios, including 2) strict application of the LOTI process (i.e. procurement and construction spend does not begin until after planning and Final Needs Case approval), and 3) delays created by running a CATO after planning and Final Needs Case approval, as well as 4) the assumed 'business as usual' process, which already allows some flexibility in application of LOTI. We intend to provide counterfactual schedules for scenarios 1, 2, and 4 for each project to which they are relevant (for some projects we have already committed to 'business as usual' acceleration vs. LOTI) as part of the Delivery Plans to be submitted in September.

Optimistic competition benefits (Ofgem's "competition %" assumption)

Ofgem assumes the benefit of late competition is in the range of 10-15%. It is unclear how this has been calculated. Ofgem refers to recent analysis of the benefits of introducing early competition⁵ and also to competition in offshore networks⁶). Both of these are of limited relevance to consideration of the late competition in onshore networks that would apply in the counterfactual here. These estimates are in our view unduly optimistic, especially at the lower bound. The Impact Assessment published alongside BEIS's consultation on Competition in Onshore Electricity Networks last year⁷ estimated a net benefit to society is in the range of -£3m to £1.0bn (NPV over 32 years), assuming annual investment of up to £1.1bn for 7 years (i.e. £7.7bn portfolio) – from approximately no benefit up to 13% (£1bn/£7.7bn). The potential savings identified in the BEIS analysis were also based on offshore competition, and the Impact Assessment acknowledges at para. 76 that:

- A large part of the savings in the offshore regime used as a comparator were realised through reduced operating and maintenance costs, at least in part by offshore generators quoting very low prices for operating and maintenance costs in an attempt to maintain control over their own assets. In an onshore competition there is less likely to be a corresponding generation asset to act in this role, and this means a similar incentive (and opportunity) for bidders to reduce maintenance costs in this way would likely not exist.
- There are limits to the extent to which lessons can be drawn from experience of offshore competition, as the outcomes demonstrated are specific to context and time.

It is possible that competition under the CATO model would increase capex costs given that competitors would be likely to pursue a project finance model requiring all risks to be priced into bids (and not able to rely on the portfolio effect of settings allowance at P50 confidence used in a conventional price control arrangement). There is also no allowance in the assessment for the loss of economies of scale from preventing bulk purchase by the incumbent TO (e.g. the BEIS Impact Assessment assumed that in the worst case capex costs could increase by 10%). Competition would also see multiple smaller procurement events chasing the same limited supply chain capacity, which would increase prices (as well as cause delay – see below).

Furthermore, Ofgem does "not consider that there is any evidence to suggest that third-party delivery of strategic projects through onshore competition would take any longer to deliver than TO delivery". The analysis therefore does not factor in any further delay costs, even in the lower bound. Current EISDs are not based on a strict application of the LOTI process and instead assume various accelerations as a result of flexibilities Ofgem has previously granted or given assurances would be granted in existing projects (e.g. the OPN2 example given above). These flexibilities would not be possible with late competition, where CATOs would be awarded on after the planning process is complete, and the correct comparison for a CATO timescale is a strictly applied LOTI process, timescales for which we will share as part of the Delivery Plans to be submitted in September. In addition to this incorrect basis for comparison, we consider the assumption that no additional time would be required is flawed for these reasons:

⁵ <https://www.ofgem.gov.uk/publications/decision-early-competition-onshore-electricity-transmission-networks>

⁶ [Draft impact assessment on Pathway to 2030 workstream's minded to decision on the Delivery Model option \(ofgem.gov.uk\)](https://www.ofgem.gov.uk/publications/draft-impact-assessment-on-pathway-to-2030-workstream's-minded-to-decision-on-the-delivery-model-option)

⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1008116/competition-onshore-electricity-network-impact-assessment.pdf

- As noted above, competition would see multiple smaller procurement events chasing the same limited supply chain capacity too late in the process, encountering the same delay issues that we have identified in the conventional ‘project-by-project’ procurement approach.
- It is possible that new incumbents may be more at risk of delay during construction given their limited experience in the sector, and the inability of project financed entities to absorb significant downside risks. This introduces a further risk of non-delivery and resilience, which may add costs and further delay to run another process to find a replacement TO.

The Pathway to 2030 Impact Assessment lends weight to these views in commentary on reasons that no offshore wind developer has chosen to use the OFTO build option. According to para. 4.19:

“Some developers were concerned that an OFTO build would lead to a loss of control over a critical component of their offshore wind projects. Developers were also worried about uncertainties regarding the identity and capability of the OFTO, the difficulties of joining up development timelines and the practical issue of having to incorporate long tender process early on in the project development timetable. They argued that these factors could increase the cost of capital through higher risk premiums or preclude positive investment decisions.”

Ofgem therefore appears to both (i) overestimate the potential savings from onshore competition and (ii) ignore the scope for meaningful delays from introducing a competition process, by assuming no delay in all cases.

It is not clear from the Consultation whether Ofgem has performed a present value calculation of the benefits that competition would bring. Any benefit would be recovered from consumers over the lifetime of the asset, so would be lower in present value terms than a one-off benefit. In contrast, constraint costs would feed through to consumers via BSUoS charges in the year they occur. The cost benefit analysis should discount future social costs and benefits to consumers at a suitable rate.

Pessimistic “Project Assessment loss” excessive cost assumption

Ofgem considers that early certainty on full project costs may expose consumers to risks of inefficient costs due to the final project design being materially different than initially forecast. We agree that, without suitable consumer protections and uncertainty mechanisms, this is a potential risk. However, it is possible to design a regulatory framework that mitigates this risk (see our response to Question 7 above). Ofgem agrees that it does not “anticipate a reduction in the robustness of [its] cost assessment” in the new process and that “ensuring a high level of consumer protection remains an essential priority” (para. 6.32). In the most optimistic case at least, it therefore should follow that there is no assumed exposure to inefficient costs.

In any event, we consider Ofgem’s assumptions to be pessimistic as they are based on a calculation showing that, for completed SWW projects in RIIO-ET1, costs reduced by 7.6% on average. Hinkley-Seabank is the only NGET project in the data set, with a headline reduction of 8.5%. However, it is wrong to conclude that this reduction was related to uncertain scope in the way that Ofgem has in this assumption. More than half of this value (4.3%) was from removals agreed bilaterally – most significantly, the removal of P50 contingency for High Impact Low Probability risks in favour of treatment under the COAE mechanism (3.7%). 2.4% was removed due to Ofgem’s disagreement with the use of T-Pylons, which could have been dealt with at an early stage (indeed, in future an earlier Ofgem view on scope could allow the TO to change the design promoted for planning in these circumstances). 1.9% was removed from project management and contingency costs on the basis of Ofgem benchmarking that could have taken place at an early stage in the process. Therefore, almost none of the reductions identified by Ofgem arose as a result of refinement of scope, and therefore more cost certainty, through the Project Assessment process.

More broadly, it is also questionable whether the counterfactual should be the level of costs achieved in the past, given that a key part of the case for change is that continuing with current approaches will likely mean insufficient market participation from suppliers and therefore higher prices than before.

The assumption that 3.4-4.6% of total project value would be saved in the counterfactual is therefore pessimistic. In the best case at least, it should be assumed that Ofgem’s new process is equally as robust as the previous one. If our proposed changes are made, it would also unlock portfolio efficiencies and new ways of procurement that should drive lower capex costs.

Pessimistic “planning loss” abortive costs assumption

Ofgem has assumed that between 1 in 10 and 1 in 15 projects will be unable to achieve consent. We agree with Ofgem it is unlikely that accelerated investment projects are abandoned given the strong needs case and the track record of LOTI projects receiving planning consent. However, Ofgem’s assumption is nevertheless somewhat pessimistic (especially in the worst case) given that the most likely scenario in the unlikely event of refusal of planning permission is delay rather than outright cancellation (for example to vary the route, location of substations, extent of mitigation, acceptance of additional planning conditions to discharge prior to construction, etc.). This is especially the case given Government policy support for the accelerated investment projects.

Ofgem then assumes that where cancellation occurs it would result in abortive costs at 5% of the total costs of the project. This is also likely to be pessimistic for several reasons:

- Some costs can be reallocated to successor projects or others in the portfolio (e.g. equipment orders, factory slots);
- Some commitments will be subject to cancellation profiles – i.e. the entire commitment is not payable in event of cancellation;
- Some design work is likely to be reusable – e.g. on technical specifications.

Q9: Do you agree with the conclusions of our cost and benefits analysis?

For the reasons listed in our response to Question 8 above, Ofgem’s CBA has a number of shortcomings and limitations in its methodology and fails to capture the full benefits of pre-2030 ‘earliest-in-service-dates’ (EISDs) and accelerating delivery of qualifying projects. However, though conservative, the conclusions from Ofgem’s CBA do clearly identify that there is a very strong consumer case for streamlining the regulatory framework and exempting the 19 NGET projects from competition and we agree with those conclusions.

Potential measures to protect consumers

Q10: What are your views on introducing a package of regulatory measures which Ofgem may apply to protect consumers?

The changes being contemplated through this Consultation are by their very nature protecting consumers. Exempting the projects from competition and providing greater clarity upfront around recovery of certain costs (as outlined in our response to Question 7) will allow us to engage much earlier with the supply chain and adopt a portfolio/programme delivery model, all of which will ensure we can accelerate the delivery of the critical infrastructure to bring the 50GW of offshore wind onto the system. This timely delivery will in turn provide consumer benefits by ensuring prolonged and exacerbated constraint costs can be avoided, as well as ensuring solid progress is made to decarbonise the energy system and bring more cheaper renewables onto the system. Therefore, by helping to bring forward delivery of the projects the measures will better protect consumers even without the additional protections proposed.

We do acknowledge it is important that the accelerated delivery framework includes a balanced and appropriate set of risk and reward measures which both incentivise the TOs to deliver early / on time, while also protecting consumers from the risk of delays and inefficient costs. However, the accelerated delivery timeframes will be more challenging than the baseline and we do not believe TOs should be disproportionately penalised for failing to meet these stretch targets. Instead the benchmark should be against the original delivery date. For example, it would seem perverse to penalise us for a 3 month delay on a date which was accelerated by 12 months, given it would still have been delivered 9 months before the project would have originally been expected. The calibration of the reward / penalty should reflect the additional risks the TOs face to deliver to a challenging date and the opportunity the TOs create value for end consumers.

We do not believe the package of regulatory measures proposed by Ofgem in the Consultation are appropriate for the reasons set out in our response to Question 11 below, and we have set out our proposal of what we think *would* be an appropriate package of regulatory measures in Part 2 of this paper and in our response to Question 11.

Q11: What are your views on the design of each of regulatory measure? (Please clearly reference which measure(s) your comments relate to e.g. Accelerated delivery Output Delivery Incentive, Ex post efficiency review, etc)

We have a number of overarching concerns with Ofgem's proposed package of measures:

- **The overall exposure is disproportionate and does not reflect the risk profile of a regulated network business:**
 - The Ofgem proposal includes a potential exposure of £2.1bn as part of the output delivery incentive (ODI) regime (based on an overall cap at 15% of project costs, currently estimated to be c.£14bn for the 19 projects NGET would be responsible for delivering). Ofgem's proposal also includes framing output delivery dates as new licence obligations (LO) meaning if the date was missed, it would also constitute a breach of a LO, with potential financial penalties of up to 10% of turnover. This subjects NGET to completely unreasonable and excessive levels of risk that are wholly unacceptable to us and would fundamentally change the risk profile both our investors and Ofgem expect from NGET as a regulated network business.
 - Ofgem has also said it is considering the use of PCDs concurrently with LOs as providing "an efficient means of allowance adjustments while protecting consumers against the risk of non-delivery" (para. 7.7 of the Consultation). We have assumed the ODI is Ofgem's proposed method of responding to a missed delivery date. If Ofgem intends the PCD allowance adjustment mechanism (i.e. allowance clawback / reprofiling in the case that a PCD was not Fully Delivered) as an additional overlay to the ODI and LO, it would seem to add a potential triple jeopardy risk, which would add to Ofgem's proposal being completely unacceptable in terms of overall risk exposure. We would welcome further clarification on this point from Ofgem
 - As noted in the RIIO-T2 Final Determinations (FDs), LOs "*set minimum standards that network companies must achieve*", while PCDs "*specify the deliverable(s) for the funding allocated, and the mechanism(s) to refund consumers if an output is not delivered (or not delivered to a specified standard)*". The FDs also state the following in respect of PCDs: "*Purpose: to put in place a framework that supports our ability to hold licensees accountable for delivering work funded through the price control. Benefits: The PCD framework provides a greater level of clarity between baseline allowances and associated outputs, which will encourage better and more focused delivery in RIIO-2 compared to RIIO-1 and will ensure that companies are only paid for what they deliver.*" **In line with these descriptions, we consider a suitably framed PCD is the best approach and that the PCD should not be used concurrently with a LO.**
- **The basis for setting the 15% cap:**
 - We do not agree with Ofgem's justification that the overall 15% cap (c.£2.1bn assuming c.£14bn total project cost) is comparable to liquidated damages clauses typically used in large construction projects in the energy sector (paragraph 7.20 in the Consultation). We do not consider this is an appropriate basis on which to set the overall TO exposure and we also do not agree that there is an industry standard for how liquidated damages are set. Liquidated damages are commercially negotiated and vary from project to project depending on the risk profile of the project in question and the risk the parties are willing or able to take on (large construction companies, for example, are likely to have a higher WACC and different risk profile to a regulated TO). Therefore, there is no 'typical' level at which liquidated damages are set. In addition, if we try to agree liquidated damages at levels that are too high it would in fact work against consumers' interests, as it would lead to the suppliers/contractors committing to more cautious delivery dates.
 - As set out in our proposal below, the maximum penalty and reward needs to be reduced to be more consistent with the low risk nature of transmission businesses and provide the right incentives for early delivery.
- **Linking the ODI to actual constraint costs**
 - We do not agree that the ODI should be directly linked to actual constraint costs but recognise some notional ex ante fixed measure of harm/benefit from late/early delivery is appropriate. Our main concerns with linking directly to actual constraint costs are:

- TO revenue is linked to the cost of delivering the assets and not the benefits that the asset delivers (in avoided constraint cost payments), so there is no direct correlation between constraints costs and TOs' revenue. We therefore have concerns that the proposed ODI is based on constraint costs (acknowledging the overall cap is linked to project value) when the remuneration is based on cost (i.e. any compensation payments should be commensurate with the fee paid).
 - Constraint costs are derived from actions taken by ESO in the wholesale markets and ancillary services contracts, which are not in the control of the TOs and cannot be easily predicted. It would also not be acceptable for the risks of market actions to be absorbed by TOs. This is especially the case in view of the fact that high constraint costs are in part a function of a deliberate strategy of deferring investments to ensure delivery of optimal reinforcements (through the FES/ETYS/NOA cycle) and allowing generators to connect ahead of the completion of certain transmission works, which has in part been exacerbated by renewable generation growing faster than had been anticipated. It is unreasonable to expose TOs to potentially large and unpredictable liabilities for the consequences of this approach.
- The proposed incentive rates in Ofgem's measures would incentivise perverse behaviours by the TOs that would not be in consumers' interests:** The misalignment in Ofgem's proposed ODI (50%) and TIM (15%) rates would not align TOs' and consumers' interests to manage the total benefits/costs of early/late delivery, and could lead to perverse outcomes which would be to the detriment of consumers as highlighted below:

ODI of 50% and TIM at 15%:



- Ongoing monitoring and reporting obligations**
 - As discussed in Question 7 above, we agree that some form of reporting arrangements is necessary to allow for reporting of progress, iteration of allowances, for example.
- Reopeners to adjust outputs and allowances**
 - We agree in principle with the proposal to use the Cost and Output Adjusting Events (COAE) mechanism to adjust outputs and allowances.
 - The COAE must be set ex ante. The TOs must be clear from the outset on the circumstances in which adjustments in outputs and allowances will be allowed, with 'known-unknowns' set ex ante, and the ability to amend outputs ex post for 'unknown-unknowns'.
 - A 10% COAE reopener threshold is too high. In this arrangement, assuming Ofgem does not fund up front contingency for the qualifying risks, TOs would bear a significant unfunded risk. We propose that COAE risks are excluded from any upfront contingency allowance and are subject to COAE arrangements with no threshold, or a low enough threshold to ensure that exposure is not material, linked to the cost of running the assessment process (i.e. transactional cost).
 - If there is to be a COAE threshold, it should be cumulative for each project rather than requiring single events to meet threshold.
 - As discussed in Question 7, we also propose various other measures to adjust outputs and allowances as scope and costs become more certain.
- Ex post efficiency review**
 - We disagree with the proposal to include an ex post efficiency review.
 - The provision of an ex post review to determine whether costs are demonstrably inefficient has previously been established as undoubtedly an asymmetric arrangement. Such a review will never

provide additional allowances in excess of expenditure incurred but could result in a cost disallowance. This was acknowledged by Ofgem in setting the ESO RIIO-2 price control with the provision of an allowance to cover the expected costs of demonstrably inefficient expenditure

- An ex post review would also undermine the strength of the incentive to outperform, as it would encourage the TOs to put effort into justifying the approach, rather than focusing on delivery.

Our proposal is set out below. Items 1, 2, 4 and 5 are specific and necessary changes to provide a more balanced risk and reward. For item 3, we believe there are a few options that could be pursued to achieve the necessary reduction in overall risk/reward balance more appropriate for a regulated TO and provide the right incentives for early delivery – we have presented two possible options and we would welcome further dialogue with Ofgem on the different approaches:

- 1. Set target dates on a P50 basis based on current ways of working and delivery models, according to Quantitative Schedule Risk Analysis (QSRA) rather than EISDs.** In some cases these dates will likely fall in the same calendar year as the EISD, but in other cases it may be somewhat later, reflective of the risks specific to individual projects. Using the EISD in all circumstances would skew the probability of delivering the portfolio to less than P50, creating asymmetry.
- 2. Set the ODI and TIM rates ex ante and align the rates to ensure alignment of cost over/under performance and exposure to constraint costs and set them at a level that gives the TOs sufficiently material exposure to influence their behaviour but reflects their low risk nature –** we propose aligning the ODI with Ofgem’s proposed TIM of 15%, as it will provide sufficient incentive on TOs (on both timing and cost) whilst (i) ensuring consumers are protected from the risk that costs have been set incorrectly and (ii) protecting TOs from unsustainable levels of risk. A common 15% rate is illustrated below:



- 3. Reduce the maximum penalty and reward to be more consistent with the low risk nature of transmission businesses and provide the right incentives for early delivery**
 - There are a number of ways this could be done. For example, the maximum penalty and reward on TOs could be reduced from 15% of project cost to a level more reflective of the risk profile (and cost of equity) of their business. We believe 3% of project cost would be a more appropriate level. Alongside this, to the extent the TOs secure delay related liquidated damages from the supply chain, the net benefit of those liquidated damages (assessed ex post, after subtracting direct cost impacts on TOs, e.g. increased project management costs) would flow directly to consumers⁸.
 - This proposal would ensure consumers and NGET are not exposed to disproportionate levels of risk. It would see liquidated damages passed to consumers while also recognising that it is not always in consumer interests to maximise the liquidated damages that can be placed on the supply chain.
 - An alternative proposal is to apply return adjustment mechanisms (RAMs) at a project level and programme level. This would address legitimacy and financeability concerns, is supported by precedent and retains the benefits of incentives while attenuating them.
 - A RAM could be implemented for each project, and use the same thresholds as RIIO-T2: retaining 100% exposure up to 300bps, 50% between 300bps and 400bps, and 10% beyond 400bps.
 - Where a series of projects are delivered as a programme the RAM at the programme level could have amended threshold levels, for example retaining 100% exposure up to 200bps, 50% between 200bps and 300bps, and 10% beyond 300bps.

⁸ Other contractual remedies (e.g. increased or reduced allowed contractor profit) may be negotiated between the TO and supply chain in addition to any delay related liquidated damages. We are happy to have further discussions on how to take account of these in TO incentivisation.

- The RAMs would be calculated on a RAV weighted average RORE over the construction period to avoid issues associated with phasing (e.g. due to totex acceleration or slippage triggering the RAM and the delivery incentive likely to be focussed in one year).
 - We would welcome further discussions with Ofgem to agree how to best ensure the risk/reward balance is more consistent with the low risk nature of transmission businesses and reflective of the intended delivery model.
- 4. Set Cost and Output Adjusting Events ex ante**
- The TOs must be clear from the outset on the circumstances in which adjustments in outputs and allowances will be allowed, with 'known-unknowns' set ex ante, and the ability to amend outputs ex post for 'unknown-unknowns'
- 5. Remove risk of double jeopardy or disproportionate levels of risk by relying only on a Price Control Deliverable (PCD) and not imposing the outputs as separate Licence Obligations (LO)**
- We do not agree that PCDs and LOs should be imposed on the same output. Therefore the target delivery date should not be an LO. As noted in the RIIO-T2 Final Determinations, LOs “set minimum standards that network companies must achieve”, while PCDs “specify the deliverable(s) for the funding allocated, and the mechanism(s) to refund consumers if an output is not delivered (or not delivered to a specified standard)”. Ofgem has said it is considering the use of PCDs concurrently with LOs as providing “an efficient means of allowance adjustments while protecting consumers against the risk of non-delivery” (para. 7.7 of the Consultation). We have assumed the ODI is Ofgem’s proposed method of responding to a missed delivery date. If Ofgem intends the PCD allowance adjustment mechanism (i.e. allowance clawback / reprofiling in the case that a PCD was not Fully Delivered) as an additional overlay to the ODI and LO, it would seem to add a potential triple jeopardy risk, which would add to Ofgem’s proposal being completely unacceptable in terms of overall risk exposure. We would welcome further clarification on this point from Ofgem.

The principles and assumptions we have applied to reach our proposal are set out in more detail above in Part 2 of our response.

[Financeability and financial risk to the TOs](#)

Q12: Do you think our proposals raise any financeability concerns or create excessive financial risk for the network companies? If so, how could they be addressed?

Financeability

- **The level of expenditure required raises significant financeability concerns post 31 March 2026. These concerns need to be addressed now rather than waiting until the next price control.**
- Section 8 of the consultation is clear that Ofgem has only considered financeability up to 31 March 2026. We agree that for the period considered, the RIIO-T2 arrangements were intended to ensure qualifying projects would be financeable. RIIO-T2 includes measures to support financeability, most notably the provision of 15% fast money on totex incurred through uncertainty mechanisms.
- Our initial analysis indicates that comparable support measures will be needed in the next price control. By way of example, FFO / net debt is a key metric used by S&P (one of the main rating agencies) and, without significant support, this key metric would deteriorate significantly and not be financeable. It is clear that financeability support will be required for the period after 31 March 2026. Our initial analysis is based on expenditure plans that do not yet reflect any changes required to bring delivery forward to 2030. Any acceleration will add further cost into the next price control and further heighten the need for measures to support financeability.
- We do not think it is appropriate to expect NGET to commit now to c.£14bn of investment required to deliver the strategic network infrastructure without understanding what measures Ofgem intends to use to ensure financeability beyond 31 March 2026, especially when most of the expenditure will be incurred post 31 March 2026.
- It is not only in consumer interests to find solutions at this stage, but that some options are more sustainable and better for both consumers and investors than others. We propose applying a shorter asset life of 25 years and starting the depreciation of the RAV in the year of expenditure, as an alternative to providing additional fast money. This proposal is an NPV neutral option and, compared to a fast money option, more directly satisfies

key credit metrics by better linking cash flows to levels of the RAV and debt. We are keen to engage with Ofgem on these proposed financeability options in more detail.

Symmetry of Risk

- **Ofgem's current proposals result in asymmetric downside risk. Improvements are needed to ensure a fair bet.**
- We agree with Ofgem that excessive financial risk could increase the cost of capital and raise concerns about financeability.
- While the risk mitigations mentioned by Ofgem in paragraph 8.16 may help to reduce some of the impact, they do not fully mitigate the increased risk the TOs will face in delivering the scale of work required, so there is still a net increase in risk for the TOs.
- Ofgem's ODI proposal is clearly asymmetric in practice despite being theoretically symmetric.
 - For projects where the EISD matches the required date there is still a negative asymmetry. The EISD is the earliest date, not most likely date, so delivery is more likely to be later than earlier than such a date. Further, a project can only be delivered a little earlier than expected, there is a finite amount of time by which a project can feasibly be delivered earlier. By contrast, the period of time by which a project can be delivered late is more open ended and major projects are frequently delivered later than originally expected.
 - For the projects where a commitment is being asked to deliver earlier than the EISD it is clearly more likely that projects will be later than any accelerated target than the possibility of them being earlier.
 - On a balance of probabilities this skewed distribution of possible outcomes results in asymmetry of expected outcome for which an offsetting adjustment is required
- We disagree with Ofgem's conclusion that including an ex post review is not asymmetric. Such a review has previously been established as undoubtedly an asymmetric arrangement. The ability to carry out an ex post review will never provide additional allowances in excess of expenditure incurred but could result in a cost disallowance. This was acknowledged by Ofgem in setting the ESO RIIO-2 price control with the provision of an allowance to cover the expected costs of demonstrably inefficient expenditure.
- While we agree with Ofgem's view that the precise balance of risk is uncertain, the issue is how negatively skewed that balance is rather than whether it is negatively skewed with the current proposals.

Excessive Downside Risk

- **Ofgem's current proposals expose the TOs to excessive and disproportionate risks that are inconsistent with a low cost of capital.**
- We welcome Ofgem's commitment to work with TOs to better understand extreme downside outcomes
- As outlined in our response to Question 11, NGET is being asked to commit to c.£14bn of investment with a 15% project cost cap on downside outcomes – this amounts to taking a risk of a £2.1bn exposure and is excessive.
- One way this could be done is for the maximum penalty and reward on TOs to be reduced from 15% of project cost to a level more reflective of the risk profile of their business, for example 3% of project cost. Alongside this, to the extent the TOs secure delay related liquidated damages⁹ from the supply chain, the net benefit of those liquidated damages (assessed ex post, after subtracting direct cost impacts on TOs, e.g. increased project management costs) would flow directly to consumers. This recognises that liquidated damage clauses may not always be in the interests of consumers given they will be priced into contracts and may encourage risk averse behaviours and thus discourage acceleration.
- If the project cap is not reduced in this way, we believe there is scope to include a project and programme RAMs approach – this would ensure incentives remain on totex and delivery while also allowing for a sensible calibration of risk. Such a proposal would reduce downside risk but still leave networks exposed to potentially earning no, or very little, equity return on a project for the full construction period. Equally, it would protect consumers by ensuring networks could not earn returns that Ofgem may deem excessive.

⁹ Other contractual remedies (e.g. increased or reduced allowed contractor profit) may be negotiated between the TO and supply chain in addition to any delay related liquidated damages. We are happy to have further discussions on how to take account of these in TO incentivisation.

- We also need to understand how such a penalty would flow through the regulatory framework. It would be unfinanceable to expect NGET to pay £2.1bn in a given year (or even over a small number of years). Having raised £14bn to invest £14bn the only way to pay a £2.1bn penalty in a short time period would be to raise further finance. No investor would be willing to provide additional equity knowing they are not going to get a return on that investment. It would be similarly difficult to raise debt finance given any such issuance would directly increase gearing and credit risk. We propose that liquidated damages be passed to consumers through a revenue adjustment with any residual penalty (or reward) applied as a RAV adjustment only.
- When assessing a credit rating, the rating agencies consider both qualitative and quantitative factors. The current regulatory framework is assessed as supportive, stable, predictable, and low risk which helps with financeability and to keep the cost of capital low. The current proposals are likely to put this assessment at risk with negative consequences for consumers.
- We look forward to working with Ofgem to ensure the package of measures do not create any financeability concerns.

Next steps

Q13: Is any further guidance, or additional specific information, needed as part of the TOs' project delivery plans?

We look forward to having discussions with Ofgem once we submit our project delivery plans on 16 September 2022 and look forward to a timely decision on competition exemptions and the relevant principles of the regulatory framework so we can engage with the supply chain.

Q14: Are there any additional timetable issues that need to be considered?

Planning

Whilst not directly within Ofgem's remit, it is important to note the dependence of delivery timescales on various planning issues, including:

- Legislative (including secondary legislation) and regulatory change in the fields of planning and environmental impact, in England, Wales and offshore.
- The ability of Government bodies to adequately resource their inputs to the planning process.
- Satisfactory clarity on what lever of community benefit is appropriate for TOs to deliver in order to offset the direct impacts of networks on local communities.

Ofgem involvement could help smooth ties between networks and planning regulation, as will a properly resourced Ofgem engagement in the planning process.

It would be helpful if Ofgem were to be a statutory consultee in the planning process and to then actively participate with views on the interrelationships between planning issues and network regulation.

Interaction with existing regulatory mechanisms in RIIO-ET2

We believe that further consideration and guidance is required on the interaction between the accelerated regulatory process that comes out of the Consultation and existing regulatory mechanisms in the RIIO-ET2 framework. For example, the Consultation is silent on the Large Project Delivery (LPD) mechanisms, including the Project Delay Charge, set out in Final Determinations and the LOTI Guidance. We assume that the proposed ODI would replace any LPD mechanisms for a project that is subject to the accelerated regime, but we would welcome clarification on this point. Assuming that LOTI continues to operate in parallel to the accelerated process, it will be important to clarify how the two regimes will be applied (for example, would the ODI from the accelerated regulatory framework be applied to a 'conventional' LOTI project or would LPD mechanisms continue to apply to the latter?). This is particularly important if it is determined that, for practical reasons, near term 'in flight' projects continue under LOTI (e.g. the Final Needs Case for OPN2 has just been submitted).

As noted in our response to Question 11, Ofgem has also said it is considering the use of PCDs concurrently with LOs as providing "an efficient means of allowance adjustments while protecting consumers against the risk of non-delivery" (para. 7.7 of the Consultation). We have assumed the ODI is Ofgem's proposed method of responding to

missed delivery date. If Ofgem intends the PCD allowance adjustment mechanism (i.e. allowance clawback / reprofiling in the case that an evaluative PCD was not Fully Delivered) as an additional overlay to the ODI and LO, it would seem to add a potential triple jeopardy risk, which would add to Ofgem's proposal being completely unacceptable in terms of overall risk exposure.