

Executive Summary

This is a joint response from the three Transmission Owners (TOs) to Ofgem’s consultation on the Material Scope Change (MSC) affecting three Accelerated Strategic Transmission Investment (ASTI) projects in Lincolnshire. Each TO has also submitted an individual response to address TO-specific issues as well as joint project responses to specific funding questions.

The TOs appreciate Ofgem’s constructive engagement in developing the revised network design and acknowledge its critical role in recognising the need for change. We welcome Ofgem’s formal recognition that the revised design delivers significant consumer value—mitigating constraint costs by an estimated [REDACTED] and increasing connection capacity from 4.6GW to approximately 18GW, as independently assessed by NESO. Additional benefits include reduced visual impact and the avoidance of placing Critical National Infrastructure (CNI) in sensitive areas such as The Wash.

We also support Ofgem’s proposed decisions on Pre and Early Construction Funding. While some project-specific clarifications are needed, the proposals broadly provide the funding necessary to maintain project momentum.

Through the MSC process, we have demonstrated that the scope of the affected ASTI projects has changed fundamentally since the 2023 licence modification decision. EGL3 and EGL4 now require over 100km of underground HVDC cable from the Lincolnshire coast to Walpole to realise the benefits outlined above. This will be one of the longest onshore HVDC cables in the UK, delivered across two ASTI projects by three TOs working in two Joint Ventures and involving at least four contractors. While this approach offers opportunities for collaboration and efficiency, it also introduces greater complexity and risk. The Grimsby to Walpole (GWNC) project has also evolved significantly, now requiring ~35km of additional overhead line and six substations—up from two in the original scope.

As a consequence of the scope change and new risk profile, the original ASTI Output Delivery Incentive (ODI) Target Dates **are no longer appropriate or achievable and would result in an unacceptably high risk of licence breach**. Each project has conducted a robust Quantitative Schedule Risk Analysis (QSRA)¹, resulting in revised dates submitted in the MSC application:

Project	Deterministic delivery date	Proposed Target ODI based on P50
EGL3	[REDACTED]	31 Dec 2034
EGL4	[REDACTED]	31 Dec 2034
GWNC	[REDACTED]	31 Dec 2034

The TOs believe that revised ODI Target Dates should reflect a ‘fair bet’. In our view, this means using the QSRA to set dates based on the P50 value—providing an objective and reasonable estimate of delivery likelihood that accounts for project-specific risks. The TOs have several significant challenges with accepting an approach to date setting that aims to maintain a fair balance of risk across the portfolio. These are outlined in our full response and summarised below:

- I. **Ofgem has not been transparent in its policy position to adopt a portfolio approach for the purpose of calibrating ASTI ODI Target Dates, and it is not clearly reflected in either the guidance or licence parameters which are based on calibrating ASTI ODI Target Dates on a project-by-project basis.** ODIs are set at a project level and need to be adjusted at project level. Ofgem did not have complete, reliable and comprehensive information to provide a baseline from which to create and manage a portfolio. It was also explicitly acknowledged by Ofgem at the time of the ASTI Licence Modification Decision that EGL3, EGL4 and GWNC would be subject to MSC applications, even though Ofgem could not predetermine what the outcome of these applications would be.¹ We have never understood it to be Ofgem’s intention to reference back to a ‘balanced position’ across a portfolio in the event of an MSC. This concept was introduced late in the MSC process, was not discussed at the time of adopting the ASTI licence modifications and is not clear in the guidance.
- II. **Ofgem has failed to conduct quantitative analysis or provide evidence to support its assertion that the ODI Target Dates were set on a portfolio basis and that they ensured an even chance of rewards or penalties for each TO.** The focus during the development of the ASTI framework was on the assessment of individual projects and it is unclear how Ofgem could have carried out a portfolio assessment ahead of the August 2023 decision to modify the TOs’ licences when only NGET were able to provide an assessment of probabilistic delivery dates across their portfolio of projects. Ofgem’s approach incorrectly assumes that TO portfolios all represented an even chance of reward or penalties, once ODI protections/Delay Events are considered. Ofgem has provided no proper analysis to support this assertion.

In support of our response, [REDACTED] has conducted quantitative analysis which suggests that (for both EGL3 and 4) the difference between the ODI neutral date and the P50 delivery date has increased significantly, and is now approximately three times longer, resulting in penalties which are approximately three times larger than they would have been had they delivered at the original P50 date pre-MSC. Given that Ofgem did not conduct the relevant analysis at the

¹ Email from [REDACTED] (Ofgem Director Networks) to [REDACTED] (NGET Director of Regulation) on 23 August 2023: “[...] Also, in respect of EGL3, 4 and Walpole, I’m happy to confirm that these projects will be subject to the new scope change governance process, however obviously I cannot provide reassurance on the outcomes of that process”.

time of the ASTI licence modification, it has no basis for its conclusion that the new dates it proposes to set result in a fair bet.

III. The TOs reject the use of a portfolio approach now to reset ODI Target Dates under the ASTI framework's MSC process. Specifically, Ofgem is yet to develop guidance or a process to determine how to account for portfolio factors such as how the financial balance of TOs' ASTI portfolios would inform/affect ODI Target Date selections.

Ofgem did not intend this approach to automatically apply to projects for which there had been an MSC. Instead, it stated there would be new regulatory tools to assess ODI Target Dates following an MSC decision;² these tools have not been defined or delivered, contrary to Ofgem's previous representations. To date they have not been developed and Ofgem appears to have handed this responsibility over to the NESO. Ofgem acknowledged in its August 2023 decision that EGL3, EGL4, and GWNC would require an MSC, but did not assess their delivery timelines in detail at the time, as scope changes were expected. The ODI Target Dates should be set based on project-specific factors, not portfolio-wide risk balancing. No regulatory mechanisms were developed to assess financial impacts, despite being promised by Ofgem, reinforcing the point that post-MSC dates should be determined individually.

IV. Ofgem's rationale/methodology for setting the ODI Target Dates for the EGL3 and EGL4 projects post-MSC is inconsistent with the rationale/methodology it adopted to set the ODI Target Dates for these projects pre-MSC. Ofgem originally set ODI Target Dates 12 months after the Required In Service Date (RISD) determined by NESO and informed by a range of dates, including Earliest in Service Dates (EISD) and probabilistic dates submitted by the TOs in September and December 2022 delivery plans. Licence Obligation (LO) date was subsequently set a further 12 months later. For EGL3 and 4 the RISD at the time was effectively a deterministic date, it had 12 months added on to set the ODI Target Date in the ASTI Licence. Ofgem's minded-to position, which now effectively uses deterministic dates as ODI Target Dates, departs from that methodology without explanation or justification. This shift also results in LO dates being set at P50, which creates an unacceptable risk of licence breach; it amounts to setting a licence obligation with the expectation of it being breached. This is also contrary to Ofgem's stated intent and contrary to good regulatory practice. Ofgem previously claimed it was not seeking to put TOs at risk of licence breach, yet shifting to P50 dates increases that risk significantly. It also reveals Ofgem's assertion—that the proposed LO dates “do not put TOs at any greater risk of [...] being in licence breach than when ASTI was introduced”—to be false.³ Consistent with the pre-scope change approach, the ODI and LO dates for both EGL3 and EGL4 should be 31 December 2034 and 31 December 2035 respectively.

In addition, whilst the NESO CBA showed that delivery by 2033 (the earliest date possible) delivered the greatest benefit to consumers within that CBA, the CBA results nevertheless showed that, even under marginally less optimistic assumptions (i.e. 2034) the proposed updated network design delivers significant consumer value in the range stated above of [REDACTED]. An ODI Target Date of 31 December 2034 would therefore still be beneficial to consumers whilst providing TOs with a fair risk balance, whilst Ofgem's minded-to position would expose TOs to an expectation of being in licence breach and facing heavy penalties despite delivering substantial benefits compared to the original project designs.

V. The most appropriate way to re-set the ODI Target Dates is to use QSRA to determine a P50 value to set the date against and maintain an even chance of reward or penalties on the project. This provides an objective and reasonable method to calculate the probability of meeting a delivery date, taking into account project specific factors in line with government 'Teal Book' guidance. It is a cross-sector industry standard, and a data-driven quantification tool derived from bottom-up analysis of individual project schedules removing optimism bias or political lens and is driven by data. The TOs presented and discussed this approach with Ofgem on multiple occasions including in a face-to-face meeting on 1 May 2025. Ofgem has provided positive feedback that this approach is 'reasonable' (see paragraph 3.15 of the consultation).

VI. The TOs do not have an equal 'portfolio' of ASTI projects. NGET has 17 projects, SSE has 10 and SPT has 4. Therefore, not all TOs have as much potential to balance risk, and in the case of SPT, almost no opportunity to do so. As a result, it is neither practical nor reasonable for Ofgem to take a generic approach to re-setting dates and Ofgem has not provided any quantitative evidence which considers each individual TO's portfolio to ensure balance.

The TOs remain committed to delivering strategic infrastructure that meets the UK's clean power and growth ambitions and maximises value for consumers. It is vital that regulatory mechanisms do not inadvertently penalise innovation, constrain consumer benefit or disincentivise use of regulatory process where there is demonstrable consumer value.

We've also included further detail in this response regarding the sequencing challenge of EGL3 and EGL4 and the commissioning stages. Initial views are that this is a GB first. HVDC links of this scale require detailed planning with the NESO to ensure the reliability, safety and resilience of the network is maintained – our expert engineering view is that a 3-6 month stagger is required and we believe further discussion is needed with Ofgem and NESO. This will be important to acknowledge

² ASTI Guidance, para 5.32

³ MSC Consultation, para 3.25

as final Target Dates are set and we would welcome continued engagement with Ofgem, including the outcome of any quantitative assessments it has or intends to perform, as it comes to its final decision.

Question 1 – Do you agree with the revised Network Design for the Lincolnshire Area?

The TOs agree with the revised Network Design for the Lincolnshire Area as submitted in the Material Scope Change (MSC) and referred to in Ofgem’s consultation. However, the outcome of the change has resulted in three fundamentally different projects compared to those defined under the original Accelerated Strategic Transmission Investment (ASTI) decision.

As a result, the projects should be considered on their own merits when determining the wider implications of the MSC, including how revised ODI Target Dates are set and how Pre-Construction Funding (PCF) and Early Construction Funding (ECF) are agreed. This needs to be done on a ‘fair bet’ basis to ensure (among other things) that TOs are not disincentivised from submitting future scope changes that would deliver greater consumer, wider network, environmental or societal value versus the previous scope. Our detailed views on these components are covered in the Executive Summary and in our responses to the questions posed in the consultation.

The MSC was submitted to agree the revised network design impacting three ASTI projects, which are:

- **Eastern Green link 3** – Joint venture High Voltage Direct Current (HVDC) project with NGET and SSENT.
- **Eastern Green link 4** – Joint venture HVDC project with NGET and SPT.
- **Grimsby to Walpole** – High voltage alternating current overhead line (OHL) reinforcement and associated substations between Grimsby and Walpole, delivered by NGET.

We have welcomed the engagement with Ofgem as the design has evolved to the current solution. This engagement provided us with the opportunity to explain, in detail, the complexity in the region and the key drivers that created the case for change. This focused on optimising the solution and delivering significant consumer, network and socio-economic value.

We are pleased that Ofgem states that it is now supportive of the new design proposed for the region and acknowledges that it will benefit consumers by between ██████████ in constraint cost mitigation when compared to delivering the original network design (as independently assessed by the NESO). This includes ensuring that the benefits from the revised network design can be delivered three years earlier than the original design, meaning consumers are not exposed to further constraint costs.

The need for change in the Lincolnshire Region first materialised in 2018 due to a need to respond to changing requirements of the network, customer demand and government targets. This culminated in September 2023 when Ofgem agreed that there was a requirement to review the design and submit an MSC.

The changing needs of the region have also been well documented through multiple planning exercises including National Energy System Operator (NESO) Network Options Assessment (NOA), Holistic Network Design Follow Up Exercise (HNDFUE) and transitional Centralised Strategic Network Plan (tCSNP), culminating in the publication of the tCSNP2 report in March 2024. This was further supported by the Crown Estate Allocation Round 4 identifying Lincolnshire as a critical landing point and specifically the requirement to meet the needs of Outer Dowsing, which taken together triggered the need for a new coastal Connection Node.

In developing the new network design, a coordinated regional approach was adopted to ensure the solution delivered the required network capacity and mitigated other environmental and socio-economic risks such as consenting, whilst seeking to maximise consumer value. This yielded a ‘back check’ of options, resulting in a revised network design, which will optimise network, consumer and customer benefits as well as de-risking project delivery. A summary of the benefits the revised network solution delivers include:

Customer Benefits	<ul style="list-style-type: none">• Achieving ~18GW of customer connection capacity for the Lincolnshire projects; an increase from ~4.6GW in the original solution, a key driver for changes related to GWNC. EGL3 also acts as enabling works for several HND (Holistic Network Design) and HNDFUE projects
Deliverability	<ul style="list-style-type: none">• Reduces construction and consenting risks across the Lincolnshire region for critical ASTI and tCSNP2 schemes while reducing the overall timeline when compared to time taken to deliver the tCSNP1 solutions and as presented at the workshop with Ofgem in August 2024.
Community and Environment	<ul style="list-style-type: none">• Reduces new OHL circuit length by ~110km in the region in comparison to the original solution.
System Capacity and Capability	<ul style="list-style-type: none">• ~10GW of additional capacity across B9 increasing the capability of the boundary by more than 5GW;

- consolidates tCSNP2 signals for further network reinforcements; and
- delivers compliant network solutions.

Economic Impacts • Mitigates constraint costs associated with deliverability risk and delay of ~£[REDACTED]. This was supported by the NESO Cost Benefit Analysis.

The TOs are also pleased to note that Ofgem agree with some of the challenging decisions made in developing the revised Network Design. These include:

- Leveraging NGET specialist consenting teams to assess the risk and delay impacts of the original solution. This allowed us to confidently provide the inputs into the NESO CBA that helped demonstrate the benefits of the new regional network design compared to the original.
- Undergrounding over 100km of HVDC cable to reduce the visual and longer-term environmental impact on the region as opposed to the original 170km overhead line requirement required to fully deliver the benefit of the original design.
- Extensive engagement with Ofgem engineering specialists to demonstrate the decisions taken to limit environmental, visual amenity and engineering challenges in heavily protected and complex environments such as The Wash. TOs had extensive engagement with the Ofgem teams on this matter and provided significant evidence in support of our proposals. This included, as noted by Ofgem in paragraph 3.7 of the consultation, avoiding locating Critical National Infrastructure assets in areas, such as The Wash, which have significant complexities such as tidal ranges and mobile seabeds.

Importantly, throughout the process of redesigning the network in this region the consequential network need and longer-term benefits have been considered. To achieve these benefits, each of the projects needs to be considered as part of an overall network solution. Taking out individual components can and will affect other capabilities and will not achieve the same overall network capability. Therefore, we have had to consider all three projects together, as well as the future pipeline from the NESO including projects such as LRN# and PSNC to create a holistic regional solution.

Impact on estimated delivery dates and Proposed Costs

In acknowledging and supporting the revised network design as the optimal one for the region, the consequential impact on the three ASTI projects needs to be considered. The change in the region constitutes a material change to the scope of all three ASTI projects and, as a result, the original delivery dates set in the ASTI sections of the transmission licence are no longer achievable.

It is also important that Ofgem consider that these are now fundamentally different projects with different risk profiles. Undergrounding over 100km of HVDC cable from the Lincolnshire coast to Walpole enables the benefits set out above; however, it does not come without risk. It will be one of, if not the longest, underground onshore HVDC cable project in the country and will be delivered across two ASTI projects by three TOs working as two Joint Ventures with at least four different contractors to manage. Whilst this approach presents the opportunity for collaborative working and efficiencies in delivery it also increases the complexity and risk.

GWNC will also now connect between Grimsby West, Weston Marsh and a new substation close to Walpole, as opposed to terminating at Weston Marsh. This results in an increase in OHL length of approx. 35/40km (~140km in total). The project will also deliver up to 6 new 400kV substations, each providing connections to customers, distribution networks and the transmission network compared to 2 substations originally.

These significant changes across all three projects resulted in reassessment of the delivery date and forecasted cost for the project. This needs to be considered when determining the approach to, and the outcome of, resetting the revised Target ODI Dates.

There are also significant engineering challenges when coordinating the commissioning of two 2GW HVDC cables on to the network in the south. Through this consultation we want to formally record this challenge and seek to engage with Ofgem further on how the sequencing complexity interacts with the regulatory framework. This is because it is, at the very least, overly simplified to assume that both EGL3 and EGL4 can achieve the same Target ODI date.

To date the projects have created their commissioning plans independently and then subjected them to project specific QSRA as explained in the MSC application. This is driven by the fact that they have been required to run two independent procurement events that require suppliers to respond to a specific set of requirements and associated timings.

Once contracts are awarded, work can commence to develop the detailed integrated plans required to sequence the commissioning. This will involve closely working with the NESO to understand the constraints as well as with the GWNC project as Walpole substation is also critical. In addition, risks relating to 'system conditions' need to be recorded and managed as there may be restrictions in place to manage the security and stability of the Network as this capacity is introduced.

Whilst detailed planning and coordination of this activity is needed, our specialist engineering teams have identified several significant challenges that will need to be considered when sequencing the energisation of EGL3 and EGL4 specifically. These include:

- Requiring sequenced and coordinated outages and system access for commissioning.
- A need to prove each system/project whilst minimising risks to in-service equipment.
- Commissioning plans that will aim to connect and energise new assets and introduce load flows, whilst minimising risks to the existing network.
- Requirement for short period of load flow/initial operations, which will scale up over time to full capability, in order to demonstrate the integrity of the links.
- Network Access and outage plans will also need be scheduled to accommodate changes nearer stage 2 commissioning (tests to integrate into the existing network) with NESO and the network control room.
- The state of the network and access: constraints, generation, load, security will also influence some of our sequencing and arrangements, and these will be subject to adjustment.

In order to manage Network security and stability it is not possible that both these links can perform the required commissioning activity in parallel and therefore need to be sequenced. At a high level it is estimated that a 3-6 month stagger is required, for connection tests and trial operations to be performed (power flow and adjustment to control systems on load). This would also allow us to explore control interactions on the wider network before safely and securely connecting the second new system.

This creates a challenge relating to assessing performance against the ODI Target Dates, as in theory EGL3 and EGL4 could be ready at the same time **but not practically or safely be able to energise** through Stage 2 Commissioning. Ofgem have not considered sequencing within their decision for the ASTI ODI Target Date. It clearly needs to be considered. We would welcome further discussion with Ofgem on this matter ahead of the final decision.

Conclusion

If the above is not taken into consideration when setting ODI Target Dates it may disincentivise TOs from proposing future changes to ASTI projects. This may have the adverse effect of constraining innovation through design and impacting the ability to deliver significant consumer value, which remains at the heart of our values as TOs and legal obligations under the Electricity Act to deliver an economic, efficient and coordinated system of electricity.

Finally, the revised network design has also impacted forecast cost. Despite the increased costs, the outcome of the CBA, explained above and in Section 2, continues to show significant consumer value even in a pessimistic scenario where costs increase above current estimates. We agree with Ofgem's view that these changes to costs should not be reflected in updates to the ASTI penalty/incentive parameters in the licence as we agree they remain a strong enough incentive to encourage accelerated delivery, if the ODI Target Dates are set appropriately.

Q2 - Do you agree with the TOs' proposal to set ODI Target Dates at the end of 2034 based on their Quantified Schedule Risk Analysis?

Yes, we strongly agree with the TOs' proposal to set ODI Target Dates at the end of 2034. This is because the **Quantified Schedule Risk Analysis** (QSRA) undertaken following the MSC was an objective and reasonable method to calculate probability of meeting a delivery date, taking into account project specific factors.

QSRA is a data-driven quantification tool derived from bottom-up analysis of individual projects schedules that **removes any optimism bias or political lens and is driven by data**. The process uses risk analysis to quantify the probability of a project meeting a delivery date in a repeatable and transparent way.

QSRA, in particular Monte Carlo analysis (used by the TOs in this instance) is widely used in the infrastructure sector (rail, utilities etc.) to conduct risk analysis with this being acknowledged by the government's 'teal book' for project delivery which outlines: *"In the early phases, the schedule is high level and usually developed on a deterministic ('bottom up') basis, without considering risk and uncertainty. Benchmarking can also be used to provide a 'top down' view. At this point, however, timescales should be given as ranges rather than point estimates. As the schedule develops, probabilistic analysis should also be conducted, for example Monte Carlo and/or curve analysis, in order to test and refine the schedule"*⁴. It is also used by several prominent risk software packages such as @Risk, Safran and Acumen Fuse. The TOs for EGL3 and EGL4 have jointly presented and discussed this approach with Ofgem on multiple occasions including a face-to-face meeting on 1 May 2025. Ofgem has provided positive feedback that this approach was 'reasonable' as per the minded-to decision.⁵

As outlined in response to Q1 and acknowledged by Ofgem in their 'Minded-to' position, the southern works and landing point of EGL3/EGL4 constitutes a material change in scope, resulting in the existing ASTI ODI Target Date no longer being achievable nor reasonable. **In line with SpC 4.9.6 the licensee is entitled to apply for a modification to the ASTI ODI Target Date where there is a material change to the scope of a project.**

In the absence of any other framework or guidance from Ofgem as to how such dates should be set following a material scope change under SpC 4.9.6, the TOs consider that a **QSRA is a responsible and reasonable assessment** to undertake, especially in the context of ASTI and delivering at an accelerated pace. QSRA was not consistently undertaken across TOs during the development of ASTI three years ago, as such it was deemed as being insufficient for Ofgem to rely upon the data in setting the ASTI ODI Target Date⁶. In addition, whilst it was clear that there would need to be changes to EGL4, three years ago none of the TOs were clear on what the new project scope would be and therefore couldn't possibly risk assess a delivery date when they did not know what they were building. Ofgem is notably silent on this point in the published consultation.

Ofgem must take into account that TOs acting reasonably need to invest in risk management activities to ensure they can meet the accelerated delivery date. Given the MSC results in a schedule and risk changes it is both reasonable and responsible of TOs to undertake this exercise.

Following the QSRA⁷, as independently assessed, we proposed to set the ODI Target Date at the P50 date of **31 December 2034**.

A P50 date should be considered a symmetrical incentive. This revised P50 date considers project specific factors, in line with Ofgem guidance,⁸ including increased risk in obtaining consents and construction - none of which seems to be considered in Ofgem's minded-to position for the revised ODI Target Dates, this has also been supported and reviewed by an independent assessment by [REDACTED] who not: *"Based on the publicly available information, it does not appear to be driven by any quantitative data analysis, or any substantial form of impact assessment"*⁹.

It is a sound and reasonable assumption to set a delivery date for a symmetric ODI which has a 50/50 reward and penalty ratio, as acknowledged by Ofgem in their ASTI decision¹⁰. Ofgem had foreseen in their ASTI decision that a material change in project scope was likely during the delivery of the ASTI projects and that changes in date would be considered¹¹. However, disappointingly, three years later, there remains no published guidance on the process for scope change in either the ASTI or

⁴ See section 16.6.3 of the Government's National Infrastructure and Service Transformation Authority's 'Teal Book' Guidance on project delivery <https://projectdelivery.gov.uk/teal-book/home/part-e-planning-and-control/chapter-16-planning/>

⁵ Appendix 1, Eastern Green Link (EGL4) Material Scope Change Submission

⁶ Section 7.38 https://www.ofgem.gov.uk/sites/default/files/2022-12/ASTI%20decision%20doc%20-%20Final_Published.pdf

⁷ Ofgem's MSC Consultation, paragraph 2.21

⁸ ASTI guidance para 5.28-5.31

⁹ [REDACTED]

¹⁰ Section 8.17 of Ofgem ASTI Consultation and Section 4.5 Ofgem's Decision Licence decision <https://www.ofgem.gov.uk/decision/decision-modify-special-licence-conditions-electricity-transmission-licences-accelerated-strategic-transmission-investment>

¹¹ 5.28-5.29 Ofgem guidance

CSNP methodologies. Ofgem has not been transparent nor provided explicit guidance on how ASTI ODI Target Dates are set or revised, unlike other ASTI applications for funding re-openers or penalty exemptions that specify the types of information required. This view has been supported by [REDACTED] in their independent assessment notes. This limits the feasibility, transparency and fairness of applying Ofgem's purported portfolio approach post-MSC. Without guidance or process it is reasonable to approach a revised date based on QSRA assessment because:

- **Uses up-to-date project information**, rather than deterministic EISDs derived from outdated assumptions which “provides a strong evidential basis for re-calibrating Ofgem ODI target dates” as outlined above¹². Importantly QSRA also excludes impact of risks deemed outside the TO's control. These are managed via Delay events, however, Delay Events only provide protection against penalty and not incentives only further skewing the outcome towards downside and supporting that the use of QSRA provides at best a fair bet for the TO's.
 - **Future policy direction:** the NESO's CSNP methodology outlines that QSRA will be the basis for setting dates in the future¹³: “*This estimate will be created from probability risk analysis at the 50th percentile*”, continuing to fill the gap Ofgem highlighted in 2022 while Ofgem reference in their guidance consultation that material scope changes will follow an effective control change mechanisms from the licensee- it's unclear whether this is reference to the NESO or the TO¹⁴. Evidence from the TOs' independent assessment concludes that “*A recalibrated approach, informed by updated analysis, may better support the credibility of the incentive regime going forward.*”¹⁵
- **In line with government guidance:** As referenced above: “*estimates for ... schedule and resources should be justifiable through evidence or experience such as benchmarking, data analytics, probabilistic simulation, consensus or experience from previous work. Estimating methods should be appropriate to the type and, where relevant, phase of the work being undertaken.*”¹⁶
- **Regulatory precedent:** prior to the ASTI ODI, any outputs, including the scope of works and delivery date would have been considered by Ofgem via the Cost and Output Adjusting Events and PCDs although these do not directly relate to QSRA there is acknowledgment that when an output is adjusted for scope this will include the output on delivery date. This is noted by [REDACTED] in their independent assessment that projects following MSC deliver different outputs¹⁷.

Net zero and CP2030 targets have demonstrated we need to accelerate transmission. However, this does not negate TOs' primary and legal obligations. As outlined in Ofgem's minded-to position and in response to Q1 of this response, there is a clear and demonstrable consumer benefit of [REDACTED] in the new design, alongside reduced environmental impact, increase connections (4.6GW increase) and increase in the boundary uplift (5GW increase) this has been **independently assessed by the NESO, as fully outlined in response to Q5 this includes delivering benefit to consumers with the proposed 31 Dec 2034 date.**

There is no doubt in the economic assessment and that Ofgem's minded-to position as economic regulator that this is the right thing to do – this is the most economic, efficient and coordinated design – **a legal duty of TOs under the Electricity Act.** Setting an unrealistic and unachievable ASTI ODI Target Date, such as 31 December 2033, risks creating a **perverse incentive** for TOs to avoid MSC, even where an MSC would be in consumers' interests, to avoid penalty, and instead seek Delay Events. Ofgem must not create this risk and this is outlined in the subsequent Q4 response. We also note in our response to Q5 there has been no cost benefit analysis or quantifiable economic assessment from Ofgem that demonstrates there would be any consumer harm from the ASTI ODI Target Date being re-set, following MSC, at 31 December 2034.

¹² [REDACTED]

¹³ Page 112 <https://www.neso.energy/document/363521/download>

¹⁴ See 9.21 <https://www.ofgem.gov.uk/sites/default/files/2025-08/CSNP-Guidance-draft-for-consultation.pdf>

¹⁵ [REDACTED]

¹⁶ See section 7.2.3 of the Government's National Infrastructure and Service Transformation Authority's 'Teal Book' Guidance on project delivery which outlines schedule and resources should be justified through evidence or experience with data analytics and probabilistic stimulation

¹⁷ [REDACTED]

Q4 - Do you agree with our proposal to set revised ODI Target Dates at the end of 2033?

No, we fundamentally disagree with Ofgem's proposal to set the revised ASTI ODI Target date as 31 December 2033.

Ofgem's minded-to position is driven by their view that the need to retain the original balance of risk across the TOs' ASTI 'portfolio' it claims to have established by the 2023 ASTI licence modification decision, as well as an intent to retain the 'balance' across the 'portfolio'. Ofgem also wants to ensure it is consistent in its methodology to set dates as it did originally: *"the approach taken under ASTI to set target dates 12 months after the projects' RISD"*¹⁸. This is an unreasonable approach to setting an Output as part of a Delivery Incentive based on outdated and subjective methods based on retrospective parameters. We set out evidence, and where appropriate independent assessment to show:

- a) why it is unreasonable and inconsistent to base MSC decisions on outdated and subjective methods based on hindsight; and
- b) how, even if this is acceptable, it is logically flawed.

a) It is unreasonable and inconsistent to base decisions on date changes as a result of MSCs on retrospect

Ofgem's indication that setting the date as 'deterministic' is consistent with the ASTI methodology is flawed and based on retrospective analysis. The QSRA outputs for each of the three projects demonstrates that 31 December 2033 is a P0 date.

Ofgem argue this was the original approach taken in its ASTI licence modification decision, i.e. 2033 equates an Earliest In Service Date (EISD). This is fundamentally flawed as it's based on the assumption of revising the ASTI ODI Target Date on a **materially** different project, [REDACTED] in their independent assessment concluded that they are not comparable: *"Ofgem is wrong to assert that maintaining ODI Target Dates at the EISD ensures the Target Dates remain as "difficult" to achieve as under the initial ASTI decision. It will make them harder to deliver."*¹⁹ This is evidenced in section 2.1 of the MSC submission which outlined that the programmes have been developed in different stages of the project lifecycle.

As outlined in response to Q2 of this response, Ofgem has not considered project specific circumstances in their assessment of the ODI Target Dates, against their own limited guidance. While there is no specific Ofgem guidance on date setting following an MSC, there is guidance on Delay Events (another mechanism to change the ASTI outputs) which explicitly states that regulatory decisions must not be made in hindsight²⁰. As outlined in above in our joint response to Q2 this is also not in line with the government's published 'teal book' on project delivery which outlines *'estimates for ... schedule and resources should be justifiable through evidence or experience such as benchmarking, data analytics, probabilistic simulation, consensus or experience from previous work. Estimating methods should be appropriate to the type and, where relevant, phase of the work being undertaken.'*

b) It is logically flawed

Ofgem has noted that 31 December 2033 is a **'reasonable proxy'**²¹ for the original design's EISD. However, this is logically flawed as there is no EISD nor RISD set for these projects which [have?] been independently assessed by the NESO. As a starting position, the CP2030 dates could be signaled as a RISD in which Ofgem's original approach was to add 12 months [31 December 2033/34²² + 12 months = 31 December 2034/5]. Noting that CP2030 advice includes both P50 for EGL4 and P0 for EGL3 (as explained in the exec summary). This is further outlined in response to Q5.

If there was a consistent approach from the ASTI original submission to the MSC there is delta for both EGL3 and EGL4, the difference between the ODI neutral date and the P50 delivery date has increased significantly, and is now **approximately three times longer**, resulting in penalties which are approximately three times larger than they would have been had they delivered at the original P50 date pre-MSC²³.

The impact of Ofgem setting an ASTI ODI Target Date of 31 December 2033, and a LO date of 31 December 2034 would mean, at this late stage in the projects' lifecycle following MSC and increased risk associated with the projects, TOs would be expected to absorb the regulatory risk associated with not only an expected penalty but an unacceptably increase in the likelihood of licence breach. Setting a date associated with breach of licence, one day after a P50 date is unacceptable and not aligned with the original policy intent of ASTI: *"(iii) "we are not looking to put any TO in breach of its licence obligations"*²⁴.

¹⁸ See section 2.22 of Ofgem's MSC Consultation

¹⁹ [REDACTED]

²⁰ See section 7.52 of the Decision on accelerating onshore electricity transmission investment (2022)

²¹ See section 3.17 of Accelerated Strategic Transmission Investment: Material Scope Change and Early Construction Funding - EGL3, EGL4 and GWNC (11 September 2025)

²² Note EGL3's CP2030 date is 2033, whilst EGL4's is 2034

²³ [REDACTED]

²⁴ Section 3.33 of Ofgem's ASTI licence modification decision

By setting a new LO delivery date at P50 (i.e. 31 December 2034) Ofgem is infringing these principles and not aligning with the approach it took to setting the dates pre scope change representing poor regulatory practice.

This risks creating a **perverse incentive** for TOs to avoid MSC as an unintended consequence, regardless of it being **the right thing to do** and economically beneficial to consumers. *The ASTI regime needs to ensure that **MSCs are critically evaluated and pursued where there is demonstrated benefit for current and future consumers, consistent with its objectives.*** Ultimately this decision may have unintended consequences on TO behavior which is against Ofgem’s primary objective to protect existing and future consumers.

As outlined in response to Q2, EISD/RISD are outdated principles and methodology, which were highly subjective.

██████████ in their independent assessment note, the original EISDs were inevitably rougher estimates based on lower maturity information, and relied more heavily on assumptions. Importantly, the original EISDs for these projects were developed pre-ASTI. That is, they were submitted to NESO on the basis of the incumbent regulatory regime, which did not include the context and impact of the ASTI framework. ██████████ note: *“It is therefore incorrect to treat current estimates of the likely schedule for project completion including EISDs as equivalent in terms of the information they provide”*.²⁵

To conclude, Ofgem has not been transparent in how original ASTI dates were set or provided any guidance around setting dates following MSC. QSRA is a more transparent, scientific and appropriate approach for revising ASTI ODI Target Dates in the event of material changes in scope.

Q5 - When setting a new date as part of a material scope change should we prioritise ensuring that the new date represents a “fair bet” for the TOs delivering the project, or the date maintains an overall fair balance of risk across their portfolio of projects?

The TOs believe that dates should be set on a project specific basis, with a date that represents a ‘Fair Bet’ for that project and not adopt a portfolio-based approach. The TOs believe the optimal way to set a new date, which represents a ‘fair bet’ is to use the output of the QSRA work and set the date aligned to the P50 date. We have explained the logic behind this as part of our response to Question 2 and Question 4.

Further to this the TOs disagree with Ofgem’s position, which is to consider setting/resetting dates to retain an overall fair balance across the portfolio. This is based on the points below, which are based on those presented in the Executive Summary. It is further supported by an independent assessment conducted by [REDACTED], relevant references included below with the report included as an addendum as part of the joint TO response:

1. Ofgem has not been transparent in its policy position to adopt a portfolio approach for the purpose of calibrating ASTI ODI Target Dates, and it is not clearly reflected in either the guidance or licence parameters which are based on calibrating ASTI ODI Target Dates on a project-by-project basis.

ODIs are set at a project level and need to be adjusted at project level. Ofgem did not have reliable, comprehensive information to provide a baseline from which to manage a portfolio. The TOs have never understood it to be Ofgem’s intention to reference back to a supposedly ‘balanced position’ across a portfolio in the event of an MSC. This concept was introduced late in the engagement on the MSC and it was not discussed at the time of adopting the ASTI licence modification. It is also not clear in the guidance, licence or formulae, nor in the scope change process, which is yet to be developed.

Across the various consultations and decision documents published through the development of the ASTI framework, Ofgem has not detailed any portfolio assessment of the TOs’ ASTI projects – the focus throughout the development of the ASTI framework was on the assessment of individual projects. TOs cannot clearly see how Ofgem could have carried out a portfolio assessment ahead of the August 2023 decision to modify the TOs’ licenses – only NGET was able to provide an assessment of probabilistic delivery dates across their portfolio of projects. This is supported by an independent assessment from [REDACTED] who state:

‘The 2022 ASTI decision and subsequent statutory consultation and licence modification decision did not clearly establish a portfolio approach to balancing risk and reward would be taken or define a methodology for maintaining or managing that purported portfolio balance. This limits the feasibility, transparency and fairness of applying Ofgem’s purported portfolio approach post-MSc’

If available the TOs would welcome any analysis from Ofgem that provides (i) documents from the time detailing the analysis which was carried out for the purpose of calibrating the original ASTI ODI Target Dates across each of the TOs’ portfolio of projects (ii) documents detailing the analysis which it has carried out in respect of the ‘updated’ portfolio of each TO following the MSC in issue.

2. Ofgem has failed to conduct quantitative analysis or provide evidence to support its assertion that the ODI Target Dates were set on a portfolio basis and that they ensured an even chance of rewards or penalties for each TO.

It was explicitly acknowledged by Ofgem at the time of the ASTI Licence Modification Decision that EGL3, EGL4 and GWNC would be subject to MSC applications, even though Ofgem could not predetermine what the outcome of these applications would be.²⁶ Ofgem didn’t claim to have carried out a detailed analysis of the likelihood of those projects being delivered on specific dates, because it was accepted that those projects would not go ahead as scheduled with the same scope, it was agreed that they required scope changes. Pending Ofgem’s decision on the MSC applications for EGL3, EGL4 and GWNC (and more specifically their ODI Target Dates), their respective ASTI portfolio of projects were in any case incomplete, such that it could not at the time be determined whether each TO’s portfolio represented an even chance of facing rewards and penalties as intended by Ofgem.

To justify its minded-to position to set the ODI Target Dates at 31 December 2033, Ofgem states with regard to the pre-MSc ODI Target Dates that “it is likely that these 2031 dates would have had a significantly lower than 50% chance of being met. Therefore, [Ofgem] consider[s] that to revert to the P50 2034 dates following the scope change, as requested by the TOs, would unfairly tip the balance of the overall ASTI regime in the favour of TOs at the disbenefit to consumers”.²⁷ Since Ofgem’s determination of the ODI Target Dates pre-MSc was simply based on a generic addition of 12 months to the TOs Required

²⁶ Email from Rebecca Barnett (Ofgem Director Networks) to Chris Bennett (NGET Director of Regulation) on 23 August 2023: “[...] Also, in respect of EGL3, 4 and Walpole, I’m happy to confirm that these projects will be subject to the new scope change governance process, however obviously I cannot provide reassurance on the outcomes of that process”.

²⁷ MSC Consultation, para 3.16

in Service Dates (RISDs), it did not reflect any probabilistic analysis by Ofgem as to when each project would be delivered. It remains unclear whether Ofgem did conduct its own assessment of the probabilistic delivery dates of these three projects. If not, then Ofgem cannot be certain whether its proposed dates reflect an equivalent probability of delivery to the dates pre MSC.

This is supported by [REDACTED] assessment in which they state: *'To implement a portfolio approach fairly, it would be necessary to both establish an initial portfolio balance and establish a clearly understood and defined methodology for maintaining that balance from the outset. Based on our review of the documentation available, no such methodology has ever been set out.....'*

None of these factors were formally considered by Ofgem to form a baseline from which to manage a balanced portfolio. In addition, and as stated above, there is also no defined process or guidance on how they would be assessed, this is neither for change events nor a more enduring monitoring of the balance of risk across the portfolio through the projects lifecycle.

Whilst no financial analysis has been provided to the TOs by Ofgem, [NGET/the TOs] have instructed [REDACTED] to carry out an independent economic assessment. As set out in the independent assessment appended to this document, [REDACTED] concluded that: *'Indicative analysis based on P50 delivery dates pre-MSD and post-MSD shows that Ofgem's proposal to keep ODI dates at 31 December 2033 increases downside skew. Specifically, it does not maintain a given balance. The implication of this finding is that Ofgem's minded to position, if maintained into a final decision, would fail to achieve its stated intent.'*

Specifically, [REDACTED] analysis found that:

- For EGL3 and EGL4, the difference between the ODI neutral date and the P50 delivery date has increased significantly and is now approximately **three times longer**.
- Given the constant daily penalty rates, this would suggest that TOs who deliver at the P50 date face penalties which are approximately **three times larger** than they would have been had they delivered at the original P50 date pre-MSD.
- While the gap between the P50 and the EISD has reduced for Grimsby-Walpole, considering the three projects as a whole (as would be in line with Ofgem's proposed 'portfolio' approach), it is clear that Ofgem's proposed approach does not maintain balance, but instead increases the downside skew relative to the original position under these assumptions.
- As outlined in response to Q4 this does not include the increased regulatory risk from potential licence obligation breach, which goes against the policy intent from Ofgem and affected in the licence.

[REDACTED] has also conducted quantitative analysis for each TO via a Monte Carlo assessment which demonstrates that the assumptions at the time showed that the portfolio did not represent a 'fair bet' and in fact since 2023 has become increasingly skewed to the downside. More detail can be found in TO specific responses given the commercially sensitive nature of this analysis.

According to Ofgem's own ASTI Guidance, MSDs *"are likely to mean that what is being delivered essentially constitutes a new project"*²⁸. In the case of EGL3, EGL4 and GWNC, this is supported by the fact that the new design:

- Enables nearly four times more customer connection capacity than previous network design (up from 4.6GW to c. 18GW);
- Provides twice as much additional capacity in the B9 boundary; and mitigates potential constraint costs of [REDACTED] associated with delays under the original network design.

Therefore, if Ofgem considers that it should take a portfolio approach when setting post-MSD ODI Target, it needs to undertake proper financial analysis evidencing that its post-MSD ODI Target Dates ensure that "each TO has an even chance of facing rewards and penalties" across its portfolio of projects. It is also the view of the TO's that to properly establish a balanced portfolio a range of other factors need to be considered such as:

- Project scale and portfolio volume
- Maturity of project requirements
- Nature and complexity of interfaces
- Planning, consenting and land availability
- Supply chain capacity, capability and resilience

²⁸ ASTI Guidance, para 5.31

- Engineering complexity and technology readiness level
- Novelty and contentiousness of projects
- Regulatory regime (noting that dates used for ASTI were for NESO economic assessment purposes and is a subjective and outdated approach, see response to Q2 and 4 for further detail)

All of these factors are considered in the QSRA which provides a P50 date of 31 December 2034, see response to Q2.

3. **The TOs reject the use of a portfolio approach now to reset ODI Target Dates under the ASTI framework's MSC process. Specifically, Ofgem is yet to develop guidance or a process to determine how to account for portfolio factors such as how the financial balance of TOs' ASTI portfolios would inform/affect ODI Target Date selections.** Ofgem did not intend this approach to automatically apply to projects for which there had been an MSC. Instead, it stated there would be new regulatory tools to assess ODI Target Dates following an MSC decision; these tools have not been defined or delivered, contrary to Ofgem's previous representations, and Ofgem appears to have handed this responsibility over to the NESO. Ofgem acknowledged in its August 2023 decision that EGL3, EGL4, and GWNC would require an MSC, but did not assess their delivery timelines in detail at the time, as scope changes were expected.

The ODI Target Dates should be set based on project-specific factors, not portfolio-wide risk balancing. No regulatory mechanisms were developed to assess financial impacts including under the RIIO-T3 DD Impact Assessment, despite being promised by Ofgem, reinforcing the point that post-MSC dates should be determined individually.

With respect to the MSC processes specifically, the TOs reject the view that when setting the new date post scope change, Ofgem can or should prioritise a date that "maintains an overall fair balance of risk across [TOs'] portfolio of projects". This is for three reasons.

- First, this does not align with the approach set out by Ofgem in its ASTI Guidance, which stated with regard to MSCs that "any decision to modify the ASTI ODI Target Date would be **based on a range of project-specific factors and circumstances** including, but not limited to, the level of confidence we have in the revised date and the extent to which consumer benefit can be demonstrated from delivering the project later than the original ASTI ODI Target Date"²⁹. The reference to "project specific factors" makes it clear Ofgem intended to assess requests for ODI Target Date modifications on a standalone basis. This is all the more logical for joint venture projects where the likelihood of one single date providing the precise balancing point for reward and penalties for each of the relevant TO's portfolio is low. On that basis, the most effective means of ensuring TOs have "an even chance of facing reward or penalties" is to choose the probabilistic date that has an equal chance of being beaten or missed.
- Second, to the extent Ofgem intended to take into account wider portfolios when setting a post-MSC ODI Target Date, at the time of implementation of the ASTI framework, Ofgem did not create any regulatory mechanism to determine how "maintaining an even chance of reward or penalties" for each TOs' portfolio would affect the ODI Target Date set for an individual project post MSC. This is despite Ofgem's representations that it would do so, and that such a tool was important. The ASTI Guidance published at the time of the ASTI Licence Modification Decision referred to the importance of "*impact assessment mechanisms for appraising TO proposals to ensure that project-level changes to the HND and the ASTI Outputs can be considered in the wider network context to inform [Ofgem's] decisions on scope changes and related licence modifications*"³⁰ and stated that such mechanisms were "*currently being developed by Ofgem, NGESO, the TOs and governments*". No such mechanisms have been proposed. As far as the TOs are aware, they have not been developed, contrary to Ofgem's representations. Similarly, Ofgem has provided no explanation of the hierarchy of priorities if one single ASTI ODI Target Date cannot ensure that the portfolios of all TOs continue to represent an even chance of facing rewards and penalties. In the absence of such mechanisms, the TOs legitimately assumed, following the ASTI Guidance, that post-MSC ODI Target Dates would be determined on a project-specific basis.
- Third and as observed by [REDACTED] in their independent assessment '*As projects mature, new challenges typically extend delivery timelines, while structural features of the ASTI framework (such as the treatment of Delay Events) mechanically reinforce downside risk, leaving portfolio outcomes systematically skewed against TOs*'. This includes the use of Delay Events, which only offset penalty and do not allow to reset incentives. Ofgem does not appear to have considered this in determining its current position.

4. **Ofgem's rationale/methodology for setting the ODI Target Dates for the EGL3 and EGL4 projects post-MSC is inconsistent with the rationale/methodology it adopted to set the ODI Target Dates for these projects pre-MSC.** Ofgem originally set ODI Target Dates 12 months after the Required In Service Date (RISD) determined by NESO informed

²⁹ ASTI Guidance, para 5.31

³⁰ ASTI Guidance, para 5.32

by a range of dates, including Earliest in Service Dates (EISD) and probabilistic dates submitted by the TOs' in September and December 2022 delivery plans. The Licence Obligation (LO) date was subsequently set a further 12 months later. For EGL3 and 4 the RISD at the time was effectively a deterministic date akin to a P0, it had 12 months added on to set the ODI Target Date in the ASTI Licence. Ofgem's minded-to position, which now effectively uses deterministic dates as ODI Target Dates, departs from that methodology without explanation or justification. [REDACTED] also observes that:

'All ASTI projects are now more advanced in their development than when ASTI dates were first set. More detailed information on each is now available, including a richer set of probabilistic analysis. The original EISDs were inevitably rougher estimates based on lower maturity information and relied more heavily on assumptions. Importantly, the original EISDs for these projects were developed pre-ASTI. That is, they were submitted to NESO on the basis of the incumbent regulatory regime, which did not include the context and impact of the ASTI framework.'

It is therefore incorrect to treat current estimates of the likely schedule for project completion including EISDs as equivalent in terms of the information they provide..... As projects mature and more is known about them and what is understood about the overall implied balance of risk will also change. This further limits the extent to which the 'portfolio approach' as described by Ofgem could be implemented in practice.'

Ofgem's position also results in LO dates being set at P50, which creates an unacceptable risk of licence breach; it amounts to setting a licence obligation with the expectation of it being breached. This is also contrary to Ofgem's stated intent and contrary to good regulatory practice. Ofgem previously claimed it was not seeking to put TOs at risk of licence breach, yet shifting to P50 dates increases that risk significantly. It also reveals Ofgem's assertion—that the proposed LO dates “do not put TOs at any greater risk of [...] being in licence breach than when ASTI was introduced”—to be false.³¹ Consistent with the pre-scope change approach, the ODI and LO dates for both EGL3 and EGL4 should be 31 December 2034 and 31 December 2035 respectively. Consistent with the pre-scope change approach, the ODI and LO dates for both EGL3 and EGL4 should be 31 December 2034 and 31 December 2035 respectively.

Finally, whilst the NESO CBA showed that delivery by 2033 (the earliest date possible) delivered the greatest benefit to consumers within that CBA, the CBA results nevertheless showed that, even under less optimistic assumptions, the proposed updated network design delivers consumer value. An ODI Target Date of 31 December 2034 as proposed by TOs would therefore still be significantly beneficial to consumers whilst providing TOs with a fair risk balance. Whereas Ofgem's minded-to position would expose TOs to an expectation of being in licence breach and facing heavy penalties despite delivering substantial benefits compared to the original project designs, see point 4 below.

5. **The TOs do not have an equal 'portfolio' of ASTI projects.** NGET has 17 projects, SSE has 10 and SPT has 4. Therefore, not all TOs have as much potential to balance risk and, in the case of SPT, almost no opportunity to do so. As a result, it is neither practical nor reasonable for Ofgem to take a generic approach to re-setting dates and Ofgem has not provided any quantitative evidence which considers each individual TO's portfolio to ensure balance.

We are concerned that the above is not taken into consideration when setting the new ODI Target Dates, it may create a perverse incentive (refer to question 4) for TOs to offer solutions and revised probabilistic dates that deliver as much value as possible for consumers whilst preserving the equal chance of rewards and benefits across the whole portfolio and therefore potentially not optimizing consumer value.

Overall, we are concerned that the complexity and lack of clarity around how Target ODI Dates are set may disincentivise TOs from submitting future change requests thus constraining potential consumer and wider benefits from being achieved as outlined in response to Q2 and Q4.

We have presented our view on how we believe dates should be set for projects of this nature. It is our view this should use probabilistic project schedule information but also consider project specifics as outlined in response to Q2.

³¹ MSC Consultation, para 3.25