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We are consulting on our proposed regulatory funding and approval framework for the onshore electricity transmission projects recommended in the Electricity System Operator's (ESO) latest transitional Centralised Strategic Network Plan 2 (also referred to as the 'Beyond 2030 report'). We would like views from people with an interest in development of the electricity transmission network and Net Zero. We particularly welcome responses from the electricity transmission owners and the ESO and we also welcome responses from consumer groups, other stakeholders and the public.

This document outlines the scope, purpose and questions of the consultation and how you can get involved. Once the consultation is closed, we will consider all responses. We want to be transparent in our consultations. We will publish the non-confidential responses we receive alongside a decision on next steps on our website at <u>ofgem.gov.uk/consultations</u>. If you want your response – in whole or in part – to be considered confidential, please tell us in your response and explain why. Please clearly mark the parts of your response that you consider to be confidential, and if possible, put the confidential material in separate appendices to your response.

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Executive Summary

Significant investment is required in the electricity transmission (ET) network to decarbonise the system and facilitate the transition to Net Zero. This is to enable connection of new renewable generation to the system, and to ensure the network has sufficient capacity to transmit the energy generated to where demand is located.

The ESO published its first transitional Centralised Strategic Network Plan (tCSNP1) in July 2022, which recommended a set of offshore and onshore network upgrades to facilitate the connection of up to 50GW of offshore wind generation by 2030. To support the expedited delivery of this plan, Ofgem introduced the Accelerated Strategic Transmission Investment (ASTI) framework in 2022, and we have subsequently worked with Government, the ESO and the TOs to consider how project delivery can be even further accelerated.

The ESO has developed a further network plan that recommends network reinforcements needed beyond 2030, published in the "transitional Centralised Strategic Network Plan 2"1 (tCSNP2). This consultation sets out our proposed regulatory approval and funding framework for the projects recommended in the tCSNP2.

Since the publication of the tCSNP2, the new Government has announced a target to decarbonise the electricity system by 2030 – the 2030 Clean Power Plan ("CPP2030") - which Ofgem supports. We are working closely with the Government and the ESO and we expect that the ESO will publish an updated network plan in the coming months. We believe that the work that we are proposing to fund through the proposed tCSNP2 framework is highly likely to be needed irrespective of a 2030 decarbonisation target and see no reason to delay that work until the updated network plan is available. We will review our framework and consider how we apply the regulatory tools at our disposal, such as delivery incentives, once we have a better understanding of what the CPP2030 plan means for the design of the network and the required delivery timelines.

Our proposed framework for tCSNP2 projects builds on the ASTI framework, but it also recognises the important differences between projects recommended by the ESO in tCSNP1 and tCSNP2, primarily that most (but not all) tCSNP2 projects are at an earlier stage of development than tCSNP1 projects. This means that there is greater uncertainty about the technical solution, design, routes, costs and delivery timelines of tCSNP2 projects. The ESO recommends that more detailed network design work is undertaken

¹ <u>Beyond 2030 | ESO (nationalgrideso.com)</u>

by the Transmission Owners (TOs) to develop these options, which we agree with. We propose that these options are then submitted to the ESO for re-assessment before confirming the needs case and providing material funding.

Our overarching objective for the proposed framework is to support the TOs in progressing projects in line with their initial delivery plans so that they can be delivered by their optimal dates as identified by the ESO. We are proposing a multi-track funding approach for tCSNP2 projects that takes account of their different levels of project maturity and mitigates the risk to consumers from inefficient investment.

We are proposing a Development track funding route for less mature, higher value (>£100m) tCSNP2 projects. Projects in this track will immediately receive an initial development funding allowance of 0.5% of forecast project cost for TOs to develop further and submit them for re-assessment by the ESO in the second half of 2025. Projects that are recommended for delivery following this re-assessment will progress into the Delivery track as set out below.

We are proposing a Delivery track funding route for more mature, higher value tCSNP2 projects. Projects in this track will immediately receive pre-construction funding allowance of 2.5% of forecast project cost on a UIOLI basis to be used flexibly on a portfolio basis. Further funding will be available under the applicable RIIO-ET3 mechanisms to progress the projects into construction and delivery. We expect to set outputs, licence obligations and financial incentives for timely delivery in line with RIIO-ET3 policy.

Lower value projects (<£100m) will be immediately eligible for full project funding either through the relevant RIIO-ET2 reopener mechanism or through the applicable RIIO-ET3 mechanism (either baseline or an uncertainty mechanism).

We also set out our expectations for the ESO and the TOs for improvements to processes for project planning and development, and for the nature and quality of information to be provided to us so that we can make informed funding decisions.

We are now seeking stakeholder feedback on our proposals. We will continue to work with the TOs, ESO, Government and other stakeholders over the coming months to ensure that the appropriate regulatory framework is put in place.

Steve McMahon

Director, Network Price Controls

1. Introduction

Section summary

This section highlights the content of this consultation, provides links to related publications and contains details of how to respond and how your data will be treated.

What are we consulting on?

1.1 We are consulting on a proposed regulatory approval and funding framework for the onshore electricity transmission projects that the ESO has recommended in its tCSNP2.² The tCSNP2 recommends a coordinated onshore and offshore network design that can facilitate the connection of up to 86GW of offshore wind generation, including 21GW in the ScotWind leasing round,³ 45GW solar, 22GW batteries and 10GW of H2 electrolysers, among other low carbon demand and generation in support of the government's Net Zero obligations under the sixth Carbon Budget.⁴

Section 2: Background

1.2 This section discusses the government's Net Zero policy objectives and the role of the electricity transmission sector in delivering those objectives.

Section 3: Provisional assessment of the ESO's recommendations

1.3 This section provides Ofgem's provisional view on the onshore projects recommended by the ESO in the tCSNP2

Section 4: Proposed regulatory framework for tCSNP2 projects

1.4 This section outlines the proposed regulatory framework to approve and fund the onshore projects recommended by the ESO in the tCSNP2.

² Beyond 2030 | ESO (nationalgrideso.com)

³ ScotWind leasing round | Crown Estate Scotland

⁴ <u>Sixth Carbon Budget - Climate Change Committee (theccc.org.uk)</u>

Section 5: Application of the proposed regulatory framework to tCSNP2 projects

1.5 This section sets out our proposals for the specific projects recommended by the ESO in the tCSNP2.

Section 6: Identifying a project for early competition

1.6 This section explains the process taken by the ESO and Ofgem to identify a project suitable to be competitively tendered

Section 7: Our expectations of the Transmission Owners and the Electricity System Operator

1.7 This section details our expectations for the work we expect the Transmission Owners to undertake on tCSNP2 projects ahead of RIIO-ET3 and the role we expect the ESO to undertake in a further network options assessment.

Section 8: Scope change governance

1.8 This section outlines our proposals to introduce a scope change governance framework to consider the impact of scope changes to large onshore transmission projects.

Section 9: Next steps

1.9 This section sets out an indicative timeline and key milestones related to this consultation.

Context and related publications

- 1.10 This document sets out our consultation on proposals for a regulatory approval and funding framework for onshore electricity transmission projects recommended in the tCSNP2. Other documents relating to this area of work are:
 - ESO's tCSNP2 Beyond 2030 Report: <u>www.nationalgrideso.com/future-</u> <u>energy/beyond-2030</u>
 - Offshore transmission network review decision on asset classification for Holistic Network Design Follow Up Exercise (HND FUE): <u>https://www.ofgem.gov.uk/decision/offshore-transmission-network-review-decision-asset-classification-holistic-network-design-follow-exercise</u>

- RIIO-ET3 Sector Specific Methodology Decision: <u>https://www.ofgem.gov.uk/decision/riio-3-sector-specific-methodology-</u> <u>decision-gas-distribution-gas-transmission-and-electricity-transmission-</u> <u>sectors</u>
- Accelerating Strategic Transmission Investment decision: <u>https://www.ofgem.gov.uk/decision/decision-accelerating-onshore-electricity-</u> <u>transmission-investment</u>
- Government's Transmission Acceleration Action Plan: <u>https://www.gov.uk/government/publications/electricity-networks-</u> <u>transmission-acceleration-action-plan</u>

Consultation stages

1.11 This consultation opens on 1 August 2024 and closes on 30 August 2024. We will carefully consider all consultation responses and intend to publish a decision in Autumn 2023

How to respond

- 1.12 We want to hear from anyone interested in this consultation. Please send your response to the person or team named on this document's front page.
- 1.13 We have asked for your feedback in each of the questions throughout. Please respond to each one as fully as you can.
- 1.14 We will publish non-confidential responses on our website at www.ofgem.gov.uk/consultations.

Your response, data and confidentiality

- 1.15 You can ask us to keep your response, or parts of your response, confidential. We'll respect this, subject to obligations to disclose information, for example, under the Freedom of Information Act 2000, the Environmental Information Regulations 2004, statutory directions, court orders, government regulations or where you give us explicit permission to disclose. If you do want us to keep your response confidential, please clearly mark this on your response and explain why.
- 1.16 If you wish us to keep part of your response confidential, please clearly mark those parts of your response that you do wish to be kept confidential and those that you do not wish to be kept confidential. Please put the confidential material

in a separate appendix to your response. If necessary, we will get in touch with you to discuss which parts of the information in your response should be kept confidential, and which can be published. We might ask for reasons why.

- 1.17 If the information you give in your response contains personal data under the General Data Protection Regulation (Regulation (EU) 2016/679) as retained in domestic law following the UK's withdrawal from the European Union ("UK GDPR"), the Gas and Electricity Markets Authority will be the data controller for the purposes of GDPR. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000. Please refer to our Privacy Notice on consultations, see Appendix 4.
- 1.18 If you wish to respond confidentially, we will keep your response itself confidential, but we will publish the number (but not the names) of confidential responses we receive. We won't link responses to respondents if we publish a summary of responses, and we will evaluate each response on its own merits without undermining your right to confidentiality.

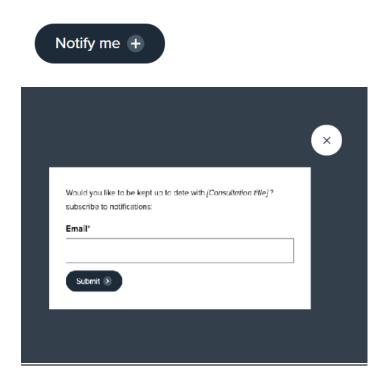
General feedback

- 1.19 We believe that consultation is at the heart of good policy development. We welcome any comments about how we've run this consultation. We'd also like to get your answers to these questions:
 - 1. Do you have any comments about the overall process of this consultation?
 - 2. Do you have any comments about its tone and content?
 - 3. Was it easy to read and understand? Or could it have been better written?
 - 4. Were its conclusions balanced?
 - 5. Did it make reasoned recommendations for improvement?
 - 6. Any further comments?

Please send any general feedback comments to stakeholders@ofgem.gov.uk

How to track the progress of the consultation

1.20 You can track the progress of a consultation from upcoming to decision status using the 'notify me' function on a consultation page when published on our website. Ofgem.gov.uk/consultations



Once subscribed to the notifications for a particular consultation, you will receive an email to notify you when it has changed status. Our consultation stages are:

Upcoming > Open > Closed (awaiting decision) > Closed (with decision)

2. Background

Section summary

This section provides details on Net Zero and associated government policy, discusses the challenges facing the ET sector and outlines our policy objectives. The section also summarises the ESO's approach to network planning and the latest ESO recommendations.

Net zero objectives

- 2.1 The Climate Change Act 2008 committed the UK to reduce its greenhouse gas emissions by 80% relative to 1990 levels by 2050. In 2019 this target was strengthened further, committing the UK to bring all greenhouse gas emissions to Net Zero by 2050. Legally binding carbon budgets also place restrictions on the total amount of greenhouse gases the UK can emit over five-year periods to help achieve this 2050 Net Zero goal.
- 2.2 In October 2023 the Energy Act 2023⁵ received Royal Assent, giving Ofgem a statutory duty to support government to meet its legal obligation to deliver Net Zero by 2050.

The challenge for the electricity transmission sector

- 2.3 In order to decarbonise the energy sector and facilitate the transition to Net Zero, significant investment is required in the ET network. This is to enable connection of new sources of renewable generation and to ensure the network has sufficient capacity to transmit the energy that is generated to the locations of demand.
- 2.4 Historically, it has typically taken around 12 to 14 years to deliver large onshore ET projects, from conception through to commissioning. In order to accelerate these timescales, in 2022 Ofgem introduced the ASTI framework,⁶ and the ET sector has continued to consider how project delivery can be even further accelerated. This is in order to reduce the time currently taken (i) to connect renewable generation to the network, and (ii) to alleviate constraints on the

⁵ Energy Act 2023 (legislation.gov.uk)

⁶ <u>Decision to modify the special licence conditions in the electricity transmission licences:</u> <u>Accelerated Strategic Transmission Investment | Ofgem</u>

network where it has insufficient capacity to transmit the energy that is being generated, so consumers effectively have to pay generators to switch off production (referred to as 'constraint costs').

Ofgem and government policy objectives

- 2.5 On 22 November 2023 the last government published its Transmission Acceleration Action Plan⁷ (TAAP). This was in response to the Electricity Networks Commissioner's report⁸ (ENC Report) on accelerating electricity transmission network build which listed 43 recommendations required for achieving acceleration of ET projects.
- 2.6 The TAAP sets out the changes needed to halve the build time for new transmission infrastructure from 12-14 to 7 years. This objective was later listed as a Government Policy Outcome in the government's Strategy and Policy Statement for Energy Policy in Great Britain⁹ (SPS).
- 2.7 Ofgem is supportive of these developments, and since the publication of the TAAP, ENC Report, and SPS we have worked closely with government, the ESO and industry to consider their implications for the ET sector.
- 2.8 These reports sit alongside the Connections Action Plan¹⁰ (CAP) that we published jointly with the Department for Energy Security and Net Zero (DESNZ) in November 2023 which sets out the reforms needed to reduce connections timescales from an average of 5 years to 6 months so that most projects can connect in line with their realistic project requirements. Network investment and build is a key enabler for meeting CAP aims.
- 2.9 All of these plans are clear on the critical importance of new network investment required to enable the UK to meet its Net Zero targets. We have carefully considered each of these reports, along with our principal objectives as an independent regulator when deciding upon the framework and regulatory treatment proposed within this consultation.

⁷ <u>Transmission Acceleration Action Plan: Government response to the Electricity</u> <u>Networks</u>

⁸ <u>Accelerating electricity transmission network deployment: Electricity Networks</u> <u>Commissioner's recommendations - GOV.UK (www.gov.uk)</u>

⁹ Strategy and policy statement for energy policy in Great Britain - GOV.UK (www.gov.uk)

¹⁰ <u>Electricity networks: connections action plan - GOV.UK (www.gov.uk)</u>

- 2.10 The TAAP and SPS were drafted with a view to accelerating the delivery of transmission infrastructure within the context of the last government's target of a decarbonised electricity system by 2035. The new government has announced a target to decarbonise the electricity system by 2030 the 2030 Clean Power Plan ("CPP2030") which Ofgem supports. We believe that the actions set out in the TAAP and SPS are still likely to be beneficial and necessary for meeting the UK's Net Zero goals irrespective of the target date for achieving a fully decarbonised electricity system.
- 2.11 However, achieving a decarbonised electricity system earlier is likely to require updates to energy system forecasts and network plans, which in turn could lead to changes in the scope and timing of necessary transmission network upgrades. We set out our view of the potential implications of this on our proposed regulatory framework for tCSNP2 projects in in paragraphs 2.12 to 2.25 below, as well as in relevant sections throughout this document.

Electricity Transmission Network Planning

- 2.12 Historically, reinforcements on the ET network have been made incrementally, with the ESO providing the TOs with investment recommendations following an annual Networks Options Assessment (NOA)¹¹ process. Under this approach, regulatory approvals, funding, procurement and delivery were considered by the TOs and Ofgem on a project-by-project basis.
- 2.13 We have since looked to take a more holistic approach to network planning that considers both onshore and offshore requirements. In December 2023 we published our decision for the ESO to develop a Centralised Strategic Network Plan (CSNP),¹² which will take a coordinated and whole system approach to recommend a GB-wide network plan. Our RIIO-3 Sector Specific Methodology Document ET Annex (RIIO-ET3 SSMD)¹³ proposes an approach by which the parts of the CSNP that are ready to enter delivery, can be taken forward at a plan level rather than on a project-by-project basis.
- 2.14 The ESO has published two "transitional" Centralised Strategic Network Plans (tCSNPs) as pre-cursors to the first full CSNP expected in 2026. These tCSNPs

¹¹ <u>Network Options Assessment (NOA) | ESO (nationalgrideso.com)</u>

¹² Decision on the framework for the Future System Operator's Centralised Strategic Network Plan | Ofgem

¹³ <u>RIIO-3 Sector Specific Methodology Decision – ET Annex (ofgem.gov.uk)</u>

represent a move towards the CSNP, with a more coordinated approach to planning the onshore and offshore electricity transmission network.

- 2.15 In 2022 the ESO published two reports that we now refer to collectively as tCSNP1: the Holistic Network Design¹⁴ (HND) and the 2021/2022 Networks Options Assessment 7 Refresh¹⁵ (NOA7 Refresh). The HND set out a coordinated approach to connecting 24GW of offshore wind to enable the GB electricity network to meet the last government's objective of 50GW of offshore wind by 2030, as set out in the British Energy Security Strategy.¹⁶ This was then complemented by the NOA7 Refresh, which recommended the onshore network reinforcements to enable the HND requirements.
- 2.16 The ASTI framework was introduced to facilitate the accelerated delivery of the large onshore ET projects recommended in the tCSNP1. The tCSNP1 combined with the new ASTI framework has given the TOs greater certainty on the need for projects than was typically achieved through the previous NOA process as the needs case for recommended projects will not be revisited in future iterations of NOA or CSNP reports. The framework also provides access to early funding ahead of securing planning consents in order to secure constrained supply chains and build supply chain capacity, as well as a high-powered delivery incentive.

The ESO's tCSNP2

- 2.17 On 19th March 2024 the ESO published the "transitional Centralised Strategic Network Plan 2^{"17} (tCSNP2), also referred to as 'Beyond 2030'.
- 2.18 The tCSNP2 is a holistic onshore and offshore network plan and comprises of:
 - The Holistic Network Design Follow-Up Exercise (HND FUE) to connect 21GW¹⁸ of offshore wind generation (OWG) from the ScotWind leasing round.
 - The NOA to meet the wider network requirements of the next 10-15 years to facilitate connections of up to 86GW OWG, 45GW solar, 22GW batteries and

¹⁴ <u>A Holistic Network Design for Offshore Wind | ESO (nationalgrideso.com)</u>

¹⁵ <u>Network Options Assessment (NOA) | ESO (nationalgrideso.com)</u>

¹⁶ British energy security strategy - GOV.UK (www.gov.uk)

¹⁷ Beyond 2030 | ESO (nationalgrideso.com)

¹⁸ This is in addition to the 50GW of offshore wind generation connecting by 2030 as per the British Energy Security Strategy

10GW of H2 electrolysis plants in Scotland, among other low carbon demand and generation.

2.19 The tCSNP2 set out the ESO's view of a network to enable the UK government to meet the sixth Carbon Budget,¹⁹ which includes the ambition of operating a zero-carbon electricity system in Great Britain by 2035.

2030 decarbonisation ambition

- 2.20 On 5 July 2024 a new government was elected with a policy target for a zero-carbon electricity system by 2030 (also known as Clean Power 2030 or CPP2030), five years earlier than the previous government's target of 2035. To achieve this ambition, the government has asked the ESO to provide advice on the energy pathway towards the 2030 ambition, with expert analysis on the location and type of new investment and infrastructure needed to deliver it²⁰. Delivering the new government's CPP2030 ambition will require the ESO to produce a view of the energy mix required and an updated transmission network plan to support it. We understand that this plan is expected later this year.
- 2.21 Until this updated plan from the ESO becomes available, there is considerable uncertainty about what an electricity network needed to support CPP2030 will look like, and the actions required for achieving this. We expect that this will require a combination of accelerating connection of different types of renewable generation, accelerating delivery of onshore network reinforcements (potentially including projects already recommended in the tCSNP2) to support this new generation, and significant changes to GB's energy mix.
- 2.22 Despite this uncertainty, we are confident that a significant proportion of the transmission network upgrades recommended by the ESO in its tCSNP2 will play an integral role in meeting Net Zero by 2050 and will therefore be required to be delivered. Some smaller tCSNP2 projects can potentially be progressed quickly and delivered by 2030 in support of a 2030 decarbonisation target. Other tCSNP2 projects that are critical for meeting the UK's Net Zero goals are currently not required before 2030, but we recognise that some of these projects could be required earlier under a CPP2030 network plan. We will work with the ESO, TOs and other stakeholders to consider how the necessary

 ¹⁹ Sixth Carbon Budget - Climate Change Committee (theccc.org.uk)
 ²⁰ Chris Stark to lead Mission Control to deliver clean power by 2030 - GOV.UK (www.gov.uk)

transmission upgrades can be delivered in accordance with the CPP2030 network plan once it is in place.

- 2.23 Our proposals for the regulatory framework for the tCSNP2 projects (as set out in Chapters 4 and 5 of this document) aim to ensure that TOs are funded without delay to undertake necessary initial development and network design work required to progress these projects on a low-regret basis ahead of the development of the CPP2030 network plan. We intend to set out in due course any proposals for further changes to the regulatory framework if they are required to support the delivery of the recommendations of a CPP2030 network plan.
- 2.24 We are mindful that the regulatory tools available to accelerate onshore project delivery such as early needs case approval, timely access to funding, removing Ofgem from the critical path of delivery, and timely delivery incentives can only accelerate project delivery by a limited amount if applied on their own without supporting changes elsewhere,²¹ and delivering CPP2030 will also require a number of other supporting developments. A key factor will be planning reform in England, Wales and Scotland²² to materially reduce the time it currently takes for projects to secure the necessary planning consents, and we acknowledge the UK government's commitment to this through reform of the National Planning Policy Framework, amongst other expected measures.²³ Other factors will also be crucial in delivering CPP2030, such as ability of the supply chain to expand and deliver the volume of work required and the ESO's outage planning.
- 2.25 The next chapter details our consideration of the ESO's tCSNP2 recommendations and the rest of this consultation contains our proposals for the regulatory approval and funding arrangements to deliver the recommended tCSNP2 projects a full list of recommended projects is in Appendix 1.

²¹ Our ASTI decision assumed projects could be delivered 1-2 years earlier under ASTI against a counterfactual of delivering through LOTI, and stated that planning reform will be required to deliver the ASTI projects by 2030.

²² Note that planning policy in the UK is a devolved matter with different constituent parts of the UK able to take different approaches.

²³ <u>Chancellor Rachel Reeves is taking immediate action to fix the foundations of our</u> <u>economy - GOV.UK (www.gov.uk)</u>

3. Provisional assessment of the ESO's tCSNP2 recommendations

Section summary

This section summarises the ESO recommendations included in the tCSNP2 and provides Ofgem's initial views on these recommendations.

Questions

Q1. Do you agree with our assessment of the tCSNP2 and the risks that we have identified?

Summary of the ESO's recommendations

- 3.1 In the tCSNP2 the ESO has recommended 46²⁴ onshore transmission projects worth a forecast £15.7bn.²⁵ This reflects only the projects recommended from the Network Option Assessment part of tCSNP2, and eight connection projects (onshore HND FUE Enabling Works) in the final network design.²⁶ The ESO's assessment also set out maturity ratings for each project to reflect their current stage of development.²⁷
- 3.2 The ESO also recommends a further set of "Radial Offshore", and "Non-Radial Offshore" transmission assets as part of its HND FUE design. These are outside the scope of this consultation and will be consulted on separately. A full list of recommended projects is in Appendix 1.

Table 1: Summary of tCSNP2 projects by recommendation and forecast cost

ESO Recommendation ²⁸	No. of Projects	Forecast cost (£m)
Proceed – Critical	20	8924
Proceed – Maintain	8	3592

²⁴ The ESO originally listed 46 projects, however SSENT have requested that two elements of the project PKUP are separated out and delivered alongside other existing projects (KKRE as part of ECUP, and PPUP as part of BPNC).

²⁵ All figures in this document are in the 2018/19 price base used for RIIO-2

²⁶ <u>nationalgrideso.com/document/304761/download</u> Technical Report - Design S_009s (Table 15)

²⁷ <u>nationalgrideso.com/document/304756/download</u> (page 47)

²⁸ Full definitions of the ESO Recommendations are on page 29 of the Beyond 2030 Technical Report: <u>Final Strategic Options Appraisal (nationalgrideso.com)</u>

HND FUE Enabling Work	8	2011
Hold	10	1234
Total	46	15,733

Table 2: Summary of tCSNP2 projects by maturity rating

ESO maturity rating	ESO Maturity Rating Description	Number of projects
Level 1	Scoping: Identification of broad needs case and consideration of number of design and reinforcement options to solve boundary constraint issues.	
Level 2	el 2 Strategic optioneering: The needs case is firm; a number of design options being developed so that a preferred design solution can be identified.	
Level 3	_evel 3 Design development / consenting: Designing the preferred solution into greater levels of detail and preparing for the planning process including public consultation and stakeholder engagement.	
Level 4	Planning & consenting: Continuing with public consultation and adjusting the design as required all the way through the planning application process.	1
Level 5	Consents approved: Consents obtained but construction has not started.	0
Level 6	Construction: Planning consent has been granted and the solution is under construction.	0

Summary of our position

3.3 In our view, the tCSNP2 differs considerably from the tCSNP1 due to the number of projects at a low level of project maturity. Whilst we agree with the ESO's high-level network plan and the need to upgrade network capability by addressing the boundary constraints identified by the ESO, there remains significant uncertainty about the design, costs, delivery timings and certainty of need for the majority of the network reinforcements recommended.

²⁹ Two projects (SGRE and TMPC) were not originally assigned maturity ratings, however following engagement with NGET we understand these to also be of a maturity rating of 1 and therefore have been included in this total. N.B. all projects that received a "Hold" signal were in this lowest category of development.

- 3.4 In the majority of cases, we consider that the low level of maturity of project designs, project costs and the delivery dates used in the Cost Benefit Analysis (CBA) results in a less robust economic assessment. We consider that more work needs to be done by the TOs to undertake development and detailed design of the projects so that there is greater certainty on project scope, delivery timings and costs, to be used in a more robust refreshed economic assessment, before we are able to provide material funding and set delivery targets and outputs for the TOs.
- 3.5 We understand from TOs that in some cases, there could also be alternative options that have not been considered in tCSNP2, that could address the identified network needs. It is worth exploring these if they can do so at lower cost or greater speed. Where further detailed design results in material scope changes or increases to project costs then a refreshed assessment could explore if it is still economically beneficial to deliver the project.
- 3.6 We have decided that once the TOs have undertaken this further development and design work on recommended tCSNP2 upgrades, the more mature options for delivering those upgrades should be re-assessed by the ESO as part of the next NOA update, and it should produce a refreshed tCSNP2 (the tCSNP2 Refresh) as part of this by 31 January 2026.³⁰ This report will recommend mature options that can be taken forward to the next stage of delivery, together with any new projects that may be required based on any newly identified network needs. Projects recommended following the tCSNP2 Refresh will then be eligible for further funding and potentially subject to delivery incentives. At that point we will also determine whether or not each qualifying project will be delivered by the TO or subject to competitive tender. (see chapter 4 below).
- 3.7 We are also mindful that the ESO is currently developing the CPP2030 network plan. We intend that the proposals in this consultation are flexible enough to account for a more accelerated approach to delivery if required by the CPP2030 network plan, and we will consider appropriate next steps once it is clear what is required from Ofgem and what the TOs should prioritise to deliver a decarbonised network in 2030.

³⁰ <u>Decision allowing National Grid Electricity System Operator Limited to submit the NOA</u> methodology by 31 March 2025 and publish the updated NOA report by 31 January 2026] Ofgem

3.8 Regardless of whether the tCSNP2 projects are required as part of a CPP2030 or to meet network needs beyond 2030, we consider it important that these projects are not delayed and want to ensure that they continue to developed at pace until we have further clarity on exactly when they will need to be delivered.

Project immaturity

- 3.9 The latest tranche of projects recommended as part of the tCSNP2 are generally less mature than those that were included in the tCSNP1. The majority of tCSNP1 projects had already been well established and considered by the ESO through previous NOA cycles. This included a number of projects that had already gained needs case approval under the LOTI mechanism and were close to securing planning consent. In comparison, due to the scale of new network needs identified in tCSNP2, TOs and ESO have had less time to develop the design of tCSNP2 options. The tCSNP2 contains an assessment of project maturity by the ESO from Level 1 (lowest maturity, scoping stage) to Level 6 (highest maturity, construction stage) of a total of 46 tCSNP2 projects recommended, 41 have the lowest ESO maturity rating of Level 1.
- 3.10 Considering the economic need for these projects is more challenging due to this immaturity in design, costs and delivery timing as changes to any of these attributes could affect the ESO's recommendations following the tCSNP2 Refresh.
- 3.11 Therefore, in our view projects with a low maturity rating recommended in the tCSNP2 require further development in order for us to have sufficient confidence in their need, design, delivery timings and approximate costs before we consider it appropriate to provide material project funding or set outputs in the TOs' licences. Our proposed funding approach (see chapter 4) intends to ensure these projects can be developed at pace and there is no delay against current forecast delivery dates until confirmation of project need following the tCSNP2 Refresh.

Uncertainty around the FES

3.12 Under the current network planning framework, the ESO's Future Energy Scenarios³¹ (FES) outline four different plausible scenarios for the future of GB's

³¹ <u>Future Energy Scenarios (FES) | ESO (nationalgrideso.com)</u>

whole energy system out to 2050. These scenarios are used to identify future system needs in the Electricity Ten Year Statement (ETYS), which in turn is used to identify network reinforcements for the GB electricity system to facilitate the development of an efficient, co-ordinated and economical system of electricity transmission. Each year the ESO updates the FES using the latest information to inform its assumptions for plausible future supply and demand scenarios on the energy system.

- 3.13 When planning wider system reinforcements within the NOA, the choice between reinforcing the system or leaving constraints on the system and paying constraint costs to generators, is assessed in the NOA CBA. In some cases, building new network may be more costly than paying future constraint costs. In such cases, the decision to not build new network may be more economical for consumers, unless these reinforcements are also required as enabling works for specific connections. As the future is uncertain, different scenarios such as the FES are used for decision making under future uncertainty. These scenarios are expected to explore uncertainties to demonstrate the consequence of different choices to decision makers.
- 3.14 The primary driver for the tCSNP2 is future OWG. We are concerned that three out of four scenarios that were used in the ESO's tCSNP2 analysis assumed little variation in the amount of OWG connecting to the network by 2035. We are concerned that there is a risk that the assumptions made in the FES do not materialise or materialise differently due to policies of the new government, resulting in underutilised assets.
- 3.15 The FES 2024, published in July 2024,³² takes a different approach than FES 2023, evolving from future 'scenarios' to future 'pathways'. These pathways seek to explore narrower ranges and strategic, credible choices that can support decarbonisation and Net Zero objectives. It is likely, though not known to what extent, that the mix of projects recommended by the tCSNP2 may change if reassessed using FES 2024 and we believe it would be prudent to test options against this updated background and system needs before providing material project funding and setting associated outputs and targets.
- 3.16 We have also asked the ESO for a view on which reinforcements are more marginal than others, to enable us to make better informed funding decisions.

³² FES 2024

This analysis should test if less OWG was to connect, or to connect later, which tCSNP2 reinforcements would be the first to not be needed.

3.17 An additional factor is CPP2030 and new government generation ambitions, which may include a greater role than previously expected for alternative generation types e.g. solar generation and onshore wind in England. While this does not necessarily mean that the growth assumed for OWG in the tCSNP2 is not required, we think this should be tested after the CPP2030 plan is published, as it may result in a different sequencing of generation and subsequent network build.

Current lack of information on the benefits of accelerated delivery

- 3.18 The ESO's tCSNP2 economic analysis considers the economic benefit of delivering projects on the Earliest-In-Service-Date (EISD) submitted by the TOs, compared to delivering the project after that date. The ESO analysis does not quantify the benefit of delivering projects earlier than the EISD, which could indicate whether there is benefit accelerating project delivery so that they are delivered before their EISDs. Ofgem is very supportive of the principle of accelerated project delivery where it is in consumers' interests, however we need clear evidence on whether targeting earlier delivery dates and applying Output Delivery Incentives (ODIs) will provide consumer benefit.
- 3.19 Furthermore, the EISDs are developed by the TOs rather than the ESO, and there is opacity surrounding the assumptions made by the TOs. In the absence of a common transparent methodology for developing EISDs, it is possible that the assumptions driving those dates vary from year to year, project to project, or between TOs. This exacerbates the issue highlighted above, as if different assumptions were used, this may result in different EISDs and therefore possibly different optimal delivery dates for some projects.
- 3.20 We are also concerned that the EISDs provided by TOs for the tCSNP2 may be excessively conservative and not reflective of the earliest possible dates that these projects could be delivered by we discuss this further in the context of setting target delivery dates in Chapter 5 below.
- 3.21 Given these concerns, we do not consider that we currently have the information required to be able to set reasonable and challenging target dates or balanced timely delivery incentives.

3.22 Chapter 7 below sets out our proposals to develop a common methodology on delivery dates that intends to address the issues above.

Interaction with REMA and Balancing Mechanism reform

- 3.23 The government is currently processing the responses to the second consultation on the Review of Electricity Market Arrangements (REMA).³³ One of the proposals includes a move to a zonal wholesale market in Great Britain. This proposal could improve the operation of interconnectors and storage, and potentially impact the location of future generation and demand across the electricity system. This impact in theory would reduce constraints on the network which could in turn make further network reinforcements less beneficial.
- 3.24 Furthermore, Ofgem³⁴ and the ESO³⁵ are in the process of reforming the Balancing Mechanism (BM). These reforms should reduce the costs that consumers incur for the ESO balancing the energy market to make sure that supply and demand are matched. When calculating the benefit of new transmission reinforcement, part of the assessment includes the impact the reinforcement will have on balancing costs. Therefore, if balancing costs through this reform are reduced, the benefit of transmission reinforcements will also be reduced.
- 3.25 The combination of REMA and BM reform adds further uncertainty to the needs case for the tCSNP2 projects, as both changes could result in a reduction in the benefits case for projects. This does not necessarily mean the projects will not still be required, but it could result in a reduction in the benefits case for projects or mean that they are not required until later and could result in network under-utilisation for a period if progressed immediately.
- 3.26 This general uncertainty further supports our position that many of the tCSNP2 projects should be re-assessed in the future, ideally following further updates from both reforms, ensuring greater certainty of need before investing significant sums of consumer money. Additionally, we are also asking the ESO to

³³ <u>Review of Electricity Market Arrangements (REMA): technical research supporting</u> <u>consultation - GOV.UK (www.gov.uk)</u>

³⁴ Ofgem launches consultation on Balancing Mechanism reforms to protect consumers | Ofgem

³⁵ <u>ESO responds to ESN call for Balancing Mechanism reforms | ESO (nationalgrideso.com)</u>

carry out analysis to understand the consequences of zonal pricing on optimal transmission reinforcement as part of the tCSNP2 Refresh.

Risks to consumers

- 3.27 Given the uncertainties set out above, we consider there could be significant risks to consumers from locking in immature project designs and delivery dates too early, before there is certainty of need and the optimal design has been identified.
- 3.28 Our proposed approach (see Chapter 4) intends to ensure that, for immature projects, TOs are provided the relatively small amounts of funding needed to carry out initial development work³⁶ so there is no delay against current optimal delivery dates ahead of the tCSNP2 Refresh by the ESO in January 2026 without committing at this stage to the more significant amounts of funding that may be needed to progress these projects into consenting and delivery. Our approach maintains the flexibility to provide additional funding after the tCSNP2 Refresh when we are likely to have greater confidence in the needs case and design.
- 3.29 If we were to provide funding for consenting and delivery of immature projects at this stage, there is a risk that we would be locking in designs that have not been thoroughly tested and may not be the optimal option. In the worst case, this could lead to excessive costs, poor routing choices, and poor design choices for the network. Furthermore, if there is a requirement to change project scope after outputs have been added to the TOs' licences the licence modification process takes time and resource and could risk projects inadvertently being delayed.
- 3.30 Progressing these immature projects into consenting and delivery now would also mean that we are less able to adapt the choice of projects or their design following the ESO's updated view from FES 2024 and the tCSNP2 Refresh of what an optimal system should look like. If there were significant changes to the location and volume of generation and demand, this could result in consumers being exposed to costs on assets that are not required or where the solution is economically suboptimal.

³⁶ This reflects the TOs' forecast levels of Y1 and Y2 expenditure on the tCSNP2 projects

- 3.31 For the more mature projects (i.e. those with an ESO maturity rating Level 3 and above), our proposed framework will provide confirmation of need and funding required to progress them into consenting and delivery.
- 3.32 For the less well-developed projects, we are proposing Initial Development Funding (IDF)³⁷ so that TOs can undertake the necessary scoping, strategic optioneering and initial project development work required. We consider this approach justified as this work is required over the next 12-18 months regardless of the regulatory approach we take, and we consider that our proposed approach allows TOs to progress project development whilst providing better protection for consumers. Our expectation of the TOs is therefore to identify and develop an optimal solution that can be taken forward to consenting – further details of the IDF deliverables are in Chapter 4 below.
- 3.33 In the Beyond 2030 publication, the ESO stated that the recommended options need to be further refined by TOs and offshore developers in what they refer to as the "Detailed Network Design" phase to ensure these recommendations meet the future needs of the system.³⁸ This phase will involve optimising the designs further, determining routeing, technology choices and where other onshore and offshore assets should be located. We support the ESO view and are proposing to fund TOs to undertake the required development and design work without delay.
- 3.34 We consider that this approach is appropriate whether targeting a Net Zero network by 2030 or 2035, as it ensures projects can progress at pace ahead of setting a delivery date in future that is reflective of the latest ESO network plan.

 ³⁷ Initial Development Funding means funding to undertake activities required to develop projects before they can go into the Delivery track (see chapter 4) and receive PCF.
 ³⁸ Beyond 2030 | ESO (nationalgrideso.com) Page 36 of the report.

4. Proposed regulatory framework for tCSNP2 projects

Section summary

This section contains our proposed framework for approving and funding projects recommended by the ESO in the tCSNP2. It sets out our objectives and principles, details the proposed regulatory framework and sets out why we consider that the framework meets our objectives.

Questions

Q2. Do you agree with our proposals for the "Development track"?

Q3. Do you agree with our proposals for the "Delivery track"?

Q4. Do you agree with our proposals for the "Small / Medium Sized Project Delivery track"?

Objectives and principles

- 4.1 We developed the ASTI framework in 2022 to support the accelerated delivery of transmission investments identified by the ESO in its HND1/NOA7 Refresh that are needed to deliver the last government's objective of connecting up to 50GW of offshore wind by 2030. The ASTI framework is underpinned by:
 - A regulatory funding arrangement that ensures that TOs have access to funding when it is needed to support the expedited delivery of projects by their required delivery dates. This includes the acceptance of need and competition exemptions on a programmatic basis, funding for preconstruction activities through the ASTI PCF mechanism, and funding for early construction activities on an anticipatory basis through the ECF mechanism.
 - A strong financial incentive mechanism to encourage timely delivery with rewards for early or on-time delivery and penalties for delays.
- 4.2 Our ASTI framework has received support from stakeholders and is considered to be a key enabler for the timely delivery of transmission infrastructure.
- 4.3 In developing the regulatory framework for tCSNP2 projects we have sought to build upon the ASTI approach. At the same time, we have recognised the important differences between ASTI projects and projects recommended in the tCSNP2. In particular, we have been mindful that:

- The projects recommended by the ESO in its tCSNP2 are, in general, currently at an earlier stage of maturity than that of ASTI projects when the tCSNP1 was published. This means that there is greater uncertainty about project scope, routing and design, which can only be resolved through further detailed network design work which the ESO has recommended as the next step.
- The ESO's optimal delivery dates for tCSNP2 projects, which in turn are derived from the TOs' EISDs and the NOA analysis, imply longer available lead times for delivery compared to ASTI projects.³⁹ This means that from a system requirements perspective, there is currently a lack of evidence on whether further expediting delivery timelines compared to the TOs' current EISDs would be beneficial for consumers or not.⁴⁰ This is in contrast to a number of ASTI projects where the ESO's analysis showed clear quantified benefits to consumers from bringing delivery dates forward.
- 4.4 We consider the ESO's Beyond 2030 publication provides strong evidence of the system benefits from delivering transmission network upgrades identified by the ESO without delay, with tCSNP2 projects critical in supporting delivery of Net Zero. We also recognise that under the ESO's CPP2030 network plan some tCSNP2 projects may require further acceleration compared to currently recommended optimal dates in tCSNP2 and we will consider appropriate incentive and licence arrangements upon receipt of that plan. However, we do not expect this to materially alter the need for detailed network design work to further develop tCSNP2 projects in the near term.
- 4.5 We also note that wider transmission system capability upgrades are essential if we are to make progress on grid connection timelines in accordance with the CAP.⁴¹
- 4.6 Our overarching objective for the proposed regulatory framework for tCSNP2 projects is to support the TOs in making progress towards the delivery of the necessary transmission network upgrades by their optimal delivery dates,

 $^{^{39}}$ The time from publication of the tCSNP2 to Optimal Delivery Dates for projects (excluding those below £100m) on average is ~ 10 years, compared with an average of ~ 7 years for ASTI projects.

⁴⁰ We expect the ESO to undertake this analysis as part of the next options assessment ⁴¹ Electricity networks: connections action plan - GOV.UK (www.gov.uk)

recognising the uncertainties and particular circumstances of those projects, without exposing TOs and consumers to unnecessary risk.

- 4.7 We have sought to achieve this objective by adopting the following design principles for our regulatory framework:
 - **Regulatory approvals remain off the critical path for delivery.** In line with the recommendation in the ENC Report,⁴² the framework should be designed so that regulatory approval is not on the critical path of the end-to-end process for project delivery.
 - Regulatory certainty for TOs. The framework should provide the regulatory certainty needed by TOs to enter into contracts with the supply chain in a timely manner.
 - Aim to deliver projects by their optimal delivery dates. The framework should support the TOs in delivering projects by their optimal delivery dates as identified by the ESO.
 - The right amount of funding at the right time. The framework should allow TOs to access sufficient regulatory funding to meet their expenditure requirements when it is needed and in line with their delivery plans.
 - Manage uncertainty by not committing too early. The framework should manage uncertainty risk by not committing to particular options or designs too early, allowing time for better information to become available while remaining off the critical path for delivery.
 - Role for balanced and proportionate financial incentives for timely delivery. As in our ASTI framework, strong financial incentives can have a key role to play in encouraging timely delivery of projects. However, such incentives should be carefully calibrated so that they appropriately reflect the quantified benefits of acceleration and costs of delay, be fairly balanced between rewards and penalties, and not expose TOs or consumers to excessive and unnecessary risk.
 - **Targeted application of cost sharing incentives.** Cost sharing incentives (i.e. the TIM) are critical in incentivising cost efficiency, however we will consider alternative mechanisms (such as the use it or lose it (UIOLI)

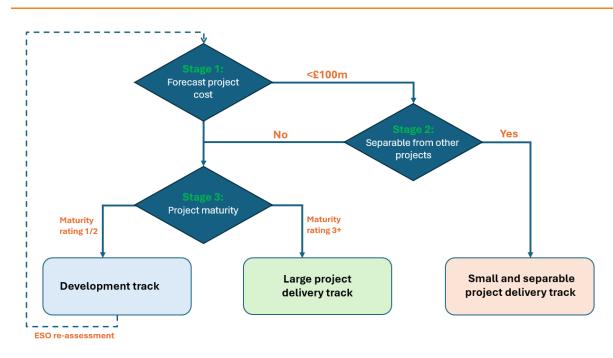
 ⁴² <u>Electricity Networks Commissioner report - Energy Systems Catapult</u> Recommendation
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mechanism) for activities where risks to the quality of work or outputs arising from the pursuit of cost efficiency cannot be effectively mitigated through outputs or similar mechanisms, for example in early design and development or in consenting.

Our proposed multi-track approach to funding

- 4.8 In line with our objectives and design principles, we are proposing a regulatory framework that:
 - Provides TOs with the necessary regulatory certainty to progress these projects with confidence;
 - Ensures that sufficient funding is available at the time that it is needed to allow the TOs to progress projects without delay;
 - Recognises the differences in the maturity level between projects, and the differences in the nature of work required to progress them;
 - Includes regulatory tools that strike an appropriate balance of risk between consumers and TOs; and
 - Is flexible enough to allow the regulatory treatment of projects to be appropriately adjusted to match their circumstances.
- 4.9 Our proposed regulatory framework comprises of three funding tracks that are designed to meet the needs of projects of different maturity levels and sizes:
 - Development track
 - Delivery track
 - Small / Medium Sized Project Delivery track

Figure 1: Proposed tCSNP2 regulatory framework



Development Track

Table 3:	Development	track	overview
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Criteria:	Output	Activities	Funding
Applies to Projects that: - have an estimated cost of greater than £100m - received a "Proceed" or "Hold" signal, or is an HNDFUE enabling work - have an ESO maturity rating of Level One or Two - Excludes projects that we consider should be delivered as part of existing projects.	PCD to develop the project to ESO maturity rating 3, and submit a report to Ofgem with evidence to demonstrate the maturity status. To deliver PCD output by 30 June 2025 so that suitably developed options can be submitted to the ESO to be assessed as part of the tCSNP2 Refresh, which is currently expected to be published in January 2026.	Including but not limited to: - Pre-FEED ⁴³ work - Early desk- based research and design - Optioneering analysis - Risk assessments - Site visits	 To be set at 0.5% of estimated project costs. A flexible pot that can be spent across all projects in the Development track. Subject to a UIOLI adjustment.

⁴³ Front-End Engineering Design

4.10 The intention for projects in this track is to provide IDF for TOs to progress project development ahead of a tCSNP2 Refresh, which is expected in January 2026, and we expect IDF to progress projects into the detailed network design phase. Our intention is to consider projects that are onshore HND FUE enabling works or receive a Proceed signal from the ESO in the tCSNP2 Refresh for inclusion into the Delivery track (see below).

Scope of coverage

- 4.11 We propose to include all projects that meet the following criteria:
 - have an estimated cost of greater than £100m;
 - received a "Proceed" or "Hold" signal, or is an HNDFUE enabling work; and
 - have an ESO maturity rating of level one or two.
- 4.12 We propose to exclude projects that we consider should be delivered as part of, or through a modification to, existing projects that have been funded for delivery.
- 4.13 We are proposing a £100m materiality threshold for projects in the Development track to make a distinction between large and small/medium projects, consistent with our approach to ASTI, LOTI and the Medium Sized Investment Project (MSIP) re-opener. The smaller recommended projects typically involve minor upgrade works to existing assets and given that for these projects route corridors and substation locations are already known, we do not think these require the type of development work that we are proposing to fund through this track. We consider that sub-£100m projects can be funded through existing price control mechanisms or as part of RIIO-ET3 see Small / Medium Sized Project Delivery track below.
- 4.14 We have considered whether to include projects that received a Hold signal from the ESO within the Development track. We recognise that these projects are not required to be delivered by their EISDs, and there is no identified need to progress the projects until the next iteration of the ESO's assessment. However given the interdependent nature of projects recommended as part of a coordinated design, the fact so many of the projects recommended are at such an early stage of project maturity, and the potential economies from undertaking development works concurrently across the portfolio, we consider there is consumer benefit from including Hold projects. We are also mindful that to decarbonise the sector by 2030, the optimal delivery dates may change, and

we want to ensure that options that could potentially be recommended are as mature as possible at that stage.

4.15 There is a risk that this could result in development costs being incurred on projects for which the need could fall away at the tCNSP2 Refresh, but given the relatively low materiality of funding provided, we consider this to be low regret investment.

Output

- 4.16 While we are proposing that IDF covers all project development work until the end of 2025, we are also proposing to set a Price Control Deliverable (PCD) to develop the projects so that they are at ESO maturity rating Level 3 (i.e. projects have completed Level 2: strategic optioneering, and have entered Level 3: Design development / consenting) by June 2025.⁴⁴ We expect the TOs by then to have a set of well-developed options to be submitted to the ESO to be assessed as part of the tCSNP2 Refresh.
- 4.17 The PCD is the minimum expected level of project development for the recommended tCSNP2 projects, but the funding provided through the IDF is intended to allow TOs to continue developing projects beyond this. Once the TOs have delivered the PCD by June 2025, we expect them to continue using the available funding to further develop the projects until the need is confirmed, or otherwise, following the tCSNP2 Refresh.
- 4.18 We see completion of the stages of ESO maturity rating Levels 1 and 2 scoping and strategic optioneering respectively as the main work that we are proposing to fund through IDF, with the additional consenting activities required to develop projects through to construction being funded through PCF allowances provided later. Setting the PCD output as developing projects to ESO maturity rating Level 3 also allows the ESO to undertake an independent assessment of whether TOs have developed projects to the requisite level of development that they have been funded for and have delivered the PCD.

⁴⁴ <u>Beyond 2030 | ESO (nationalgrideso.com)</u> page 47. ESO maturity ratings:

Level 1: Scoping

Level 2: Strategic optioneering

Level 3: Design development / consenting

Level 4: Planning and consenting

Level 5: Consents approved

Level 6: Construction

Price Control Deliverable

- 4.19 We recognise that the ESO maturity ratings could be subjective and are not defined in specific detail in the NOA Methodology.⁴⁵ Therefore, we propose that in order to meet the PCD requirement, the TOs submit a report demonstrating for each project in the Development track:
 - Identification of electrical solution(s) e.g. extend or upgrade substation A and B and install new circuit or reconductor existing circuit from A B.
 - Development of an indicative high-level substation layout drawing resulting from the assessment of site characteristics, including by checking existing layout drawings and Geographic Information Software (GIS), considering connectivity to existing assets, and identifying space to install new assets including by extending substations. Also consider asset health drivers and the need to combine these with tCSNP projects where appropriate.
 - Assessment of spatial characteristics including environmental limitations (for example river crossings, Areas of Outstanding Natural Beauty) and potential community impacts, largely by using GIS software and other specialised desktop-based routing tools, resulting in the identification of an indicative initial route corridor and site location for the purpose of costing and scoping.
 - Development of a single line electrical schematic showing the proposed solution.
 - High-level specification of the required asset ratings and electrical parameters to meet network needs.
 - Development of a high-level construction programme with demonstrably expedited delivery dates. This should include a description of the measures adopted by the TO to expedite delivery relative to historical timelines along with estimates of the impact of those measures on delivery timelines.
 - Updated estimations of project costs.
- 4.20 We also expect that, where appropriate, the TOs use the IDF to develop new and alternative options that could meet the system requirements identified by the ESO. This could be where alternative solutions could be delivered earlier or at a lower cost, or in a way that better aligns with other drivers such as new

⁴⁵ <u>NOA methodology | ESO (nationalgrideso.com)</u>

connections or condition related replacements. This may include further development and consideration of projects which have not been recommended to proceed in tCSNP2.

4.21 We are proposing that projects that heavily interact with and can be delivered as part of existing schemes (which have already received funding) do not go into the Development track and TOs can use existing price control re-opener mechanisms should they require additional funding.⁴⁶ This is where, for example, the tCSNP2 recommendation is a modification to an ASTI project or where a TO has indicated it intends to deliver the works as part of an existing programme of work rather than as a standalone project (see below).

Initial development activities

- 4.22 We do not intend to set an exhaustive list of prescriptive activities that IDF may be spent on, and we consider that TOs are best placed to determine how best to deliver the PCD output and develop the projects.
- 4.23 We consider the work required to develop projects at this stage to be distinct from the activities listed in the TOs' licences under Special Condition 1.1 "Pre-Construction Works" that PCF is provided for. In other words, we see IDF as the funding required for any works that precede Pre-Construction Works, to develop projects up to the point where they are ready to enter the Delivery track and receive PCF. IDF is not intended to fund the following activities, which are funded through PCF:
 - Work required to secure planning consents (including planning consultations, wayleaves, legal costs, planning applications)
 - Significant community and stakeholder engagement, including Local Area Energy Planning
 - Environmental surveys and ground works

⁴⁶ For example, through Special Condition 3.40 (Accelerated Strategic Transmission Investment Pre-Construction Funding Re-opener, Price Control Deliverable and Use It Or Lose It Allowance) or Special Condition 3.15 (Pre-Construction Funding Re-opener and Price Control Deliverable)

Allowances

- 4.24 We have consulted with TOs in numerous working groups and bilateral meetings and have sent requests asking for their view on the amount of funding they consider to be necessary for projects in the proposed Development track. To date we have not had clear and consistent project-level cost assumptions from TOs on their view of how much it will cost to deliver the Development track PCD output.
- 4.25 Our understanding of the type of activities required is that these are mostly desk-based with potential site visits where necessary to inform design choices. This type of work may require FTE staff, possibly consultancy support and potentially expenditure on software to develop route options. As such we consider the amount of funding required is of a reasonably low materiality and significantly less than what is required for PCF.
- 4.26 We have considered the forecast Year 1 and Year 2 expenditure in the cost profiles submitted by the TOs for the tCSNP2 analysis, which is 0.37% of total forecast project costs for the projects in the Delivery track. We want to ensure that TOs have access to funding to develop these projects at pace, particularly if the CPP2030 network plan requires tCSNP2 projects to be accelerated. Recognising that we are proposing a Use-It-Or-Lose-It (UIOLI) allowance whereby any unspent allowance is returned to consumers in full, we propose that the IDF allowance amount should be set at 0.5% of estimated projects costs.
- 4.27 We recognise that the proposed IDF allowance is higher than the amounts that the TOs have forecast to spend on projects in the Development track during the next 18-24 months (proposed allowance of £63.47m against forecast Y1/Y2 project expenditure of £29.0m⁴⁷). However, we also expect the TOs to use this allowance to develop new and alternative options that can also meet the network requirements, where appropriate.
- 4.28 We expect the TOs to deploy sufficient resource to ensure this vital initial development work and optioneering is done as thoroughly and expeditiously as possible. A UIOLI approach ensures that we do not create a perverse incentive

 $^{^{47}}$ This figure is lacking Y1/Y2 cost forecasts of three projects (AC7, AC8 & AC9) due to these forecasts not being provided ahead of the consultation.

for TOs to pursue cost savings in this area at the risk of a reduced quality of work – which could lead to significantly higher costs to consumers in the long run. At the same time, the UIOLI mechanism ensures that any unspent allowances are returned in full to consumers. Consistent with our approach under ASTI, we propose that the Totex Incentive Mechanism (TIM) applies to any over-spend against allowances, however given the TOs' cost forecasts, we consider it very unlikely that there will be allowance over-spends.

4.29 We propose that rather than being project-specific, IDF should be set as a substitutable pot that can be spent flexibly across the TOs' portfolios of Development track projects, consistent with our approach to providing PCF under ASTI. This accounts for the fact that spend may vary significantly across different projects but should balance out across a portfolio.

Delivery track

4.30 The Delivery track is intended to fund the cost of delivering more mature tCSNP2 projects that are ready to progress into the consenting stage.

Criteria:	Output	Activities	Funding
Applies to Projects that: - have an estimated	PCD to submit planning	For PCF, qualifying	- PCF to be set at 2.5% of estimated projects costs.
cost of greater than £100m	application by dates that are consistent with initial delivery plans	activities listed in SpC 1.1 definition	A flexible pot that can be spent across all projects in the Delivery track
- received a "proceed" signal, or is an HNDFUE enabling work		of Pre- Construction Works	Subject to a UIOLI adjustment
 have an ESO maturity rating of Level 3+ 	Additional outputs may be		Flexibility to access additional funding ahead of receiving planning consent ⁴⁸
- Excludes projects that we consider should be delivered as part of existing projects	set at a later date when providing further project funding		Full project funding to be provided under the applicable RIIO-3 mechanism ⁴⁹

Table 4: Delivery track overview

⁴⁸ Using to-be-introduced advanced procurement mechanism – see paragraphs 4.57 to 4.60

⁴⁹ <u>RIIO-3 Sector Specific Methodology Decision – ET Annex (ofgem.gov.uk)</u> page 25

Scope

- 4.31 We are proposing that projects that meet the following criteria should be eligible for the Delivery track:
 - have an estimated cost of greater than £100m
 - received a "proceed" signal, or is an onshore HND FUE enabling work
 - have an ESO maturity rating of Level 3+.
- 4.32 We propose to exclude projects that we consider should be delivered as part of, or through a modification to, existing projects that have been funded for delivery.
- 4.33 We consider that projects should only go into the Delivery track once they have reached a level of maturity where there is sufficient certainty of scope and costs that we are comfortable providing more material funding to progress project delivery. As stated above, we consider the appropriate level of project maturity for projects to go into the Delivery track to be once the scoping and strategic optioneering activities have been completed and a preferred solution identified to take forward to consenting, and therefore we propose that projects in this track must have an ESO maturity rating of Level 3 or above in the tCSNP2.
- 4.34 We propose that projects in this track should have a materiality threshold of £100m. This is consistent with approach taken throughout RIIO-ET2 where £100m is the materiality threshold for ASTI and LOTI projects, with sub-£100m projects being delivered through existing licence mechanisms such as MSIP. We do not see any justification to depart from the prevailing RIIO-ET2 approach during this price control. Whilst our RIIO-ET3 SSMD does set out an alternative approach to materiality thresholds,⁵⁰ this is proposed alongside an array of other updates to the price control that are not relevant in RIIO-ET2.
- 4.35 We propose that only projects which have a Proceed signal from the ESO or are onshore HND FUE Enabling Works should be put into the Delivery track at this stage so that they can be progressed without causing any delay. None of the projects that received a Hold signal in the tCSNP2 have a maturity rating higher than Level 1, as such we propose that none of these projects are included in the Delivery track.

⁵⁰ <u>RIIO-3 Sector Specific Methodology Decision – ET Annex (ofgem.gov.uk)</u> Chapter 2

PCF Output and Funding

- 4.36 We consider that provision of PCF should align closely with the approach taken to provide PCF under ASTI and have not seen any information that suggests a departure from the ASTI approach is required. ASTI PCF was the product of significant engagement and consultation with the TOs, and in our view strikes the appropriate balance between enabling acceleration and protecting consumers from excessive risk.
- 4.37 We propose that projects in the Delivery track are funded as follows:
 - We will set a PCF PCD with an output to submit a planning application for the associated project.
 - We will set allowances at 2.5% of estimated project value that can be spent flexibly across a TO's portfolio of Delivery track projects
 - PCF allowances will be subject to a Use-It-Or-Lose-It (UIOLI) assessment to claw back any unspent allowances.
- 4.38 One issue for us to consider is an appropriate delivery date for the proposed PCF PCD. Under ASTI, TOs are held to account for the overall project delivery date through licence obligations and financial incentives, so the delivery dates for ASTI PCF PCDs are not a critical factor in terms of overall delivery. Under our Delivery track approach, we are not proposing to set overall project delivery dates at this stage. In order to avoid unnecessary delays against their optimal delivery dates, we want to ensure that Pre-Construction Works are progressed as expediently as possible. Therefore, we are proposing to set the delivery date for the PCF PCD at the date which TOs' initial project plans⁵¹ show them expecting to submit the necessary planning applications.
- 4.39 We recognise that the TOs' initial project plans were prepared in the context of a target to achieve a decarbonised electricity system by 2035. We will reconsider these target dates for PCF PCDs if required following the receipt of the ESO's CPP2030 network plan.

Provision of construction funding ahead of securing planning consents

4.40 We consider that where there is demonstrable consumer benefit, either through acceleration against current optimal dates or avoided delay, TOs should have

⁵¹ Submitted to Ofgem on April 12th 2024.

access to appropriate funding ahead of securing planning consents. However, if funding is not required during RIIO-ET2 explicitly to accelerate projects or to avoid delays then we propose that future RIIO-ET3 funding arrangements will apply.

- 4.41 Under ASTI, we introduced the concept of Early Construction Funding (ECF), which allowed TOs access to up to 20% of forecast project costs early for activities such as land purchases, early enabling works and securing constrained supply chains. We considered 20% an appropriate threshold that strikes the right balance between accelerating projects and protecting consumers, as this funding could be redundant if the projects do not ultimately get delivered.
- 4.42 The RIIO-ET3 SSMD policy decision is to move away from ECF⁵² and instead look to secure supply chains through a funding mechanism for advanced procurement, which Ofgem intends to consult on this year and introduce in early 2025 (see below). Our current view is that this advanced procurement mechanism can provide any funding required by TOs ahead of securing consents for tCSNP2 projects in the Delivery track that is not already funded through the PCF. We are not proposing a separate ECF mechanism for tCSNP2 projects during RIIO-ET2.
- 4.43 Therefore, for projects being allocated into this track now following the tCSNP2 we propose to provide immediate PCF only at this stage, with any additional funding required during the current price control to be secured through the advanced procurement mechanism (see paragraphs 4.57 to 4.60).
- 4.44 Due to uncertainty around the optimal delivery dates for these projects and absence of data on the benefits of acceleration or the cost of delay we do not propose setting Licence Obligations (LOs) with target dates for project delivery or ODIs for timely delivery at this point in time. We expect to set LOs and ODIs following the tCSNP2 Refresh, or following the CPP2030 network plan, however we expect that target delivery dates and incentive arrangements will be set in accordance with the RIIO-ET3 Final Determinations policy decision for major project delivery.

⁵² <u>RIIO-3 Sector Specific Methodology Decision – ET Annex (ofgem.gov.uk)</u> Paragraph 2.41

Small / Medium Sized Project Delivery track

- 4.45 For smaller or medium sized projects (sub-£100m) there are existing mechanisms within the RIIO-ET2 framework that can fund these works and we are not proposing to introduce any new funding mechanisms ahead of RIIO-ET3. Our view is that existing price control mechanisms, principally the MSIP reopener, are suitable to fund activities during RIIO-ET2, or these projects can be funded through RIIO-ET3 baseline totex or re-openers.
- 4.46 For projects to be funded through this track through a RIIO-ET2 reopener, we propose that they should have a Proceed recommendation in the tCSNP2.
 However, we are open to providing funding for projects with a Hold signal where the TOs can satisfactorily demonstrate through a project delivery plan why earlier access to funding is required.
- 4.47 Once there is sufficient certainty on the scope, timings and costs for these projects we expect the TOs to submit a funding request to Ofgem along with all necessary supporting justification.
- 4.48 We are conscious that the majority of sub-£100m projects have EISDs on or before 2030 and therefore may form part of a deliverable CPP2030 network plan, and we intend that our approach is flexible enough to ensure that if projects are required for CPP2030 then TOs will have access to funding without delay.

Projects with interactions with other schemes

- 4.49 There are several projects that are better defined as additions or modifications to existing schemes that are currently in development, such as ASTI or LOTI projects, rather than standalone projects in and of themselves.
- 4.50 We propose that these recommended changes are incorporated into the existing schemes to which they are linked by modifying the existing outputs, rather than delivering as two discrete programmes of work. Provided there are no material delays to the original projects as a result of these scope changes which then lead to increased constraint costs, there should be consumer cost savings through not having to mobilise separate project teams as well as reduced environmental and community impact.

4.51 These projects will then have access to any existing PCF or ECF granted to the project they are combined with, as such we do not consider it necessary to provide additional funding through any separate mechanism for such projects.

Approach to funding projects recommended in the tCSNP2 Refresh

- 4.52 Once projects have been sufficiently developed i.e., the IDF PCD output has been delivered - and given a Proceed recommendation by the ESO, or the projects are required to meet ambitions in new government policy, we propose that TOs should have access to funding to ensure that these projects can be progressed without delay.
- 4.53 For projects with a forecast cost of less than £100m, we expect TOs to request funding through (i) existing RIIO-ET2 funding mechanisms, (ii) to include them in their RIIO-ET3 business plans, or (iii) to request funding through a RIIO-ET3 re-opener.
- 4.54 For projects with a forecast cost greater than £100m, we expect to provide PCF as per the Delivery track arrangements we are currently consulting on. We do not intend to set target delivery dates and apply delivery incentives immediately following the tCSNP2 Refresh during RIIO-ET2, and we propose that these are set in accordance with the approach decided at RIIO-ET3 Final Determinations.

Interaction with onshore competition

- 4.55 Ofgem has had an ambition to introduce competitive tendering into the delivery of onshore transmission projects and is supportive of the intention set out in the TAAP that we and the ESO should identify the first project for competition and start preliminary tender works by the end of 2024.
- 4.56 Chapter 7 sets out our proposed approach to identifying the first project for onshore competition from the recommended tCSNP2 projects.

Advanced equipment procurement mechanism

4.57 As referenced in our RIIO-ET3 SSMD,⁵³ we are working with TOs to introduce an advanced equipment procurement mechanism during RIIO-ET2, to be

⁵³ <u>RIIO-3 Sector Specific Methodology Decision – ET Annex (ofgem.gov.uk)</u> Paragraph 2.51

implemented in 2025. The intention is for this mechanism to be carried over into the RIIO-ET3 price control period.

- 4.58 We intend to consult on proposals for the advanced procurement mechanism later this year and we expect TOs to use this mechanism to make necessary project investments ahead of securing planning consents, when full project funding will be provided.
- 4.59 This mechanism is intended to help TOs to de-risk their project delivery timescales that are currently being challenged by continuing supply chain constraints as many countries push for expansion of their energy systems in the path towards Net Zero.
- 4.60 The effect of this mechanism should be similar to that of ECF that was implemented as part of our ASTI decision, which enabled TOs to make advanced purchases of long lead-time assets. As such, we are not proposing to introduce an explicit ECF mechanism for tCSNP2 projects and expect TOs to use the advanced procurement mechanism where necessary.

Interaction with RIIO-ET3

- 4.61 We are mindful that the regulatory framework for the next price control (RIIO-ET3) is still being developed and consideration is being given to how onshore electricity transmission projects should be funded, and what incentives and obligations should be placed on project delivery. The proposals in this consultation should be considered in conjunction with the RIIO-ET3 SSMD.
- 4.62 It is our intention through this consultation, where possible, to avoid creating additional regulatory mechanisms to deliver onshore ET projects in addition to the existing ASTI and LOTI RIIO-ET2 mechanisms and the new RIIO-ET3 arrangements.
- 4.63 For the majority of recommended tCSNP2 projects, we expect major funding decisions to be made during the RIIO-ET3 price control and that the RIIO-ET3 Final Determinations (expected late 2025) will apply to these projects. This will include setting appropriate target delivery dates and outputs in the TOs' licences and applying the appropriate delivery incentives.
- 4.64 Depending on the level of project maturity and the required project delivery date we are open to providing funding as part of the RIIO-ET3 baseline totex allowances or through a RIIO-ET3 re-opener mechanism after the price control

starts in April 2026. We will continue to engage with the TOs to understand their intentions with regard to requesting project funding for tCSNP2 projects.

4.65 Where projects are sufficiently mature during the RIIO-ET2 period and TOs require PCF or full project funding ahead of RIIO-ET3, in order to ensure that projects are either accelerated or not delayed against current EISDs, we consider that the proposals in this consultation are flexible enough to ensure that TOs will have access to the necessary funds. However, we welcome any consultation responses from the TOs if they consider any further funding flexibility may be required.

5. Application of proposed regulatory framework to tSCNP2 projects

Section summary

This section sets out our proposed categorisation of recommended tCSNP2 projects into the tracks outlined in the previous section. It also sets out our consideration of early competition to deliver a tCSNP2 project as well as our view on additional projects classified as onshore following our tCSNP2 asset classification decision.

Questions

- Q5. Do you agree with our categorisation of tCSNP2 projects?
- Q6. Do you agree with our proposed approach for the tCSNP2 asset classification projects?

Q7. Do you agree with our approach to identifying a project for early competition?

Categorisation of projects into tracks

- 5.1 We are proposing to allocate projects into different "tracks" depending on how they meet certain criteria such as level of development, materiality, and interaction with other existing projects. The tracks are "Development", "Delivery" or "Small/Medium Sized Project Delivery".
- 5.2 We use the following acronyms when referring to the incumbent Transmission Owners (TOs) throughout this document:

Table 5: TO abbreviations

Abbreviation	Licensee
NGET	National Grid Electricity Transmission Plc
SHET	Scottish Hydro Electric Transmission Plc
SPT	Scottish Power Transmission Plc

Development track

5.3 We propose that the following projects should be entered into the Development track:

-	Project Description	EISD	то
Code			
ESCF	Reconfigure Stalybridge - Thorpe Marsh 400kV circuit	2033	NGET
EDN3	Reconductoring Brinsworth to Thorpe Marsh, Brinsworth to Chesterfield and Chesterfield to Ratcliff	2032	NGET
NOR6	Reconductor double circuits Norton to Osbaldwick	2029	NGET
E4L6	Three ended HVDC link between Lincolnshire, Walpole and either the north end of TGDC or north end of E4L5	2033	NGET
TWNC	Waltham Cross- Wymondley new double circuit	2033	NGET
MRU2	Mersey Ring Upgrade - Stage 2	2033	NGET
MRU1	Mersey Ring Upgrade - Stage 1	2031	NGET
CLN2	New double circuit between North West England and Carlisle	2036	NGET
FSU1	Upgrade Fourstone 275kV network to 400kV and reconductor lines between Harker – Fourstones – Stella West (B37F, B37C and B37E)	2035	NGET
RANC	New 400kV double circuit and Infrastructure within the Kent area	2036	NGET
CMN3	Establish a new 400kV double circuit OHL from Gala North to Carlisle	2033	NGET/ SPT
WCN2	Establish a new 400kV double circuit from Kilmarnock South to Glenmuckloch and Carlisle	2037	NGET/ SPT
WCD4	Proposed amendment to HND1 Western Multi Terminal HVDC to provide 4GW North to South Capacity (North Wales)	2036	NGET/ SPT
NHNC	New Deer 2 - Tealing - Harburn 400kV New Double Circuit	2038	SHET/S PT
	Establish a 400kV single circuit corridor south from Kincardine North, on existing OHL routes, towards the Strathaven - Smeaton (XH/XJ route) corridor west of Edinburgh and Currie/Smeaton substation	2022	SPT
LCU2 HGNC		2033	
AC7	Establish new 400kV double circuit from Harburn to Gala North	2036 N/A ⁵⁴	SPT SHET
	Peterhead to E2b - 2GW HVAC connecting to offshore substation E2b to E2a – 2GW HVAC circuit between offshore substations	-	
AC8 AC9	E2a to Richborough – 2GW HVDC from offshore substation to Richborough	N/A N/A	SHET NGET/ SHET

Table 6: Development track project list

5.4 We propose the following IDF allowances for the TOs to develop projects in the Development track:

 $^{^{\}rm 54}$ Projects AC7, AC8 and AC9 were not developed by the TOs, therefore we do not currently have EISD information

Table 7: Proposed IDF allowances

	2024/25 Allowance	2025/26 Allowance	Total ET2 Allowance 55
	£m	£m	(£m)
NGET	ТО	17.567	35.134
SHET	8.378	8.378	16.756
SPT	5.787	5.787	11.575

- 5.5 We propose to set a PCD for each project in the Development track to develop the project to ESO maturity rating Level 3 (i.e. to complete Level 2) and to submit a report to Ofgem with evidence to demonstrate the maturity status as set out in paragraph 4.19.
- 5.6 We propose to set a delivery date of 30 June 2025 for all Development track PCDs. For the avoidance of doubt, we understand that some projects could reach the required maturity status before that date, and we expect the TOs to make reasonable efforts to deliver each PCD as soon as possible.

Delivery track

5.7 We propose that the following projects should be entered into the Delivery track:

Code	Description	EISD	Owner
DSUP	Establish further connection capacity between Dounreay, Banniskirk (Spittal), and Thurso	2034	SHET
ВКИР	Upgrade the existing network to a higher voltage between Blackhillock and Kintore		SHET
РКИР	Upgrade and/or rebuild the circuits and equipment between Longside (Peterhead 2), Peterhead, Persley, Kintore, Fetteresso, Alyth, and Kincardine	2033	SHET
SHL2 ⁵⁶	New 1.8GW HVDC link Shetland - Coachford	N/A	SHET

Table 8: Delivery track project list

⁵⁵ Allowances have been calculated based upon 0.5% of estimated project costs submitted to the ESO ahead of the tCSNP2. Joint Venture project allowances have been apportioned on a pro-rated basis depending on the assumed split of each between TOs. For the project "E2a to Richborough" we assumed a 50:50 split as data was not made available ahead of the consultation. Allowances are for the RIIO-T2 period.
⁵⁶ The SHL2 code is for reference and created by Ofgem – this code is not used to refer

⁵⁶ The SHL2 code is for reference and created by Ofgem – this code is not used to refer to this project in the Beyond 2030 report.

5.8 We propose that the following allowances for the TOs to undertake Pre-Construction Works on projects in the Delivery track:

 Table 9: Proposed Delivery track PCF allowances

то	Allowance (£m)
NGET	0
SHET	84.716
SPT	0

5.9 For each project in the Delivery track, we propose to set a PCD to submit all material planning consent applications. We propose to set target dates as per Table 10.

Table10: Price Control Deliverable details

ТО	Project	PCD output	Delivery date
SHET	DSUP	Submission of all material planning consent applications for DSUP	31 st December 2027
SHET	BKUP	Submission of all material planning consent applications for DSUP	31 st December 2026
SHET	PKUP	Submission of all material planning consent applications for DSUP	31 st December 2026
SHET	SHL2	Submission of all material planning consent applications for DSUP	31 st December 2026

Small/Medium Sized Project Delivery track

- 5.10 The Small / Medium Sized Project Delivery track requires TOs to submit projects through existing regulatory mechanisms such as MSIP, or to make requests as part of their RIIO-ET3 business plans or through RIIO-ET3 re-openers.
- 5.11 We propose that all sub-£100m projects that are not being delivered as part of existing projects should be entered into the Small/Medium Project Delivery track and once sufficiently developed TOs are to submit a funding request for full project funding. We are not proposing to provide any allowances for projects in this track at this stage.

Project Code	Description	EISD	то
DCR4	Uprating of Carrington – Daines 400kV circuit	2027	NGET
JTHW	Hotwire Thurcroft to West Melton 275kV circuit	2027	NGET
OTHW	Hotwire Osbaldwick – Thornton 400kV 400kV circuits	2027	NGET
ECSC	Installation of Series Compensation East Anglia Coastal Node-Tilbury 400kV Circuit	2027	NGET
ETRE	Reconductoring of Eggborough Thorpe Marsh 400kV single circuit 2x700 Conductor	2029	NGET
SNRE	Reconductor Spennymoor Norton double circuit	2029	NGET
BTR2	Reconductoring of Brinsworth - Thorpe Marsh 1 400kV circuit 3x700 Conductor	2027	NGET
TMC2	Thorpe Marsh reconfiguration and Keadby circuit open stand by	2032	NGET
SGRE	Reconductor Grendon to Sundon 400kV double circuit	2029	NGET
TMPC	Thorpe Marsh - West Melton 1 275kV circuit.	2030	NGET
HNRE	Reconductoring of Hawthorn Pit – Norton 400kV double circuit)	2029	NGET
TDP4	Additional power control technology along the Drax – Thornton 1 400kV circuit and install devices along the Drax – Thornton 2 400kV circuit	2030	NGET
SPRE	Reconductor Spennymoor Stella West 400kV double circuit	2029	NGET
FMR2	Feckenham to Minety 400kV Circuit Reconductoring	2029	NGET
PCR1	Reconductoring of Carrington - Penwortham & Padiham - Penwortham 400kV circuits	2030	NGET
THRE	Reconductor of Hinkley Point Taunton 1 & 2 and Hinkley Point - Taunton - Exeter	2029	NGET
TMCF	Thorpe Marsh reconfiguration	2032	NGET
LTRE	Reconductoring of Lackenby – Thornton 400kV double circuit	2030	NGET
CVUP	Establish a 400kV single circuit corridor south from Clydes Mill to Strathaven on existing OHL routes, with associated substation development at Clydes Mill, Strathaven and near East Kilbride	2031	SPT
VERE	Reconductor the ZV route between Strathaven and Elvanfoot with HTLS conductor	2030	SPT
EHRE	Reconductor the ZV route between Elvanfoot and Harker with HTLS conductor	2030	SPT

Table 11: Small / Medium Sized Project Delivery track⁵⁷

⁵⁷ The project "Errochty - Clunie 132kV Reconductoring" (ECRE) is a small/medium sized project recommended in the tCSNP2 which has already received funding through RIIO2 and as such has not been included in this table.

- 5.12 Where the TOs need to incur early development costs before full project funding is provided, we expect the TOs to continue developing these projects at pace until a funding request is submitted. We expect the TOs' full project funding requests to include incurred development costs and, subject to an efficiency assessment, we will set the allowances to cover already-incurred efficient costs. If TOs incur costs developing projects in this track and the needs case subsequently falls away before funding has been provided, we propose that efficient incurred costs are recovered through RIIO-ET2 closeout.
- 5.13 We recognise that many of the projects in this track have EISDs on or before 2030, and therefore could be required as part of the ESO's CPP2030 network plan. Once the CPP2030 plan is published and we understand what projects are required we will consider appropriate timely delivery incentives.

Combining tCSNP2 recommendations with existing projects

5.14 In the table below we list the tCSNP2 projects that we consider should be delivered as part of existing projects in the TOs' licences. This can be achieved through scope changes to the existing projects rather than by setting new standalone outputs. If TOs require additional funding to reflect the changed project scope this should be requested through the appropriate RIIO-ET2 reopener mechanism.

Code	Description	то	Linked project
NNNC	Third cable circuit between New Deer – Greens (New Deer 2) 400kV	SHET	BPNC (ASTI)
PPUP	Rebuild Peterhead – Longside (Peterhead 2) 400kV OHL route with triple Araucaria conductor.	SHET	BPNC (ASTI)
KKRE	Reconductor the 30% of the Kintore – Fetteresso – Alyth – Kincardine 400kV double circuit OHL that is due to be strung with twin Totara as part of RIIO-T2 project ECUP with triple Upas	SHET	ECUP (RIIO-T2 Baseline)
PTC2	Replace the conductors on the existing circuit between Pentir and Trawsfynydd with a higher capacity than was previously recommended	NGET	PTC1 (ASTI)
PTN2	New circuit in North Wales with a higher capacity than was previously recommended	NGET	PTNO (ASTI)

Table 12: tCSNP2 recommended projects combined with existing projects

Asset classification projects

tCSNP2

5.15 In April 2024 we published a decision⁵⁸ that classified projects from the HND
 FUE as either offshore or onshore based upon power flow assumptions. As part of this exercise, we classified four additional projects as onshore projects.

 Table 13: HNDFUE Onshore projects and view on TO responsible

Circuit	Classification	TO responsible
Peterhead to E2b	Onshore	SSE
E2b to E2a	Onshore	SSE
E2a to Richborough	Onshore	NGET + SSE Joint Venture
Shetland to Coachford	Onshore	SSE

- 5.16 TOs have informed us that these four projects are at a highly immature stage of development. All four of the asset classification projects exceed £100m in forecast cost. These projects also form an integral part of the offshore HND FUE design and are required to ensure the Security and Quality of Supply Standard (SQSS) compliant connection of ScotWind generators.
- 5.17 Due to the high level of project immaturity, we consider that these projects require significant initial development work before there is sufficient certainty on project scope, cost and delivery date that we would have confidence providing material funding and setting outputs in the TOs' licences. Therefore, we propose that three of these projects Peterhead to E2B; E2B to E2A; E2A to Richborough should be included in the tCSNP2 Development track and treated as other such onshore projects at a similar level of project maturity. The fourth asset classification project Shetland to Coachford we are proposing to put into the Delivery track (see below).
- 5.18 As these projects were not developed by the TOs we do not have annually profiled cost information or EISDs relating to them, however we do have a total forecast cost from the ESO. For the three projects in the Development track, we are proposing IDF allowances are calculated at 0.5% of the ESO's forecast

⁵⁸ Offshore transmission network review: decision on asset classification for Holistic Network Design Follow Up Exercise | Ofgem

project cost. The total IDF allowance is not specific to any project and we expect the overall level of allowance to be sufficient to carry out development activities across the portfolio of projects in the Development track, including these asset classification projects.

Shetland to Coachford

- 5.19 The link from Shetland to mainland Scotland will be required to dispatch the power generated from three prospective offshore wind farms. It will also add to the resilience of the security of supply to the islands, support the Scottish government's Hydrogen Action Plan⁵⁹ and also add additional capacity for the transmission of power from several current and future onshore wind farms currently in development.
- 5.20 We understand that SHET are in negotiations with a cable manufacturer and its joint venture partner with a view to securing a capacity reservation agreement to manufacture and deliver cable for that project.⁶⁰ Reserving capacity with that joint venture will, in turn, provide the manufacturer with an anchor project that will enable them to build a factory in the north of Scotland. The prospective factory will produce ~250km of HVDC cable per annum, which could be used as a domestic source of much-needed subsea HVDC cable to be used by GB transmission owners and offshore wind developers.
- 5.21 Whilst we recognise that this project is currently at a very early stage of development, we have a high degree of confidence that a second HVDC link to Shetland will be needed. We understand that SHET requires confirmation of project need and that it will be the delivery body before it is able to commit to long-term agreements with the cable manufacturer.
- 5.22 Consequently, we are proposing to confirm the project need by putting it into the Delivery track, confirming SHET as the delivery body, and providing PCF as per the Delivery track arrangements proposed in Chapter 4. We are willing to ensure that funding to meet efficient costs incurred in placing a capacity reservation agreement (CRA) are made available to SHET through the advanced procurement mechanism subject to a commitment from them that, in the event

⁵⁹ <u>Hydrogen action plan - gov.scot (www.gov.scot)</u>

⁶⁰ <u>Sumitomo Van Oord JV picked for Shetland 2 interconnector as £350M cable factory</u> <u>breaks ground | New Civil Engineer</u>

that the link becomes unviable or not needed, it will use best endeavours to ensure the capacity reserved is used for alternative purposes.

HND / ASTI

- 5.23 There were a number of projects recommended in the HND as being required to be delivered by 2030 that we did not include within the initial ASTI framework as TOs could not commit to delivering them by 2030. The Accelerated Strategic Transmission Investment Guidance And Submissions Requirements Document⁶¹ (the ASTI Guidance) makes clear these are 'Provisional ASTI' projects, stating that TOs were to develop these projects and Ofgem would consider providing PCF and setting outputs and incentives in the TOs' licences once a credible project delivery plan had been submitted.
- 5.24 Two of these projects PSNC and LRN4⁶² were re-assessed for the tCSNP2 and both projects received a Proceed – Critical recommendation from the ESO. We have engaged with the TOs and understand they expect to submit project delivery plans for these projects within the next 12 months. As such, we are proposing that funding arrangements for these projects remain as per the ASTI decision and they are not put in any of the tCSNP2 tracks being consulted on. Once a project delivery plan is received, we will consider appropriate funding and delivery incentive arrangements in accordance with the ASTI Guidance.

Our expectations for an updated network plan

- 5.25 As detailed above, the proposed Development track funding arrangement set out above is dependent on a further assessment by the ESO before we confirm project need and delivery body and commit to providing funding to progress projects into delivery. The ESO will produce its next iteration of the tCSNP (the tCSNP2 Refresh) in January 2026.
- 5.26 We are mindful that an updated plan from the ESO to deliver CPP2030 may require a change in our approach to providing funding, setting delivery dates and appropriate incentives and we will consider appropriate next steps once that plan has been developed. However, we consider the proposals in this

 ⁶¹ Decision to modify the special licence conditions in the electricity transmission licences: Accelerated Strategic Transmission Investment | Ofgem
 ⁶² Was assessed as LRN6 in the tCSNP2

consultation will enable projects to develop at pace until decisions on delivery dates and incentives can be made robustly.

5.27 We expect the ESO to produce the CPP2030 network plan later this year, however we still require a tCSNP2 Refresh in January 2026 (in addition to the CPP2030 network plan) to confirm the needs case for some of the longer-term projects required beyond 2030.

Approach to setting LOs, target delivery dates and delivery incentives

- 5.28 Under our ASTI framework we set ODIs and LOs on TOs to deliver the projects by their Optimal Delivery Dates (ODDs). The ODDs for ASTI projects were influenced by the setting of a government target to connect up to 50GW of offshore wind by 2030. In many cases this resulted in ODDs that were earlier than the EISDs provided by TOs, which we recognised presented a challenge to TOs delivering on time, hence we worked with TOs to create the ASTI framework to give them the best chance of delivering by these dates. This included high-powered ODIs that rewarded TOs for delivering early or on time and penalised them for late delivery. The ODIs were based upon the assessed consumer benefit of alleviating significant constraint costs through early delivery of projects.
- 5.29 Our concern with setting ODIs for tCSNP2 projects is threefold. Firstly, we do not have any measure of the economic benefits of delivering these projects earlier or later than their EISDs; secondly, the tCSNP2 does not assess whether it is optimal to deliver any of the projects any earlier than the EISDs provided by the TOs; and thirdly, there is a lack of clarity and confidence in the EISDs provided. This means that we do not know whether it is optimal to deliver projects any earlier, nor what the constraint cost impact may be, or how stretching of a target it would be for the TOs to deliver earlier.

EISDs and expedited delivery dates

5.30 We consider that the delivery timelines for tCSNP2 projects provided by TOs are relatively conservative compared to historically achieved timelines, and therefore could potentially be more ambitious. This is despite all TOs assuming an ASTI-style regulatory framework for delivery of tCSNP2 projects. With an average of 10-12 years from conception to completion, the TOs delivery plans for new build tCSNP2 projects are also significantly longer than the 7-year

ambition set out by Nick Winser in the ENC Report, although we do acknowledge that achieving 7-year delivery potentially depends on some factors fully or partially outside the TOs' control, particularly the time taken to secure planning consents. There is also a natural uncertainty in establishing realistic delivery dates due to the immaturity of many of the projects, with significant changes to project scope possible at this stage.

- 5.31 Setting high-powered incentives against these timelines risks rewarding TOs for delivering projects to unambitious timescales that do not align with the ENC Report or SPS, further compounded with the risk of not knowing if there is any quantifiable benefit in doing so. Furthermore, it is not clear to us how current EISDs are derived by TOs. There is a lack of transparency around the assumptions made and no standardised methodology, meaning that there may also be inconsistencies between the TOs.
- 5.32 Given that speed of delivery is a high-priority strategic objective for Ofgem, we are keen to work with the TOs to develop a robust and consistent approach for setting expedited, but achievable, delivery dates for projects that would allow us to set high-powered delivery incentives with confidence (see chapter 7 below).
- 5.33 This is important as we progress towards RIIO-ET3, as the intention is that Ofgem will continue to set ODIs on future projects in the next price control where there is consumer benefit in doing so. The intention is that this methodology and approach to delivery dates will be carried over into RIIO-ET3.
- 5.34 In ASTI we set all outputs in the TOs licences as LOs and Price Control Deliverables (PCDs) in addition to setting ODIs. As discussed above, we will consider the use of ODIs in the future if we can see that there is demonstrable consumer benefit in doing so and expect delivery incentives to play an important role in securing timely project delivery. We consider that the use of LOs and PCDs is appropriate for tCSNP2 projects, as these provide consumers with necessary protections. A PCD can allow us to hold the TOs to account for delivering the specific output that it has been funded for, with provision to adjust allowances in the event that the output is not fully delivered or delivered to an alternative specification to that which was funded. LOs would oblige the TOs to deliver the projects by certain dates and failure to do so would be considered a licence breach. Ofgem then has the discretion to use enforcement action against a TO, if appropriate.

5.35 Any target delivery dates for tCSNP2 projects (to which we would link LOs, PCDs and ODI if applicable) will be determined in the future following further development of options. We expect this to be after the tCSNP2 Refresh, however we will consider appropriate regulatory mechanisms should tCSPN2 projects be required as part of the CPP2030 network plan.

6. Identifying suitable projects for early competition

Section summary

This section sets out our approach to identifying projects from the tCSNP2 suitable to be tendered through an onshore competition

Questions

Q8. Do you agree with our approach to identifying a first project for early competition?

Background

- 6.1 Extending competition into the design, delivery and ownership of onshore transmission projects in the UK has been a long-term policy aim of ours. The legal framework to allow for this was included in the Energy Act 2023. Following this, the TAAP anticipated that the introduction of competition in energy transmission could result in up to £1bn in consumers' savings by 2050, and also stated the ambition to identify the first eligible project(s) for competition in 2024 from the projects identified in the tCSNP2.
- 6.2 To this end, we have been prioritising the development of early competition, which refers to a competition that happens before detailed design work has been carried out. We consider that early competition can maximise the level of innovation delivered through the competitive process, whilst also allowing for earlier supply chain engagement from bidders relative to late competition. In July 2024, we published an updated policy decision on the early competition framework.⁶³
- 6.3 Further to that decision, the criteria for early competition are now set out in the Electricity (Criteria for Relevant Electricity Projects)(Transmission) Regulations 2024 (the "Criteria regulations").⁶⁴ The Criteria regulations state that to be eligible for early competition, projects must be:
 - New (Novelty criterion, Regulation 5)
 - Separable (Separability criterion, Regulation 6)

⁶³ <u>https://www.ofgem.gov.uk/decision/decision-early-competition-onshore-electricity-transmission-networks-policy-update</u>

⁶⁴ <u>The Electricity (Criteria for Relevant Electricity Projects) (Transmission) Regulations 2024</u> (legislation.gov.uk)

- Capable of addressing a network need with reasonable certainty (Network Need criterion, Regulation 4). In line with our 2022 decision, we intend to consider this as met for projects that have a "Proceed", "Hold", or "Delay" signal.⁶⁵
- Likely to deliver an anticipated benefit to consumers if early competition is applied. This will be assessed by way of cost-benefit analysis in respect of a project which must demonstrate that the non-tendered consumer impact does not outweigh the tendered consumer impact (Consumer Benefit criterion, Regulation 7)
- 6.4 In order to meet the consumer benefit criterion in the Criteria regulations, the ESO has designed a CBA methodology which compares the costs and benefits delivering a project through a competition model against a counterfactual of the TO delivering the project through the RIIO framework. We consulted on this methodology as part of a general early competition policy consultation in Feb 2024⁶⁶ and published our view on the final methodology in July 2024.⁶⁷ This quantitative assessment is then supplemented by qualitative analysis that considers non-quantifiable variables such as innovation and ecological impact.
- 6.5 As part of the tSNP2 process, ESO identified all projects that meet the early and late competition criteria, as per the Criteria regulations these projects are listed in Table 14 below.
- 6.6 Our current intention is to launch one project for early competition initially whilst identifying a potential pipeline of projects that could be suitable for competition in the future. We expect the process of identifying projects to evolve over time, meaning that the methodology used to identify the first project may not necessarily be the same for the enduring process as we apply lessons learned from the first tender going forward.

Project identification process

6.7 Central to the selection of suitable projects from tCSNP2 for competitive tender is the consideration of their attractiveness to potential bidders, the maturity of

 ⁶⁵ Decision on early competition in onshore electricity transmission networks | Ofgem
 ⁶⁶ Consultation on policy updates to Early Competition in onshore electricity transmission networks (ofgem.gov.uk)

⁶⁷ <u>Decision on policy updates to Early Competition in onshore electricity transmission networks</u> (ofgem.gov.uk) Page 25

their design and needs case as well as the wider impact on the government's Net Zero ambitions. The ESO has therefore been undertaking supporting analysis of the tCSNP2 recommendations to narrow down the projects that may be suitable for the first early competition tender.

- 6.8 Both Ofgem and the ESO recognise that certain projects, even where they meet the competition criteria, may be less suitable for the competition, either now or in the future. This could be because the projects are still highly immature, are required to be accelerated or delivered quickly, or require a lot of separation before specific elements of a project could be tendered.
- 6.9 The ESO has therefore categorised projects within the following categories:
 - Shortlist of priority projects for further investigation for the first competition.
 - Potentially suitable for competition, but currently considered a lower priority for the first tender. These projects will be considered for a pipeline of future projects for competition.
 - Unlikely to be suitable for competition, due to timeframes and/or complexity.

Prioritisation factors

- 6.10 The ESO's prioritisation process considered the following factors:
 - i. **Initial CBA output**⁶⁸: This assessment identified projects where there was likely to be economic benefit through competitive tendering whilst discounting those projects with little or no benefit.
 - ii. **Certainty of need**: ESO reflected on what is driving the need to reinforce that particular part of the network and how confident we are that the need will materialise.
 - iii. Project maturity: This assessed the extent of optioneering and early design work undertaken and whether the ESO is sufficiently confident that the particular option is the optimal way to address the system need.
 - iv. **Certainty of interface points**: The ESO considered whether the interfaces are known and whether any new or re-built substation works are known and planned.

⁶⁸ This CBA was conducted before Ofgem published our decision on the CBA model and the analysis was based on the CBA methodology as consulted on in February 2024 (<u>Early</u> <u>Competition in onshore electricity transmission networks: policy update | Ofgem</u>)

- v. **Separability**: The ESO assessed whether the eligible projects are capable of being distinguishable from any other part of the transmission system and from another solution related to the transmission system, and whether further work was required to understand how electrical separability could be achieved.
- vi. **Initial programme concerns**: The ESO assessed whether delivering the project through the first competitive process would likely cause a delay to the project being delivered. If so, the ESO considered whether this would lead to consumer detriment.
- vii. **Initial consenting concerns**: This factor assessed whether there are any material consenting risks relevant to the project which could make the project unattractive to potential bidders.
- viii. **Initial deliverability concerns**: This assessed how complex the project would be to deliver from an outage and construction standpoint and whether that may pose concerns to bidders, especially given the first of a kind nature of early competition.

Outcome of initial prioritisation of projects for competition

6.11 Based on its assessment of the factors above, the ESO initially considered the eight projects in Table 14 below as candidates for further assessment of their suitability for the first early competition. The last three projects all fall around the Carlisle area; these projects will require additional progression of the surrounding network design before the specific scope of the projects can be suitably identified.

Table 14: Initial prioritisation of projects for competition

NOA code	Project description	EISD	Optimal delivery date	TO area
BKUP	Upgrade the existing network to a higher voltage between Blackhillock and Kintore	2034	2034	SHET
HGNC	New circuit between Harburn and Gala North	2036	2038	SPT
LRN6	New transmission capacity between the South Lincolnshire area to Hertfordshire	2034	2034	NGET
NHNC	New circuit from North East Scotland to the Central Belt	2038	2038	SHET / SPT
TWNC	New circuit between Wymondley and Waltham Cross and increase operating voltage of the network within the area	2033	2034	NGET
CLN2	New circuit across North West England	2036	2036	NGET
СМИЗ	New circuit between South East Scotland and North West England	2033	2035	NGET / SPT
WCN2	New circuit between South West Scotland and North West England	2037	2037	NGET / SPT

- 6.12 Given the indicative dates for these projects falling significantly beyond 2030, we do not anticipate that the delivery of any of these projects through competitive tender would undermine the government's policy mission for CPP2030, however we will consider the appropriate delivery body once we have assessed a CPP2030 network plan.
- 6.13 We are proposing to put all recommended tCSNP2 projects into a Delivery, Development or Small / Medium Sized Project Delivery track, including those listed in Table 14 above. We expect the TOs to continue developing these projects until a decision is made on which project(s) will be taken forward for competition, at which point we will direct the TOs to demobilise from that project. We intend to confirm the delivery body for tCSNP2 projects (and confirm exemptions from competition) once projects are put into the Delivery track, either following the tCSNP2 Refresh or if the projects are required as part of the CPP2030 plan.

Additional project studies

- 6.14 The ESO is currently conducting additional investigation into the projects prioritised for further assessment to test the assumptions used in the project selection process and the CBA. The selection of the first project for an onshore competition tender will be guided by the outcome of additional project studies, a broader review of feedback to this consultation, and any additional information received from stakeholders. As further information emerges the ESO is continuing to reflect on the suitability for competition of each eligible project.
- 6.15 The additional project studies will give the ESO an indication of the extent of works required at interface substations, identify any major delivery challenges that could be a barrier to successful delivery of the project (such as any technical or environmental consenting risks), and assess delivery programmes to understand the impact competition might have on the delivery of that projects.
- 6.16 To determine the first project for early competition, the ESO will continue to undertake additional project studies before making a recommendation to Ofgem on a suitable project to tender. Ofgem will review and assess the ESO's recommendation before making a decision – if possible, we will announce the first project for competition in the decision to this consultation, however we may consider a further consultation ahead of making our decision.

Ofgem view on shortlisted projects

- 6.17 We support the process being taken by the ESO to identify the first project for early competition however there are some additional factors that we think should also be considered, such as whether there is scope and benefit in accelerating project delivery beyond the current EISDs, and whether that can be better achieved by a TO or through competitive tendering. We are especially mindful of this given the CPP2030 plan may result in earlier optimal delivery dates than currently forecast in the tCSNP2 analysis.
- 6.18 Also, we are aware that for some projects the TOs are still considering alternative options that could meet the network requirements and which can be assessed in the tCSNP2 Refresh. Therefore, we want the ESO to ensure a project is not chosen and a design choice effectively locked down at this stage which results in a sub-optimal network in future or exposes consumers to additional costs.

- 6.19 Further, some tCNSP2 projects are heavily interlinked with a number of other key ASTI projects which are being designed jointly by the TOs. We want the ESO to ensure that isolating a project from those it is linked with does not cause any design or consenting issues that could result in the project being delayed.
- 6.20 More generally, we encourage the ESO to continue to engage with the TOs and the wider market, including generators, to understand the impact of any customer connections on the scope of a first tender as well as ensuring any change to delivery dates as a result of running a competition can be managed from a whole system perspective, acknowledging interdependencies between certain projects. We also want to ensure the ESO's assessment considers current supply chain constraints and whether a third-party is able to secure supply chains for long-lead time assets and ensure projects are delivered on time in a way that a TO will be able to through the advanced procurement mechanism.
- 6.21 Having considered the projects initially shortlisted for additional project studies we have provided some initial feedback to the ESO. Specifically, on BKUP we think there may be greater scope for accelerated project delivery by SHET than through competitive tendering; LRN6 is heavily interlinked with a number of key ASTI projects, including the Eastern Links 3 and 4; and we want to see NHNC (and any alternative options that meet the system requirements) assessed in the tCSNP2 Refresh before we confirm the project needs case. The ESO is considering our initial feedback as part of its further exploration of the eligible tCSNP2 projects.

Next steps

6.22 We have engaged with the ESO and shared our concern around the projects initially shortlisted for competition, and this is being factored into the ESO's assessment. We and the ESO will continue to engage with the stakeholders as the project identification process progresses.

7. Our expectations of the TOs and the ESO

Section summary

This section sets out our expectations for the TOs to continue developing projects and to develop an EISD methodology, and for the ESO to undertake a further options assessment to be published in January 2026.

Questions

Q9. Do you agree with our expectations for the TOs and ESO?

TOs

Expectations relating to initial development work

7.1 Due to the early stage of development of the majority of tCSNP2 projects, it is important that the TOs invest in their network planning capabilities over the next 12 to 18 months to develop both existing and new options to maximise the value of the tCSNP2 Refresh. Consistent with our ASTI approach, while we always expect the TOs to operate efficiently, the focus should be on doing this initial development work thoroughly, quickly and holistically rather than on cost minimisation. As a minimum, we expect the TOs to have completed scoping and strategic optioneering works and identified a preferred solution to take forward to consenting.

Develop realistic and robust delivery dates

- 7.2 As discussed in chapter 5 above, we are concerned with the current approach to developing EISDs. There is a lack of transparency and standardisation of method. The development of realistic, but expedited, delivery dates is of critical importance for setting fair and reasonable ODIs, and also crucially feeds into the optimal delivery analysis of options.
- 7.3 We expect the TOs to work together to produce an agreed approach for the tCSNP2 Refresh Methodology to determine reasonable and expedited delivery dates ahead of submitting options for the tCSNP2 Refresh. This approach should be clear and transparent, to be shared with Ofgem and the ESO. We expect this methodology to have regard to the TAAP and SPS and to include:

- Quantitative schedule risk analysis (QSRA) to understand the probability distribution of potential delivery dates, and provide for instance p20, p50 and p80 estimations
- standardised assumptions for consenting timings, and construction durations (for equivalent assets)
- assumption that construction can start as soon as consents are approved (unless otherwise justified)
- Standardised assumptions about outage windows and their duration

Electricity System Operator

- 7.4 The proposals contained in this consultation rely on the ESO producing a tCSNP2 Refresh by January 2026 and Ofgem is currently engaging with the ESO on the NOA methodology for this next update. As stated above, given the current level of project immaturity and uncertainty around project scope, costs and EISDs, we consider it necessary for the ESO to refresh the tCSNP2 analysis with updated TO submissions to ensure that there is a strongly justified needs case before we commit to materially funding the projects.
- 7.5 To ensure Ofgem has the information it needs to make appropriate funding and incentivisation decisions, we expect the tCSNP2 Refresh analysis to include the following. This is not an exhaustive list, and more may be added to this as part our work with the ESO to develop the tCSNP2 Refresh Methodology:
 - An options assessment in accordance with the agreed tCSNP2 Refresh methodology
 - An assessment of project maturity status using the same ESO maturity ratings included in the tCSNP2
 - The ESO's view on the optimal project delivery dates
 - Economic analysis of the benefits of delivering projects earlier and the cost of delivering them later
 - The impact of earlier delivery on the connections queue
 - Sensitivity analysis that sufficiently tests the impacts of uncertainties in the assumed generation and demand backgrounds, giving a view on what reinforcements are more marginal to the background generation assumptions than others

- To understand the impact of potential REMA decisions noted in paragraphs 3.23-3.26, analysis to explore what transmission reinforcements are required under zonal pricing, and the impact on tCSNP2 Refresh investments.
- Analysis to understand the impact of potential Balancing Market reform noted in paragraphs 3.23-3.26.
- Analysis that demonstrates the benefit of carbon emission reductions from tCSNP2 Refresh options
- Lifetime Least Worst Regret analysis to enable us to make an informed decision on providing complete funding for the projects
- Analysis showing Value for Money of tCSNP2 Refresh options, using Benefit Cost Ratios.⁶⁹
- 7.6 We will engage with the ESO over the coming months to establish the detailed approach and timings to undertake this analysis, as part of developing the tCSNP2 Refresh Methodology.

⁶⁹ The Department for Transport provides this helpful recommended approach for assessing Value for Money using Benefit Cost Ratios: <u>Value for money: supplementary guidance on categories (publishing.service.gov.uk)</u>. We will consider the ESO's approach as part of developing the tCSNP2 Refresh methodology

8 Scope change governance

Section summary

This section sets out our proposals to introduce a scope change governance process for onshore electricity transmission projects.

Questions

Q10. Do you agree with our proposals to introduce a scope change governance process for onshore transmission projects?

Introducing a scope change governance process

- 8.1 As explained in Chapter 3, the vast majority of tCSNP2 projects are at a low level of design maturity. As such, as the projects mature, we recognise that some may change, including in terms of how they interact with the other projects they connect into. As part of the initial development work that we propose to fund we expect TOs to develop the projects in a way that limits the need for design changes once they are reassessed and funding arrangements are confirmed.
- 8.2 Once designs are fully developed, we expect there should be limited need for changes, but there will remain certain factors that could result in a need to change the scope of a project, for example for SQSS compliance on the basis of background changes, to facilitate specific connections, or due to unexpected consenting difficulties. We have seen scope changes on a number of ASTI projects,⁷⁰ and while there is a scope change governance process to manage changes to the offshore element of the HND, there are currently no formalised arrangements to understand and manage the consequences of scope changes for onshore ET projects. As stated in our ASTI licence modification decision,⁷¹ we do not consider it appropriate that Ofgem forms a view on scope changes or revised delivery dates before understanding the wider implications of the change.

 ⁷⁰ Decision to modify the special licence conditions in the electricity transmission licences: Accelerated Strategic Transmission Investment | Ofgem Paragraph 4.3
 ⁷¹ Decision to modify the special licence conditions in the electricity transmission licences: Accelerated Strategic Transmission Investment | Ofgem Paragraph 4.17

- 8.3 We are proposing to introduce a formal scope change governance process so that the impact of any scope changes is fully understood before Ofgem consults on any modifications to the allowances, delivery dates and/or outputs in the TOs' licences. It is important to ensure that any revised scope meets system requirements, is technically appropriate and deliverable, and consequential impacts on the broader network are considered and understood. Ofgem needs confidence that any scope change is economically efficient, the proposed new design has been well optioneered and is justified by a robust CBA.
- 8.4 We consider this important due to the integrated nature of the onshore and offshore networks, as scope changes that lead to delays in transmission projects may result in delayed connection offers to Developers and potentially impact on other onshore works.
- 8.5 We propose that this process will not in and of itself be a mechanism for making decisions on the design of options (that is a matter for the TOs), but an information-gathering process that will provide Ofgem with the necessary information to make an informed decision on any licence modifications relating to outputs, funding and incentive calibration, which will be formally consulted on with stakeholders.

Applicability of proposed scope change governance process

- 8.6 We propose that this process is not specific to tCSNP2 projects and the intention is that it covers scope changes to all major onshore projects that form part of the ESO's HND, tCSNP2, the tCSNP2 Refresh and future CSNPs.
- 8.7 We consider this process should be used to address scope changes to projects that are already set as outputs in the TOs' licences, and therefore do not expect it to apply to tCSNP2 projects while they are in the proposed Development track. Until there is an output in the TOs' licences we do not consider it an appropriate use of ESO resource to undertake scope change impact assessments and alternative project scope(s) should be considered during the ESO's general network planning activities.

Onshore scope change governance process

8.8 The key aim of this process is to ensure that we are able to gather all the information required to make informed decisions on modifying outputs, allowances and delivery dates in the TOs' licences. Figure 2 shows our proposed process map that details each step and identifies roles and responsibilities.

8.9 We welcome consultation responses from relevant stakeholders, particularly the ESO and TOs, to help us establish appropriate time frames and the detailed activities in each step of this process. Ultimately, we want the process to reflect a reasonable timeframe that avoids any unnecessary delays to projects.

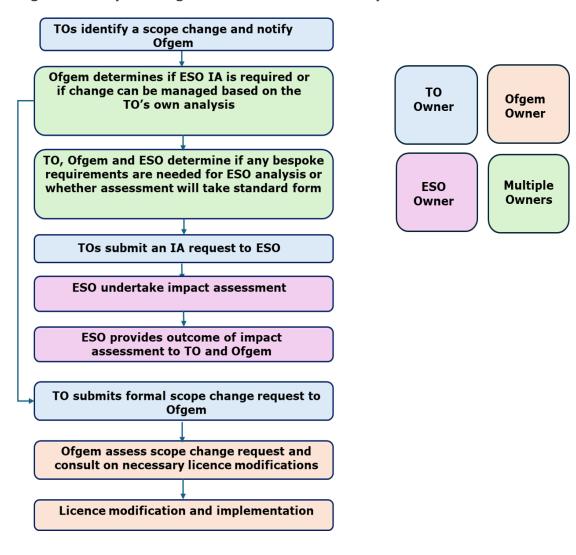


Figure 2: Scope Change Governance Process Map

Criteria for an ESO IA

8.10 We recognise that an ESO IA takes time and involves significant resources, therefore it is important that these are only done where scope changes are material and have a significant impact on the wider network. We do not intend to set out an exhaustive list of factors that would necessitate an ESO IA at this stage, however our current view is that it would likely be required following scope changes that:

- Change the delivery date by more than twelve months
- Increase the cost by more than 50%
- Result in significant changes to the project routing, substation location or technical design.
- Result in material change to the boundary transfer capacity
- 8.11 We consider that these thresholds strike an appropriate and proportionate balance generally, whilst recognising there may also be other circumstances where it could be necessary to initiate this process. For example, where the scope changes do not reach any of the thresholds above but have some significant impact on other elements of the system such as other major projects or generation connections.
- 8.12 We accept there is a degree of subjectivity as to what 'significant' and 'material' changes could mean and therefore the process above makes provision for preengagement between Ofgem, the TOs and ESO on a case-by-case basis to determine whether or not the process should be initiated.

Impact Assessment request timing

- 8.13 Following engagement between Ofgem, the ESO and TOs, we have been considering the timing of requests to the ESO for impact assessments. We do not want to cause any delay in project delivery due to the time this process takes, however the ESO also has to be able to effectively manage its resources, especially where there could be multiple scope changes requiring assessment simultaneously. We have considered two approaches to the timing of ESO IA requests:
 - An ad hoc approach where TOs are able to submit their ESO IA request(s) to the ESO at any point when there is a scope change. This avoids unnecessary delays to the project, but it could pose a resourcing challenge for the ESO as it would need to maintain sufficient capacity to deal with an uncertain volume of requests.
 - Alternatively, we have considered a 'submission window' approach with windows set periodically throughout the year. This approach would allow the ESO to plan its resourcing and ensure it is able to assess the impact of potentially multiple scope changes simultaneously. However, we note that

there is risk a TOs could narrowly miss a submission window which could result in delay to project delivery.

8.14 Our current preference is to adopt the submission window approach. We consider that three submission windows a year strikes an appropriate balance between managing the risk of unnecessary delays and the ESO's ability to sufficiently plan resource to undertake the required analysis, and also allows multiple scope changes to be considered simultaneously or on a regional basis.

Process stages

Initial Ofgem, TO and ESO pre-engagement

- 8.15 The process is designed to encourage communication between Ofgem and TOs in the early stages where it can be established if an ESO IA is needed or if a formal scope change request can be submitted directly to Ofgem without requirement for the ESO to undertake detailed analysis. If Ofgem decides following engagement with the TO that further analysis was needed by the ESO in order to properly assess the impact of the scope change, then the TO(s), ESO and Ofgem need to engage to determine the exact scope and requirements of the ESO's assessment.
- 8.16 Once the scope of the ESO's assessment has been agreed, we expect the TOs to provide all relevant information to the ESO, as well as any additional information requested during the ESO's assessment.

ESO IA

- 8.17 While the exact scope of the ESO IA will be determined at the pre-engagement stage, we expect the ESO's analysis to incorporate the following:
 - Assessment of the new design against the four design objectives of the NOA, using the design of the NOA7 Refresh and HND FUE recommendations as the baseline for comparison.
 - 2. Impact of the change on the design of the offshore network
 - 3. For ASTI projects originally recommended by the ESO in the NOA7 Refresh, the impact of the design change on the ESO's recommendation. Specifically:
 - a. For projects that received either an HND essential recommendation with an optimal delivery date of 2030 or earlier, does the revised design meet the criteria for the original recommendation? If not, what is the ESO's recommendation for the revised design?

- b. Where the original recommendation was based on an economic assessment, what is the impact of the design change on the optimal date for delivery?
- 4. For projects recommended in the tCSNP2, does the revised design meet the criteria for the original recommendation? If not, what is the ESO's recommendation for the revised design?
- 5. Quantification of economic impact of changes to delivery dates in terms of project, constraint costs and carbon costs relative to the baseline design
- 6. Any other impacts identified by the TO
- 7. Impact on projects not captured by the HND, such as MSIP projects
- 8.18 We propose that the starting baseline for the ESO to assess scope changes against is the tCSNP2 network recommendation. Then when the process has been completed and the revised scope is reflected in the TOs' licences, the updated network design becomes the baseline against which further changes are assessed.
- 8.19 We expect the ESO to assess alternative options against the baseline for all design principles, to optimise the scoring of the proposed design change and identify a minded-to position on the most favourable option or set of options.
- 8.20 We propose that governance arrangements are put in place within the ESO where all options submitted for assessment can be presented, along with any supporting mitigations and the methodology used to reach a minded-to view. We propose that an external governance panel is also established to assure the ESO's processes and recommendations. Once this has been completed the ESO is to provide the results of the ESO IA to both Ofgem and the TO(s).

TO formal scope change request

- 8.21 Once the ESO IA has been completed we propose that the TOs make a formal scope change request to Ofgem, informed by the ESO's analysis. We propose that this scope change request includes:
 - i. A detailed description of the original design and the revised design, clearly highlighting the changes.
 - ii. A description of the factors (internal and external) driving the need for the change, along with supporting evidence and analysis.
 - iii. A description of the actions taken by the TO to mitigate the impact of the change drivers.

- iv. Details of the process followed for optioneering and assessment of different options.
- v. Description of the impact of the change on project costs and delivery timelines using the original design as the baseline.
- vi. Impact of the change on other onshore transmission projects

Ofgem assessment

- 8.22 Once the ESO's impact assessment is complete and the information provided to Ofgem, Ofgem's next step is to assess the TO's formal scope change request. Ofgem will consider the information provided before consulting on any resultant modifications to the outputs, allowances and/or delivery dates in the TO's licence.
- 8.23 Before consulting on any licence modifications, Ofgem's assessment of the scope change request will consider:
 - i. Has the TO provided evidence to demonstrate that a scope change is needed?
 - ii. Has the TO provided evidence that it had taken reasonable steps to mitigate the factors driving the need for change?
 - iii. Has the TO provided evidence that an appropriate range of alternatives were considered and properly assessed?
 - iv. Have the impacts of the proposed scope change been appropriately considered?
 - v. Has the ESO recommended that the revised design should be progressed?
 - vi. Taking account of available evidence on impacts of the change, is there net consumer benefit from accepting the scope change request?

Next steps

8.24 We will continue to engage with the ESO and TOs and consider detailed responses to the proposals in this consultation. We will then develop a formal onshore scope change governance document, including terms of reference and information submission templates, which we intend to consult on with stakeholders later this year.

9 Next steps

- 9.1 This consultation is open until 30 August 2024 after which we will carefully consider all stakeholder responses. We intend to publish our decision in Autumn 2024, following which we will make the necessary modifications to the TOs' electricity transmission licences to give effect to that decision.
- 9.2 We have decided that the next tCSNP2 Refresh (NOA update) will be published by 31 January 2026, and its methodology will be submitted to Ofgem by 31 March 2025⁷². We will work with ESO and TOs to determine the changes required to the methodology to fulfil the requirements set out in chapter 7.
- 9.3 We are working with Government and the ESO to understand how the Government's mission to achieve a fully decarbonised electricity system by 2030 will affect the need for, and the timing of, transmission upgrades. We intend to update our proposals if necessary once we have more information about this.
- 9.4 Figure 3 below sets out indicative timelines and key milestones relating to this consultation.

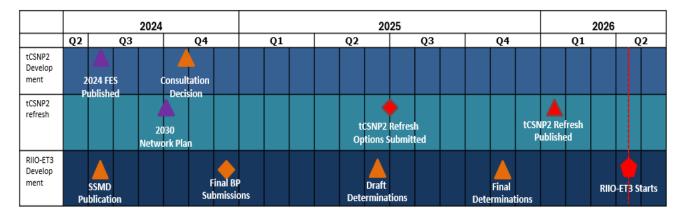


Figure 3: Indicative timelines and key milestones

SSMD publication - July 2024 ESO 'Future Energy Scenarios' published - July 2024 tCSNP2 options submitted - Summer 2025 Consultation decision – October 2024 2030 Network Plan published – October 2024 RIIO-ET3 Final BP submissions - December 2024

RIIO-ET3 draft determinations - June 2025 RIIO-ET3 final determinations - November 2025 tCSNP2 published - January 2026 RIIO-ET3 starts - April 2026

⁷² Decision allowing National Grid Electricity System Operator Limited to submit the NOA methodology by 31 March 2025 and publish the updated NOA report by 31 January 2026 | Ofgem

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Appendix 1 – Details of ESO's tCSNP2 recommendations

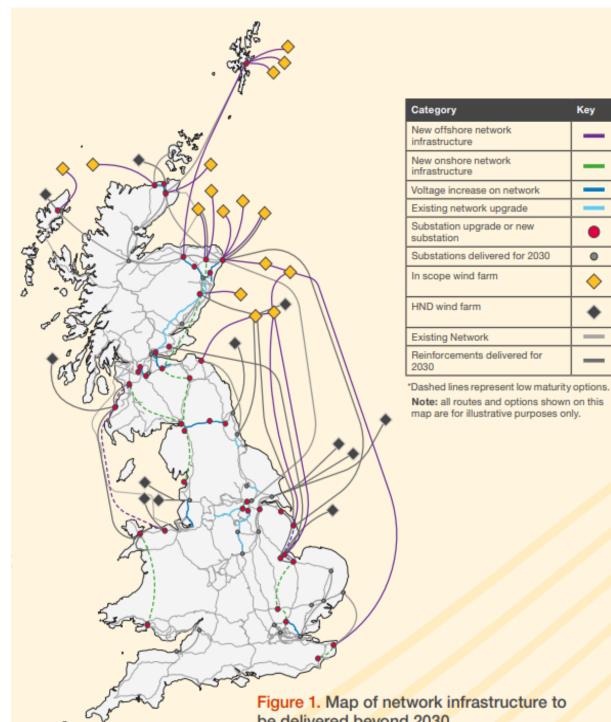
Code	Project description	EISD	Owner	MR ⁷³	Recomme- ndation
DCR4	Uprating of Carrington – Daines 400kV circuit	2027	NGET	1	HNFUE enabling work
JTHW	Hotwire Thurcroft to West Melton 275kV circuit	2027	NGET	1	Proceed - Maintain
OTHW	Hotwire Osbaldwick – Thornton 400kV 400kV circuits	2027	NGET	1	HNFUE enabling work
ECSC	Installation of Series Compensation East Anglia Coastal Node-Tilbury 400kV Circuit	2027	NGET	1	Proceed - Maintain
ETRE	Reconductoring of Eggborough Thorpe Marsh 400kV single circuit 2x700 Conductor	2029	NGET	1	Proceed - Critical
SNRE	Reconductor Spennymoor Norton double circuit	2029	NGET	1	Hold
BTR2	Reconductoring of Brinsworth - Thorpe Marsh 1 400kV circuit 3x700 Conductor	2027	NGET	1	Hold
TMC2	Thorpe Marsh reconfiguration and Keadby circuit open stand by	2032	NGET	1	Hold
SGRE	Reconductor Grendon to Sundon 400kV double circuit	2029	NGET	n/a	Proceed - Critical
TMPC	Thorpe Marsh - West Melton 1 275kV circuit.	2030	NGET	n/a	Proceed - Critical

⁷³ ESO maturity rating level

HNRE	Reconductoring of Hawthorn Pit – Norton 400kV double circuit	2029	NGET	1	HNFUE enabling work
TDP4	Additional power control technology along the Drax – Thornton 1 400kV circuit and install devices along the Drax – Thornton 2 400kV circuit	2030	NGET	1	HNFUE enabling work
SPRE	Reconductor Spennymoor Stella West 400kV double circuit	2029	NGET	1	Hold
FMR2	Feckenham to Minety 400kV Circuit Reconductoring	2029	NGET	1	Proceed - Critical
PCR1	Reconductoring of Carrington - Penwortham & Padiham - Penwortham 400kV circuits	2030	NGET	1	Hold
PTC2	Modifying PTC1 to have higher cable rating	2028	NGET	1	Proceed - Critical
THRE	Reconductor of Hinkley Point Taunton 1 & 2 and Hinkley Point - Taunton - Exeter	2029	NGET	1	Proceed - Critical
TMCF	Thorpe Marsh reconfiguration	2032	NGET	1	Proceed - Maintain
LTRE	Reconductoring of Lackenby – Thornton 400kV double circuit	2030	NGET	1	Proceed - Critical
ESCF	Reconfigure Stalybridge - Thorpe Marsh 400kV circuit	2033	NGET	1	Proceed - Critical
PTN2	Modifying PTNO to have higher cable rating	2028	NGET	1	Proceed - Critical
EDN3	Reconductoring Brinsworth to Thorpe Marsh, Brinsworth to Chester Field and Chesterfield to Ratcliff	2032	NGET	1	Hold
NOR6	Reconductor double circuits Norton - Osbaldwick	2029	NGET	1	Proceed - Critical
E4L6	Three ended HVDC link between Lincolnshire, Walpole and either the north end of TGDC or north end of E4L5	2033	NGET	1	HNFUE enabling work
TWNC	Waltham Cross- Wymondley new double circuit	2033	NGET	1	Proceed - Maintain
MRU2	Mersey Ring Upgrade - Stage 2	2033	NGET	1	Hold
MRU1	Mersey Ring Upgrade - Stage 1	2031	NGET	1	Hold
CLN2	New double circuit between North West England and Carlisle	2036	NGET	1	Proceed - Critical
FSU1	Upgrade Fourstone 275kV network to 400kV and reconductor lines between Harker – Fourstones – Stella West	2035	NGET	1	Proceed - Critical
LRN6	New double circuit from South Lincolnshire to Hertfordshire	2034	NGET	1	Proceed - Critical
RANC	New 400kV double circuit and Infrastructure within the Kent area	2036	NGET	1	HNFUE enabling work
PSNC	New double circuit from Pentir to Swansea North	2037	NGET	1	Proceed - Critical

CMN3	Establish a new 400kV double circuit OHL from Gala North to Carlisle	2033	NGET,SP T	1	Proceed - Maintain
WCN2	Establish a new 400kV double circuit from Kilmarnock South to Glenmuckloch and Carlisle	2037	NGET,SP T	1	Proceed - Critical
WCD4	Proposed amendment to HND1 Western Multi Terminal HVDC to provide 4GW North to South Capacity (North Wales)	2036	NGET,SP T	1	Proceed - Maintain
ECRE	Errochty - Clunie 132kV Reconductoring	2029	SHET	3	Proceed - Maintain
NNNC	Establish a 3rd 400kV cable circuit between Greens (New Deer 2) and New Deer substations.	2030	SHET	4	HNFUE enabling work
DSUP	Replace the existing 275kV double circuit OHL from Dounreay - Thurso - Spittal with a new 400kV double circuit OHL. Install new 400kV substations at Dounreay and Thurso with 2x400/275kV SGTs at each site to connect to the existing 275kV substations.	2034	SHET	3	HNFUE enabling work
BKUP	Blackhillock - Cairnford - Kintore 400kV Upgrade	2034	SHET	3	Proceed - Critical
PKUP	Peterhead - Persley - Kintore 400kV Upgrade	2033	SHET	3	Proceed - Critical
NHNC	New Deer 2 (SSEN) - Tealing (SSEN) - Harburn (SPT) 400kV New Double Circuit	2038	SHET,SP T	1	Proceed - Critical
CVUP	Establish a 400kV single circuit corridor south from Clydes Mill to Strathaven on existing OHL routes, with associated substation development at Clydes Mill, Strathaven and near East Kilbride	2031	SPT	1	Hold
VERE	Reconductor the ZV route between Strathaven and Elvanfoot with HTLS conductor	2030	SPT	1	Proceed - Critical
EHRE	Reconductor the ZV route between Elvanfoot and Harker with HTLS conductor	2030	SPT	1	Proceed - Critical

LCU2	Establish a 400kV single circuit corridor south from Kincardine North, on existing OHL routes, towards the Strathaven - Smeaton (XH/XJ route) corridor west of Edinburgh and Currie/Smeaton substation	2033	SPT	1	Hold
HGNC	Establish new 400kV double circuit from Harburn to Gala North	2036	SPT	1	Proceed - Maintain



Appendix 2 – The ESO's tCSNP2 network plan

Figure 1. Map of network infrastructure to be delivered beyond 2030

Key

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Appendix 3 - Consultation questions

Section 3

Q1. Do you agree with our assessment of the tCSNP2 and the risks that we have identified?

Section 4

Q2. Do you agree with our proposals for the "Development track"?

Q3. Do you agree with our proposals for the "Delivery track"?

Q4. Do you agree with our proposals for the "Small / Medium Sized Project Delivery track"?

Section 5

Q5. Do you agree with our categorisation of tCSNP2 projects?

Q6. Do you agree with our proposed approach for the tCSNP2 asset classification projects?

Q7. Do you agree with our approach to identifying a project for early competition?

Section 6

Q8. Do you agree with our approach to identifying a first project for early competition?

Section 7

Q9. Do you agree with our expectations for the TOs and ESO?

Section 8

Q10. Do you agree with our proposals to introduce a scope change governance process for onshore transmission projects?

Appendix 4 – Privacy notice on consultations

Personal data

The following explains your rights and gives you the information you are entitled to under the General Data Protection Regulation (GDPR).

Note that this section only refers to your personal data (your name address and anything that could be used to identify you personally) not the content of your response to the consultation.

1. The identity of the controller and contact details of our Data Protection Officer

The Gas and Electricity Markets Authority is the controller, (for ease of reference, "Ofgem"). The Data Protection Officer can be contacted at <u>dpo@ofgem.gov.uk</u>

2. Why we are collecting your personal data

Your personal data is being collected as an essential part of the consultation process, so that we can contact you regarding your response and for statistical purposes. We may also use it to contact you about related matters.

3. Our legal basis for processing your personal data

As a public authority, the GDPR makes provision for Ofgem to process personal data as necessary for the effective performance of a task carried out in the public interest. i.e. a consultation.

4. With whom we will be sharing your personal data

We will not be sharing your personal data.

5. For how long we will keep your personal data, or criteria used to determine the retention period.

Your personal data will be held for *six months* after the relevant decision has been

published.

6. Your rights

The data we are collecting is your personal data, and you have considerable say over what happens to it. You have the right to:

- know how we use your personal data
- access your personal data

- have personal data corrected if it is inaccurate or incomplete
- ask us to delete personal data when we no longer need it
- ask us to restrict how we process your data
- get your data from us and re-use it across other services
- object to certain ways we use your data
- be safeguarded against risks where decisions based on your data are taken entirely automatically
- tell us if we can share your information with 3rd parties
- tell us your preferred frequency, content and format of our communications with you
- to lodge a complaint with the independent Information Commissioner (ICO) if you think we are not handling your data fairly or in accordance with the law. You can contact the ICO at https://ico.org.uk/, or telephone 0303 123 1113.

7. Your personal data will not be sent overseas.

8. Your personal data will not be used for any automated decision making.

9. Your personal data will be stored in a secure government IT system.

10. More information For more information on how Ofgem processes your data, click on the link to our "ofgem privacy promise".