

## Guidance

# Load Re-opener Guidance and Submission Requirements Document

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The Load Re-opener provides Electricity Transmission Owners (ETOs) with a route to apply for funding for reinforcements driven by demand or generation driven network requirements demand or generation and investments to maintain compliance with planning standards and ensure secure, efficient system operation.

This Load Re-opener Guidance Document sets out the process and requirements for ETOs seeking funding for load-related investments during the RIO-3 price control period (2026–2031). These projects are critical to delivering a secure, resilient, and low-cost energy transition, enabling the connection of new generation, reinforcing system boundaries, and supporting the UK’s net zero and Clean Power by 2030 targets.

When we set baseline allowances at RIO-3 Final Determinations, some projects could not be funded due to uncertainty around their economic need, optioneering, scope, or timing. The Load Re-opener provides a structured mechanism for ETOs to bring forward such projects once there is sufficient clarity on these factors, ensuring that consumers only pay for investments when they are justified and represent long-term value.

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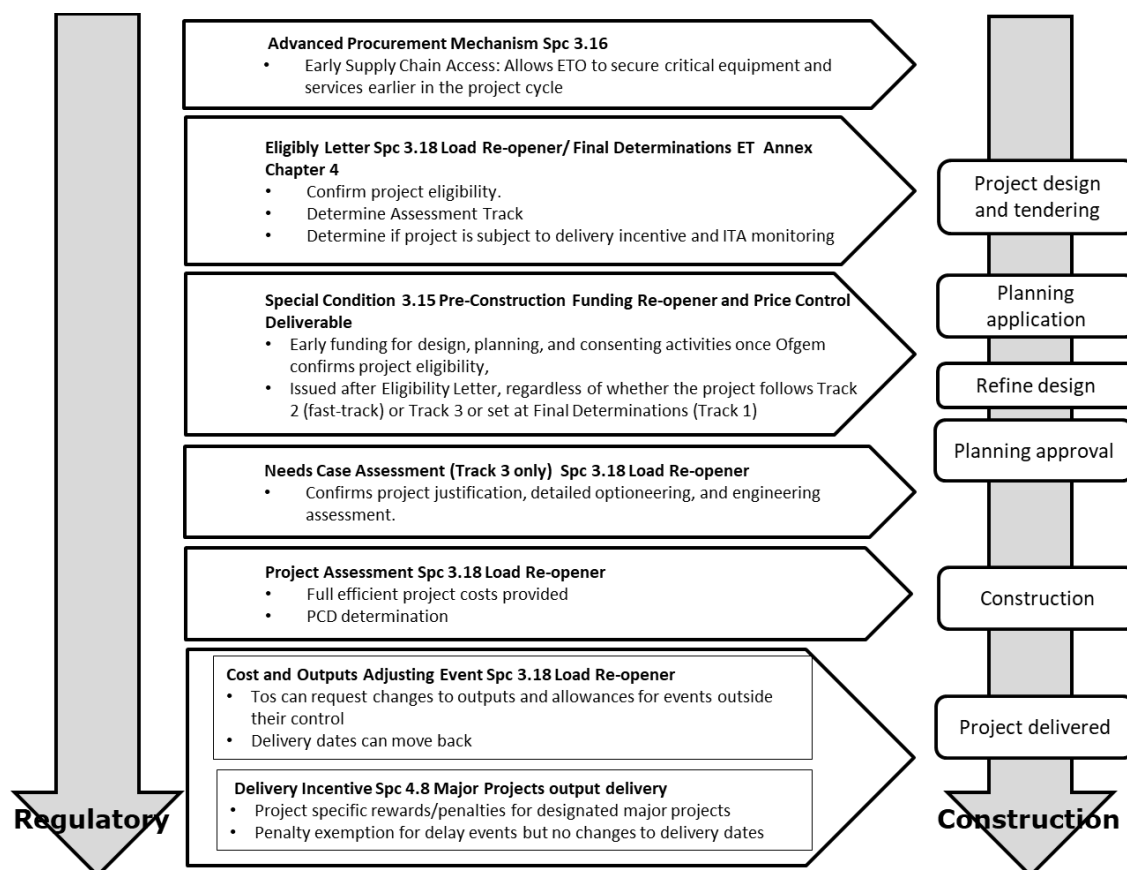


# 1. Introduction

## Scope of this Guidance Document

- 1.1 This document provides additional detail regarding the function and operation of the Load Re-opener, including the ETO submission requirements and our assessment and decision process for the following licence conditions:
- Pre-Construction Funding Re-opener, Price Control Deliverable (Special Condition 3.15)
  - Load Re-opener and Price Control Deliverable (Special Condition 3.18)
  - Major Projects Delivery Incentive (Special Condition 4.8)
  - Advanced Procurement Mechanism (Special Condition 3.16)
- 1.2 Licensees must also have due regard to the Re-opener Guidance and Application Requirements Document and Price Control Deliverable Guidance and Submission Requirement Document.
- 1.3 These licence conditions require that ETOs adhere to the provisions and requirements set out in this document. An indicative overview of the different elements of these conditions and how these could relate to the development of a project are set out in Figure 1 below:

**Figure 1: Load Re-opener Framework Overview**



## Scope of the Load Re-opener

1.4 As set out in our RIIO-3 Final Determinations<sup>1</sup> and the electricity transmission (ET) licences, the Load Re-opener allows ETOs to bring projects which constitute investments in the transmission network that are:

- expected to cost £40m or more of capital expenditure;
- in whole or in part, either:
  - (i) load-related or related to a shared-use or sole-use generator connection project: and
  - (ii) excluded from the volume driver uncertainty mechanism, having been classified as an atypical project.<sup>2</sup>

1.5 The types of projects ETOs may bring forward include:

- boundary reinforcements designed to provide greater transfer capability across system boundaries and/or maintain NETS SQSS compliance.<sup>3</sup>
- Load related project identified by the National Energy System Operator (NESO).
- Atypical generation or demand connection projects whose forecast costs fall outside the thresholds set for the volume driver mechanisms (Special Conditions 3.11 and 3.12) and is greater than £40m.

1.6 In addition, projects that relate to one of the areas above but also relate to the health of existing assets on the network, which have not been funded within baseline allowances, can also be brought forward through Load Re-opener.

## Overview of the Load Re-opener process

1.7 The Load Re-opener process has two key process elements: Assessment Tracks and Assessment Stages.

- Assessment Tracks define the overall pathway an application follows, tailoring the level of regulatory scrutiny to the complexity and maturity of a project. There are three tracks, ranging from a single-stage review for projects with established engineering options to multi-stage assessments for more complex or high-value schemes.
- Assessment Stages are the distinct steps within each Assessment Track that serve specific regulatory purposes—such as confirming eligibility, validating the needs case and optioneering, and determining efficient costs.

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<sup>1</sup> [RIIO-3-Final-Determinations-ET.pdf](#)

<sup>2</sup>Page 107 Generation and Demand Connections Volume Drivers of [RIIO-3-Final-Determinations-ET.pdf](#)

<sup>3</sup>[Security and Quality of Supply Standard \(SQSS\) | National Energy System Operator](#)

- 1.8 Together, tracks and stages provide an assessment framework that is proportionate, flexible and agile; that accelerates our assessment where certainty exists while ensuring robust consumer protection for projects with greater uncertainty.
- 1.9 Table 1 sets out how the of Load Re-opener Assessment Tracks related to the Assessment Stages.

**Table 1: Comparison of different Assessment Tracks and Stages**

<b>Assessment Tracks</b>	<b>When applied</b>	<b>Relevant Assessment Stages</b>
<b>Track 1</b>	Project needs case and early optioneering is approved in our RIIO-ET3 Final Determinations but there is cost uncertainty.	<b>Stage 3:</b> Project Assessment.
<b>Track 2 – Single stage assessment</b>	When projects are well-defined and require minimal optioneering analysis and iterative review. ETOs are invited to apply directly for Project Assessment.	<b>Stage 1:</b> Eligibility Assessment; <b>Stage 3:</b> Project Assessment.
<b>Track 3 – Multi-Stage Assessment</b>	When project optioneering has greater uncertainty and design may evolve over time (or project is equal to or greater than £300m); ETOs should submit additional reporting requirements as set out under the PASE framework as part of the Needs Case stage.	<b>Stage 1:</b> Eligibility Assessment; <b>Stage 2:</b> Needs Case Assessment; <b>Stage 3:</b> Project Assessment.

### Load Re-opener tracks

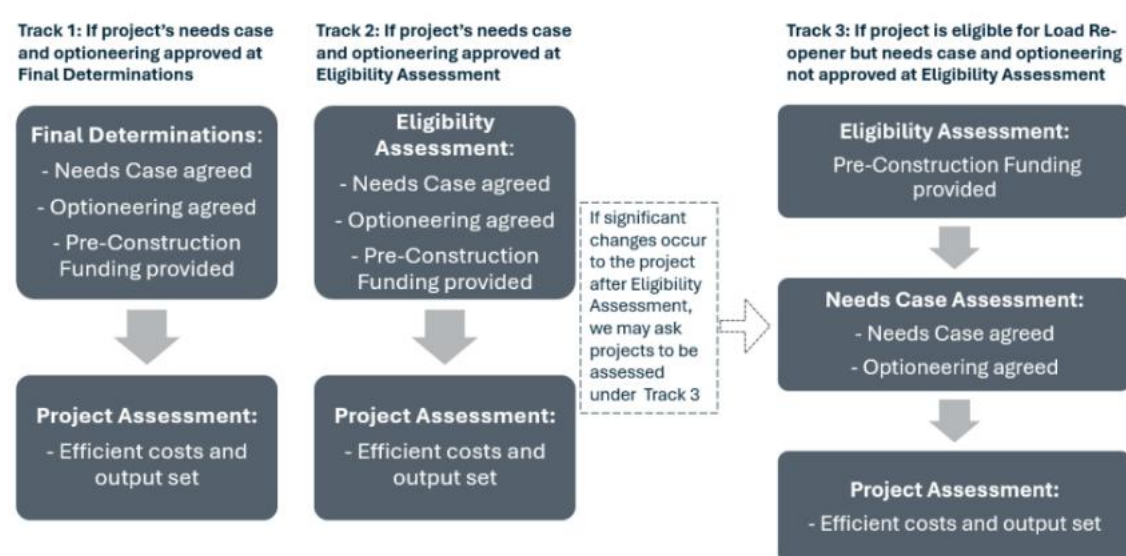
- 1.10 Figure 2 sets out the how Ofgem will determine the appropriate Assessment Track for assessing a project under the Load Re-opener. The multi-track structure allows for a proportional approach where we apply more checks where uncertainties are higher.
- 1.11 As part of Ofgem’s assessment of ETOs’ business plans for the RIIO-3 Final Determinations, we determined ETOs can apply directly to Ofgem to set efficient cost directly through the Project Assessment Stage (Track 1) for specific projects.<sup>4</sup>

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<sup>4</sup> These are set out in Appendix 1 of the unredacted versions of our RIIO-3 Final Determinations, company annexes.

- 1.12 For projects submitted to Ofgem during the price control period, we will use the Eligibility Assessment to make our decision on the assessment track.
- 1.13 ETOs are encouraged to adopt Pre-Approval of Solutions by Engineering (PASE) compliant projects to increase the likelihood that a project is progressed through Track 2; however, PASE should not prejudice or prevent ETOs' final engineering design choice. Where there are deviations from PASE but strong justifications for the appropriateness and consumer benefits of the solution, we may determine that projects may progress and be assessed through Track 2.
- 1.14 Track 3 will be used when ETO chooses a solution that significantly deviates from PASE approved options and/or ETOs does not provide sufficient justification to Ofgem at the Eligibility Assessment to understand the needs case for the project. In such cases, the ETO must submit a separate Needs Case Assessment when the project matures.
- 1.15 Projects with capital costs over £300m will automatically follow Track 3, even if they retain PASE principles as a basis for review. Nonetheless, where projects are above £300m but use PASE, we will aim to expedite these reviews while likely requiring additional justifications given their high materiality.
- 1.16 Pre-construction funding (PCF) will be provided once the Eligibility Assessment is approved, regardless of whether we have decided the project follows Track 2 or 3.

**Figure 2: Load Re-opener tracks and their applicable assessment stage**



- 1.17 We will use a template-based system for submissions to ensure that regulatory submissions are standardised to help expedite our assessment. These templates and their applicability to each stage are set out in Appendix 2 of this document.



## Load Re-opener assessment stages

- 1.18 An assessment stage is a distinct step within the Load Re-opener. Each stage sets defined criteria and evidence requirements to enable Ofgem's funding determination.
- 1.19 The applicability of an assessment stage for each Load Re-opener track is not uniform and varies between Load Re-opener tracks (i.e projects assessed under Track 1 and 2 are not subject to the Needs Case Assessment)- reflecting the complexity and nature of a project. The level of detail expected is set out in table 2 and reflect the expected maturity of projects at each assessment stage.
- 1.20 The purpose of each individual assessment stage is:
- **Eligibility Assessment (EA)<sup>5</sup>** – applicable for load projects, that were approved in RIIO-3 Final Determinations, the EA is based upon the ETO's Eligibility Letter submission. The purpose of this stage is to confirm whether a proposed project meets the criteria for the Load Re-opener mechanism and is sufficiently mature to proceed. This stage:
    - (a) Establishes project eligibility under licence conditions.
    - (b) Assigns the appropriate assessment track (Track 2 or Track 3).
    - (c) Determines if the project qualifies for PCF.
    - (d) Provides an early review (and in some cases approval) of indicative design, needs case, and optioneering against PASE principles.
  - **Needs Case Assessment (NCA)** – The purpose of this stage is to validate that the project remains justified and the proposed engineering solution delivers consumer value. This stage:
    - (a) Confirms the network need and investment drivers.
    - (b) Reviews detailed optioneering and rationale for the preferred option.
    - (c) Requires robust cost-benefit analysis and sensitivity testing.
    - (d) Ensures alignment with system planning documents (NOA, FES) and policy objectives.
    - (e) Addresses any material changes since the Eligibility Assessment stage.
  - **Project Assessment (PA)** – The purpose of this stage is to determine the efficient cost allowance and readiness for delivery before setting outputs and allowances in the licence. This stage:
    - (a) Assesses detailed cost submissions, procurement outcomes and risk management.
    - (b) Benchmarks costs against industry standards and previous projects.
    - (c) Confirms delivery strategy and contractual readiness.
    - (d) Sets funding allowances, outputs, and delivery dates in the licence.
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## Pre-approval of Solutions by Engineering (PASE)

### What is PASE

1.21 PASE (Pre-Approval of Solutions by Engineering) is an assessment framework that helps identify engineering solutions that in the round promote efficient, future-proof engineering solutions for transmission projects. It sets out a suite of pre-approved optioneering designs and configurations that typically deliver the lowest whole-life cost, while supporting system resilience and net zero objectives. By aligning projects with PASE designs, ETOs can reduce regulatory risk, accelerate approvals, and ensure consistency with long-term consumer interests.

1.22 Appendix 1 sets out our PASE Framework, including the types of projects and solutions that are PASE compliant,. Within the PASE framework, there are two categories of PASE-compliant solutions:

- **Primary Options:** Engineering solutions that fully align with PASE principles and represent the standard, preferred approach.
- **Variant Options:** Alternative designs that still adhere to PASE principles but are adapted to specific system or locational circumstances. If a ETO selects a Variant Option, it must provide good justification for its use in its Eligibility Letter Submission.

### Purpose and Principles

1.23 PASE approved solutions follow these common principles:

- **Whole-life cost efficiency:** PASE recognises that some solutions may involve higher upfront costs but offer the lowest lifetime cost, typically over asset lives of 40+ years. Based on engineering expertise and experience with historic projects, listed solutions provide benefits such as improved network performance and reduced long-term costs, justifying initial investment.
- **Adaptability and future-proofing:** PASE prioritises solutions that are flexible, well-established, and capable of adapting to future technological or policy changes. Designs provide optionality for system growth, reducing the risk of asset stranding and enabling capacity expansion without major redesign. Where justified, overbuild may be included to support net zero pathways. This combination of proven design and forward-looking capability gives confidence in long-term value and reliability.
- **Standardisation and proven design:** Solutions align with standard engineering configurations that have been validated for reliability and cost efficiency. This reduces design risk and accelerates delivery.
- **Alignment with Net Zero and system growth:** Solutions help support decarbonisation targets, facilitate renewable integration, and maintain system stability under evolving generation and demand patterns.

- **Risk reduction:** By using pre-approved solutions, ETOs reduce regulatory uncertainty and avoid extensive optioneering reviews, provided compliance is demonstrated.

### **How PASE is used in the Load Re-opener**

1.24 Our determination of the assessment tracks at the EA will be informed by PASE, which helps minimise our need for detailed optioneering and engineering reviews. ETOs are encouraged to adopt PASE aligned solutions during optioneering. PASE aligned projects will receive a fast-tracked regulatory process (Track 2). If a project deviates from PASE and the ETO cannot provide robust justification for the alternative solution, we will require the ETO to submit an Engineering Justification Paper (EJP) at the Needs Case Assessment (in Track 3) to explain why the solution was chosen.

### **Track 2 Optioneering Assessment**

1.25 Where a ETO evidences that a PASE-compliant solution has been selected, the optioneering review will focus on whether the solution is a Primary Option (engineering solution that holistically aligns with the principles of PASE) or the Variant Option (alternative engineering solutions that may be better suited given prevailing system and locational context but still align with the principles of PASE<sup>6</sup>). We expect robust justifications from licensees for Variant Options or non PASE compliant solutions following our guidance in Appendix 3 – Justification Guide.

### **Track 3 Optioneering Assessment (Explain and Justify)**

1.26 Projects that are not aligned with PASE design and where the ETO is unable to provide robust justification in their Eligibility Letter will follow Track 3. In this track a further optioneering assessment is undertaken as part of the Needs Case Assessment. This ensures that more complex solutions are fully justified and remain in consumers' interests.

1.27 For projects assessed under Track 3, the optioneering review through the Needs Case will determine whether the proposed solution is adequately justified.

Outcomes are defined as follows:

- **Justified** – No concerns raised; the project may proceed to Project Assessment to have efficient costs determined.
- **Partially Justified** – Issues identified must be addressed before Project Assessment or may result in cost adjustments depending on the robustness of justifications.

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<sup>6</sup> For example, justification demonstrating how the proposed solution fits into the built environment and explanation of environmental or community context of the projects justification

- **Not Justified** – Significant concerns must be resolved prior to Project Assessment and may lead to cost disallowances, where justifications are not provided.

1.28 Where licensees can provide additional cost driver information this should be included in the Project Assessment submission. PA submission compliance is dependent on the use of the RRP template provided, through licensees can submitted additional information if required to support their cost driver justification.

### **PASE and Electricity Transmission Design Principles (ETDP)**

1.29 The PASE framework and the ETDP (that is developed by the NESO) share a common purpose: to deliver efficient, future-proof transmission infrastructure that meets system needs while protecting consumers and the environment. Both frameworks aim to standardise decision-making, reduce delays, and ensure projects are designed with clarity and consistency.

1.30 PASE and the ETDP have shared objectives:

- **Economic benefits:** Both frameworks prioritise lowest whole-life cost solutions, consistent with Ofgem’s statutory duties and ETDP’s principle of promoting economy and efficiency.
- **Future-proofing:** PASE-approved solutions anticipate future network needs, aligning with ETDP’s focus on flexibility and resilience within recognised planning horizons.
- **Environmental and community considerations:** ETDP principles require sensitivity to landscape and community impacts. The PASE framework evaluates solutions that incorporate prevailing network and site constraints considerations through standardised designs and targeted justification.
- **Regulatory clarity:** ETDP provides overarching design principles, while PASE operationalises these principles into specific engineering configurations, reducing ambiguity in project optioneering.

1.31 ETDP sets the strategic and design principles for transmission infrastructure across Great Britain, guiding decisions on technology choices and design standards whilst PASE translates these principles into practical, pre-approved engineering solutions, enabling ETOs to adopt designs that meet ETDP requirements without lengthy justification.

1.32 Where projects deviate from PASE, ETOs must justify the engineering need in light of existing network conditions, consistent with ETDP’s requirement for transparent and evidence-based design decisions.

## **Overview of regulatory process**

- 1.33 This section sets out the regulatory steps for each of the three Load Re-opener tracks.
- 1.34 Eligibility for a project to be funded through the Load Re-opener occurs at the RIIO3-Final Determinations (for Track 1 projects) or through the Eligibility Assessment (for Track 2 and 3 projects).
- 1.35 For projects that are approved for PCF, as part of the Eligibility Assessment; allowances and outputs will be updated in Special Condition 3.15 Pre-Construction Funding Re-opener and Price Control Deliverable (PCFt and PCFREt).
- 1.36 Where we approve the outputs and efficient funding under the Load Re-opener, under Special Condition 3.18 Load Re-opener and Price Control Deliverable we will consult on the license modification to include the PCD outputs and delivery dates, and any licence obligations.

### **Track 1: Projects approved at RIIO-3 Final Determinations**

- 1.37 For any projects approved under Track 1 as part of the RIIO-3 Final Determinations we will take the following steps:

**Step 1 – Project Assessment Submission:** ETOs submit the necessary project documentation using the Stage 3 Template – Project Assessment as set out in Appendix 2.

**Step 2 – Project Assessment:** Ofgem assesses the licensee's submission.

**Step 3 – Consultation:** Ofgem will publish a consultation on funding, outputs and delivery timelines for the project.

**Step 4 – Decision:** Ofgem will consider consultation responses and publish its decision.

**Step 5 – Licence modification:** Ofgem will publish a statutory consultation on relevant modifications as required to Special Condition 3.18 Load Re-opener and Price Control Deliverable (LRT)

**Step 6 – Licence implementation:** The required modifications will be made to the conditions in Step 5 and implemented in the ETOs' licences.

### **Track 2 and Track 3**

- 1.38 Below sets out the steps for projects assessed under the Load Re-opener, which follow either Track 2 or Track 3. Both tracks share initial eligibility steps but differ in subsequent requirements:

#### **Common Steps for Both Tracks**

##### **Step 1 – Eligibility Assessment Submission**

ETOs submit the necessary project documentation following Stage 1 Template – Eligibility Letter as set out in Appendix 2.

### **Step 2 – Eligibility Assessment**

Ofgem assesses the licensee's submission and publishes its decision to:

- (a) Accept project eligibility, designate whether the application is a Major Project and invite the ETO to submit a **Project Assessment Submission (Track 2)** (we may need to issue a policy consultation in order to do this, depending on materiality and consumer impact of the decision); or
- (b) Accept project eligibility, designate whether the application is a Major Project and invite the ETO to submit a **Needs Case Submission (Track 3)**; or
- (c) Reject project eligibility.

Ofgem will publish its rationale for decisions.

### **Step 3 – Pre-Construction Funding**

If project is approved for Track 2 or 3, Ofgem will issue a direction to update Special Condition 3.15 Pre-Construction Funding Re-opener and Price Control Deliverable:

- (a) Appendix 1: Pre-Construction Funding allowance; and
- (b) Appendix 2: Pre-Construction Funding Price Control Deliverable.

#### Track 2 (PASE aligned)

### **Step 4 – Project Assessment Submission**

ETOs submit the necessary project documentation using the Stage 3 Template – Project Assessment as set out in Appendix 2 (including submission and any supplementary information as set out in Appendix 3).

### **Step 5 – Project Assessment**

Ofgem assesses the licensee's submission.

### **Step 6 – Consultation**

Ofgem publishes a consultation on funding, outputs, and delivery timelines.

### **Step 7 – Decision**

Ofgem considers consultation responses and publishes its decision.

### **Step 8 – Licence Modification**

Ofgem publishes a statutory consultation on modifications as required to Special Condition 3.18 Load Re-opener and Price Control Deliverable (LRt).

### **Step 9 – Licence Implementation**

Required modifications are made and implemented in ETOs' licences.

#### Track 3 (Additional justification)

### **Step 4 – Needs Case Assessment Submission**

ETO submits the necessary project documentation using the Stage 2 Template – Needs Case (Engineering Justification Paper) as set out in Appendix 2 (including submission and any supplementary information as set out in Appendix 3).

**Step 5 – Needs Case Assessment**

Ofgem assesses the licensee's submission and publishes its decision on whether the licensee can apply for a Project Assessment.

**Step 6 – Project Assessment Submission**

ETOs submit the necessary project documentation using the Stage 3 Template – Project Assessment as set out in Appendix 2.

**Step 7 – Project Assessment**

Ofgem assesses the licensee's submission.

**Step 8 – Consultation**

Ofgem publishes a consultation on funding, outputs, and delivery timelines.

**Step 9 – Decision**

Ofgem considers consultation responses and publishes its decision.

**Step 10 – Licence Modification**

Ofgem publishes a statutory consultation on modifications as required to Special Condition 3.18 Load Re-opener and Price Control Deliverable (LRt).

**Step 11 – Licence Implementation**

Required modifications are made and implemented in ETOs licences.

Project Cancellation

**Step 1 – Cancelled Project Template**

ETOs submit to Ofgem the Template- Cancelled Project as set out in Appendix 2.

**Step 2 – Ofgem's assessment**

Ofgem reviews submission to determine if there are allowances that need to be recovered.

**Step 3 – Recovery of allowances**

If the project has only received PCF, we would seek to recover any unused allowances and any inefficient PCF by direction through Special Condition 3.15 using the principles set out in the Price Control Deliverable Reporting Requirements and Methodology Document.

If the project is in the delivery stage Ofgem will seek to recover any unused allowances and any inefficiently incurred spend to date by direction.

Ofgem publishes a statutory consultation on modifications as required to Special Condition 3.18 Load Re-opener and Price Control Deliverable (LRt).

Material Project Changes

(applies when a project has significantly changed between Eligibility Assessment, Needs Case Assessment or Project Assessment).

**Step 1 – Material Project Change Template**

ETOs submit to Ofgem the Template- Material Project Changes as set out in Appendix 2

**Step 2 – Ofgem’s assessment**

Ofgem reviews submission to determine the impact of the Material Project Change.

Ofgem may determine:

- (a) The preferred option is still in scope of the original needs case however additional information may be required either at the Needs Case Assessment or Project Assessment;
- (b) The scope of the project has fundamentally changed to the point the preferred option is no longer a rational option in the interest of consumers;

**Step 3 – Ofgem’s response**

Ofgem will respond in writing to the licensee setting out:

- (a) Whether the project is still in scope and any additional reporting requirements for either the Needs Case or Project Assessment;
- (b) If Ofgem has determined the preferred option is no longer in the interest of consumers, Ofgem may ask licensees to reapply for an Eligibility Letter;
- (c) If the load element of a project has fallen away, we may request ETOs to apply for the non-load element through [Special Condition 3.10 Non-Load Re-opener (NLRT)];
- (d) Ofgem may seek will issue a direction to update Special Condition 3.15 Pre-Construction Funding Re-opener and Price Control Deliverable.



## 2. Eligibility Assessment (Stage 1)

### Overview

- 2.1 For projects submitted during the price control period, Ofgem begins with an Eligibility Assessment to confirm that the proposed solution meets Load Re-opener criteria, is sufficiently mature, and based on sound engineering principles that deliver consumer benefits.
- 2.2 This stage determines whether the project follows Track 2 or Track 3, guided by the clarity of project drivers and preferred engineering solutions in the Eligibility Letter and assessed against the PASE framework.
- 2.3 The Eligibility Letter provides essential early-stage information in a standard format, outlining project drivers, shortlisted options, indicative technical details, costs, timelines, interactions with other projects, and pre-construction funding needs. Its purpose is to enable Ofgem to confirm eligibility, assign the appropriate track, and decide whether the project can proceed via fast-track review or requires a detailed Needs Case Assessment.

### ETO submission requirements

- 2.4 The Eligibility Letter template that ETOs must submit to Ofgem by email is set out in Appendix 2: Stage 1 – Eligibility Letter. This template adds more structured reporting fields (e.g. RRP references, spend apportionment) that is not explicit in this chapter)
- 2.5 Where a project is a PASE Variant Option or does not comply with PASE, ETOs should follow the additional reporting requirements set out in Appendix 3 - Justification Guide. We recognise that the level of detail and robustness of evidence will vary depending on the stage of the project. Submissions should therefore provide evidence proportionate to the project's maturity.
- 2.6 We encourage ETOs to group submissions together and ETOs must provide a minimum of 1 months' notice to Ofgem ahead of submissions. This will enable a faster Ofgem assessment.

### Ofgem's approach and outputs

- 2.7 Following the Eligibility Assessment, Ofgem will determine whether the project proceeds under Track 2 or is assigned to Track 3.
- 2.8 Our assessment of Eligibility Letter will include but is not limited to:

#### **Confirm compliance with Load Re opener criteria**

- Check that the project meets the licence definition. This includes verifying that the capital cost exceeds the threshold, the project is load-related, and it is excluded from the volume driver mechanism.

**Technical need and timing**

- Validate the requirement for reinforcement and confirm optimal timing considering uncertainties (generation, demand, constraint costs).
- Review delivery confidence and risk: We examine indicative timelines, planning assumptions, and risk mitigation strategies to ensure the project can be delivered as proposed.

**Optioneering quality**

- Check alignment with PASE Framework: determine whether the proposed solution is PASE-compliant and if not determine the appropriate track for review with reference to Appendix 3 -Justification Guide.
- Assess high-level needs case - review the clarity and strength of optioneering and the shortlist of options. Projects that clearly align with system requirements and deliver consumer benefits will be prioritised for fast-track assessment.
- Check if all technically feasible options and operational measures were considered.
- Assess the robustness of option shortlisting and justification based on cost, optionality, deliverability, and supporting evidence.

**Economic case**

- Confirm the preferred solution is in the interest of consumers.
- Review validity of assumptions and inputs used in quantitative analysis.
- Ensure any cost-benefit methodology and sensitivity testing are appropriate.
- Confirm cost estimation methods allow fair comparison across options.

**Future Needs Case requirements**

- Identify if any considerations require revisiting later in the Needs Case process based on evidence strength and quality.

2.9 Regardless of the track assigned, if the project is deemed eligible for the Load Re-opener we will issue a direction to provide Pre-Construction Funding (PCF) following completion of the Eligibility Assessment as well as publishing a written update or consultation covering:

- Our determination project assessment track;
- Whether the project is a Major Project and subject to the Major Projects Output Delivery Incentive;
- Determine whether delivery will be monitored by an Independent Technical Adviser; and
- Where we have determined a project will require a Needs Case assessment – we will set out any additional reporting requirements (following Appendix 3 Justification Guide).

### 3. Needs Case Assessment (Stage 2 (Track 3 only))

#### Overview

- 3.1 The Needs Case Assessment is a critical stage in the Load Re-opener process for projects assigned to Track 3 to determine the need for the project by understanding the economic benefits that the project provides for GB consumers and favoured technical solution that the ETO plans to take forward.
- 3.2 ETOs must demonstrate the chosen design is technically viable, cost-efficient over its lifetime, and consistent with consumer and system interests. If the justification is insufficient, Ofgem may require revisions or reassign the project for further review before progressing to cost assessment.

#### ETO submission requirements

- 3.3 ETO must submit the Needs Case Assessment to Ofgem by email using the Appendix 2: Stage 2 Template – Needs Case (Engineering Justification Paper).
- 3.4 The Needs Case must be shown by a clear demonstration of the specific network need or constraint the project addresses, supported by robust data and analysis. This would comprise of clearly identified investment drivers.
- 3.5 ETOs should engage with Ofgem and document any modifications to underlying assumptions or design elements that result from planning activities or stakeholder engagement between the Eligibility Assessment and the Needs Case Assessment.

#### Ofgem's approach and outputs

- 3.6 Our Needs Case Assessment will include but is not limited to:
- Confirm the ongoing driver for the project: We review whether the project remains justified and continues to address a clearly defined network need. This includes checking alignment with any NESO system planning documents such as the NOA, Future Energy Pathways, and Holistic Network Design.
  - Assess optioneering and preferred solution: We examine the ETOs' optioneering process in detail. ETOs must demonstrate that all credible alternatives have been considered and provide a clear rationale for selecting the preferred option. We expect evidence of structured evaluation across cost, deliverability, environmental impact, and future-proofing.
  - Technical engineering assessment: We will scrutinise optioneering around design choice to ensure that:  
(1) the outputs and project specification being delivered are optimal and in consumers' interests; and

- (2) any concerns around whether the network solution being progressed represents the optimal solution are raised as early as possible in the project's development to limit the scope for delays.
  - Evaluate consumer value and cost-benefit analysis: We require robust cost-benefit analysis, including sensitivity testing, to confirm that the proposed solution delivers long-term value for consumers. This analysis should demonstrate efficiency under different scenarios and justify any anticipatory investment.
  - Review any changes since eligibility assessment: We check for material changes in scope, costs, or design assumptions since the Eligibility Assessment. ETOs must explain and justify any changes, including their impact on delivery timelines and risk profile.
- 3.7 We recognise that the most appropriate time to assess the Needs Case is during or after the planning consent process, when project design assumptions are clearer. However, planning consent does not need to be secured before submitting the Needs Case.
- 3.8 Where projects have significantly changed since our Eligibility Assessment determination ETOs must notify Ofgem as soon as possible by submitting a Template – Material Project Changes as set out in Appendix 2. Material changes include but are not limited to:
- Significant changes to the preferred technical solution (where the new solution is no longer PASE compliant);
  - Material changes in the estimated costs (~40%);
  - Significant changes in the project drivers (e.g if several generation developers halt their projects); and
  - Significant changes to planning conditions.
- 3.9 Following our review, Ofgem will:
- Confirm whether the needs case and preferred solution are:
    - (1) Justified – No concerns raised; the project may proceed to Project Assessment to have efficient costs determined.
    - (2) Partially Justified – Issues identified must be addressed before Project Assessment or may result in cost adjustments depending on the robustness of justifications.
    - (3) Not Justified – The project is not needed or significant concerns must be resolved prior to Project Assessment, and may lead to cost disallowances, where justifications are not provided.
  - If the project is 'Justified' or 'Partially Justified', direct the ETO to proceed to the Project Assessment stage.

- Identify any conditions or additional evidence required before cost assessment.

3.10 Where Ofgem's review determines the needs case is partially justified or not justified, Ofgem may request a resubmission of the Needs Case and undertake another Needs Case Submission. Where the information required is specific, Ofgem may request in writing, the ETO submit the additional information for a specified date.

## 4. Project Assessment (Stage 3)

### Overview

- 4.1 This is the final stage of the Load Re-opener process, where Ofgem determines the efficient cost allowance for delivering the project. The review focuses on the ETO's readiness to proceed and the efficiency of forecast costs, including construction, risk contingencies, and delivery plans.
- 4.2 However, a Project Assessment submitted before the following conditions are met is unlikely to provide sufficient information for Ofgem to effectively undertake a Project Assessment:
- The ETO has confidence in its cost estimates.
  - The ETO has received final procurement offers from suppliers<sup>7</sup>.
- 4.3 The ETO must engage with us in the months leading up to its Project Assessment submission to help ensure that its submission will enable us to conduct an effective assessment.
- 4.4 The ETO must provide a single, comprehensive submission demonstrating readiness to deliver and the efficiency of proposed costs. This should include:
- A robust, well-justified cost estimate proportionate to project scale, supported by engineering designs, procurement outcomes, and risk assessments.
  - Detailed delivery plans, including strategy and risk management.
  - A complete cost breakdown in spreadsheet form, with summary and disaggregated tabs for each asset type, linked to supporting calculations and assumptions.
  - All referenced documents, including contracts, quotes, studies, and original source data.
- 4.5 ETOs should engage with Ofgem and document any modifications to underlying assumptions or design elements that result from planning activities or stakeholder engagement between the Eligibility Assessment, or the Needs Case Assessment, and the Project Assessment stage.

### ETO submission requirements

- 4.6 The Project Assessment template that ETOs must submit to Ofgem is set out in Appendix 2: Stage 3 Template – Project Assessment.

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<sup>7</sup> This is not an implication or requirement that contracts should have been signed at this stage, rather an expectation that negotiations would have reached final stages.

- 4.7 For cost related data, the ETO must provide a detailed cost breakdown in spreadsheet form. The main spreadsheet should include a summary of total construction costs and separate tabs for each asset type (eg overhead line). These costs should link to supporting spreadsheets showing calculations, assumptions, units, price bases, and time profiles. Supporting sheets may reference contract terms, quotes, studies, or other evidence. Original contractor source data should also be provided to Ofgem.
- 4.8 ETOs must ensure any changes to assumptions or design that arise from planning or stakeholder engagement.
- 4.9 Within the main cost spreadsheet, a clear indication of the ‘firmness’ of each cost must be provided. Our classification for this ‘firmness’ is as follows:

**Table 2: Firmness of cost submissions**

	<b>Classification</b>	<b>Description</b>	<b>Supporting documentation required</b>
<b>1</b>	Fixed	(i) The cost has been incurred, is not subject to change and has supporting documentation matching the amount; or (ii) Cost is fixed but not yet committed to by the ETO.	Contract/bill/tender with supporting documentation of payment made. Fully auditable if needed.
<b>2</b>	Agreed, but re-measurable	The cost has been agreed or estimated but is subject to change according to a clear and agreed variation process. Changes only driven by unforeseeable circumstances.	Contract/bill with supporting documentation of payment made/to be made. Fully auditable if needed.
<b>3</b>	Agreed, but will be re-measured based on known future information received	The cost has been agreed or estimated but will be subject to change due to clarifying the scope of works or due to additional surveys and assessments being undertaken. As above, changes should follow a clear variation process.	Contract/bill with supporting documentation of payment made/to be made. Rates auditable, volumes subject to change based on quantifiable and foreseeable factors.
<b>4</b>	Agreed, but indexed	The cost has been agreed or estimated but will be subject to indexation / price adjustment mechanism(s) where change is foreseen but there is no change to project scope.	Contract/bill with supporting documentation of payment made/to be made. Rates auditable, volumes subject to change based on quantifiable and foreseeable factors.

	<b>Classification</b>	<b>Description</b>	<b>Supporting documentation required</b>
<b>5</b>	Estimated	Cost estimated based on assessments and actual surveys and using experience and examples from other projects.	Spreadsheet with the calculations (methodology), assumptions and evidence base. Emails/minutes of meetings with specific mention of the variables that have been used in calculating these estimates, the person and company providing the calculations and information. List of surveys done as well as documentation of the surveys.
<b>6</b>	Early estimate	Costs estimated through modelling cost ranges from different projects and past experience.	Spreadsheet with the calculations (methodology), assumptions and evidence base. Emails/minutes of meetings with specific mention of the variables that have been used in calculating these estimates, the person and company providing the calculations and information. List of surveys to be performed to increase the confidence of the cost estimates.

## Ofgem's approach and outputs

4.10 Our Project Assessment includes but is not limited to the following aspects:

- Communication and engagement - discussions between the ETO and Ofgem will be held throughout the Project Assessment process to ensure that we understand the rationale behind the submitted costs, as well as the project's scheduled activities.
- Initial review – an initial review of the Project Assessment submission to ensure the necessary information has been provided by the ETO. If we believe that the ETO has not provided all the information necessary for us to carry out our assessment it will be notified. The ETO must then engage with us to ensure that we receive all relevant information needed for us to complete our review.
- Full information review – once we are broadly satisfied that the ETO's submission includes the necessary information, we will undertake a thorough review of the project's costs, alongside its technical characteristics. This will include comparing the project's costs to other projects, as well as multiple rounds of supplementary questions (SQs).

4.11 The purpose of the SQ process is to ensure we can capture any information/clarifications we require on project-specific issues to ensure a clear and complete basis for our assessment.



4.12 As part of our assessment, we will undertake detailed benchmarking analysis of the project's costs. We would expect to consider several issues, including but not limited to:

- Whether there is sufficient detail on the technical design to demonstrate that the costs are efficient and that any optional capabilities included in the proposal represent long-term value for money.
- The robustness of the ETO's process for procurement and selection, and whether this process had been efficiently applied and could be expected to lead to an efficient market outcome.
- The efficiency of the proposed costs, considering the conclusions on the above and any additional detailed cost assessment including benchmarking of specific elements where comparable data is available.
- The evaluation of risks, and the appropriateness of the proposed risk management strategy including the allocation of risks and the associated costs.
- The appropriateness of the construction programme and progress made towards being ready to proceed in the proposed timescales.

4.13 Our assessment will include detailed benchmarking of the project's costs. We compare the ETO's submitted costs with similar projects, considering technical characteristics. Costs may be broken down by asset (e.g., onshore cable) to enable granular analysis.

4.14 Benchmarking helps identify areas where costs appear higher than expected. It is a guide, not an absolute determinant of allowable costs. Where concerns arise, we conduct further analysis to assess whether costs are economic and efficient. ETOs can justify differences from industry averages, however without sufficient evidence, we will use our cost benchmarking exercise, using the cost of the selected option against our efficient unit rates as measured in ET3 and through wider industry data, to inform our view of efficient costs.

4.15 Beyond asset-level benchmarking, we also compare other elements of the submission—such as resource costs and risk budgets—against historical datasets. We perform both high-level and detailed comparisons and discuss any issues with the ETO.

4.16 Our assessment will also consider which wider load mechanism should be implemented on the project. We would expect that our considerations when assessing this will usually include:

- The consumer benefits that the ETO has identified could be achieved if this project is delivered on time (and hence the potential for consumer detriment if delivered late);
- Cashflow and financeability of the ETO;

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- The length of the construction period, and key milestones within that period which will be critical to ensuring timely delivery; and
- Whether the project is subject to monitoring through an Independent Technical Advisor.

4.17 After completing our initial review of the project's submission, and once we are satisfied that we have all the information that we need for our assessment, we will undertake our assessment. We expect to take up to 6 months to publish our Project Assessment decision.

4.18 After considering responses to the consultation, we will publish the Authority's decision on the proposed project.

4.19 Any new Load Re-opener outputs, delivery dates, associated allowances and applicable mechanisms will be specified in the relevant licence conditions.

## 5. Ongoing Engagement with Ofgem

### Overview

- 5.1 Ofgem expects ongoing engagement throughout development to ensure transparency on optioneering and design decisions. This is particularly important ahead of the Project Assessment stage, as solutions may evolve during the planning process. Early dialogue helps identify and resolve issues before they impact timelines or costs.
- 5.2 To support meeting assessment timescales a Load Board, chaired by us and attended by the TOs, exists which will be used quarterly to escalate emerging issues and provide us with status updates on, and sight of, all load projects that the TOs are developing. TOs must use the Load Board to proactively identify new projects to us that are emerging in its pipeline. The finalised Load Board Terms of Reference was shared with ETOs via email in early 2026.
- 5.3 ETOs should:
- Keep Ofgem informed of key design and optioneering choices as they progress.
  - Provide a summary of baseline technical and consenting assumptions early in the process.
  - Highlight any changes to assumptions or design that arise from planning or stakeholder engagement.
  - Where continuous engagement is not feasible, report updates through annual RRP submissions to maintain visibility of decisions and rationale.
- 5.4 This approach ensures that Ofgem can assess whether the preferred solution remains justified and aligned with consumer interests, even if project parameters change during development.
- 5.5 ETOs may provide:
- A description of the construction works.
  - Details of any changes in design since earlier submissions, with explanations and associated evidence, if appropriate.
  - An appropriate level of detail on technical designs (e.g. substation layout) and construction techniques to be used in the project, including an explanation and justification for all major technical decisions that have been made for the project. We expect more detail would be provided if design and/or construction activity is technically challenging, novel, or a cause for divergences in cost relative to industry benchmarks.
  - Detail on any optional capability that is included in the technical proposal and justification for its inclusion.

- 5.6 Our goal in this is to standardise submissions, as far as reasonably practicable, to aid in licence change control and then minimise Project Assessment review timescales.

### Project cancellation

- 5.7 Where a project approved under the Load Re-opener is cancelled after submission through the Eligibility Assessment, Needs Case Assessment, or Project Assessment stages, ETOs must follow the process below:
- ETOs must complete and submit the Template – Cancelled Projects (Appendix 2) to Ofgem as soon as the decision to cancel is confirmed. The template should include:
    - Project identification details (name, reference, assessment track).
    - Reason for cancellation, including external factors (e.g., planning refusal, stakeholder objections, system changes).
    - Summary of costs incurred to date, broken down by category (e.g., pre-construction funding, design, procurement).
    - Outputs delivered prior to cancellation (e.g., surveys, design work).
    - Interactions with other projects and implications of cancellation.
    - Supporting evidence (e.g., cost reports, stakeholder correspondence, planning decisions).
- 5.8 Ofgem will review the submission to determine:
- Whether allowances need to be recovered.
  - Whether any costs incurred were inefficient.
- 5.9 If the project has only received Pre-Construction Funding (PCF), Ofgem will seek to recover any unused PCF and any inefficient spend via direction under Special Condition 3.15 (Pre-Construction Funding Re-opener and Price Control Deliverable), applying principles set out in the Price Control Deliverable Reporting Requirements and Methodology Document.
- 5.10 If the project is in the delivery stage, Ofgem will seek to recover any unused allowances and any inefficiently incurred spend to date.
- 5.11 We will publish a statutory consultation on licence modifications as required to:
- Special Condition 3.18 (Load Re-opener and Price Control Deliverable).
  - Special Condition 4.8 (Major Projects Output Delivery Incentive), if applicable.
- 5.12 ETOs should notify Ofgem promptly to avoid delays in allowance recovery and licence updates. Supporting evidence must be proportionate and auditable.

### Material project changes

- 5.13 Where projects have significantly changed since our Eligibility Assessment (where a project was assigned Track 2) or since our Final Determinations (where a project

was assigned Track 1), ETOs must notify Ofgem as soon as possible. Material changes may include but are not limited to:

- Significant changes to the preferred technical solution (e.g., deviation from PASE compliance or major design alterations).
- Material changes in estimated costs ( $\geq 20\%$  increase or  $\geq \text{£}50\text{m}$ , whichever is greater).
- Significant changes in delivery timing (e.g., delay or acceleration of  $\geq 12$  months in key milestones).
- Changes in project drivers (e.g., withdrawal of generation developers or system need reduction).
- New planning or consenting risks that materially affect deliverability.

5.14 ETOs must complete and submit the Template – Material Project Changes (Appendix 2) to Ofgem. The template should include:

- Project identification details (name, reference, original track).
- Summary of changes and reasons for change.
- Updated project drivers and justification for continued need.
- Revised optioneering analysis and rationale for preferred option.
- Updated cost-benefit analysis and sensitivity testing.
- Delivery and risk impacts, including mitigation strategies.
- Supporting evidence (e.g., technical drawings, cost reports, stakeholder correspondence).

5.15 Ofgem will review the submission to determine:

- Whether the project remains in scope of the original needs case.
- Whether additional reporting is required at the Needs Case or Project Assessment stage.
- Whether the project should revert to Eligibility Assessment or move to Track 3 for further scrutiny.

5.16 Ofgem will notify to the ETO in writing whether the project is:

- Still in Scope: Project continues under Track 1 or 2 with additional reporting requirements at the Project Assessment Stage.
- Reassignment: Project moves to Track 3 for Needs Case Assessment.
- Resubmission required: Ofgem may request a new Eligibility Letter if changes identified by ETOs are significant to warrant a re-review of the project.

5.17 If the load driver falls away, Ofgem may direct the ETO to apply under the Non-Load Re-opener (Special Condition 3.10).

**5.18** Ofgem may issue a direction to update Special Condition 3.15 to adjust Pre-Construction Funding allowances where appropriate.

## 6. Delivery of Load Re-opener Output

### During construction

#### Role of the ETO

- 6.1 ETOs are required through Standard Condition B15 (Regulatory Instructions and Guidance) to report annually during the construction phase on their expenditure and progress in delivery of their Load Re-opener outputs. ETOs will also be expected to report on progress on projects in their delivery pipeline that are expected to be submitted through the Load Re-opener.
- 6.2 As part of this annual reporting the ETO must provide an update on the status of the project delivery programme against the project plan. This must include an explanation of divergences in expenditure or project milestones or concerns that the ETO has about delivery progress.
- 6.3 An ETO may seek an adjustment to the allowed expenditure, Load Re-opener Output or delivery date through the provisions in Part F (Cost and Output Adjusting Event (COAE)) of Special Condition 3.18, although we expect such applications to be rare. More information on the COAE process is set out below.

#### Role of Ofgem

- 6.4 We will monitor progress against deliverables based on information provided in the ETO's annual regulatory report. Where appropriate we will consider and make decisions on any COAE requests made by an ETO.

#### Role of the Independent Technical Advisor (ITA)

- 6.5 Ofgem may designate an ITA to support the monitoring of project delivery as part of its Project Assessment for projects that meet criteria set out in the ITA Guidance Document.
- 6.6 The ITA will act as an impartial body providing assurance to Ofgem on the design, procurement, cost, and delivery of selected load-related projects during RIIO-ET3. While the ITA holds no decision-making authority, the ITA's insights will inform Ofgem's regulatory decisions and help ensure timely, efficient delivery of strategically important investments. The ITA's scope includes supporting the assessment of project delivery and change control, such as COAE or Delay Events, with activities tailored to project complexity and stage.

#### Costs and Output Adjusting Event (COAE)

- 6.7 An event may be categorised as a COAE (as determined strictly in line with the provisions of Part F of Special Condition 3.18), where the following conditions are present:

- an Extreme Weather Event;
- the imposition of additional terms or conditions of any statutory consent, approval or permission (including but not limited to planning consent);
- unforeseen ground or sea-bed conditions; and
- for the purposes of a particular Load Re-opener output, any event that the Authority directs is a Cost and Output Adjusting Event in the Project Assessment Direction.

6.8 Where there has been a COAE, an ETO may apply to Ofgem to amend the Load Re-opener output, delivery date or allowance of a project if:

- the licensee could not have reasonably foreseen the event;
- the licensee could not have economically and efficiently planned a contingency for the event;
- the event has caused expenditure to increase or decrease by at least 10% (expenditure impact) relative to the relevant allowance in Appendix 1 of Special Condition 3.18, or by at least such other percentage as the Authority may direct (calculated before the application of the Totex Incentive Strength); and
- the increase or decrease in expenditure is expected to be efficiently incurred or saved.

6.9 During the Project Assessment stage, we may consider the value of the expenditure impact threshold, including whether to make any changes to the standard 10% threshold for the proposed Load Re-opener output.

6.10 Unless we direct otherwise, to make an application under the COAE provisions, the ETO must make the application:

- as soon as is reasonably practicable after the COAE has occurred; and
- not later than before the end of the period of three months beginning with the delivery date for the Load Re-opener Outputs.

6.11 Additionally, the submission must:

- be made in writing;
- include detailed supporting evidence that a Cost And Output Adjusting Event meeting the requirements set out in Paragraph 6.7 has occurred;
- set out any amendments requested to the Load Re-opener Output, the delivery date or associated allowances in Appendix 1 of the Load Re-opener Licence;
- explain the basis of the calculation for any proposed adjustment to the allowances in Appendix 1 of Load RE-opener Licence which must be designed to keep, so far as is reasonably practicable, the financial position and performance of the licensee the same as if the Cost And Output Adjusting Event had not occurred; and

- include a statement from a technical adviser who is external to and independent from the licensee, whether, considered in the context of the value of the Load Re-opener Output, the proposed adjustments to the Load Re-opener Output, the delivery date or associated allowances fairly reflect the effects of the Cost And Output Adjusting Event; and
- include an update to the submission narrative provided in the Project Assessment submission;
- include an updated main cost spreadsheet;
- include updated supporting cost spreadsheets, where relevant;
- include a detailed technical overview of any changes to the project's technical scope;
- include an updated risk register; and
- detail updates to delivery strategy and risk management.

## **Re-profiling**

6.12 When projects are delivered late, we will re-profile the allowances provided to a network company in its licence to reflect actual expenditure, to avoid the network company benefitting from delayed expenditure.

6.13 This will be done by retrospectively adjusting ETO allowances in the licence and Price Control Financial Model (PCFM) to match the actual expenditure profile that was incurred in delivery of the project.

## **Delivery**

6.14 Once the Load Re-Opener output has been commissioned, the ETO must formally confirm delivery to Ofgem and provide supporting evidence to verify that the output has been achieved.

6.15 We will review the ETO's delivery of the Load Re-opener output. If an ETO misses the delivery date, it must explain the reasons and provide a recovery plan.

6.16 TOs remain fully responsible for their actions and those of any contractors, as they are best placed to manage these risks. This ensures accountability and incentivises careful selection and oversight of third parties.



## Appendix 1 -PASE Framework

### Introduction

A1.1 The PASE framework does not specify how a licensee undertakes optioneering or project development. Projects which do not align with PASE will not be considered inherently uneconomic or inefficient but will be reviewed on its own merits and project specific factors.

### Environmental Considerations

A1.2 PASE does not take into consideration three elements set out below:

- Expenditure on Biodiversity Net Gain (BNG)
- Expenditure on Visual Amenity (VA)
- Insulation and Interruption Gas (IIG) selection

A1.3 For the three elements set out above we will consider the efficient costs at Project Assessment.

A1.4 For BNG, PASE includes these costs when considered at Project assessment regardless of the choice by licensees for either local or remote BNG and we see no difference to this in our review. We recognise that these scope items are often (but not always) mandatory and would anticipate licensee providing cost breakdowns and evidence being provided to justify costs.

A1.5 With regard to VA, PASE includes these costs where economic and efficient in relation to the project presented. We recognise that these works are bespoke to the site/project in question and may be (but not always) mandatory. Where licensees are proposing VA we expect costs to be provided for these works. Specially for VA we recognise that for some works, most often major connections, there

A1.6 For IIG selection, we remain supportive of licensees avoiding the use of SF<sub>6</sub> where possible and support the use of alternatives. Where there are economic and efficient cost for delivering this we will consider it at Project Assessment. Where licensees are considering the use of SF<sub>6</sub>, notably in AIS designs, we encourage licensees to consider the spacing requirements for either alternative F-Gasses or Vacuum interrupters and the replacement of the SF<sub>6</sub> assets ahead of 2050. Where licensees can evidence costs attributable to this we will consider them at Project Assessment. While we retain a view that licensees should consider alternatives, we recognise that for certain specific engineering requirements that SF<sub>6</sub> may be required.

### Ratings Requirements

A1.7 We have specified in PASE, for both Linear (A1.11) and Non-Linear (A1.12) assets our preferred options for various designs to be 220kV. We expect licensees to,

where using PASE, install these assets such that they are capable of 220kV operation. We accept that these assets may be operated at 132kV, and as such some components may require 132kV equipment to be used. Where this is the case, we expect licensees to either:

- Make provision to operate these assets at 220kV; or
- Provide clarity in costing of assets which would need replacement should the operation move to 220kV.

## Innovation

A1.8 We continue to welcome innovative solutions being used in network build and interventions. PASE seeks to minimise limitations to innovative solutions by detailing options which are of a sufficiently high level to enable innovations within the scope of PASE solutions.

A1.9 Where a licensee proposes an innovative solution which:

- is not PASE compliant; and
- is not proven or does not have a history of being deployed through the price control via existing innovation funding mechanisms.

A1.10 We expect that the Track 3 route will be most applicable for these types of investment.

## PASE Linear Builds/Interventions

A1.11 The table below provides the PASE framework for Linear assets:

Linear Builds/ Interventions	PASE	Description	Evidence Required if used
<b>Reconductoring</b>	Primary Option	Highest Rated Conductors shall be used for the Tower/Pole type.  Fittings will be to the highest voltage permissible to the Tower/Pole design	N/A
<b>Hot Wiring</b>	Variant Option	Applicable to all voltages.  May be used for campaign, portfolio investments when above UIOLI.	Where the EAWO and future outage burden does not impact NESO present or future planning or Operations
<b>New Circuit</b>	Primary Option	Double Circuit Overhead Line (Towers or Pylons) – May include minor sections	N/A

<b>Linear Builds/ Interventions</b>	<b>PASE</b>	<b>Description</b>	<b>Evidence Required if used</b>
		<p>of Cable for SSSI, AONBs or dense urban areas.</p> <p>Highest rated conductors available shall be used.</p> <p>Designed to 400kV (or higher) or 220kV.</p>	
<b>New Circuit</b>	Variant Option	220kV OR 132kV Pole Route.	For circuits not interactive with Boundary Circuits directly
<b>New Circuit</b>	Variant Option	Cable Route Stand alone.	<p>That the route is in its entirety in a SSSI, AONB or Dense urban environment</p> <p>OR</p> <p>That all cable costs absorbed by customer</p>

## **PASE Non-Linear Builds/Interventions**

A1.12 The table below provides the PASE framework for Non-Linear assets:

<b>Non Linear Builds/ Interventions</b>	<b>PASE</b>	<b>Description</b>	<b>Evidence Required if used</b>
<b>New Substation</b>	Primary Option	Double Bus Bar AIS 220kV with Double Circuit Turn in capability	N/A
<b>New Substation</b>	Variant Option	Indoor AIS Double Bus Bar 400kV or 220kV with Double Circuit Turn in capability	<p>If used in high pollution areas (Class V insulation requirements) Design must show future extendibility into Double Bus AIS.</p> <p>If design can be shown to not be on boundary critical circuit.</p>

<b>Non Linear Builds/ Interventions</b>	<b>PASE</b>	<b>Description</b>	<b>Evidence Required if used</b>
<b>New Substation</b>	Variant Option	Single Switch Mesh AIS at 220kV or 400kV	Design must show future extendibility into Double Bus AIS.  If design can be shown to not be on boundary critical circuit.
<b>New Substation</b>	Variant Option	Indoor Double Bus GIS Substation at 400kV or 220kV	If required in Dense Urban Area without AIS comparable footprint, Major connection AND no existing ET infrastructure; or.  IF Required at Altitudes over 400m from sea level.
<b>Substation Extension</b>	Variant Option	Atypical Extensions (including Strategic Investment) to Double Bus AIS	If extension costs are under atypical for connection works, but go above Atypical for Strategic Investment purposes.
<b>Substation Extension</b>	Variant Option	Extensions to SF6 Free GIS Double Bus Bar Substations	If extension costs are under atypical for connection works, but go above Atypical for Strategic Investment purposes.
<b>Other</b>	Primary Option	NESO Approved Pathfinders	Unless costs rise above NESO tendered costs.
<b>Other</b>	Primary Option	NESO Operability Requests	Where NESO has provided instructions to intervene on the network.
<b>Other</b>	Primary Option	NESO OTS/ANM Schemes	Where NESO has provided instructions to intervene on the network.

## Appendix 2 – Templates for Load Re-opener Submissions

### Templates Overview

- A2.1 There are three core templates for each Load- Reopener stage and two templates for cancelled projects or those where there are material changes. Licensees will use the Eligibility Letter template as a minimum when triggering a Load Re-opener based scheme.
- A2.2 We expect licensees to submit, at a minimum, the Eligibility Letter ahead of planning applications (where required) or before the completion of detailed technical design works. This will ensure we have sufficient time to provide our views.
- A2.3 For the Stage 2 Needs Case submission we have adapted our templates from the ET3 Major Projects EJP business plan guidance.<sup>8</sup>
- A2.4 We accept that schemes may be cancelled, but welcome licensees submitting the Eligibility letters ahead of signed connection agreements. Where projects are terminated licensee will submit a Template – Cancelled Projects.

### Stage 1 Template – Eligibility Letter

Topic	Description
RRP References	Reference to any Regulatory Reporting Packs as part as part of on-going progress reporting through the Load pipeline.
BPDT/Scheme Reference Number	This will include the licensees own referencing system.
Name of Scheme	Working title of the Scheme. <i>This will be a meaningful name that relates to the investment proposed.</i>
Outputs	Please list all outputs to be delivered.
Cost	This is the total cost of the preferred option(s) <i>This includes all cross-period funding requirements.</i>

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<sup>8</sup> [https://www.ofgem.gov.uk/sites/default/files/2024-09/RIIO-3\\_Business\\_Plan\\_Guidance\\_Annex\\_Part\\_One.zip](https://www.ofgem.gov.uk/sites/default/files/2024-09/RIIO-3_Business_Plan_Guidance_Annex_Part_One.zip)

Topic	Description
Delivery Year	The year the scheme will be completed.  <i>If this is a staged programme with multiple ACL dates, please provide the list and associated circuits which are commissioned.</i>
Applicable Reporting Tables	Please list all applicable tables which have this scheme, including volumes and costs.
Historic Funding interactions	Please detail all interactive (either as direct named assets, or as portfolios) funding provided for works in RIIO ET1 and/or RIIO ET2, RIIO ET3.  Please highlight if there has been any deferrals of works  Please highlight any Early Asset Works Orders (EAWO) associated with these works.
Interactive Projects	Please detail any projects which are directly interactive with this investment. <i>This includes existing and future ASTIs or other Load Re-opener Projects</i>  Where applicable include any project references from the BDPT.

## 1. Reference Table

(Project specific reference table used throughout project life cycle)

## 2. Project Summary Table

(Maximum 500 words)

Title Section	Descriptions
Name of Scheme	Working title of the Scheme.  <i>This will be a meaningful name that relates to the investment proposed.</i>
Investment Driver	<i>tCSNP, Connections, Reinforcement, etc</i>
Solution	<i>Brief overview of the Solution proposed by ETO</i>  <i>This will be a short description of the solution used, max 100 words.</i>
PASE Compliance	Is Project PASE compliant? Yes/No  If project is PASE compliant, is it a Primary or Variant? Primary/Variant

Title Section	Descriptions
	If project is not PASE complaint; brief justification for not aligning with PASE (100 words max).
PASE Evidence Variant Option	Include if PASE Variant Option being used (100 words)
Spend Apportionment (£m)	
RIIO- ET2	
RIIO-ET3	
RIIO-ET4	

### 3. Core Narrative

Section	Requirement	Description	Quantitative/ Qualitative
Needs Case	Eligibility (200 words)	Statements setting out why the proposed project meets the eligibility criteria for the Load Re-opener	Qualitative – setting out how the project aligns with the Load Re-opener eligibility criteria
Needs Case	Preferred project track	State whether the preferred track for the project is Track 2 or Track 3 and state the reasons why.	Qualitative – narrative justification based on maturity and PASE compliance.
Needs Case	Outputs and delivery year (200 words)	Set out the proposed outputs for a Price Control Deliverable and the delivery year.	Quantitative / Qualitative – description of the outputs and proposed delivery years. Include explanation of how the delivery year was calculated.
Needs Case	Justification of Need (200 words)	Outline the reason(s) why the project is needed (e.g. connection to new generation including proportion of non-load shared drivers).	Quantitative / Qualitative. Licensees may provide quantified data to support project drivers – for example connection TOCA, NESO reporting, power system analysis etc.  Specify if project is of strategic importance (e.g this can be a NESO

Section	Requirement	Description	Quantitative/ Qualitative
			identified project for boundary uplift).
Needs Case	Project benefits (500 words)	<p>The expected increase in transmission capability or other wider system benefits.</p> <p>Where a project uses a PASE variant or does not comply with PASE, the ETO should provide justification for the alternative solution.</p> <p>In some cases, these designs deliver clear benefits, such as enabling urgent delivery or reducing major programme risks (e.g., land acquisition or planning constraints). These need to be clearly articulated.</p>	Quantitative / Qualitative – include metrics such as MW increase in transfer capability, boundary flow limits, constraint cost savings, reliability improvements (LOLE/EUE), plus qualitative explanation of wider benefits (e.g., resilience, decarbonisation).
Needs Case	Early needs case views	<p><b>Summary of the project’s early needs case, focusing on the underlying network drivers and justification for intervention. This may include:</b></p> <p>System Context: Identify the network boundary/constraint, provide current and forecast power flows, thermal ratings, NETS SQSS compliance, and any operability issues (fault level, voltage stability).</p> <p>Investment Drivers: Quantify generation/ demand growth using FES and NOA, include</p>	Qualitative – high-level justification of network need and timing.



Section	Requirement	Description	Quantitative/ Qualitative
		<p>contracted volumes, termination risk, and NESO recommendations.</p> <p>Counterfactuals: summarise “do nothing” and “do minimum” scenarios with indicative cost-benefit comparisons.</p> <p>Timing: Justify urgency based on outage constraints, asset lead times, and compliance risks.</p> <p>Evidence: Include high-level power system study outputs and NESO modelling; provide metrics such as MW transfer uplift, constraint savings, and reliability improvements (loss of load).</p>	
Needs Case	Interactive projects (200 words)	<p>Outline whether and how this project interacts with or is dependent on any other project on the network, and vice versa.</p> <p>Specify whether there are interactions with CP2030 and CP2030-referenced projects.</p>	Qualitative – narrative on dependencies and interactions.
Needs Case	Economic benefits (500 words)	Provide details of direct and wider economic benefits, estimated through cost-benefit analysis studies.	Quantitative / Qualitative – cost-benefit analysis outputs (NPV, constraint savings) plus qualitative socio-economic benefits.
Optioneering	Project is subject to statutory or	Does the project require formal planning consent or is it exempt?(eg under Town	Qualitative – narrative on planning status and consultation progress.

Section	Requirement	Description	Quantitative/ Qualitative
	non statutory public consultation (200 words)	and Country Planning Act, Development Consent Order, or permitted development rights)  If consent is required, what stage is the process at? (e.g., early planning, consultation completed, application submitted, consent granted)	
Optioneering	Solution <b>description</b> (1000 words)	Description of the chosen solution proposed by ETO.	Qualitative – narrative justification of compliance or deviation from PASE principles.  If project is a PASE compliant Variant Option or non-PASE compliant provide additional justification following guidance in Appendix 3 – Justification Guide (Eligibility Letter).  Technical schematic, GIS maps and other technical information may be provided.
Optioneering	Short-list of options considered (1000 words)	Provide a list of shortlisted options for the project with justification as to why they are on the shortlist and a summary comparison across projects.	Qualitative – narrative on optioneering and rationale for shortlist.
Optioneering	Early technical view (scope, route e.g. maps including of any known utility	Provide early technical details of the project, including but not limited to:  Project scope	Qualitative – descriptive technical overview; may include indicative ratings or route lengths, site diagrams etc.

Section	Requirement	Description	Quantitative/ Qualitative
	crossings, landing points etc). (500 words)	Route – e.g. maps of known utility crossings, landing points etc.	Technical information can be provided.
Optioneering	PCF (300 words)	Provide an estimate of pre-construction funding required, including a breakdown of this funding estimate.  An outline of estimated delivery timeline, including key contract award milestone	Quantitative / Qualitative – funding estimate in £m plus narrative on timeline and milestones.
Optioneering	Early cost views and estimates (200 words)	Provide a breakdown of early cost estimates of the project. This should follow the same structure of reporting as [BPDT templates?]	Quantitative – cost estimates in £m following BPDT structure.  Set out the timing of investments across different price controls.
Optioneering	Delivery timescales and risks. (500 words)	Provide information on delivery timescales and risks to timely delivery. Uncertainties expected to be experienced	Qualitative – narrative on programme risks and mitigation.
Optioneering	Optioneering justification (700 words)	Provide a summary based on the information set out across all elements of the letter justifying the rationale for the preferred solution.	Qualitative/ Quantitative – narrative justification referencing optioneering and CBA.
Optioneering	Environmental considerations and stakeholder engagement	Provide a summary of environmental impacts and stakeholder engagement activities undertaken for the project. This should include:  Identification of key environmental	Qualitative and Quantitative –  Provide narrative on environmental risks and mitigation strategies, supported by evidence of

Section	Requirement	Description	Quantitative/ Qualitative
		<p>considerations (e.g., visual impact, land use, carbon footprint, biodiversity impacts).</p> <p>Description of any mitigation measures proposed to reduce environmental harm.</p> <p>Summary of engagement with relevant stakeholders (e.g., ESO, developers, local communities, planning authorities).</p> <p>Evidence that stakeholder feedback has been considered and incorporated into the solution design.</p> <p>References to supporting documents such as Environmental Impact Assessments (EIA), planning submissions, and stakeholder consultation reports.</p>	<p>stakeholder engagement outcomes.</p> <p>Include quantitative data where available, such as estimated carbon emissions, land area affected, number of stakeholders engaged, and consultation timelines.</p> <p>Where applicable, provide metrics on biodiversity impact, visual mitigation measures, and socio-economic benefits linked to stakeholder agreements.</p>

#### 4. System Design Table

System Design Table	Circuit/Project	Project Name Option 1	Project Name Option 1a	Project Name Option 2
Thermal and Fault Design	Existing Voltage (if applicable)			
Thermal and Fault Design	New Voltage			
Thermal and Fault Design	Existing Continuous Rating (if applicable)			

**Guidance** Load Re-opener Guidance and Submission Requirements Document

<b>System Design Table</b>	<b>Circuit/Project</b>	<b>Project Name Option 1</b>	<b>Project Name Option 1a</b>	<b>Project Name Option 2</b>
Thermal and Fault Design	New Continuous Rating			
Thermal and Fault Design	Existing Fault Rating (if applicable)			
Thermal and Fault Design	New Fault Rating			
NESO Dispatchable Services	Existing MVAR Rating (if applicable)			
NESO Dispatchable Services	New MVAR Rating (if applicable)			
NESO Dispatchable Services	Existing GVA.s Rating (if applicable)			
NESO Dispatchable Services	New GVA.s Rating			
System Requirements	Present Demand (if applicable) MVA			
System Requirements	2050 Future Demand MVA			
System Requirements	Present Generation (if applicable) MVA			
System Requirements	Future Generation Count (direct connections)			
System Requirements	Future Generation Capacity (licensee forecast) MVA			
Initial Design Considerations	Limiting Factor			

<b>System Design Table</b>	<b>Circuit/Project</b>	<b>Project Name Option 1</b>	<b>Project Name Option 1a</b>	<b>Project Name Option 2</b>
Initial Design Considerations	Strategic Investment			

## **Stage 2 Template – Needs Case (Engineering Justification Paper)**

### **1. Summary Table**

(Maximum 1000 words)

<b>Title Section</b>	
Name of Scheme	Working title of the Scheme.  <i>This will be a meaningful name that relates to the investment proposed.</i>
Investment Driver	<i>tCSNP, Connections, Reinforcement, etc</i>
PASE Eligibility	Primary justification for not utilizing PASE.  <i>This will provide concise justification for our need to review.</i>
BPDT/Scheme Reference Number	This will include the licensees own referencing system.  <i>This will provide interaction with other projects which licensees are developing through their portfolio papers.</i>
Outputs	Please list all outputs to be delivered.
Cost	This is the total cost of the preferred option(s)  <i>This includes all cross-period funding requirements.</i>
Delivery Year	The year the scheme will be completed.  <i>If this is a staged programmed with multiple ACL dates, please provide the list and associated circuits which are commissioned.</i>
Applicable Reporting Tables	Please list all applicable tables which have this scheme, including volumes and costs.

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Title Section	
Historic Funding interactions	<p>Please detail all interactive (either as direct named assets, or as portfolios) funding provided for works in RIIO ET1 and/or RIIO ET2, RIIO ET3.</p> <p>Please highlight if there has been any deferrals of works</p> <p>Please highlight any EAWOs associated with these works.</p>
Interactive Projects	<p>Please detail any projects which are directly interactive with this investment. <i>This includes existing and future ASTIs or LRR Projects</i></p> <p>Where applicable include any project references from the BDPT.</p>

## 2. Core Narrative

Section	Requirement	Description	Quantitative/ Qualitative
Needs Case	Needs Case clarity (300 words)	Demonstrate the specific network need or constraint the project addresses, supported by robust data and analysis. This should include clearly identified investment drivers and justification for intervention.	Quantitative / Qualitative – include power flow studies, boundary limits, generation/demand forecasts, NESO forecasts etc.
Needs Case	Output proposal (300 words)	ETOs may also propose outputs for the project, to be considered by us for specification in the Load Re-opener licence condition	Qualitative – narrative description of outputs and delivery milestone
Needs Case	Needs case views (500 words)	<p>Summary of the project's needs case, focusing on the underlying network drivers and justification for intervention. This may include:</p> <ul style="list-style-type: none"> <li>• System Context: Identify the network boundary/constraint, provide current and forecast power flows, thermal ratings, NETS SQSS compliance, and any operability issues (fault level, voltage stability).</li> <li>• Investment Drivers: Quantify generation/demand growth using</li> </ul>	Qualitative narrative and quantitative evidence to demonstrate the needs case. This means providing clear explanations of network drivers alongside measurable data such as power flow studies, thermal ratings, generation/demand forecasts, cost-

Section	Requirement	Description	Quantitative/ Qualitative
		<p>FES and NOA, include contracted volumes, termination risk, and NESO recommendations.</p> <ul style="list-style-type: none"> <li>• Counterfactuals: summarise “do nothing” and “do minimum” scenarios with indicative cost-benefit comparisons.</li> <li>• Timing: Justify urgency based on outage constraints, asset lead times, and compliance risks.</li> <li>• Evidence: Include high-level power system study outputs and NESO modelling; provide metrics such as MW transfer uplift, constraint savings, and reliability improvements (loss of load).</li> </ul>	<p>benefit comparisons, and reliability metrics (e.g., MW transfer uplift, constraint savings, LOLE/EUE).</p> <p>We expect ETOs to sign-post analysis to any CBA to support any justification.</p>
Needs Case	NESO-driven interactions (150 words)	Identify any interactions with NESO-led projects, including enabling works for CSNP projects or projects recommended by transitional CSNPs.	Qualitative – narrative supported by NESO correspondence or planning documents.
Needs Case	Future energy scenarios (150 words)	Reference GB-wide generation and demand forecasts, including Future Energy Scenarios and the Strategic Spatial Energy Plan (SSEP).	Quantitative / Qualitative – include FES data tables and narrative interpretation.
Needs Case	Regional connections (150 words)	Provide ETO assessments of likely outturn connections on their regional networks.	Quantitative / Qualitative – forecast MW capacity and narrative on regional drivers.
Needs Case	Synergies with NLRE (150 words)	Consider non-load related expenditure where synergies exist with load-related works.	Qualitative – narrative supported by cost estimates where applicable.
Needs Case	Strategic planning alignment	Demonstrate alignment with the latest Network Options	Qualitative – narrative referencing NOA



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Section	Requirement	Description	Quantitative/ Qualitative
	(150 words)	Assessment (NOA) or equivalent planning documents.	recommendations and system planning output
	System constraints (150 words)	Evidence of current or future capacity shortfalls and system constraints requiring intervention.	Quantitative / Qualitative – power flow studies, thermal ratings, and narrative justification.
Needs Case	Counterfactuals (150 words)	Include analysis of credible alternatives such as 'do nothing' or 'do minimum' scenarios.	Qualitative – narrative supported by indicative cost and risk comparisons.
Needs Case	Environment Impacts and stakeholder engagement (1000 words)	Summarise environmental impacts, planning and consenting risks, and stakeholder engagement outcomes.	Qualitative – narrative supported by planning documents and engagement records.
Optioneering	Optioneering analysis (2000 words)	<p>Licensees must provide a detailed narrative explaining the optioneering process undertaken. This should include:</p> <p>Completion of the optioneering summary table, formatted at the licensee's discretion.</p> <p>Clear references to appendices where supporting drawings, maps, and technical information are provided.</p> <p>Inclusion of additional appendices where necessary to proportionately support the funding request.</p> <p>Details of any crossings with other infrastructure (e.g., gas transmission pipelines) when considering new routes.</p>	<p>Qualitative – structured narrative with supporting diagrams; may include elements such as indicative ratings or route lengths</p> <p>We also expect optioneering and appraisal. This should include a detailed cost breakdown by asset type and activity, supported by benchmarking against historical projects or industry standards. Provide Whole-Life Cost Analysis (WLCA) to</p>

Section	Requirement	Description	Quantitative/ Qualitative
		Supporting evidence should be informed by the requirements set out in Appendix 3 – Expected Evidence, ensuring that submissions demonstrate robust justification for the preferred option and consideration of credible alternatives.	capture capital, operational, and replacement costs, alongside environmental and carbon impacts. Include a monetised Cost-Benefit Analysis (CBA) showing constraint cost savings and consumer bill impacts, supported by sensitivity testing on key assumptions. Quantify risk and contingency allowances with clear methodology and provide scenario modelling outputs to justify any anticipatory or strategic investment.
	Policy alignment (150 words)	Explain how local or national policies and net zero targets (including CP2030 and connections reform impacts) have influenced option selection and timing.	Qualitative – narrative referencing CP2030, HND, and relevant policy documents.
Optioneering	Cost-benefit analysis (500 words)	<p>Submit evidence of cost-benefit analysis and sensitivity testing to confirm consumer value.</p> <p>If a project uses a PASE variant or does not comply with PASE, the ETO must provide robust justification for the alternative solution.</p> <p>The ETO must demonstrate how designs may be deliver clear benefits, such as enabling urgent delivery or reducing major</p>	Quantitative – monetised costs/benefits, NPV, constraint cost savings, sensitivity analysis.

Section	Requirement	Description	Quantitative/ Qualitative
		programme risks (e.g., land acquisition or planning constraints).	
Optioneering	Cost drivers (500 words)	<p>Explain the key factors influencing project costs, including engineering design choices, locational constraints, procurement strategy, and risk allocation. The narrative should clearly link cost drivers to the preferred solution and justify any anticipatory investment. This includes:</p> <p>Scope Overview:</p> <p>Provide a clear description of the project scope, including all major components (e.g., overhead lines, substations, cable sections) and any associated works. This should align with the technical design and delivery strategy.</p> <p>Breakdown of quantities:</p> <p>Submit a detailed summary covering all asset types and quantities. This should include unit rates, volumes, and assumptions used in estimating costs.</p> <p>Strategic Investment Justification:</p> <p>Where the project includes anticipatory or strategic elements (e.g., overbuild for future capacity), provide a clear rationale supported by scenario modelling and whole-life cost analysis.</p>	<p>Quantitative/ qualitative explaining key cost drivers such as design choices, locational constraints, procurement strategy, and risk allocation. Include evidence such as a detailed breakdown of equipment list with unit rates and volumes, benchmarking against industry standards</p> <p>Where strategic investment is proposed, justify it with scenario modelling outputs and cost-benefit analysis showing long-term consumer value.</p>
Optioneering	Delivery and risk	Outline delivery timelines, planning assumptions, and risk	Qualitative – programme schedule, risk

Section	Requirement	Description	Quantitative/ Qualitative
	(1000 words)	<p>mitigation strategies on project deliverability, including:</p> <p>A detailed explanation of the delivery approach, covering programme structure, key milestones, and risk mitigation strategies.</p> <p>Previous Funding Overview:</p> <p>Include details of any funding previously requested for assets that interact with the proposed site strategy.</p> <p>Identify any assets that have been subject to intervention within the last two regulatory periods.</p> <p>Provide associated costs and a short description of the scope of those interventions.</p> <p>Programme Schedule:</p> <p>Submit a detailed programme for each option using recognised planning tools (e.g., Primavera P6 or Microsoft Project).</p> <p>The programme should clearly show critical path activities, dependencies, and key delivery milestones.</p> <p>Highlight any outage planning considerations and coordination with third-party works.</p> <p>Supporting evidence should demonstrate confidence in deliverability and alignment with the proposed delivery timeline. Where appropriate, reference appendices containing detailed schedules, risk registers, and procurement strategies.</p>	<p>register, mitigation narrative.</p> <p>Deliverability evidence including supply chain capacity, outage planning, risk modelling.</p>

**Optioneering summary table**

<b>Options</b>	<b>Map</b>	<b>Layout of Substation/ Connection</b>	<b>Layout of all Route Works</b>	<b>Relevant Survey Works</b>	<b>Narrative Consenting Risks</b>	<b>Narrative Preferred Option</b>	<b>Narrative Rejection</b>
<b>Preferred</b>							
<b>Rejected 1</b>							
<b>Rejected 2</b>							

**3. System Design Table**

<b>System Design Table</b>	<b>Circuit/Project</b>	<b>Project Name Option 1</b>	<b>Project Name Option 1a</b>	<b>Project Name Option 2</b>
Thermal and Fault Design	Existing Voltage (if applicable)			
Thermal and Fault Design	New Voltage			
Thermal and Fault Design	Existing Continuous Rating (if applicable)			
Thermal and Fault Design	New Continuous Rating			
Thermal and Fault Design	Existing Fault Rating (if applicable)			
Thermal and Fault Design	New Fault Rating			
NESO Dispatchable Services	Existing MVAR Rating (if applicable)			
NESO Dispatchable Services	New MVAR Rating (if applicable)			

<b>System Design Table</b>	<b>Circuit/Project</b>	<b>Project Name Option 1</b>	<b>Project Name Option 1a</b>	<b>Project Name Option 2</b>
NESO Dispatchable Services	Existing GVA.s Rating (if applicable)			
NESO Dispatchable Services	New GVA.s Rating			
System Requirements	Present Demand (if applicable) MVA			
System Requirements	2050 Future Demand MVA			
System Requirements	Present Generation (if applicable) MVA			
System Requirements	Future Generation Count (direct connections)			
System Requirements	Future Generation Capacity (licensee forecast) MVA			
Initial Design Considerations	Limiting Factor			
Initial Design Considerations	Strategic Investment			

#### 4. Appendices

- Relevant drawings
- Cost breakdown/further information (as required)
- Other Supporting Information in line with advice in Appendix 3

### Stage 3 Template – Project Assessment

#### 1. Summary Table

(Maximum 1000 words)

## Guidance Load Re-opener Guidance and Submission Requirements Document

Title Section	
Name of Scheme	Working title of the Scheme.  <i>This will be a meaningful name that relates to the investment proposed.</i>
Investment Driver	<i>tCSNP, Connections, Reinforcement, etc</i>
Original PASE Eligibility	Detail is PASE has been used or not.
BPDT/Scheme Reference Number	This will include the licensees own referencing system.  <i>This will provide interaction with other projects which licensees are developing through their portfolio papers.</i>
Outputs	Please list all outputs to be delivered.
Cost	This is the total cost of the preferred option(s)  <i>This includes all cross-period funding requirements.</i>
Delivery Year	The year the scheme will be completed.  <i>If this is a staged programmed with multiple ACL dates, please provide the list and associated circuits which are commissioned.</i>
Applicable Reporting Tables	Please list all applicable tables which have this scheme, including volumes and costs.
Historic Funding interactions	Pease detail all interactive (either as direct named assets, or as portfolios) funding provided for works in RIIO ET1 and/or RIIO ET2, RIIO ET3.  Please highlight if there has been any deferrals of works  Please highlight any EAWOs associated with these works.
Interactive Projects	Please detail any projects which are directly interactive with this investment. <i>This includes existing and future ASTIs or LRR Projects</i>  Where applicable include any project references from the BDPT.

## 2. Core Narrative

Requirement	Expanded Description
Introduction	Provide a succinct summary of the entire submission

Requirement	Expanded Description
(500 words)	<p>Must include:</p> <ul style="list-style-type: none"> <li>• Changes to the investment since Stage 1 or Stage 2 submissions, including scope, cost, and delivery assumptions</li> <li>• Identification of any new uncertainties or risks that may affect delivery or cost efficiency.</li> <li>• Confirmation of outputs, delivery year, and alignment with licence conditions.</li> <li>• High-level summary of project drivers, optioneering outcomes, and preferred solution rationale.</li> <li>• Include references to supporting appendices for technical drawings, planning status, and stakeholder engagement evidence.</li> </ul>
<p>Background Information</p> <p>(500 words)</p>	<p>Provide updated background information if changed from previous stages</p> <p>Must include:</p> <ul style="list-style-type: none"> <li>• Completion of all relevant tables summarising project details, technical scope, and planning assumptions.</li> <li>• Explanation of any material changes in project drivers, optioneering, or delivery strategy since Stage 1 or Stage 2.</li> <li>• Evidence of alignment with NESO planning documents (NOA, FES, Holistic Network Design).</li> <li>• References to appendices for additional technical or economic evidence where required</li> <li>• Clear justification for changes and their impact on consumer value and delivery confidence.</li> </ul>
<p>Final Cost</p> <p>(3000 words)</p>	<p>Provide a comprehensive cost justification</p> <p>Must include:</p> <ul style="list-style-type: none"> <li>• Narrative explaining key cost drivers (engineering design choices, locational constraints, procurement strategy, risk allocation).</li> <li>• Detailed scope overview aligned with technical design and delivery strategy</li> <li>• Full Bill of Quantities (BoQ) covering all asset types and quantities, including unit rates, volumes, and assumptions.</li> </ul>



Requirement	Expanded Description
	<ul style="list-style-type: none"> <li>• Breakdown of costs by category: Ofgem Asset Possibilities, Project Management, Risk and Contingency (with risk register), CAIs, Contractor Fees.</li> <li>• RRP compliant submission with OAP C&amp;Vs.</li> <li>• Benchmarking against historical projects and industry standards.</li> <li>• Whole-Life Cost Analysis (WLCA) and Cost-Benefit Analysis (CBA) with sensitivity testing</li> <li>• Scenario modelling outputs to justify any anticipatory or strategic investment.</li> </ul>
<p>Deliverability (1000 words)</p>	<p>Provide a detailed deliverability assessment Must include:</p> <ul style="list-style-type: none"> <li>• Narrative outlining delivery strategy, programme structure, and key milestones.</li> <li>• Previous funding overview, including references to any Pre-Construction Funding (PCF) and breakdown of spend with achieved outcomes.</li> <li>• Programme schedule for each option using recognised planning tools (Primavera P6 or MS Project), showing original and current forecast dates.</li> <li>• Evidence of supply chain capacity, outage planning, and risk modelling.</li> <li>• Risk register and mitigation strategies for delivery risks.</li> <li>• Coordination arrangements for third-party works and dependencies.</li> <li>• References to appendices for detailed schedules, procurement strategies, and stakeholder engagement records.</li> </ul>

### 3. Appendices

- Cost tables associated with Core Narrative
- Cost breakdown/further information (as required)
- Other Supporting Information in line with advice in Appendix 3

## Template – Cancelled Projects

This template should be completed by licensees for projects that have been cancelled after submission through the Eligibility Letter, Needs Case or Project Assessment. It ensures Ofgem has visibility of cancelled projects and associated costs.

1. Project Identification	Project Name: [Enter project name] Project Reference: [Enter reference] Assessment Track (Track 2 / Track 3): [Enter track] Original Submission Date: [Enter date]
2. Reason for Cancellation	Provide a clear explanation of why the project has been cancelled, including any external factors (e.g., planning, stakeholder objections, system changes). [1000 words]
3. Costs Incurred	Summarise all costs incurred up to cancellation, including pre-construction funding, design, and procurement costs. See sub-table below.
4. Outputs Delivered	Detail any outputs delivered prior to cancellation (e.g., completed surveys, design work). [500 words]
5. Interactions with Other Projects	Identify dependencies or interactions with other projects and explain implications of cancellation. [500 words]
6. Supporting Evidence	Attach or reference any supporting documents (e.g., stakeholder correspondence, cost reports, planning decisions). List of Attachments: [Enter details]

Cost Category	Amount (£)	Comments
[Enter details]	[Enter details]	[Enter details]

## Template – Material Project Changes

ETOs must submit the Template – Material Project Changes when a project that has already passed the Eligibility Assessment (or where a project was determined under RIIO-ET3 Final Determinations to be eligible for Project Assessment under the Load Re-opener) experiences significant changes before or during the Needs Case Assessment or Project Assessment stages.

## Guidance Load Re-opener Guidance and Submission Requirements Document

1. Project Identification	Project Name: [Enter project name] Project Reference: [Enter reference] Original Assessment Track: [Enter previous track] Date of Original Submission: [Enter date]
2. Summary of Changes	Provide a clear summary of the changes triggering reassessment under Track 3 (e.g., engineering design, costs, delivery timing, scope). [1000 words]  See Material Changes thresholds table below.
3. Updated Project Drivers	Explain how the project continues to meet the identified network need and delivers consumer benefits despite the changes. [300 words]
4. Revised Optioneering Analysis	Detail the optioneering process undertaken following the changes. Include alternatives and rationale for the preferred option. [1000 words]
5. Updated Cost-Benefit Analysis	Provide a revised cost-benefit analysis, including sensitivity testing to demonstrate efficiency under different scenarios.
6. Delivery and Risk Impacts	Summarise the impact of changes on delivery timelines, supply chain, outage planning, and risk profile. Include mitigation strategies. [500 words]
7. Supporting Evidence	Attach or reference any supporting documents (e.g., updated technical drawings, cost reports, stakeholder correspondence).  List of Attachments: [Enter details]

### Material changes thresholds

This table sets out the thresholds for material changes

Category	Definition	Threshold
Engineering Design	Significant deviation from original technical configuration or PASE compliance.	Change in core design (e.g., overhead line to cable, AIS to GIS) or major design alterations impacting reliability, resilience, or extendibility.
Costs	Increase in forecast capital expenditure or changes in cost drivers.	≥20% increase in total forecast cost or ≥£50m (whichever is greater).

**Guidance** Load Re-opener Guidance and Submission Requirements Document

<b>Category</b>	<b>Definition</b>	<b>Threshold</b>
Delivery Timing	Material shift in delivery schedule or outage strategy.	Delay or acceleration of $\geq 12$ months in key milestones (e.g., in-service date).
Other Material Factors	External or systemic changes affect project justification.	New planning/consenting risks, supply chain constraints, vendor changes, or significant interactions with other projects.

## Appendix 3 - Justification guide

- A3.1 In this section we provide guidance on additional evidence licensee may provide to support our review of the Eligibility Letter or Needs Case where the project is either:
- PASE Variant Option; or
  - Non-PASE compliant.
- A3.2 We will take into consideration a range of evidence in our assessment of the Eligibility Letter and Needs Case and therefore licensees should consider what is the most appropriate evidence which is needed to support their proposals.
- A3.3 We recognise that the level of detail and robustness of evidence will vary depending on the stage of the project. Submissions should therefore provide evidence proportionate to the project's maturity. For example, at the Eligibility Letter stage, we expect more project to be of lower maturity. Therefore, we expect high-level cost estimates and indicative optioneering, whereas at the Needs Case stage we expect project to be more mature, and we expect a more developed cost-benefit analysis supported by sensitivity testing and detailed technical justification.

### Stage 1 – Eligibility Letter

#### Overview

- A3.4 We expect ETOs to provide the Eligibility Letter as early as is possible. This expedience will enable us to provide confidence over regulatory review tracks and timescales as early as possible.

#### Thresholds and Submissions

- A3.5 For sub £300m investments, once a PASE Compliant or Variant Option has been accepted we do not require any additional submission until Project Assessment.
- A3.6 For Projects which are above £300m we will provide commentary on our view of the options selected. Our preference is retained for PASE projects in which Need Case assessments of PASE compliant projects will be triaged and processes early to minimise delays.

#### Cancelled Projects

- A3.7 We anticipate that Eligibility Letter applications may be submitted for projects which do not progress. In anticipation of this we have included a Cancelled Projects template to allow for this.

## **Stage 2 – Needs Case**

### Overview

A3.8 This Section provides guidance for Needs Case Submissions

### Optioneering

A3.9 ETOs must explain how credible alternatives have been considered and evaluated for whole-life cost efficiency, deliverability, and consumer value. A thorough review provides transparency, supports regulatory confidence, and protects consumers by confirming that the chosen option represents the optimal balance of technical performance, environmental impact, and economic benefit

A3.10 ETOs must provide justification that clearly demonstrates why the alternative design is necessary and how it remains aligned with PASE principles of efficiency, resilience, and optionality.

### Whole Life Cost Analysis (WLCA)

A3.11 ETOs should provide Whole Life Cost Analysis (WLCA) for each proposed reinforcement option to show that decision-making reflects the full cost implications over the asset's lifetime. The inclusion of WLCA ensures that options with lower initial costs but higher future liabilities are appropriately assessed against alternatives that may offer better long-term efficiency

A3.12 WLCA should be presented alongside the Cost-Benefit Analysis (CBA) to provide a comprehensive view of both the economic benefits and the lifetime cost profile of each option.

A3.13 WLCA may include but is not limited to:

- Capital costs (Construction), including costs of land, easements/wayleaves and visual amenity mitigations
- Cost of community benefits and bill discounts to those living in proximity of new infrastructure (if applicable)
- Long Term Operational Costs (Maintenance, Running Costs) estimations between different proposals.
- Equivalent carbon equivalent cost of greenhouse gas emissions in construction and operation over the life of the assets, this includes leakage of any Insulation Gases
- Present value cost of like for like replacement at the end of the economic life of the asset (e.g. 40 years for GIS / Cables, 60 years for AIS / OHLs)
- Cost and complexity estimations for the future extension or reinforcement of any proposals any time during the asset's operational life.
- Costs to consumers, including evidence of willingness to pay.

## Operability and Extendibility

A3.14 ETOs should also demonstrate how the proposed solution supports long-term system needs optionality (extendibility and spare capacity) and avoids asset stranding through:

- Whole-life cost comparison of future reinforcement scenarios.
- Extendibility assessment (e.g., ability to add bays or circuits without major redesign).
- Spare capacity modelling against Future Energy Pathways (FEP)
- Supporting Evidence:
  - (1) Technical drawings showing space for expansion.
  - (2) Land acquisition plans and cost estimates.
  - (3) Scenario modelling outputs.
  - (4) Narrative explaining optionality benefits and risk mitigation.

A3.15 Where the ETO is choosing to utilise a solution which limits present or future operability or extendibility the ETO should highlight this and justify through CBA use.

## Cost Benefit Analysis (CBA)

A3.16 The ETO's submission must include evidence on the expected long-term value of the proposed project for consumers when compared to alternative approaches. Such evidence may include:

- A CBA of the shortlisted reinforcement options using the most up-to-date inputs available. This should focus on the monetised costs and benefits for consumers across different scenarios for future generation. In the case of load-related projects (including generation connections), this may include standalone analysis produced by the NESO.
- An explanation of the methodology and assumptions used in the CBA.
- Additional analysis looking at the sensitivity of the CBA results to key inputs and assumptions such as the volume of generation and demand projections, discount rates and constraint volumes and costs.

A3.17 The modelling of the CBA, including:

- a working spreadsheet of the CBA;
- details of the inputs, outputs and any calculated constraint volumes from the CBA; and
- any modelling of key assumptions.
- Relevant information provided by the SO which has been used to inform the analysis on the proposed reinforcement.

A3.18 At the Eligibility Letter stage, the CBA does not need to include any costs associated with changing the delivery dates of options, as all options should be able to start at the same time at this stage of the project.

A3.19 At the Eligibility Letter stage, the CBA should demonstrate consideration of key factors beyond capital costs. This includes quantifying:

- Constraint cost reduction
  - (a) Quantify expected savings from reduced system constraints, such as avoided redispatch and balancing costs.
  - (b) Use NESO modelling outputs or historical constraint cost data as evidence.
  - (c) Provide calculations showing how these savings translate into consumer bill impacts.
- Impact of delay
  - (a) Assess the financial impact of potential delays on constraint costs and consumer bills.
  - (b) Include risk-adjusted scenarios and explain assumptions used in modelling.

Socio-economic benefits

- (c) Provide a narrative explaining the expected regional and national economic benefits, including job creation and inward investment.
  - (d) Quantify benefits using recognised methodologies such as Gross Value Added (GVA) modelling based on ONS multipliers and employment impact studies.
  - (e) Where quantification is challenging, provide qualitative evidence supported by stakeholder engagement and regional development plans.
- Consumer bill impact
  - (a) Translate system savings and efficiency gains into indicative consumer bill impacts using Ofgem-approved methodologies.
  - (b) Provide clear assumptions and calculations to support these estimates.
- Other supporting evidence:
  - (a) Stakeholder engagement records and regional development plans.
  - (b) Sensitivity analysis and scenario modelling outputs.

A3.20 We recognise that, PASE variant or non-compliant designs may sometimes allow for the unlocking of additional benefits that PASE compliant designs cannot. Such design choices may better support time critical delivery, reduce outage requirements, and/ or unlock local environmental benefits. In these cases, we expect ETOs to be explicit in explaining the trade-offs that have informed their design choices relative to the PASE-compliant equivalent design.



- A3.21 Where a PASE Variant or non-PASE compliant solution is proposed, it will only be considered where the Transmission Owner can demonstrate, through a full and robust optioneering assessment, that the alternative delivers clear and quantifiable long-term consumer benefits. Any justification based on factors such as delivery acceleration or programme risk must be supported by strong evidence and presented as part of the broader whole life cost analysis, ensuring that short-term gains do not compromise efficiency, resilience, or future-proofing in line with PASE principles.
- A3.22 For example, in the case of a non-compliant solution enabling earlier delivery, the submission should clearly demonstrate how this acceleration or derisking of delivery will drive expected benefits, and why the proposed solution is necessary to achieve this. This should be based on thorough and proactive exploration and robust assessment of a full range of options, and present a clear, strong basis for any expected time saving stated and the resulting expected benefits.
- A3.23 ETOs should be able to articulate a clear justification and quantification of the additional benefits that will result from their design, and how they've traded them off against additional costs, or other disbenefits, to determine that the selected design represents the best overall outcome for consumers. Paragraphs A3.20 to A3.34 set out examples of evidence that should support the ETO justification.

## **Stage 3 – Project Assessment**

### **Overview**

- A3.24 This section details the Project Assessment overview.

### **Progress to Project Assessment**

- A3.25 Where optioneering has changed, we will undertake a further review of the solutions proportional to the degree of change. If the optioneering solution remains PASE compliant, we will seek to expedite the process. Where the solution has changed to PASE Variant or Non-Compliant then we expect ETOs to submit a Need Case submission as soon as possible to ensure our review is early on in the design processes. ETOs must submit a Template – Material Project Changes (as set out in Appendix 2) as soon as possible, ahead of any Project Assessment submissions.
- A3.26 Before progressing to Project Assessment, licensees must provide robust cost estimates supported by advanced procurement or tendering evidence to demonstrate confidence in pricing.
- A3.27 Cost submissions as a minimum will be detailed in an RRP compliant format and will include all applicable OAP. Licensees may provide alternative breakdowns, with BoQs being the most applicable.

## Cost Drivers

A3.28 Where licensees are justifying their costs we expect that clear cost drivers will be provided with associated factors clearly justified and evidenced.

## Wider Stakeholder Evidence

### Detailed Stakeholder Justification

A3.29 Where applicable, licensees should provide clear analysis and any wider stakeholder supporting information to help the demonstration of the benefits of the proposed solution. This can contain a range of evidence that may include but is not limited to:

- Environmental and wider carbon impacts
- Deliverability and supply chain
- Planning, consenting and stakeholder acceptance

A3.30 This may include evidence such as:

- Land acquisition – we would expect to review evidence that licensees have engaged with landowners and established cost and programme impacts if this is being used as justification.
- Planning Consents – we would expect to review evidence that licensees have engaged with planning authorities and ahead of planning submissions highlighted the different options available to the licensee, including those which are PASE complaint solutions.
- Connecting or existing infrastructure (consents and land): This applies when an ETO is seeking planning consent or land rights for a project and there are comparable cases where other third-party connectors or large infrastructure projects have successfully secured similar consents, land access, or equipment. In these situations, ETOs must provide a clear analysis explaining why they cannot achieve similar outcomes. The submission should include supporting evidence such as correspondence, planning authority responses, and any relevant documentation demonstrating efforts made and barriers encountered.
- Licensees who propose supply chain limitations as justification for not utilising PASE will need to confirm from the supply chain why this is not suitable, and in particular why APM has not addressed these issues.

## Environmental Impacts

A3.31 We recognise that there are Environmental trade offs which licensees must consider. We expect licensees to utilise Strategic investment and extensible designs as often as possible to minimise net environmental impacts. Where

licensees' options are definitely influenced by environmental factors we expect justification to be included in the relevant sections.

A3.32 This may include but not limited to:

- Visual mitigations (including 3D renderings if required)
- Environmental land uses and mitigation requirements.
- Carbon and embodied carbon emissions.
- Protected environments species
- Impacts of unextendible, un-reinforceable designs

### Planning, consenting and stakeholder acceptance

A3.33 ETOs should demonstrate that planning and stakeholder considerations have been fully assessed to reduce delivery risk and ensure timely project execution.

This may include:

- Planning risk analysis (timeline, likelihood of consent): analysis outlining expected timelines and likelihood of consent, supported by evidence of proactive engagement with relevant authorities and communities
- Stakeholder engagement: evaluation of potential impacts of stakeholder positions on project feasibility and identify measures to mitigate objections or delays.
- Community benefit evaluation: assessment of community benefits associated with the project, highlighting how these have been communicated and agreed upon during consultations.

### Deliverability

A3.34 ETO's should include a clear delivery strategy and timeline. This may include but is not limited to:

- Clear delivery strategy and timeline:
- Project schedule with key milestones
- Procurement approach (objectives, risk management, value-for-consumer considerations)
- Third-party works and coordination arrangements
- Supply chain availability assessment
- Delivery risk summary and mitigation plans
- Application of lessons learned from previous projects
- Supply chain capacity assessment (lead times, vendor availability)
- Outage planning optimisation studies
- Programme risk modelling (critical path analysis).