nationalgrid

East Claydon – Enderby – Patford Bridge (EBRE) Submission Summary

National Grid Electricity Transmission
Eligibility Letter and Needs Case

May 2026

T3 – East Claydon – Enderby – Patford Bridge OHL Reconductoring

Executive Summary

Background

The East Claydon – Enderby – Patford Bridge (EBRE) project involves reconductoring an existing 400 kV overhead line (OHL) circuit to increase its transmission capacity and maintain network reliability. The scheme has been identified through the Network Options Assessment (NOA7) and subsequent system planning processes as essential to support future electricity demand and generation growth.

The investment forms part of NGET's RIIO-T3 programme and contributes to wider UK energy policy objectives, including Clean Power 2030. It enables increased power transfer across key network boundaries and supports the integration of new low-carbon generation while maintaining system operability and resilience.

Investment Drivers

The primary drivers for this investment are:

Network capacity requirements (NESO):

- Increase B8 boundary capability by approximately 500 MW and B9 boundary by 250 MW to support forecast power flows and system stability.
- Address thermal limitations by increasing circuit capacity from 2010 MVA to at least 3100 MVA.

Asset health benefits (secondary driver):

- Replacement of ageing conductors and steelwork to improve long-term reliability.

Options

A structured optioneering process considered a wide range of interventions, including:

A. Do nothing / counterfactual
B. Hotwiring existing assets
C. Power flow control devices
D. Reconductoring and hybrid options
E. Reconducting
F. New build circuits
G. Dynamic line rating

Following assessment, four credible shortlisted options were identified, all relating to Reconducting Option D. Four conductors were identified to replacing existing conductors (two for each existing conductor), which for commercial reasons we shall refer to these in generic terms as conductor A to D:

- Option E-1: Reconductoring with Conductor A & Conductor B
- Option E-4: Reconductoring with Conductor C & Conductor B
- Option E-5: Reconductoring with Conductor C & Conductor D
- Option E-6: Reconductoring with Conductor A & Conductor D

These options were assessed against deliverability, cost, system performance and compliance with required outputs.

Preferred Solution

The preferred solution is Option E-1: Reconductoring with Conductor A & Conductor B.

This option involves full reconductoring and associated refurbishment of the existing circuit to:

- Deliver the required 3100 MVA capacity
- Increase B8 and B9 boundary transfer capability
- Replace ageing assets and extend asset life by approximately 40 years
- Improve network reliability and reduce likelihood of faults

The option is selected on the basis that it:

- Meets all thermal and delivery requirements
- Provides greater future-proofing compared to alternatives
- Uses well-established conductors with proven operational performance
- Offers a balanced outcome across cost, operability and delivery risk