nationalgrid

Feckenham – Ironbridge (IFR1) Submission Summary

National Grid Electricity Transmission
Eligibility Letter and Needs Case

May 2026

T3 – Feckenham – Ironbridge OHL Reconductoring

Executive Summary

Background

The Feckenham – Ironbridge (IFR1) project is a reinforcement of an existing 400 kV overhead line (OHL) circuit through reconductoring. It is a National Energy System Operator (NESO) driven investment identified through the Network Options Assessment (NOA7) and subsequent strategic planning processes to support future electricity demand and generation growth.

The investment is required to increase the thermal capacity of the existing circuit and support power transfer across the SC1 boundary.

The project forms part of wider network reinforcement required to accommodate increasing electricity flows, particularly north-to-south transfers driven by generation growth and changing system conditions, aligned to Clean Power 2030 (CP2030).

Investment Drivers

The primary drivers for this investment are:

Network capacity requirements (NESO):

- Requirement to increase SC1 boundary capability by approximately 700 MW.
- Increase circuit rating to at least 3100 MVA to meet forecast system requirements.
- Address overload risk under certain fault conditions and high-power transfer scenarios.

Asset health benefits (secondary driver):

- Replacement of ageing conductors and fittings and approximately 8 tonnes of deteriorating Grade 4 steelwork.

Options

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

- Do nothing
- Hotwiring / uprating existing assets
- Installation of power control devices
- Reconductoring with alternative conductor types
- Upgrading voltage (275 kV to 400 kV)
- Building a new circuit
- Dynamic line rating

Following assessment, two credible shortlisted options were identified. For commercial reasons, we shall refer to these in generic terms as Conductor A and Conductor B:

- Option D-1: Reconductor with Conductor A
- Option D-4: Reconductor with Conductor B

All other options were rejected as they:

- Did not meet the required 3100 MVA capacity,
- Could not be delivered within required timescales, or
- Presented higher cost, delivery, or consenting risks.

Preferred Solution

The preferred solution is Option D-1: Reconductoring the existing circuit using Conductor A.

This option is selected on the basis that it:

- Has lower capital cost and transmission losses compared with the alternative.
- Uses a proven and widely deployed conductor, reducing delivery and operational risk.
- Enables full refurbishment of conductors, fittings and targeted steelwork, improving asset reliability and extending asset life.