

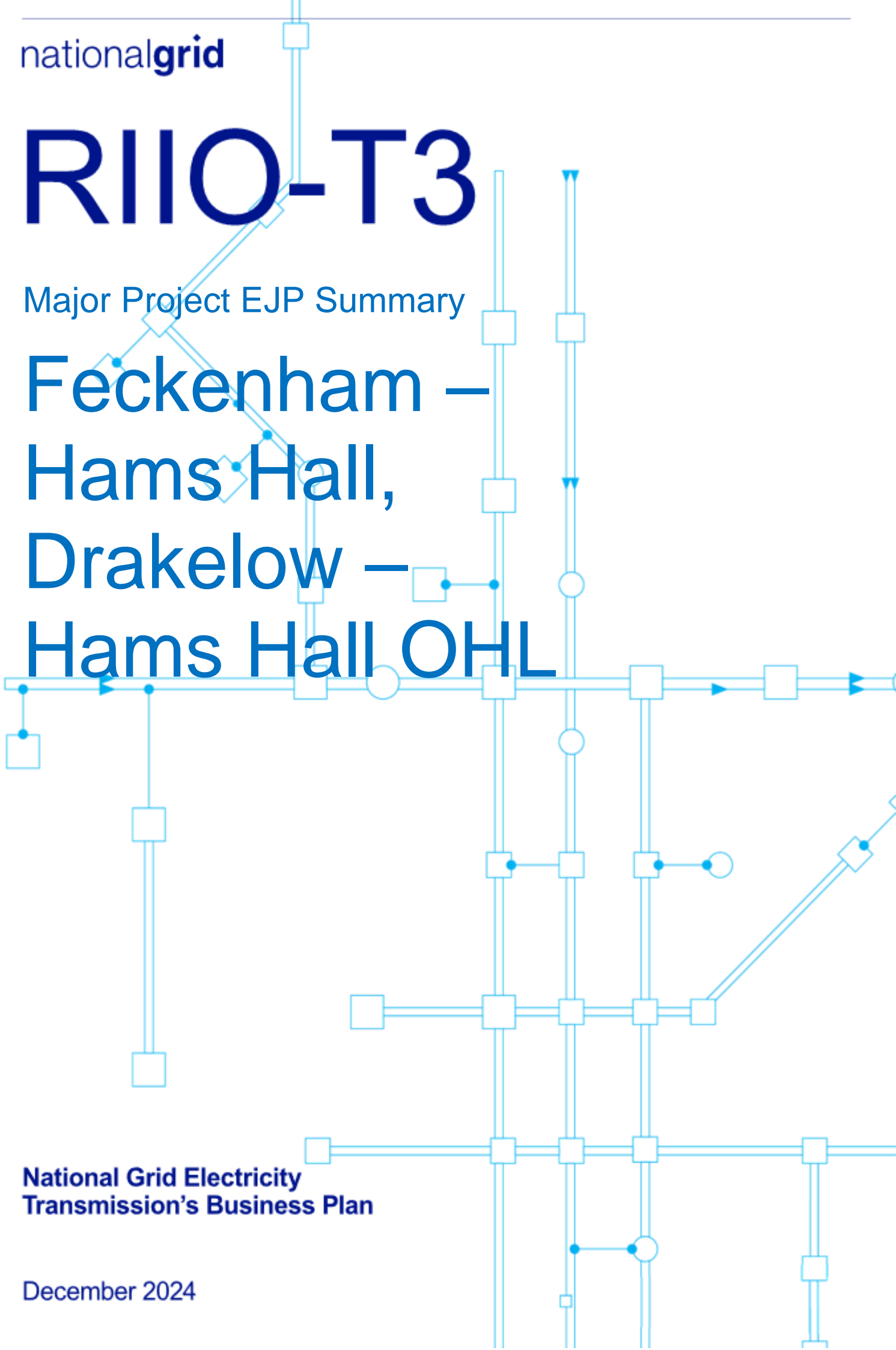
RIIO-T3

Major Project EJP Summary

Feckenham – Hams Hall, Drakelow – Hams Hall OHL

National Grid Electricity
Transmission's Business Plan

December 2024



Executive Summary - Major Project EJP: Feckenham – Hams Hall, Drakelow – Hams Hall OHL

Background

The Feckenham – Hams Hall and Drakelow – Hams Hall 400kV overhead line (OHL) circuits, collectively referred to as FHRE, are essential components of the UK's electricity transmission network, supporting the north-to-south power flow. Both circuits were fully refurbished in the late 1980s, which now require upgrading to meet future power demands and ensure network reliability.

Investment Drivers

The primary driver for the proposed intervention is the need to increase boundary capabilities as identified in the Network Options Assessment (NOA7) Refresh report. Specifically, the aim is to enhance the B8 boundary capability by 1050MW and the B9 boundary capability by 950MW to address increased power flow demands and system stability. Additionally, the Drakelow – Hams Hall circuit needs to be upgraded to meet growing customer demand and planned connections, as outlined in the Transmission Works Review (TWR) with a need date of 2028. This project also seeks to address emerging asset health considerations that can be bundled with the primary driver as part of this Investment for delivery efficiency.

Options

An options assessment was conducted to identify the most effective solution to meet the investment drivers. The key outputs and benefits considered were:

- Achieving a post-fault winter rating of at least 3100MVA.
- Deliverability by 2028 to enable planned connections.
- Addressing steelwork condition on both circuits.
- Providing additional capacity to address potential future needs.

Preferred Solution

The preferred solution involves reinforcing the Feckenham – Hams Hall and Drakelow – Hams Hall 400kV circuits. This option will:

- Increase the B8 boundary capability by 1050MW and the B9 boundary capability by 950MW.
- Enhance the circuits' winter post-fault capacities, aligning with the next limiting factor of the substation civil infrastructure.
- Alleviate thermal capacity constraints, allowing new customer connections and supporting the transition to a low-carbon economy.
- Improve the reliability and resilience of the transmission network by replacing aging assets.

Timeline

The project is proposed for completion date at this stage by December 2030 as per the NOA signal, with the following key milestones:

- Conducting ecological surveys and continuing FEED activities.
- Commencing the main works tender process, then contract awards.

- Beginning equipment procurement, with a lead time of approximately 10-12 months.
- Executing the main works both circuits