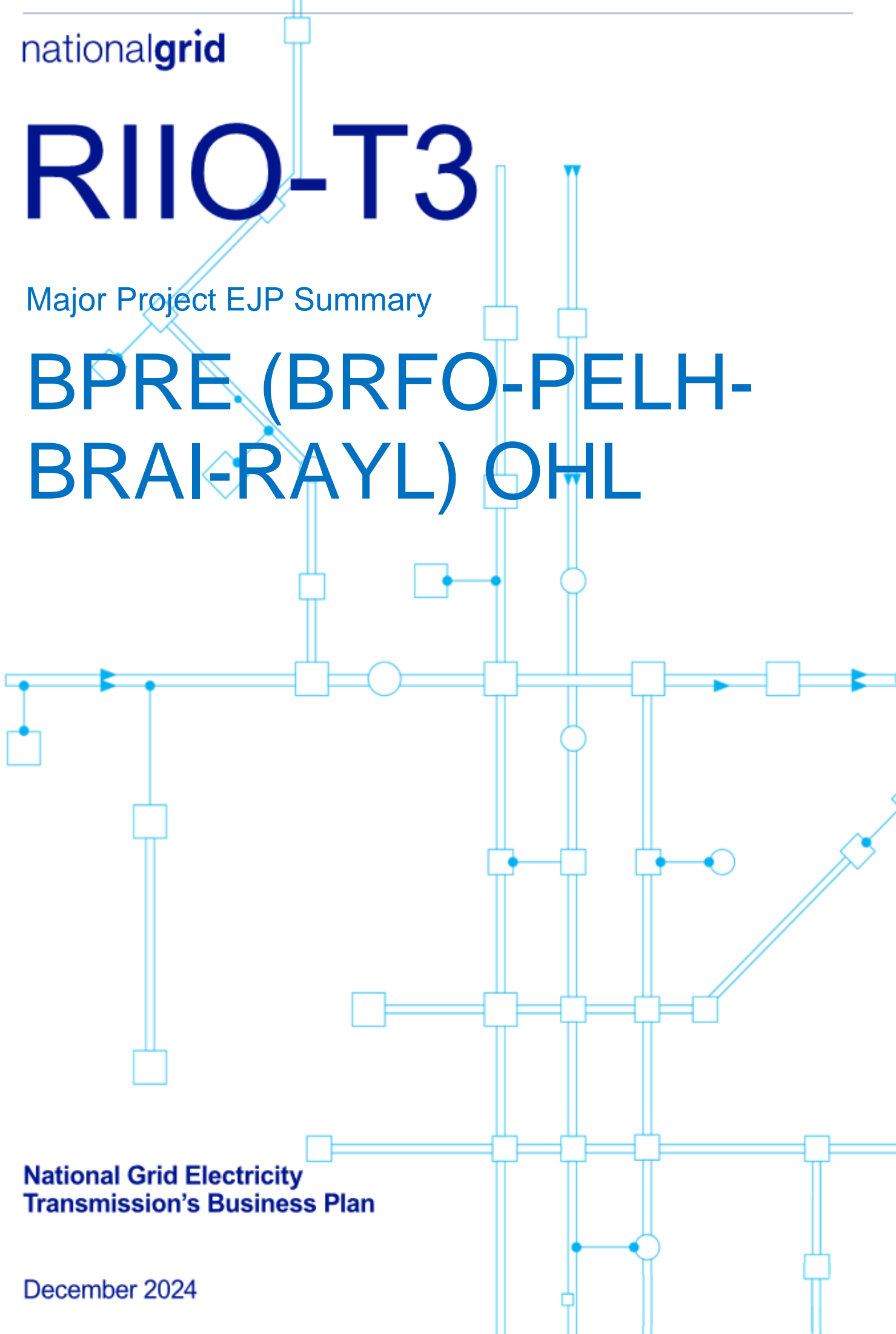


R110-T3

Major Project EJP Summary

BPRE (BRFO-PELH- BRAI-RAYL) OHL



**National Grid Electricity
Transmission's Business Plan**

December 2024

BPRE (BRFO-PELH-BRAI-RAYL) OHL

Executive Summary

Background

The BPRE (Bramford-Pelham-Braintree-Rayleigh) Overhead Line (OHL) project is a critical initiative within National Grid Electricity Transmission's (NGET) RIIO-ET3 business plan. The primary objective of this project is to upgrade a section of the overhead line network in the East Anglia region to support the increased power generation from regional generation sources. This project involves the reconductoring of the existing Quad Zebra conductors to significantly increase the network's capacity and reliability.

Investment Drivers

The BPRE project is driven by both load-related and non-load-related factors:

Load-Related Drivers

- The need to enable a 6,377MW boundary uplift across the EC5 boundary, essential for the BTNO (Bramford to Twinstead Reinforcement) and BRRE (Bramford-Rayleigh Reinforcement) schemes.
- To support increased generation capacity in East Anglia, facilitating the transmission of power from North Sea offshore wind assets and other regional generation.
- Alleviate thermal overloading on the newly formed second Bramford-Pelham circuit during outages on other circuits, supporting power flows from the Midlands to the South.

Non-Load-Related Drivers

- Improve asset health including steelwork condition improvements and strengthening and tower muff and foundation repairs.

Options

An assessment of options was undertaken to formulate the investment proposal. The key outputs and benefits considered (including in conjunction with BTNO) bringing the existing Pelham 400kV - Braintree 400kV – Rayleigh 400kV to 3,326MVA rating pre and post fault, addressing asset health and providing additional capacity to meet future needs.

Preferred Solution

The preferred solution for the BPRE project involves reconductoring the existing towers with new conductor. This option meets the need for increased capacity as specified in the System Design Specifications, ensuring a winter post-fault rating of 3,326 MVA. It also provides a consistent thermal rating limit between Bramford-Pelham and Bramford-Rayleigh following the completion of BRRE, BPRE, and BTNO schemes. As no new overhead line construction is required this reduces the impact on local stakeholders.

Timeline

The proposed delivery timeline for the BPRE project includes several key milestones with the first site access proposed in April 2027 and completion in 2028. This timeline is closely aligned with the BTNO scheme to ensure optimal coordination of outages and resource allocation.