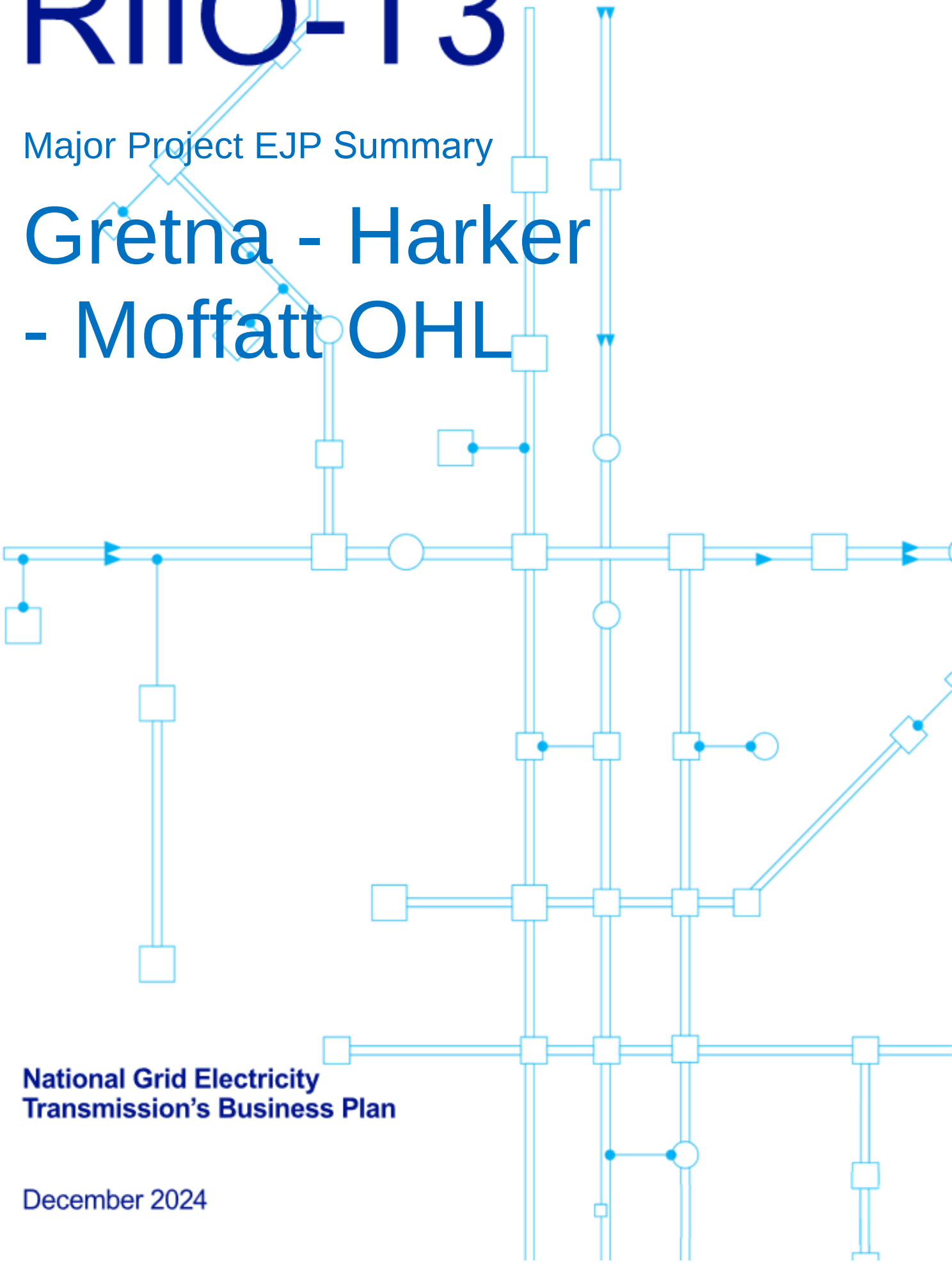
nationalgrid

RIIO-T3

Major Project EJP Summary

Gretna - Harker - Moffatt OHL



National Grid Electricity Transmission's Business Plan

December 2024

Gretna - Harker - Moffat OHL

Executive Summary

Background

The Elvanfoot (Gretna) – Harker & Harker – Moffat 400kV overhead line (OHL) circuits were constructed in 1993 with twin Rubus conductors. They form a critical component of the electrical transmission network between Scotland and England. These circuits span a route crossing the Anglo-Scottish border, with 10.20 route km within National Grid Electricity Transmission's (NGET) licensed area.

Investment Drivers

The primary driver for this investment is to contribute towards meeting the power transfer requirements of almost 20GW and 30GW across the B6 boundary by 2030 and 2035 respectively. This increase is crucial to address power flow demands and system stability, particularly to support the transmission of renewable energy generated in Scotland to demand centers in the South. The project is deemed essential, with an optimal delivery date set for December 2030, aligning with the broader reinforcement plans within the northwest and northeast regions.

Secondary drivers include addressing the asset health requirements of the fittings to maintain network reliability and longevity.

Options

A comprehensive assessment of multiple options was undertaken to formulate the investment proposal. The key outputs and benefits considered included supporting transmission of renewable energy in Scotland and enhancement of the B6 boundary capability by 400MW.

Preferred Solution

The preferred solution is reconductoring the existing 400kV circuits. This option will:

- Increase the EHRE circuit’s winter post-fault capacity from 2210 MVA to 3100 MVA, ensuring preparedness for increased power flow and demand.
- Address future asset health requirements by replacing aging conductors and fittings, thereby enhancing the reliability and resilience of the system.
- Support the connection of new renewable energy projects and managing increased power flows.
- Align with NGET’s strategic reinforcement plans in the Northwest and Northeast regions.

Timeline

The project is proposed for completion by December 2030 as per NOA signal. Key milestones include continuation of Front-End Engineering Design (FEED) activities, pre-works for procurement and mobilisation ahead of the first planned outage and project completion.