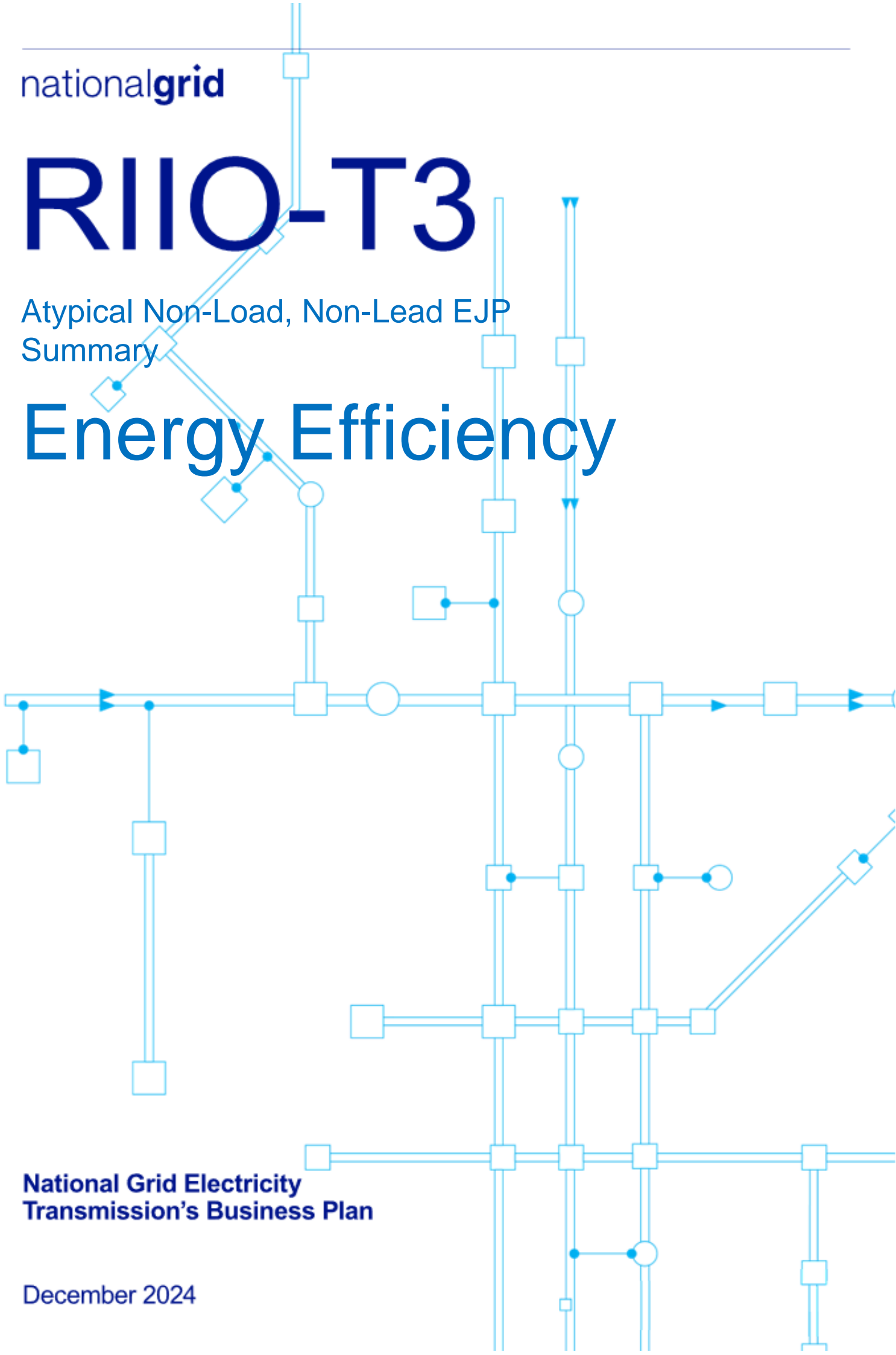


nationalgrid

R110-T3

Atypical Non-Load, Non-Lead EJP
Summary

Energy Efficiency



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

December 2024

Energy Efficiency

Executive Summary

Background

The document details the proposed Substation Energy Efficiency Programme by National Grid Electricity Transmission (NGET) as part of the RIIO-ET3 business plan. The project aims to install energy efficiency measures across selected substations, directly supporting our Science Based Target of aligning with our commitment to environmental sustainability and a 50% reduction in Scope 1 and 2 emissions from a 2018/19 baseline. The project is expected to provide a reduction in energy and carbon use from a 2022/23 baseline.

Investment Drivers

Primary drivers for this investment include:

- Energy and carbon reduction in line with the Energy Saving Opportunity Scheme Regulation 2023 and NGET's environmental goals.
- Reduction in operational expenditure through lower utility bills.

Secondary drivers include NGET's commitment to deliver a clean, fair, and affordable energy future, as well as responding to stakeholder feedback on the need for quantifiable energy reduction targets in substations.

Options

The project considered a range of energy efficiency technologies and interventions through an optioneering process. Sites were prioritised based on factors which included energy consumption, carbon intensity, and deliverability.

Preferred Solution

The preferred option was selected based on balancing the Net Present Value (NPV) and capital expenditure. This option includes:

- Installing innovative and efficient technologies and retrofitting insulation to key buildings
- Upgrading heating and cooling systems and control systems
- Solar PV installation
- Replacing windows and doors and draughtproofing.

The preferred option, once complete, is estimated to yield annual electricity savings of 15 million kWh and annual carbon savings of 3307 tCO₂e, translating to reductions in utility bills and long-term benefits for consumers and the environment. Additionally, we also plan to deliver a behavioural programme alongside the energy efficiency project.

Timeline

The project is proposed for delivery during T3, with key milestones including design, procurement, construction, and project closeout stages. The procurement strategy involves detailed surveys, supplier proposals, and coordination with local site planning teams.