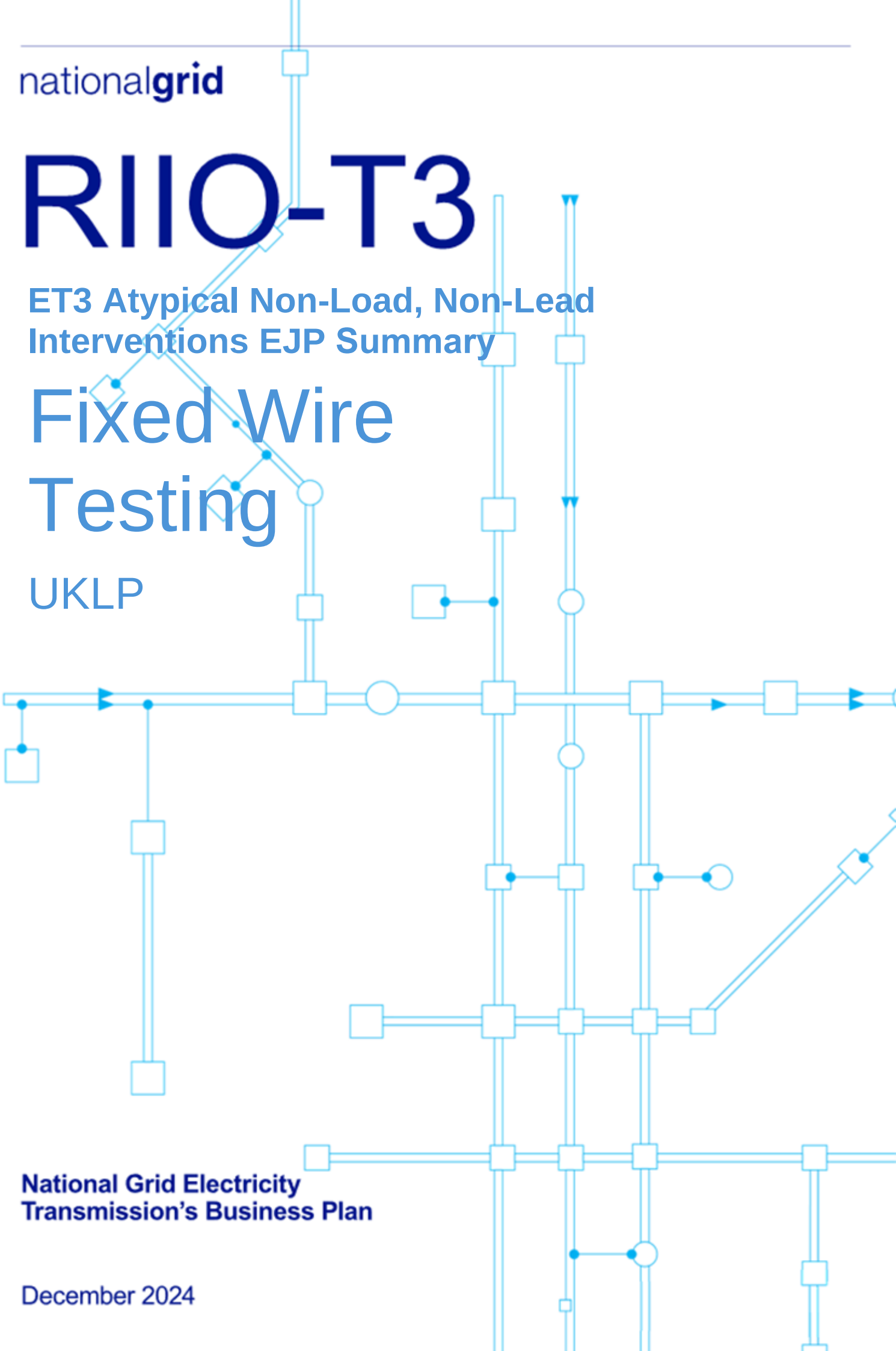
nationalgrid

RIIO-T3

ET3 Atypical Non-Load, Non-Lead Interventions EJP Summary

Fixed Wire Testing

UKLP



National Grid Electricity Transmission's Business Plan

December 2024

Fixed Wire Testing: Executive Summary

Background

National Grid Electricity Transmission (NGET) is responsible for the high voltage transmission network in the UK, a critical infrastructure that transports energy to homes and businesses. To support the Government's ambition of a decarbonised power system by 2030, NGET must expand its infrastructure significantly. This growth necessitates not only increased capacity but also the provision of safe, modern, and inclusive workspaces to attract and retain a skilled workforce.

Fixed Wire Testing (FWT) is a statutory requirement under the Electricity at Work Regulations 1989, which mandates the inspection and testing of electrical installations and circuits every five years. During the RIIO-T2 period, we conducted FWT across X substations, identifying X remedial actions that were classified into four categories: Danger Present (C1), Potentially Dangerous (C2), Improvement Recommended (C3), and Further Investigation Required (FI). This investment proposal focuses on continuing remediation of C2 and FI actions and addressing C3 improvements to ensure compliance and safety across X substation sites.

Investment Drivers

The primary driver for this investment is the health and safety of our employees, ensuring compliance with statutory regulations and providing a safe working environment. The FWT project aims to address identified deficiencies to maintain regulatory compliance, improve the reliability of low-voltage electrical systems, and support the broader goal of transforming our workspaces to attract and retain workforce talent during a period of significant network expansion.

Options Considered

We evaluated several options to address the identified deficiencies:

Option 1 – Do Nothing

This option was rejected as it would leave almost X deficiencies unresolved, failing to meet statutory compliance and posing significant safety risks.

Option 2 – Phased Remediation

This approach proposed phasing remediation works across the highest risk sites during RIIO-T3, with remaining works deferred to RIIO-T4. This option was discounted due to the inefficiencies and higher costs associated with duplicated site visits and potential emergency repairs.

Option 3 – Full Remediation (Preferred)

This option involves resolving all X identified deficiencies within the RIIO-T3 period. This comprehensive approach ensures safe workspaces, regulatory compliance, and cost-efficiency by avoiding duplicated site visits and emergency works.

Option 4 – Safety Critical Remediation

This option would address only C2 and FI works during RIIO-T3, leaving C3 works for later. It was rejected due to the potential for further degradation of electrical systems and the higher costs associated with emergency repairs and duplicated site visits.

Option 5 – Defer to RIIO-T4

Deferring all remedial works to RIIO-T4 was rejected as it presents unacceptable risks to workforce safety and fails to meet statutory compliance.

Preferred Solution

The preferred option is Option 3: Full Remediation. This option fully meets our needs case by delivering all identified remedial works within the RIIO-T3 period, ensuring safe and compliant workplaces, supporting workforce retention, and providing long-term reliability of electrical systems. It is the most cost-efficient solution, avoiding the higher costs of emergency repairs and duplicated site visits.

Timeline

The project will be delivered over five years, aligning with the RIIO-T3 price control period. Detailed survey and quotation work will be carried out in the first two years, with a ramping-up of delivery in subsequent years. The works will be delivered as follows:

- Year 1: X% of the project portfolio
- Year 2: X% of the project portfolio
- Years 3-5: X% of the project portfolio each year

The project will be coordinated with the “Operational Property Estate” investment to maximise efficiency and minimise disruption.

Conclusion

The proposed investment of £X million for the RIIO-T3 period will ensure the delivery of X remedial actions across X substation sites. This investment is critical to maintaining statutory compliance, ensuring the safety of our workforce, and supporting the broader goal of transforming workspaces to attract and retain talent. The preferred option, Full Remediation, provides the most cost-efficient and comprehensive solution, ensuring long-term reliability and minimising the costs and risks associated with deferred and emergency works.