ASSET DYNAMICS LIMITED
Level 1, 3 Byron Street
Napier 4110
New Zealand
info@assetdynamics.co.nz
assetdynamics.co.nz

30 July 2026

Entrust
Private Bag 92088
Victoria Street West
Auckland 1142

Attention: The Trustees

Network Security Report 2026

Under Entrust's New Deed Recording Essential Operating Requirements (NDREOR), Vector is required to periodically engage an independent expert to prepare a report on the state of its electricity distribution networks. Vector engaged Asset Dynamics to undertake this review and prepare the Network Security Report 2026.

The review was undertaken by Asset Dynamics as lead assessor, with support from Niko Electrical Engineering Consultants. Asset Dynamics is an independent asset management consultancy serving New Zealand's infrastructure sector, advising asset owners across the full breadth of the discipline in line with international good practice. Our Directors hold internationally recognised certifications and have extensive experience working with regulated and asset-intensive organisations. For this engagement, the assessment team's qualifications and experience span strategic asset management, electrical engineering, maintenance management, data and information management, and process safety.

The scope of the review addresses the matters required under the NDREOR, namely:

- The state of Vector's electricity lines with regard to maintenance programmes and the appropriateness of expenditure;
- Any need for the upgrading of Vector's electricity assets;
- The capacity of Vector's electricity lines in relation to forecast demand; and
- Any security risks to Vector's electricity lines network.

Summary Findings

The review found that Vector has established systems, processes, and programmes that are generally appropriate for the scale and complexity of its electricity network across the areas of maintenance, upgrade, capacity, and security. The assessment did not identify any concerns requiring fundamental changes to Vector's asset management, investment, or operational approaches. The review identifies areas requiring continued management focus, including completion of the transition to the strengthened maintenance regime and continued improvement in capital delivery performance as investment levels increase. It also identifies several opportunities for continuous improvement, such as further strengthening investment prioritisation processes and improving consistency in some aspects of field delivery. Overall, the findings indicate a mature and improving asset management system that is delivering appropriate outcomes while continuing to evolve in response to changing network requirements and risks.

Our review is based on the information made available during the engagement, including documents, data, interviews, sample-based tracing of works from identification to close-out, field surveys, and independent analysis undertaken in selected areas. Asset Dynamics has exercised professional judgement and applied reasonable skill and care in undertaking the review but has not independently audited or verified every item of information provided.

The review should be read in the context of a network operating in a dynamic environment. Vector continues to manage growth in demand and customer connections across Auckland. At the same time, the business is responding to increased resilience expectations and evolving customer and technology impacts, while working to translate a growing investment pipeline into sustained delivery performance.

Maintenance

Vector has established a structured and increasingly mature maintenance system, supported by asset class strategies, maintenance standards, and procedures that are subject to ongoing review. There is evidence that risk-based approaches to maintenance and defect prioritisation are embedded, supported by improving asset condition modelling. These practices are contributing to more targeted expenditure and informed risk management.

Network performance indicators suggest that maintenance and renewal activities are supporting acceptable network outcomes, notwithstanding the impacts of recent severe weather events.

The primary area requiring continued focus within maintenance is embedding Vector’s strengthened maintenance and inspection regime. This follows the maintenance review completed in financial year 2025 and the development and introduction of new maintenance and inspection standards in financial year 2026. The transition includes validating and reassessing existing open notifications raised under earlier practices, and progressing remediation of actionable defects under the revised timeframe-based approach.

Maintenance planning and expenditure are considered appropriate, with continued progress toward more consistent and data-informed decision-making.

Upgrade

Vector has established a structured and credible approach to identifying and progressing network upgrades that aligns with its corporate risk management frameworks. There is a clear linkage between asset-related risks, performance objectives, and proposed upgrade programmes. Investment decisions draw on a range of inputs, including reliability performance, asset condition, safety and environmental considerations, and operational experience.

The review identified an opportunity to further formalise the prioritisation of upgrade needs across competing drivers. While current decision-making is supported by technical assessments and governance processes, prioritisation relies in part on separate processes and expert judgement. A more integrated and transparent framework would improve consistency in evaluating trade-offs across investment drivers.

Overall, Vector demonstrates a credible and appropriate approach to identifying and addressing known and emerging upgrade needs.

Capacity

Vector has a well-developed capacity planning framework, supported by scenario-based demand forecasting, network modelling, and documented planning standards. The methodology incorporates multiple inputs, including projected load growth, large customer connections, electrification trends, and distributed energy resources, and is supported by established planning processes.

There is evidence that emerging constraints are being identified through modelling and feeder-level analysis, with outputs informing defined investment programmes.

Uncertainty associated with future demand profiles, connection timing, and limited visibility at lower voltage levels remains a key challenge for Vector, as it is for many electricity distributors globally. While these factors are reflected within scenario-based planning, they introduce variability in the timing and scale of investment requirements. These issues are recognised, and Vector is implementing approaches to address them.

Overall, the capacity planning framework is considered appropriate and provides a sound basis for identifying and responding to future network capacity needs.

Security

The review found that Vector has a well-developed and increasingly integrated approach to identifying and managing security and resilience risks. Security risks are being systematically identified and assessed, with established processes linking risk assessment to mitigation activities. This includes the use of hazard modelling, scenario analysis, and structured risk evaluation to inform both operational and investment decisions.

Preparedness and response arrangements are in place, with alignment between planning and operational functions. In addition, Vector demonstrates established capability across both physical and cyber security domains, indicating an integrated and mature approach to security and resilience risk management. Overall, the approach is appropriate, well-developed, and reflects clear awareness of evolving risk factors.

Delivery

Our review considered delivery performance as supporting context for whether identified risks will be addressed in a timely manner.

Delivery performance has presented a constraint in recent periods, particularly in the context of increasing capital programme scale. Vector has recognised the delivery challenge and has implemented a range of improvements across project definition, governance, procurement planning, and programme oversight. Recent delivery performance and improved forecasting accuracy provide evidence that these improvements are strengthening delivery capability. Continued focus will be required to sustain this performance and align delivery capability with the scale and timing of planned investment over the ten-year planning period.

Field Surveys

Field survey observations provide positive evidence that Vector's systems, standards, and expectations are being implemented effectively at site level. Work quality, health and safety practices, and adherence to procedures were observed to be broadly consistent with requirements. Site teams also demonstrated responsiveness to stakeholder and community interests in line with Vector's focus on customer service performance.

Minor opportunities for improvement were identified, including consistency in documentation, aspects of traffic and pedestrian management, and subcontractor oversight. These findings are not material but suggest some variability in practice. Overall, field delivery was observed to align well with Vector's requirements and expectations.

Conclusion

The review indicates that Vector has established a sound asset management framework with evidence of ongoing development and improvement. Across the areas assessed, the review found established systems and processes that are generally appropriate for the scale and complexity of the network. Areas requiring continued focus remain, particularly in relation to embedding the strengthened maintenance and inspection regime, including validation and reassessment of existing open notifications, and sustaining capital programme delivery improvements; however, these are recognised, and measures are in place to address them.

Yours sincerely

Andrew Gatland

Director, Asset Dynamics