2024

the lines company

Asset Management Plan Update

Foreword

This is The Lines Company's (TLC) 2024 Asset Management Plan Update (AMP).

This document provides an update on our 2023 AMP speaking to the key focus areas for TLC on our journey to maintain and invest in our electricity network, ensuring our customers keep having access to affordable and reliable power supply.

Our 2024 AMP is not a full AMP and highlights the changes from the full AMP published in March 2023 and provides a look ahead for the next 10 years.

The 2023 year presented some major challenges for our network as we recovered from the impacts of cyclone Gabrielle and other severe weather events resulting in delays to planning and project delivery in FY2024. However, despite these challenges, investment in our network has continued with delivery of twenty-eight line-renewal projects, the installation of five electric vehicle charging stations across the network to support New Zealand's decarbonisation targets, and further investment in security of supply. We are also very proud of the support we provided to local communities following the completion of several very successful community solar projects.

The investment in both our communities and our staff was acknowledged by TLC taking away the top honours at the NZ Energy Excellence Awards by winning the coveted Community Initiative of the year award. TLC also won multiple awards at the Connexis Annual Connection line competition including the overall Line Mechanic competition.

Our updated strategy has been incorporated into the AMP with specific focus areas driving key initiatives. This AMP update reflects our continuous drive to achieve our assigned quality standard thresholds with material investment changes on vegetation, security of supply, resilience, asset renewal and maintenance. Our asset management practices and improving capability ensures we focus our expenditure on the right assets at the right time. We have initiated an aerial pole-top inspection programme inspecting over 40,000 pole top assets, including photographing, and assessing their condition so we can better target our renewal. We have also started developing and growing our digital platform to support our vision to improve customer experience and continually improve efficiency. This will enable new and better channels of communication with our customers as well as enhanced project management capabilities.

Our focus on operational excellence and investing in network growth and security has been further enhanced with senior executive appointments for General Manager Future Energy, and General Manager Operational Excellence. Their appointments increase the depth of leadership within our executive team.

We are acutely aware that maintaining a safe and reliable electricity supply system is fundamental to supporting regional economic growth. This is even more important as our customers begin to rely on electricity for a larger share of their energy needs in the future. Our planning challenge is to do this in a sustainable and very importantly a cost-effective way for generations to come.

We're engaging with our stakeholders, our customers, our business partners, and the people living in our community on the way we manage our assets and on the projects that stem from the guiding principles outlined in this document. We continue to work hard to keep connected with our community and deliver our business objectives including the significant and important work outlined in this AMP.

The Lines Company

Mike Fox

Chief Executive

Contents

Foreword 2
Contents 3
1 Executive Summary 4
2 Introduction 6
2.1 Our network 6
2.2 Our Asset Management Objectives 7
3 Our Strategy 8
4 Delivering our strategy 9
4.1 Four areas of focus 9
4.2 AMP Focus Area 1: Vegetation Management 9
4.3 AMP24 Focus Area 2: Resilience 10
4.4 AMP Focus Area 3: Digital Utility 12
4.5 AMP Focus Area 4: Security of Supply 13
4.5.1 Decarbonisation 13
4.5.2 Hangatiki GXP 13
4.5.3 Turangi Area Constraints 14
4.5.4 Network Automation 14
4.5.5 Zone Substation and Feeder Security of Supply 14
4.6 Significant projects in the 2024 AMP update 17
Material Changes to our Expenditure 18
5 Material Changes to our Expenditure 19
5.1 Summary 19
5.2 CAPEX - Material changes in each category 19
5.2.1 Consumer Connection 19
5.2.2 System Growth 20
5.2.3 Asset Replacement and Renewal 21
5.2.4 Quality of supply, reliability safety and environment 22
5.2.5 Non-network assets 23
5.3 Summary of changes in capital expenditure 23
5.4 OPEX - Material changes in each category 26
5.4.1 Network Opex 26
5.4.2 Non-network opex 26
5.5 Summary of changes in operational expenditure 27
6 Appendix A – AMP Disclosure Schedules 30

1 Executive Summary

TLC's new strategy is now incorporated into AMP24 together with the corresponding five pillars of the framework driving the major initiatives. Our ability to deliver the strategy is crucial to achieve the outcomes expected for our customers. Four focus areas have been identified as critical enablers in AMP24. They are Vegetation Management, Resilience, Digital Utility and Security of Supply. Each of these have specific initiatives identified in the planning period.

TLC has also considered the implications of its contraventions of the quality standards in prior periods. Over the coming year we will complete an external review of our asset management practices as agreed with the Commerce Commission. This will assist us in further improving our asset management practices minimising the likelihood of future contraventions of our quality standards such as those that occurred in the 2017-2020 period.

This AMP also builds on the work over the past seven years, taking a targeted long term, prudent approach to addressing SAIDI and SAIFI performance. The majority of these initiatives will provide long term SAIDI and SAIFI benefits and will be implemented over a number of years.

Security of Supply (more detail in Section 4.5)
TLC has an extensive network, with many radial feeders and zone substations that don't have alternative back feed options. Currently any fault on these circuits results in SAIDI, that is entirely dependent on the total repair time for the fault, for customers beyond the fault. In some situations, where the fault location is difficult to access or repair, these customers can experience extended outages.

With the initiatives proposed, only a smaller section of the circuit directly impacted by the fault will be exposed to the total repair time. The supply to the remaining circuit can be restored reasonably quickly (isolation time) thereby improving customer experience and reducing SAIDI. Twelve initiatives have been forecast to address "n-1" security in AMP24, at a total cost of around $16.6M.

Asset Renewal (more detail in Section 5.2.3)
AMP24 has refined the long-term renewal plans for most asset classes with an uplift of $5.8m over the AMP24 planning period. For Overhead Assets, this extends more than 20 years. These longer-term plans will allow for more certainty and the ability to establish longer term contracts, improving delivery. Overall, this structured focus on renewal of assets posing a higher risk will improve reliability and reduce the risk of inherent asset failure and associated SAIDI.

Resilience (more detail in Section 4.3)
AMP24 has assigned specific capex investment of $2.2M pa from RY26 to improve resilience associated with High Impact Low Probability (HILP) type environmental events by hardening the network to mitigate the impacts of climate change. These initiatives will include the relocation of overhead assets in forestry blocks (in partnership with forestry owners), undergrounding and others mitigating the impact of coastal erosion, flooding, earthquake, fire etc.

In addition, a further $60k pa of OPEX has been allocated to work through the process of identifying the key risks and finalising the resilience roadmap. Armed with the learnings from the quality contraventions over the 2017-2020 period, a strong focus for this AMP is on finding solutions to address vegetation risk specifically associated with out of zone trees.

Maintenance (more detail in Section 5.2 and 5.4)
Initiatives have been forecast to improve TLC's ability to detect emerging risks that may lead to failure. These include the aerial pole top survey that is now underway, acoustic testing to identify incipient defects and Thor Hammer pole testing to identify wooden poles impacted by rot. In addition, improvements are also proposed to some maintenance activities to reduce the likelihood of unplanned outages. AMP24 has an overall uplift of $5M opex and $5.7M capex to support these initiatives.

Vegetation (more detail in Section 4.2)
Improvements to the management of vegetation have also been included in AMP24. In addition to the traditional opex related activity, a capex allocation has also been included to support the management of vegetation as part of capital renewal works. AMP24 has $16M of opex and a further $6M of capex allocated to vegetation initiatives in addition to the resilience expenditure mentioned earlier. TLC has also worked with a supplier to develop/ trial an innovative technique to manage in-zone vegetation using a Heli-Saw. This initiative will improve overall efficiency and help reduce the risk of impact from vegetation.

Digital Utility (more detail in Section 4.4)
The investment in the Digital Utility Program aims to provide greater focus on customers, to enable seamless operations (by using advanced and integrated systems), to create smarter tools for managing assets and to enable new technologies, such as artificial intelligence that will become integral in future asset management. AMP24 has allocated $4.8M of non-network capex for the digital utility programme, and a further $1.25M p.a. in opex to support the new systems that will be put in place.

2 Introduction

This AMP update provides a summary of the key changes we have made to our asset management plan since its last publication. It explains the key themes and initiatives which underpin those changes and outlines the impacts on expenditure we expect over the ten-year planning period.

2.1 Our network

The TLC Network provides an electricity distribution service to over 18,000 customers with around 24,000 connection points (or ICPs) covering 13,700 km^2. It is one of the largest network areas in New Zealand but has a low population density and doesn't supply a major urban centre. Consequently, much of the network is committed to providing electrical distribution services to rural and sparsely populated areas.

Relative to other distributors in New Zealand, the TLC network is also electrically complex. It has one of the most diverse customer populations, a long circuit length, multiple and varied points of supply (from both Transpower and large generators), and significant electricity generation embedded within the network.

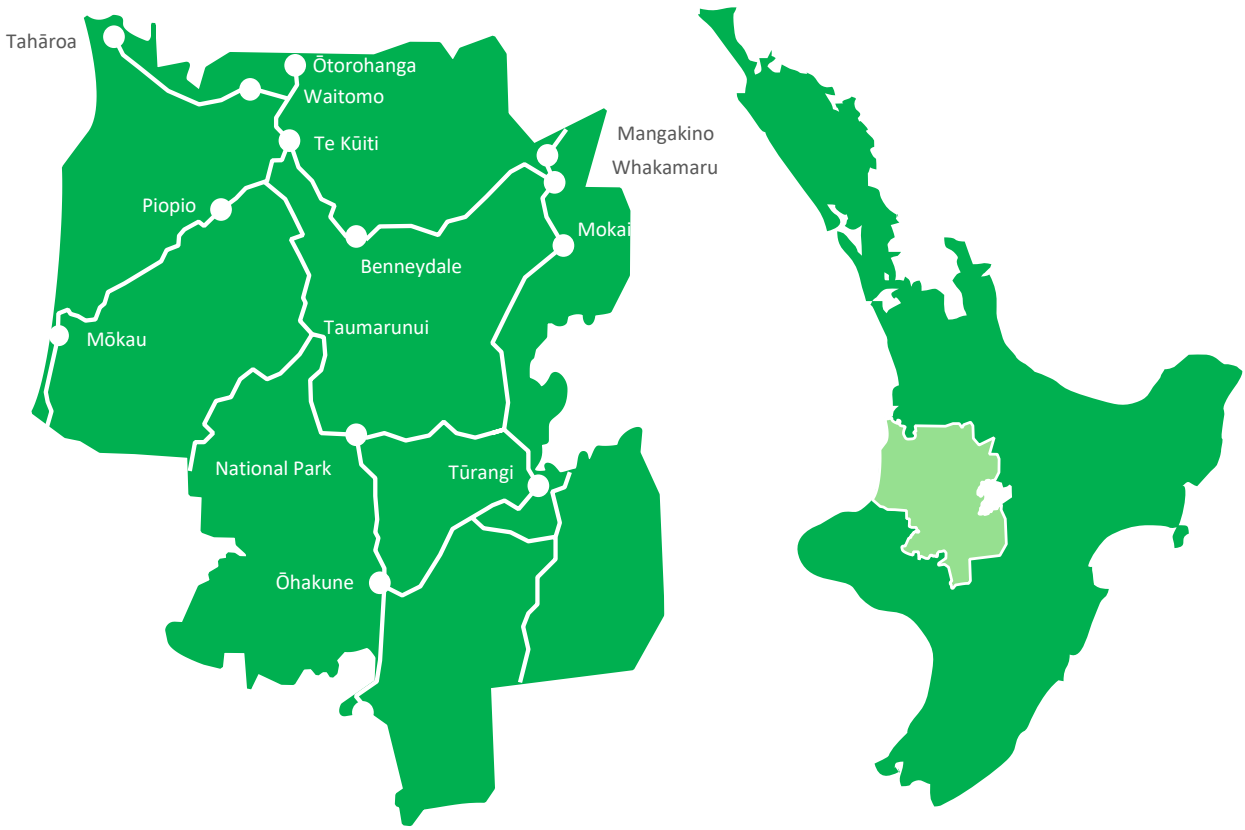

Figure 2 : The TLC Network Region

2.2 Our Asset Management Objectives

It is important that our Asset Management Plan and associated investment reflects the needs of the community. Investment in the network is intergenerational and our asset management plan seeks to ensure the best outcomes for customers over both short and long-term horizons. As such, when analysing investment in growth and security of supply, our goal is not to invest too early or too late but find a balance of both cost and performance that fits the needs of our community. Consequently, continuous engagement with our community is at the heart of balancing the energy trilemma of reliability, affordability and sustainability.

For this 2024 AMP, we have refined our objectives, focusing on the areas that we believe will have the most positive impact on our network and add value to our communities and customers across both the short and long term. Overall, these objectives remain consistent with previous years and are targeted at the underlying drivers of safety, reliability, compliance and risk.

• **Safety and environment**	Maintains a focus on staff and public safety
• **Customer and community**	Recognises that we exist to serve the needs of our customers and community
• **Networks for today and tomorrow**	Ensures that we invest to meet both short and long-term energy delivery needs of our customers and NZ inc.
• **Asset stewardship**	Ensures that we invest to maintain the health of our asset fleet.
• **Operational excellence**	Provides ongoing pressure to improve our asset management capabilities

Table 2: Our Asset Management Objectives

We are continuing to seek a balance between affordability, reliability, and sustainability in our decisions. We recognise that we are operating in a complex environment and the decisions we make and how we interact with our communities has a direct impact on our customers now and into the future. Not only do we need to balance the energy trilemma of affordability, reliability, and sustainability but we also need to make sure that we make it easy for our customers to engage and work with us.

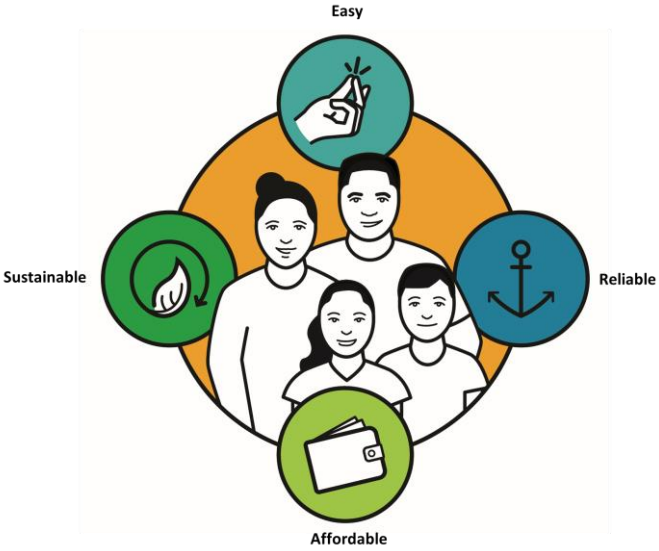

Figure 2: Our network planning is guided by the outcomes our customers value most

This 2024 AMP investment plan furthermore reflects TLC's commitment to standards set by the Commerce Commission. The plan focuses on identified areas that have caused contraventions in the past such as vegetation and climate change risks together with a continuous focus on overhead lines, security of supply and public safety.

3 Our Strategy

Over the last twelve months we have revised our strategy, and this is now reflected in our prioritisation and investment decisions. The core of our network strategy is that we aspire to be exceptional Asset Managers recognising that we drive investment returns, network efficiency and resilience with deployment of well-placed capital. In doing this we meet the current and future needs of our customers and comply with all our regulatory requirements.

Our new network strategy is designed to deliver on our purpose of 'Growing Communities with Energy' with the following five pillars forming the network strategy framework:

The Core: At its core, our network is safe for the public and our people, it meets or exceeds customer expectations in both value and reliability, is able to withstand the impact of increasingly volatile weather patterns, and it has the lowest practicable impact on the environment over its life cycle.

Decarbonisation. Our network is constructed and renewed to a standard that enables it to grow with the needs of our customers who wish to decarbonise through electrification. See section 4.5 for more detail.

Decentralisation. We are future ready and are enablers for our customers who wish to generate, consume, gift and sell their own energy. Our customers receive the benefits of a reliable, stable network connection while being able to generate their own renewable energy.

Digitisation. We use data to inform our investment and operational decisions, with a strong focus on the future. Our technology enables an awesome customer experience and drives efficiency through our business.

Value for our Shareholders. Our capital structure reflects the intergenerational nature of our assets ensuring an equitable distribution of cost over the life of our assets and an appropriate return to our shareholders.

The 2024 AMP focus areas are represented in table 2 below with the medium-term initiatives (FY24 to FY26) supporting TLC's long-term targets.

The following table provides a summary of the four AMP24 focus areas as they are represented in our Network strategy:

Focus Area	Strategy Pillar	FY24 – 26 Planned Initiatives
• **Vegetation Management**	The Core	• Commence re-route planning around forestry blocks to improve resilience where this is deemed viable. • Commence trials of a new technology (Heli Saw) to improve efficiency of rural tree cutting.
• **Resilience**	The Core	• Complete Asset Resilience Risk Assessment and formalise resilience framework.
• **Security of Supply**	The Core	• Delivery of projects identified according to the AMP24 investment plan.
• **Digital Utility**	Digitisation	• CRM system integrated with our business processes. • ADMS system implemented.

Table 2: Our Focus Areas

4 Delivering our strategy

Each year TLC matures in its asset management capabilities and continuously adjusts its expenditure profile to improve quality performance standards as set by the Commerce Commission. Sections 4.1 and 4.6 summarize the material asset expenditure changes. Significant changes to our asset management approach and investment have occurred over the past seven years and we will continue to develop and improve these processes addressing issues following the quality performance standards contraventions in RY2017 to RY2019. We have made the following changes in our planning process for the 2024 AMP opex and capex expenditure forecasts.

- **Our CAPEX allocation has been more defined over full 10-year program**

  The CAPEX plan has been built using a bottom-up approach for all the asset types for the next 10 years based on current condition data, known issues and basic end of life analysis.

  In regulatory year 2025 we will complete a full network helicopter and drone-based inspection of our line assets, which will be conducted on a five yearly basis moving forward. This will materially improve our asset data quality and allow improved condition assessment and renewal planning for our major asset groups.

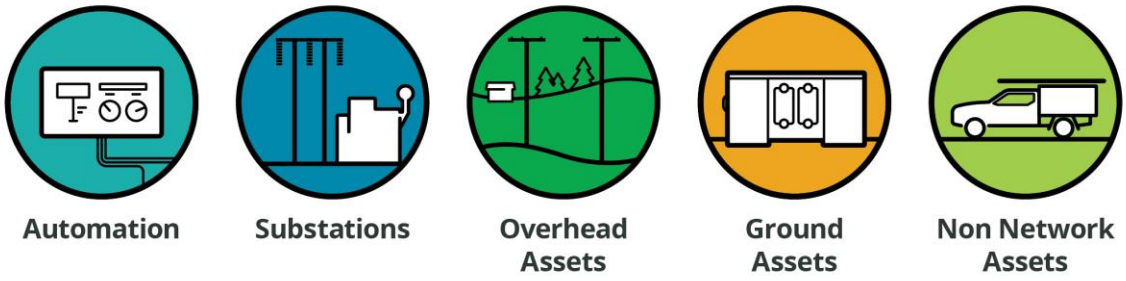

Figure 3: Expenditure plans were developed for each asset class for the 2024 AMP

The overhead line renewal program has undergone a major programme of works review to ensure that at-risk poles from a certain material and/or construction are pro-actively replaced over the next two decades, based on known risks and criticality.

- **Our OPEX forecast has been reviewed to support future asset management activities**

  Our Network opex expenditure has been re-evaluated with a focus on pro-active condition monitoring and maintenance practices plus the addition of non-network opex for climate change resilience analysis. This review and investment in pro-active maintenance and resilience has led to an increase in opex forecast.

4.1 Four areas of focus

Four focus areas have been identified for the 2024 AMP update. Each are critical enablers to support the AMP objectives, and each represents a significant change in the 10-year AMP expenditure profile or has a material impact on our business.

Each focus area is outlined in further detail in the following sections.

4.2 AMP Focus Area 1: Vegetation Management

The TLC network crosses through dense vegetative and forested areas, with 269 km of our overhead circuit running through forestry blocks and a further 106km through dense DOC land, requiring intensive vegetation management. Accordingly, TLC has a high exposure to faults resulting from out of zone tree fall, particularly during and after storm events.

In our 2023 AMP we documented the significant investment TLC is making on vegetation management (tree-trimming and removal) to maintain a reliable supply with operational expenditure of $1.6m opex for vegetation control (not including vegetation faults). Out of zone trees are the most significant contributor to unplanned vegetation outages, making up over 90% of all vegetation outages (by count) and are especially prevalent where the lines run through managed forestry blocks. Consequently, we have allocated additional capex of between $217k to $615k per annum to assist with re-routing and

undergrounding in line with our vegetation management strategy. This capex allowance varies in accordance with the amount of line renewal projects planned for each year. In regulatory year 2024, we allocated $150k to trial a heli-saw for trimming trees in forestry blocks to test the effectiveness and economic viability of this new tool. We are currently analysing the value of this operation and will decide whether a future increase in the vegetation management budget is justifiable. For now, the intention is to execute further heli-saw work within the current $1.6m opex vegetation budget but substituting existing expenditure of traditional tree trimming.

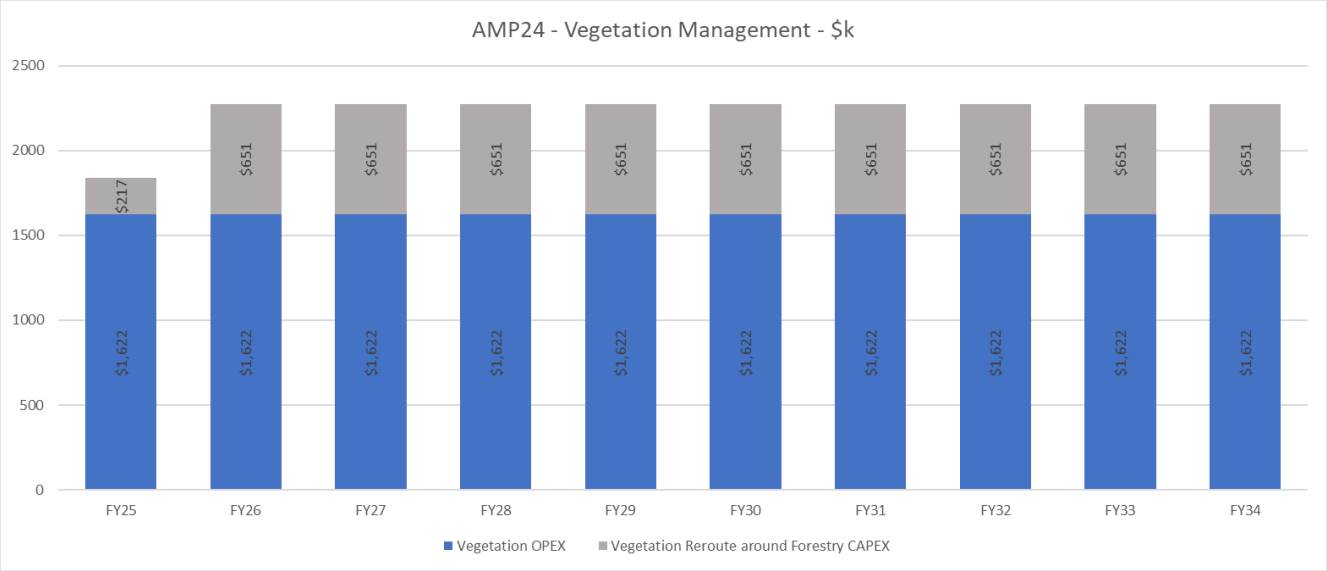

Figure 4: Vegetation Management (Capex and Opex) – excl CPI

TLC is engaging with forestry companies in the region to assess opportunities to relocate TLC network assets where appropriate. Most companies were receptive of this as an option and further discussions will be held for specific blocks at the right time. Other activities identified in our vegetation management strategy (such as spraying, re-routing, looking at alternative design options etc.) are in progress and being actioned as appropriate.

4.3 AMP24 Focus Area 2: Resilience

Our network is exposed to a wide range of natural hazards due to its proximity to active volcanoes and exposure to inundation risk from coastal storm surge and significant weather events (e.g., Cyclones Hale and Gabrielle). Along with weather-related risk, climate change is increasingly impacting our network. We are seeing more regular and more severe storm events and increased vegetation as farmland is converted to carbon sequestration forests.

The risks imposed depends on the type of hazard, our exposure to it and the vulnerability of our assets to each hazard. For example, assets near coastal areas are more greatly exposed to the risk of sea level rise.

We will link this back into the Electricity Engineers Association (EEA) resilience framework and the work Electricity Networks Aotearoa (ENA) is undertaking to develop a common resilience standard for electricity distributors (EDBs). This will also link in with the work we are doing with NiWA and an external consultancy we are engaging to support our resilience planning. In combination we will make use of both forecasted weather prediction information and historical climatology data to inform our decisions and actions in line with the resilience framework.

In July 2023 we completed a self-assessment using the EEA RMMAT resilience framework and submitted to the ENA who combined all the responses into an EDB view. Figure 4 shows the outcome of our assessment, which we will use to cross reference the ENA combined assessment outcome to develop a resilience improvement roadmap for TLC.

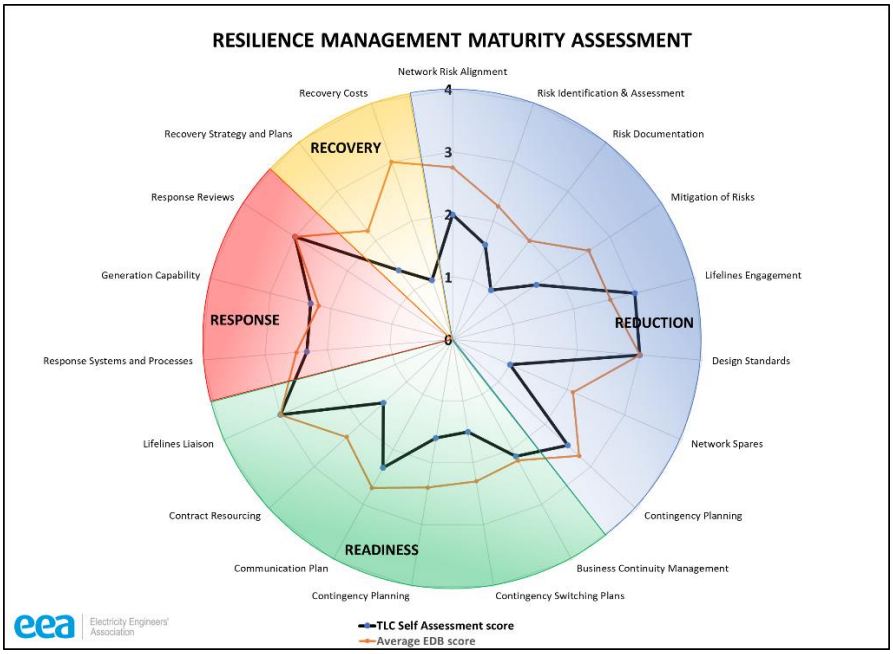

Figure 5: Resilience Self-Assessment – TLC and EDB average July 2023

In the coming year we will define the specific areas that will add most value to our business to address resilience maturity improvement. The key areas for the TLC Resilience framework strategy in the short term will include:

1. Reduction - Risk Identification & Assessment
2. Reduction - Network Spares
3. Recovery - Recovery Strategy & Plans

This programme of work will span the next few years and follow a route of discovery, exposure and vulnerability assessment, utilising weather and other climatology data. The outcome of this will be used to identify the risks and finalise the resilience roadmap. An opex budget allowance for this resilience work of $60k per annum over the next 4 years has been included in the 2024 AMP investment plan. To strengthen the recovery actions TLC will be working with Marae, local community and councils and civil defence to identify locations on the network to install generator inlets at key community facilities, which will allow the local community to easily connect mobile generators in the event of extended outages.

In addition to the foregoing, the 2024 AMP signals a renewed focus on resilience, especially relating to environmental risk, with Capex investments of $1M p.a. covering all assets, $0.6M p.a. specifically targeted at overhead lines and $0.6M p.a. targeting zone substations, forecast from RY26.

The investment on resilience will focus on environmental impacts and considering exposure to climate change risk. The overhead element will look to address specific segments of the network at risk (e.g. areas impacted by coastal erosion, severe weather etc.) by considering a range of potential mitigation activities including relocation, undergrounding, reconductoring with aerial bundle conductor or the installation of covered conductors.

The zone substation element will pro-actively address risks associated with flooding, earthquake etc.

The investment for all assets will aim to address the increasing environmental risks driven by climate change. Examples of these are risks associated with fire, severe weather, lightening, landslides etc.

An extended program of work will be developed, and the associated projects details identified.

4.4 AMP Focus Area 3: Digital Utility

Electricity supply, distribution and management is becoming increasingly complex. This is being driven by the introduction of greater volumes of network information (digitisation), the increasing use of electricity in transport and industry to reduce carbon emissions (decarbonisation) and greater access to new technologies that allow customers to generate electricity on their homes (decentralisation).To manage this growing operational and asset investment complexity, TLC will undertake a programme to upgrade its key operational technologies, known as the Digital Utility Programme.

The primary objectives of the programme are to provide greater focus on customers, to enable seamless operations (by using advanced and integrated systems), to create smarter tools for managing assets and to enable new technologies, such as artificial intelligence that will become integral in future asset management.

A key part of the Digital Utility Programme is building the capabilities that can either reduce they quantity of outages on the network or their impact on customers. This will be delivered by more efficient fault tracking tools, advanced fault location capabilities via the Advanced Distribution Management System (ADMS), and optimised field resource management i.e. optimising how we mobilise field teams to respond to multiple outages across geographic locations on high fault days.

Figure 7 below summarises the key objectives of the programme.

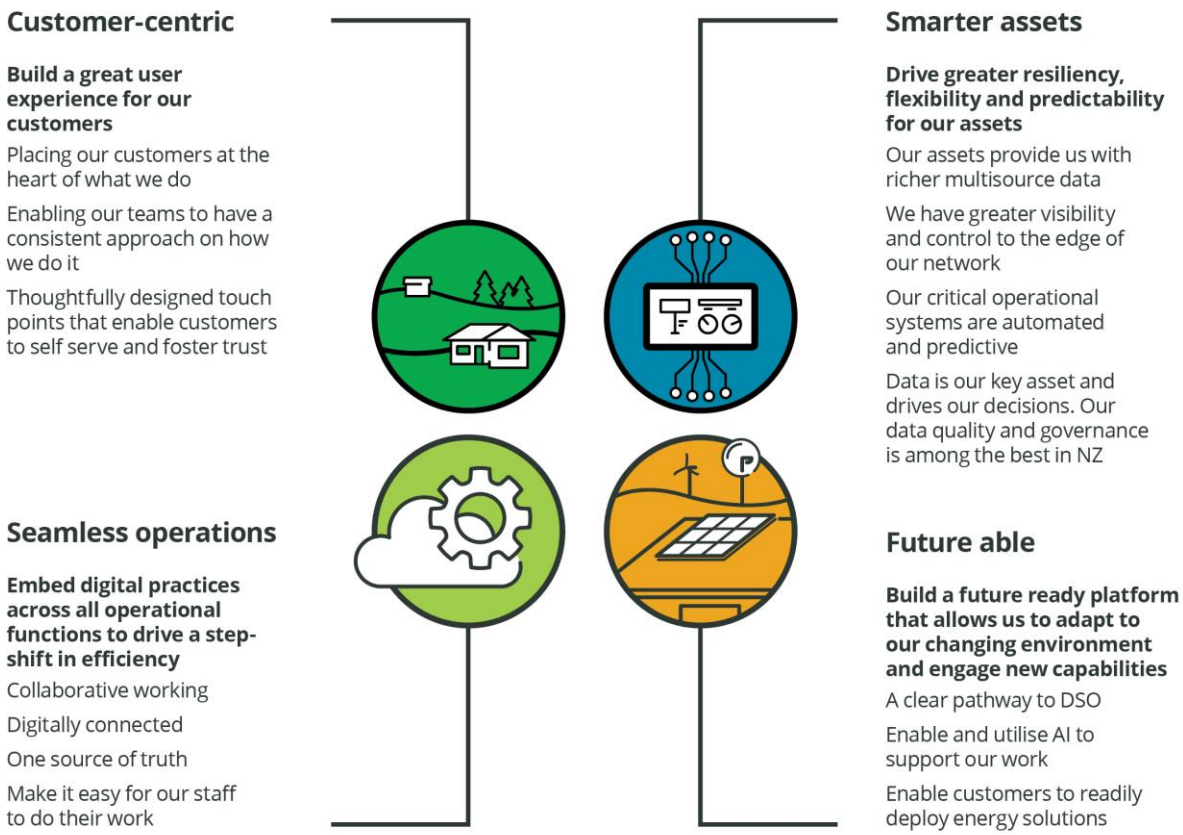

Figure 7: Key objectives of our digital utility strategy

The 2024 AMP will deliver these objectives in four phases over a five-year period, with the first delivery in regulatory year 2025. The programme will initially focus on improving customer experience and will then broaden to enable the full integration and enhancement our underlying databases and operational systems.

Phase	Core system(s) upgraded	Core capabilities that will be delivered
Phase 1	• CRM (Customer Relationship Management)	Track customer information, systemise management and tracking of outages, systemise workflow and create initial capability for customers to self-serve via the TLC website.
Phase 2	• GIS (Geographic Information System) • ADMS (Advanced Distribution Management System)	Accurate and digital twin of the network, single source of truth for network connectivity modelling, advanced outage management including fault location and field response, advanced and automated network control capabilities, low voltage visibility and service monitoring.
Phase 3	• AMS (Asset Management System)	Accurate single source of truth for our asset information, fully integrated with our financial systems.
Phase 4	• SCADA (System Control and Data Acquisition system)	Modern field and back-office infrastructure that enables a future support pathway, including enhanced cyber protection and multi-site disaster recovery capability.

Table 3: Digital Utility Implementation Phases

The 2024 AMP has allocated $4.8M of non-network capital expenditure for the digital utility programme, and a further $1.25M p.a. in operational expenditure to support the new systems that will be put in place.

Developing and extending the capability of these critical systems will enable TLC to continue improvement in customer experience, improve safety outcomes for staff and public, improve operational efficiency and be more targeted in its investment planning.

4.5 AMP Focus Area 4: Security of Supply

We are continuing our security of supply programme to strengthen key supply points on our network. The key driver is that the quality of supply and reliability of our network is becoming increasingly important as electricity becomes a bigger portion of our customer's energy needs.

4.5.1 Decarbonisation

We are beginning to see initial impacts of decarbonisation occurring on our network, and we expect these to increase over the planning period. These initial impacts are primarily driven by our larger industrial and generation customers currently, and we expect impacts felt from changes in behaviour from mass market customers to follow in time. Investment in the security of supply on the network are taking this decarbonisation growth in mind and building capacity into parts of the network where amongst others the demand for EV charging points is increasing.

4.5.2 Hangatiki GXP

Changes to the demand profile for the Hangatiki GXP since the 2023 AMP have been made to take into account changes on future demand from three areas:

1. The proposed new milk processing plant at Otorohanga is now not expected to emerge, as the investing company was placed into administration and subsequently delisted from the ASX. It is therefore unlikely to proceed as previously forecast. This has resulted in a net reduction in forecast demand of between 8MVA and 12MVA.
2. There is currently approximately 11MVA of installed embedded small scale hydro generation capacity connected to this GXP which typically contributes from 1MVA to 9MVA to the net profile seen by Transpower. We have added back the metered generation profile to establish a contingent base profile for the 2024 AMP model.
3. The overall increase in demand at the Hangatiki GXP for the 2024 AMP is now primarily from iron ore mining together with some organic growth and forecast step increases.
    a. Iron ore mining activity is increasing requiring an increase of installed capacity. However, firm capacity to the iron ore operations remains capped, and will be managed by a dedicated "Run Back" control system. This control can be initiated by Transpower or TLC under GXP or 110kV Transmission constraint conditions.
    b. Forecast growth in the 2024 AMP period has been modelled with compounding organic growth rates of 1% (low) and 2% (high). Step load increases of circa 3.5MVA for new EV chargers and decarbonisation are also included in the forecast.

c. The resulting model indicates that the Hangatiki GXP should not become capacity constrained until around regulatory year 2030 with the runback scheme noted above in place.

As a result, with the milk processing plant not going ahead, there is no immediate need to increase capacity at Hangatiki GXP. TLC will engage with Transpower and agree a pragmatic solution to address the longer-term constraints associated with both the Hangatiki GXP and the regional transmission networks.

As a result of less load growth than expected deferral to align with the Transpower forecast transformer end of life renewals at circa 2031 are proposed and should be mutually beneficial. TLC will engage with Transpower to explore Hangatiki GXP options to improve their interim contingent available capacity until they are replaced.

Consequently, the previously forecast of $12M investment in the 2023 AMP during regulatory year 2027 for an additional transformer, has been removed from our investment plan and a new allocation will be considered in the 2026 AMP planning cycle once there is more clarity on a longer-term solution.

4.5.3 Turangi Area Constraints

Through the development of the investment forecasts for the 2024 AMP, we have reviewed the growth forecast and constraints for Turangi, with a specific focus on the load growth forecasted due to EV charging stations. Through this exercise, we have considered Turangi, Awamate and Waiotaka Zone Substations as a group, given their proximity and interconnection. The 11kV Turangi and Awamate interconnection already exists and with existing planned work to install additional underground 33kV cable to the Turangi substation, only small-scale changes are required in the short term to accommodate the predicted load growth.

Therefore, noting that the existing transformers at Turangi are in an aged, but serviceable condition, fans will be retrofitted to the transformers at Turangi to increase their capacity in FY25. This delays the requirement for a more immediate investment to upgrade Turangi and allows TLC to better plan a transition away from the current site to a new site in the FY31 to FY34 period.

4.5.4 Network Automation

We are continuing our investment in sectionalising and automating switches on the network, which enables faults to be isolated to the affected areas and supports our ability to meet the targets of our security of supply standard. We see this as an important reliability management tool given TLC's network characteristics (large geographic coverage with limited back-feed options) and our observation is that this investment over the last few years is now providing benefits.

4.5.5 Zone Substation and Feeder Security of Supply

Our objective has been to identify and address expected capacity constraints on the network as well as improve the ability to recover from and restore supply to our customers in the event of a fault. These are critical to ensure the network can meet our customers primary expectations on quality of supply (SAIDI and SAIFI). Both the timing and the nature of the improvements proposed are crucial in balancing these customer service and cost.

For this 2024 AMP we have conducted a more detailed review of security of supply across all TLC zone substations using the published TLC security of supply standard as our reference point. This review has identified that 8 of the 28 zone substations currently meet the standard.

Initially we have focused on the five substations that are likely to encounter capacity constraints ("N" Security) due to growth during the 2024 AMP period and forecast the required improvements just prior to when the constraint is expected. Some constraints have been reviewed and proposed investments deferred e.g., Turangi and Hangatiki GXP. A secondary focus has been to address substations where we have difficulty in restoring supply in the event of a single fault ("N-1" Security).

Feeders that are known to cause difficulties due to inadequate back-feed capability have been identified as well as those that would help improve the "N-1" security at some zone substations. We have used SAIDI, the number of incidents and customer criticality to prioritise the feeders to reinforce. Investments addressing these will provide a more immediate benefit to TLC customers whenever they are affected by typical distribution faults.

The security of supply standard also has requirements associated with recovery from two concurrent events ("N-2" security). At this stage, we have not focused any investment on improvements to this element. Investment initiatives to address these are typically disproportionately more expensive, impacting on customer affordability.

We are aiming to continually improve network performance while maintaining an investment profile that is aligned with our regulatory limits. At the end of the 2024 AMP period, we expect to have addressed all forecast capacity constraints ("N"

security). Investments of $21M on system growth and $23M on quality of supply are forecast in the 2024 AMP period. Both investment categories have elements that make up our security of supply related initiatives.

This review has also highlighted that our current self-developed security of supply standard has set a high bar for TLC resulting in a value versus cost trade-off that may be inappropriate for our customers.

TLC has a total of 28 zone substations and within the 2024 AMP plan, only 11 won't meet the current published "N-1" standard at the end of the planning period. We will undertake a review of our security of supply standard in regulatory year 2025 to better understand the implications to future investment and network performance and ensure that our customers' expectations of balancing both service quality and affordability can be met.

Through this 2024 AMP planning cycle, the following are a subset of the investments proposed. Note that smaller projects under $300k have been removed from the tables but their cost is still included in budget.

Feeder / ZSS	Project Description	Cost
Kiko Road ZSS *FY25-FY27*	***Risk: N-1 (ZSS and Feeder)*** ***Kiko Road is a Z2 sub with ~890 customers fed by single 33 kV line. FY23 had 3 events where this could have saved total 81.2 raw SAIDI minutes. Customers off until faults are repaired or until generation is deployed.*** Feeder reinforcement to improve both feeder and ZSS security of supply constraint.	$ 1,500,000
Wairere Falls ZSS *FY25-FY27*	***Risk: N-1 (ZSS and Feeder)*** ***The Wairere line supplies 1925 customers, but only 324 of these can be backed up during normal conditions via the 11 kV network.*** Feeder reinforcement to improve both feeder and ZSS security of supply.	$ 3,850,000
Mahoenui (Mokau) *FY25-FY27*	***Risk: N-1 (Feeder - Permanent Generator Site)*** ***The Mokau feeder is F1 security class with 589 customers on a radial feeder with no viable network backfeed options.*** Identify a site and develop a permanent generator site	$ 1,000,000
Waiotaka RMU *FY27-FY28*	***Risk: N-1 (Feeder and RMU)*** ***The Waiotaka substation 11 kV feeder heads in 3 directions as it leaves the sub. To use this as either a Kiko back feed or to use the 33/11 intertie arrangement presents difficulties and time delay in rearranging feeders to manage loads.*** Reinforce / reconfigure feeder to improve security of supply	$ 400,000
McDonalds Feeder reroute *FY27-FY30*	***Risk: N-1 (Feeder)*** ***The McDonalds and Gravel Scoop are on shared structures with the Te Waireka 33 kV line through Progress drive. This poses a common fault risk to this part of the network.*** Reroute feeder to improve security of supply	$ 500,000
Northern Feeder - Reinforcement *FY28-FY29*	***Risk: N-1 (Feeder or ZSS)*** ***Northern Feeder is F1 security class with 1156 customers on essentially a radial feeder including Taumarunui Highschool.*** Develop solution to address security of supply.	$ 1,000,000
TK West New Feeder *FY28-FY30*	***Risk: N-1 (Feeder)*** ***The urban section of the Oparure feeder is currently supplied from Gadsby sub, operating at N security. This includes the Te Kuiti hospital and high school.*** Reinforce feeder to improve security of supply.	$ 500,000
Waitete ZSS FY29-FY31	***Risk: N-1 (Sub Trans)*** Upgrade Waitete Sub-Transmission Line conductor.	$ 1,200,000

Feeder / ZSS	Project Description	Cost
Tangiwai Feeder *FY30-FY32*	***Risk: N-1 (Feeder)*** ***Multiple circuits & line clash risk.*** Convert section to underground	$ 450,000
Waikato River System - Reinforcement of Maraetai, Marotiri and Kahu Tee ZSS *FY30 - FY33*	***Risk N-1 (Sub Trans, Feeders and Power Transformers)*** Assessment of existing 33kV feeder from Atiamuri to Kahu Tee and Whakamaru - verify conductor capacity Assessment for upgrade of Mercury 11kV feeder to 33kV for a second supply to Maraetai Implement proposed solution that is informed by the prior assessment activities to address security of supply constraints.	$ 3,950,000
Te Waireka ZSS *FY32-FY34*	***Risk: N-1 (Sub Trans)*** Upgrade Te Kawa Sub-Transmission Line conductor.	$ 1,391,000
Te Waireka ZSS *FY32-FY34*	***Risk: N-1 (Sub Trans)*** Upgrade Te Waireka Sub-Transmission Line conductor.	$ 910,000
Marotiri ZSS *FY27-FY29*	***Risk: N (Power Transformer)*** Replace 3 MVA Transformer with 5 MVA TX.	$ 600,000
Manunui ZSS *FY30-FY32*	***Risk: N (Power Transformer and switchgear)*** Replace Existing 5MVA TX with 10MVA and replace 11 kV pole mount switchgear with ground mount switches. Provision for an 11 kV incomer and a 3rd feeder to the Petpal site.	$ 1,150,000
Turangi ZSS *FY31 - FY33*	***Risk: N (Power Transformer)*** Install 2 new 10MVA Transformers	$ 1,500,000
Gadsby Rd *FY29-FY30*	***Risk N (Switchgear and Transformer)*** Replace switchgear and replace 5MVA Tx with 10/12 MVA	$ 1,250,000
Tangiwai *FY29-FY30*	***Risk N (11kV Feeder)*** Take 11 kV supply from Transpower Tangiwai as backup supply to Ohakune area. Unload Tangiwai feeder	$ 500,000
National Park *FY32-FY33*	***Risk: N (Power Transformer)*** Replace 3 MVA Fixed tap 33/11 kV transformer with 5 MVA	$ 600,000

Table 4: Significant Security of Supply Projects

4.6 Significant projects in the 2024 AMP update

Some of the key changes to projects forecast from the 2023 AMP are detailed below.

Iron Mine upgrade	This project has now been split into a growth component and an asset renewal component. TLC can now progress on some components of the asset renewal project without waiting on decisions from the customer on the growth component.
Hangatiki GXP	Now that the 2023 AMP forecast demand for the milk processing plant is no longer required, we have been able to develop a solution to support the proposed iron ore mining increase without an immediate upgrade of the Hangatiki GXP. As a result, the previously forecast investments have been removed. TLC is now working with Transpower and other regional networks to establish a pragmatic longer term regional solution which will be required around 2030/31. Once these are finalised, the required investment forecasts will be included in a future AMP.
Overhead Renewal Programs	A 20 plus year program has been established to address large populations of overhead assets that are nearing end of life and as a result likely to pose an increasing level of risk. The intent is to manage the risk associated with these and mitigate a potential bow wave of required renewal that will not be practically achievable. The program extends well beyond the AMP24 period with consolidated packages of work grouped geographically and electrically by Asset Group to improve delivery efficiency. This program addresses Steel Rail, "L" Shaped Concrete, Larch poles, existing lines not meeting current standards and known condition related issues in a cohesive manner. The condition related portions will be refined with the improved information gathered from the Aerial Pole Top Survey. This type of program will allow TLC to establish a longer-term base-line volume of work which will enable more efficient and longer-term contracts with field service providers.
Mobile substation	The 2023 AMP proposed that TLC procured a 5MVA mobile substation which could be deployed across TLC's network to support substation or distribution line faults and routine maintenance activities. The total cost of a 5MVA mobile substation including the establishment of connection points was estimated at $2m and forecast accordingly in AMP23. The preparation of the business case has highlighted that lower cost options might exist to address the issues. The size of the unit, accessibility, and practicality to install across the range of TLC substations will undergo further analysis to determine if this is the most cost-effective way to address the issue. As a result, the potential procurement of the mobile sub-station has been removed from the AMP24 forecast.
New wind farm	A wind farm investor is currently working with TLC on the Connection Agreement leading to an expected final connection application involving a 33kV 6 way switching substation into the Taharoa A and B Lines and a STATCOM. The installed capacity is expected to be 32.4MW operating at 30MW.

Material changes to our expenditure

5 Material Changes to our Expenditure

5.1 Summary

The major changes in AMP24 are the result of volatility associated with customer-initiated projects as well as TLC improvements to its asset management practice with a strong focus on network resilience.

We have continued to build on the work started in 2017 ensuring appropriate levels of investment are targeted at areas of the network to address current or emerging network performance issues. Quality contraventions in 2017-2020 period have driven increased focus in the areas impacting most on reliability performance.

From 2017 our vegetation budget has increased from $0.9M to $1.2M in 2020, $1.4M in 2022 and then to $1.6M in 2024 which made a difference addressing vegetation issues within the Growth Limit Zones (GLZ). Currently circa 90% of vegetation related issues are caused by trees outside the of GLZ. In an attempt to address these out of GLZ tree issues material capex budget changes are forecasted in the resilience and security of supply budgets where the focus will be on either re-routing lines out of commercial forestry blocks (in partnership with forestry companies) or other resilience measures such as undergrounding or design changes in an attempt to make the lines more resilient to tree fall damage.

To address pole top defects, a pole top Failure Mode and Effect Analysis (FMEA) was conducted which led to the investment reflected in this AMP to conduct aerial pole top condition inspections five yearly starting RY24. This will provide a full pole top condition snapshot and ensure targeted investment in areas of the network that are at risk of unplanned outages.

Additional capex spend to improve security of supply following outages, by creating back feed options and automation to assist with faster restoration times has also been forecasted. These and other expenditure changes to address reliability performance are reflected in section 4.6.

The new investment profile is well aligned with the key focus areas highlighted in Section 3 and these are discussed in more detail for each category below.

5.2 CAPEX - Material changes in each category

In the following section we have outlined the material changes in each expenditure category.

All figures are in 000s and in constant values (i.e. they have not been adjusted for CPI).

5.2.1 Consumer Connection

Driver

The primary drivers for step change continues to be larger industrial customers (new and changing demand) and utility scale generation. Initiatives in both these elements have varying degrees of certainty driven by their commercial viability. Since AMP23, a significant contributor to forecast growth at Hangatiki GXP has become insolvent, resulting in the need to change forecast investments as discussed in section 4.5.

Regionally, other organic growth and decarbonisation initiatives also continue, but at a steady pace.

Material changes in our AMP expenditure forecasts

RY25

- Industrial growth initiatives for an iron ore mining company ($3.8M) continue as planned, but the milk processing plant ($1M) will not.
- Organic and other decarbonisation growth remains.

RY26-30

- Generation - Utility scale embedded generation of 45.8MVA is forecast for this period, with an associated cost of around $6M.
- A $1m reduction in 2028 due to the milk processing plant as above not proceeding.
- Organic and other decarbonisation growth remains.

RY31-34

- Organic and other decarbonisation growth remains.

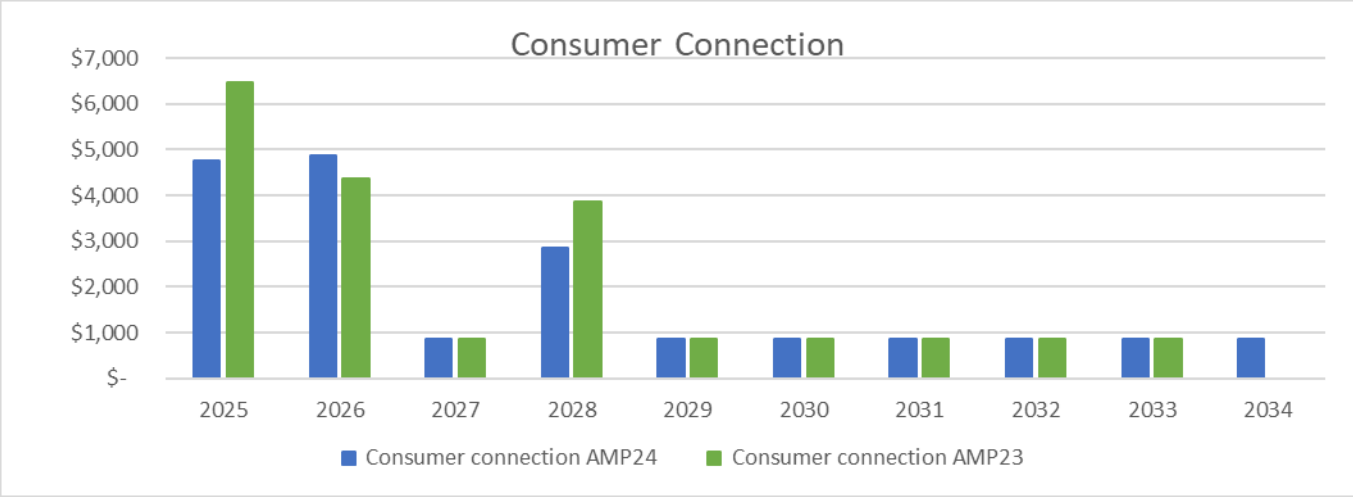

Figure 8: Consumer connection expenditure

5.2.2 System Growth

Drivers

As with consumer connections on the TLC network, System Growth is primarily influenced by large industrial customers and utility scale generation. TLC has also taken an improved approach to assess security of supply constraints as discussed in Section 3.5 and forecast in Section 4.2.4 below.

TLC continues to work closely with its customers to balance affordability and reliability to ensure they are not unduly burdened.

Material changes in our AMP expenditure forecasts

RY26-30

- TLC has taken a pragmatic approach to defer the impact of the growth forecast at Hangatiki GXP. Now that the new milk processing plant is not going ahead, the growth for the iron ore mining company will be accommodated by developing commercial terms and the associated system controls to restrict available capacity under constrained conditions. We will also explore options to increase the contingent capacity of the existing transformers with Transpower. This has allowed TLC to defer the need for immediate investment at Hangatiki GXP ($12M).

RY31-34

- It is now clear the Hangatiki GXP will exceed its firm capacity in normal operating conditions within the AMP24 planning period, but not as soon as expected in AMP23. These changes will have regional implications and TLC has begun engagement with both Transpower and other regional networks to develop an appropriate solution. Once these forecasts are established, they will then be presented in a future AMP.

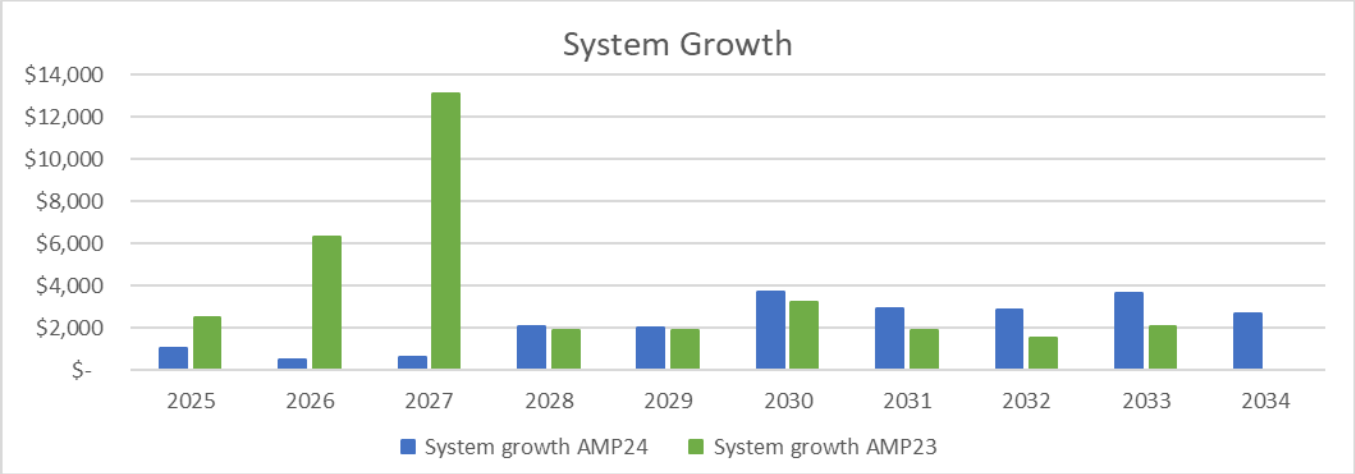

Figure 9: System growth expenditure

5.2.3 Asset Replacement and Renewal

Drivers

The forecast for asset replacement and renewals has been built bottom-up taking a whole of life view of the assets. These forecasts were designed to be able to manage known risks and criticality.

The forecast program has also been designed to allow TLC to establish longer term planning horizons to support the ability to contract accordingly. These renewal programs include Steel Rail, L Shaped Concrete and Larch poles. This will help maintain the balance between reliability, affordability, and deliverability for TLC.

Material changes in our AMP expenditure forecasts

Despite the changes in approach and planning mentioned above, the forecast investment profile aligns closely with that from AMP23.

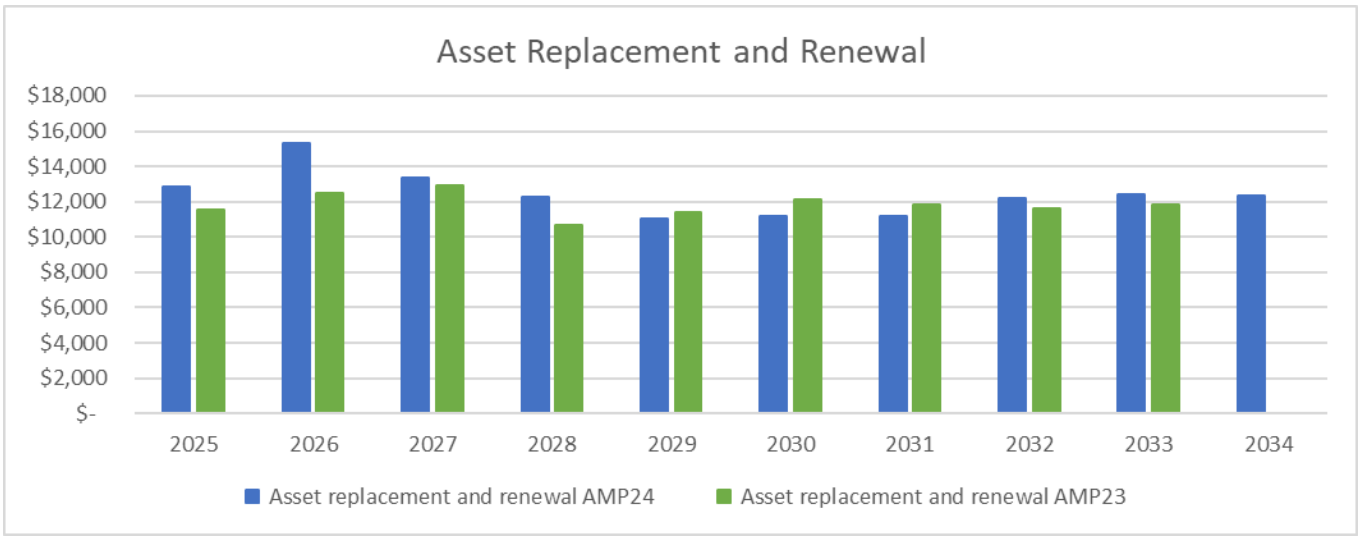

Figure 10: Asset renewal expenditure

5.2.4 Quality of supply, reliability safety and environment

Drivers

The key drivers here are resilience, security of supply, reliability, and automation. These initiatives are critical to manage our customers' expectations as well as ensure compliance with SAIDI and SAIFI thresholds.

A program of work has been developed to focus specifically on security of supply and this is described in more detail in section 4.5 with the objective being to address all know constraints at "N" security as well making a material impact on improving the ability to restore supply in the event of a single event ("N-1"). Initiatives addressing "N-1" constraints are at both feeder and zone substations.

Resilience also has a specific focus with increased investment forecast in the period from RY26 to RY34.

The pragmatic drive to install new automation also continues to improve reliability.

Material changes in our AMP expenditure forecasts

RY25

- From the graph below, it is clear that there is a step change of investment in this category across the AMP24 planning period. RY25 includes some carryover projects from RY24 which include projects that could not be delivered due to delays in Iwi negotiations and delays caused by third parties. The increase also includes multi-year project seed funding for a number of initiatives planned in the periods after.

RY26-30

- A strong focus on resilience initiatives with investment of $2.2M pa across the TLC network. This will include initiatives like increased undergrounding, aerial bundle conductor, covered conductors, elevation of infrastructure prone to flooding etc.
- A non-network solution to providing "N-1" security is being proposed for the Mokau feeder, by most likely permanently installing end of feeder generation.
- A number of security of supply projects are forecast to commence in this period and further details are provided in Section 4.5.

RY31-34

- Continued focus on resilience from the RY26 to 30 period. ($2.2M pa)
- Continued focus on security of supply initiatives covered in Section 4.5

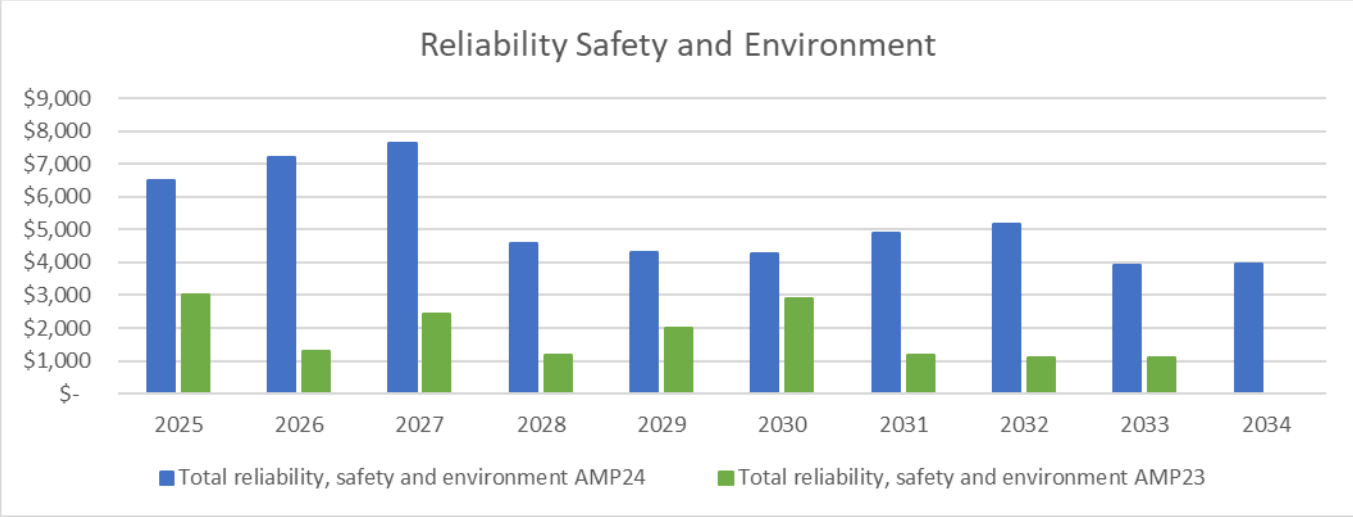

Figure 11: Quality of supply plus reliability, safety and environment expenditure

5.2.5 Non-network assets

Drivers

Non-Network investments support the primary networks business, improve efficiency and enable business improvements.

The key drivers for AMP24 are identified below. There have been increases or changes in timing from AMP23.

1. The Digital Utility Project (section 4.4) to upgrade TLC asset systems to streamline and digitise our asset management processes.
2. The improvements to renew and improve TLC offices.
3. Development and implementation of improved Overhead inspections
    a. Aerial pole top inspections
    b. Aerial acoustic surveys
    c. Aerial LiDAR survey

Material changes in our AMP expenditure forecasts

RY25

- The Digital Utility Project and the improvement to TLC corporate offices get underway with an investment of $1.7M in RY25.
- RY25 includes carryover $1.4M made up primarily of pole top inspection and digital utility expenditure.

RY26-30

- The Digital Utility Project continues with further investment of $2.5M.
- Additional investment of $3.5M on development of capability including the capture and management of aerial inspection data.

RY31-34

- Ongoing investment of $2.26M for the development of capability together with capture and management of aerial inspection data.

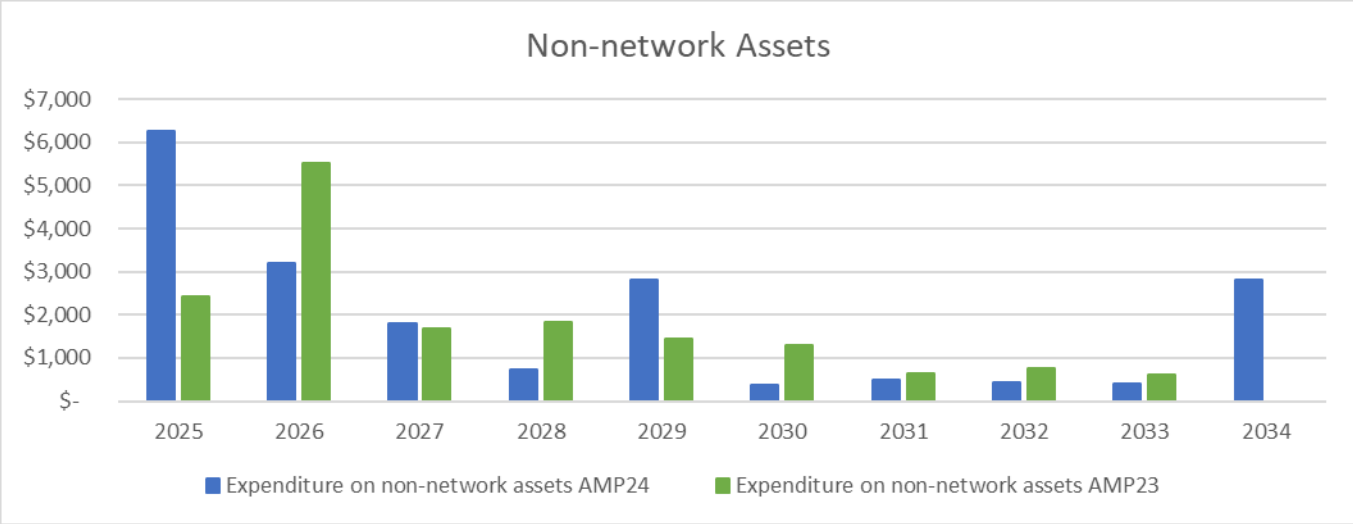

Figure 12: Non network asset expenditure

5.3 Summary of changes in capital expenditure

With the changes in customer demand since AMP23, we have been able to defer the need for a more immediate investment. This will allow TLC to work more closely with the regionally impacted parties to develop a pragmatic solution, which will now likely be implemented in the latter AMP24 period. This investment will be forecast in a future AMP.

The major AMP24 capex changes are discussed in Section 4.6 and the overall category movements are shown in the graph below.

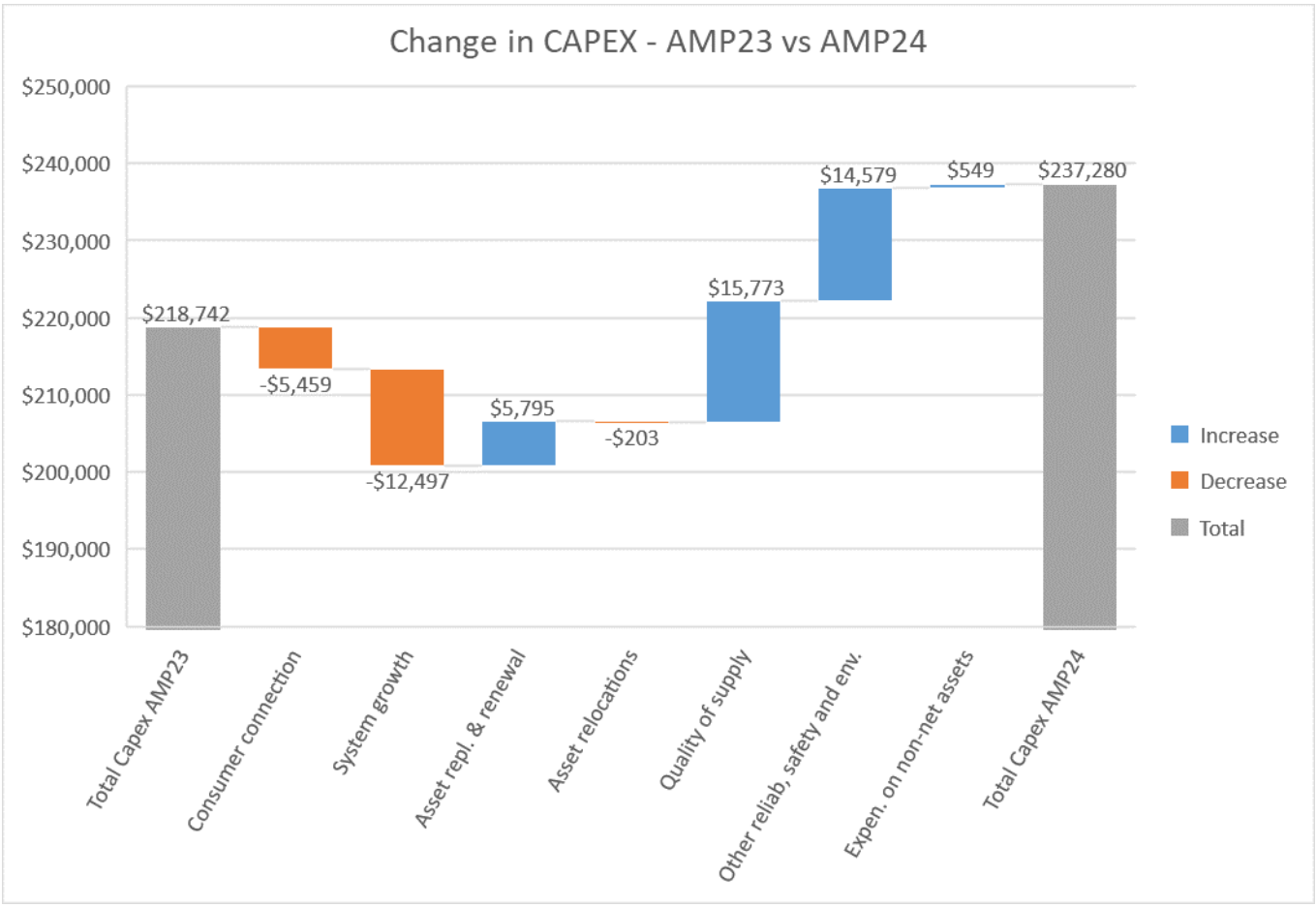

Figure 13: Changes in capital expenditure from the AMP23 vs AMP24

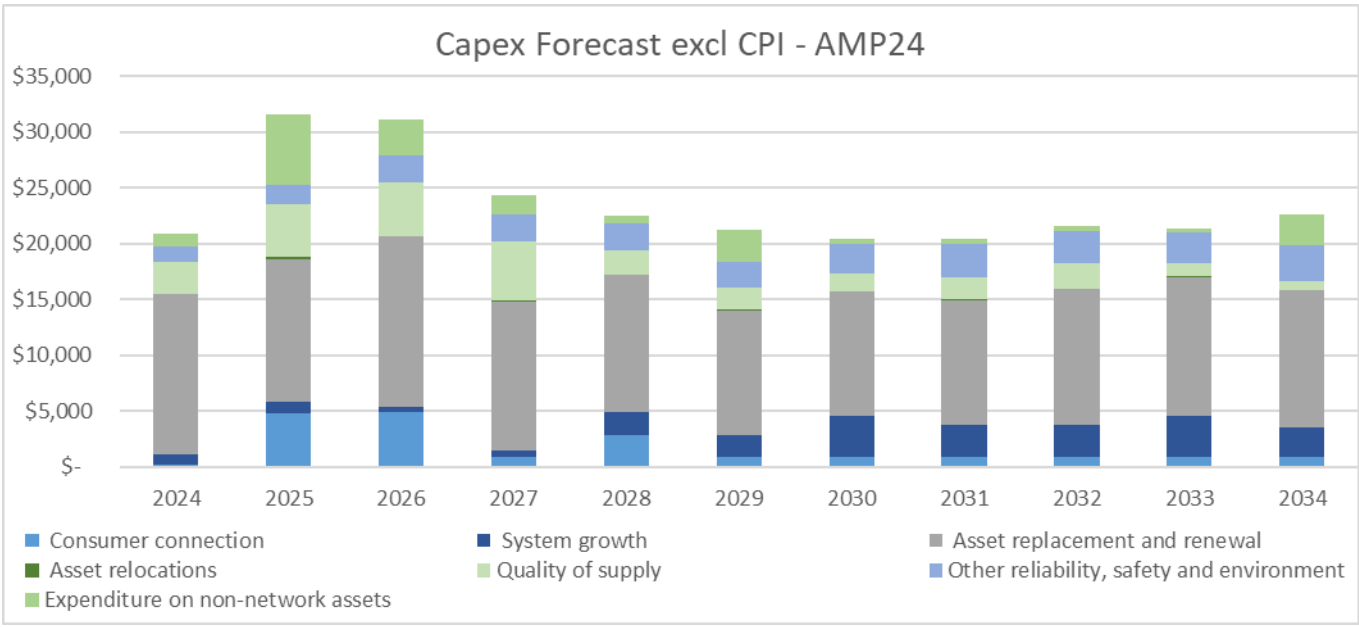

Figure 14: Summary of Total Capital Expenditure

AMP24	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
Consumer connection	227	4,765	4,865	865	2,865	865	865	865	865	865	865	
System growth	870	1,072	500	600	2,100	2,020	3,705	2,900	2,885	3,670	2,651	
Asset replacement and renewal	14,416	12,816	15,327	13,324	12,260	11,070	11,194	11,151	12,219	12,409	12,357	
Asset relocations	0	150	0	150	0	150	0	150	0	150	0	
Quality of supply	2,866	4,765	4,751	5,256	2,186	1,921	1,521	1,936	2,241	1,216	746	
Other reliability, safety and environment	1,325	1,743	2,450	2,390	2,390	2,400	2,745	2,950	2,925	2,700	3,200	
Expenditure on non-network assets	1,140	6,255	3,187	1,804	722	2,800	379	501	447	396	2,827	
Total Expenditure on Assets	**20,844**	**31,566**	**31,080**	**24,389**	**22,524**	**21,226**	**20,409**	**20,453**	**21,582**	**21,406**	**22,645**	237,280
Less Capital Contributions	0	-3,800	-4,000	0	-2,000	0	0	0	0	0	0	
Expenditure on Assets - excl Capital Contributions	**20,844**	**27,766**	**27,080**	**24,389**	**20,524**	**21,226**	**20,409**	**20,453**	**21,582**	**21,406**	**22,645**	227,480

Table 5: Total Capital Expenditure

5.4 OPEX - Material changes in each category

In the following section we have outlined the material changes in Network and Non-Network Opex.

All figures are in 000s and in constant values (i.e. they have not been adjusted for CPI).

5.4.1 Network Opex

Network Opex expenditure has been re-evaluated with a focus on pro-active condition monitoring and maintenance practices. As a result, there has been an uplift of around $500k pa in routine and corrective maintenance and inspections across the entire AMP24 period.

The key areas with changes are RMU inspections, Protection testing, Zone Substation Maintenance, and wooden pole testing.

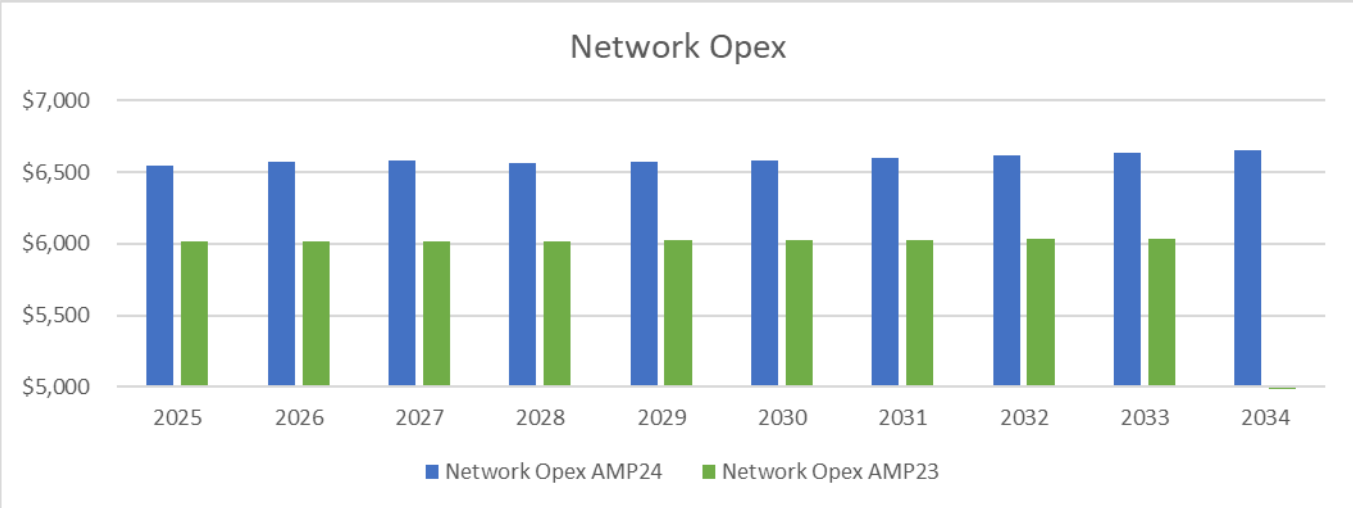

Figure 15: Network Opex

5.4.2 Non-network opex

Non-network opex has had material changes in System operations & network support, and Business Support. The forecast movements are relatively consistent across the AMP24 period and are made up as follows:

1. System operations and network support
    a. Increase in SaaS licenses with Digital Utility Project (+$1.2M pa).
    b. Reallocation of meter data acquisition costs from Business Support (+$800k pa).
    c. Increases in Engineering and Project Management (+$1M pa).
2. Business Support
    a. Reallocation of meter data acquisition costs to System operations and network support (-$800k pa).

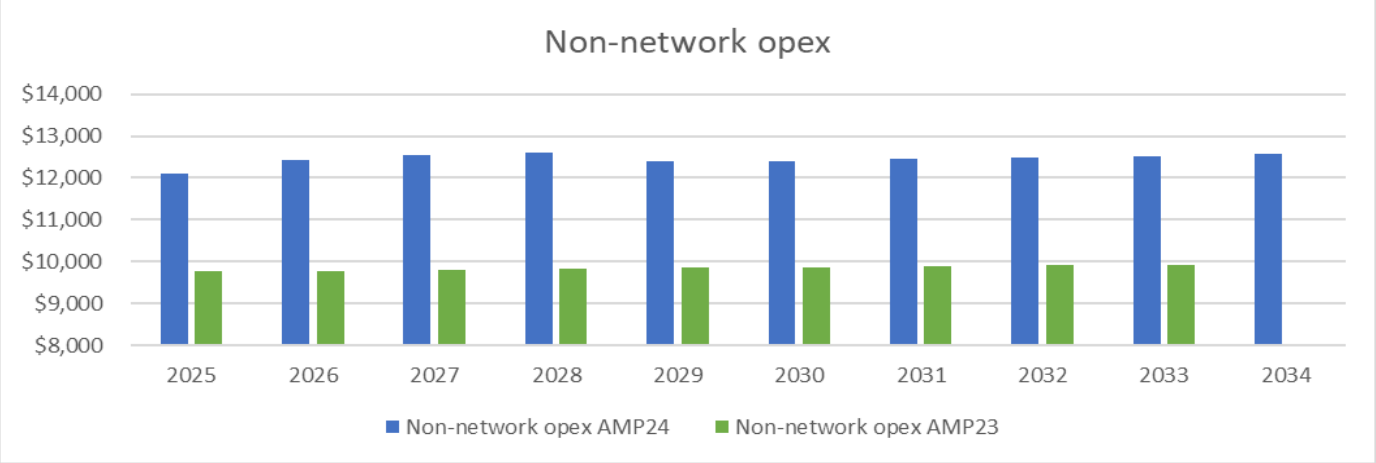

Figure 16: Non-Network Opex

5.5 Summary of changes in operational expenditure

The major AMP24 opex changes are discussed in Section 5.4 and the overall category movements are shown in the graph below.

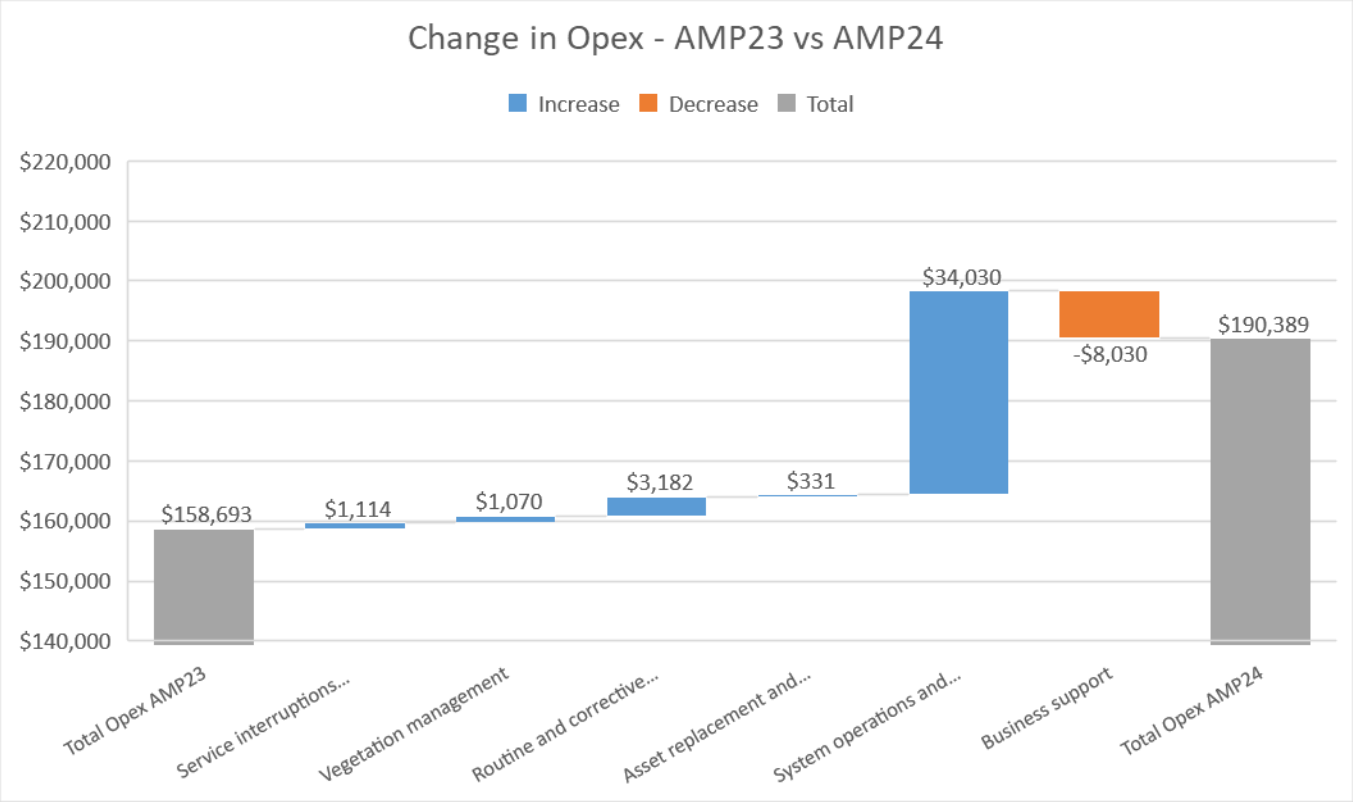

Figure 17: Changes in Opex

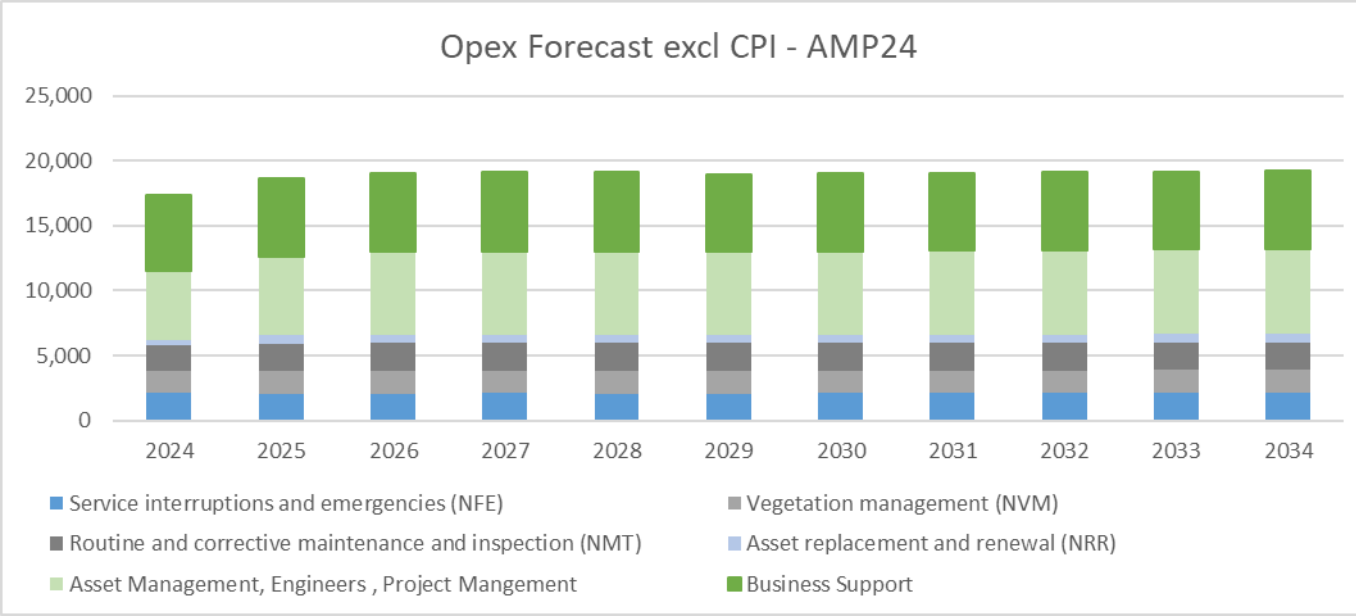

Figure 18: Total operational expenditure

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
Service interruptions and emergencies (NFE)	2,109	2,067	2,077	2,079	2,072	2,075	2,079	2,084	2,089	2,095	2,102	
Vegetation management (NVM)	1,711	1,747	1,755	1,757	1,751	1,754	1,757	1,761	1,766	1,771	1,776	
Routine and corrective maintenance and inspection (NMT)	1,941	2,118	2,128	2,130	2,123	2,127	2,131	2,135	2,141	2,147	2,154	
Asset replacement and renewal (NRR)	373	613	616	617	615	616	617	618	620	622	624	
Total Network OPEX	6,134	**6,544**	**6,576**	**6,583**	**6,560**	**6,571**	**6,584**	**6,599**	**6,615**	**6,634**	**6,655**	65,921
System operations and network support	5,369	6,018	6,393	6,425	6,414	6,437	6,462	6,490	6,521	6,554	6,589	
Business Support	5,890	6,075	6,045	6,127	6,184	5,947	5,947	5,951	5,956	5,963	5,972	60,166
Total Non Network OPEX	**11,259**	**12,094**	**12,438**	**12,552**	**12,597**	**12,383**	**12,410**	**12,441**	**12,476**	**12,516**	**12,561**	
AMP24 Total Opex	**17,393**	**18,638**	**19,014**	**19,134**	**19,158**	**18,954**	**18,993**	**19,039**	**19,092**	**19,151**	**19,216**	190,389

Table 6: Total Operational Expenditure

Appendices

6 Appendix A – AMP Disclosure Schedules

Number	Report Name
11a	Forecast Capital Expenditure
11b	Forecast Operational Expenditure
12a	Asset Condition
12b	Forecast Capacity
12c	Forecast Network Demand
12d	Interruptions and Duration
14a	Mandatory Explanatory Notes on Forecast Information
17	Directors Certification for Year-Beginning Disclosure

Company Name	**The Lines Company**
AMP Planning Period	**1 April 2024 – 31 March 2034**

SCHEDULE 11a: REPORT ON FORECAST CAPITAL EXPENDITURE

This schedule requires a breakdown of forecast expenditure on assets for the current disclosure year and a 10 year planning period. The forecasts should be consistent with the supporting information set out in the AMP. The forecast is to be expressed in both constant price and nominal dollar terms. Also required is a forecast of the value of commissioned assets (i.e., the value of RAB additions)

EDBs must provide explanatory comment on the difference between constant price and nominal dollar forecasts of expenditure on assets in Schedule 14a (Mandatory Explanatory Notes). EDBs must express the information in this schedule (11a) as a specific value rather than ranges. Any supporting information about these values may be disclosed in Schedule 15 (Voluntary Explanatory Notes).

This information is not part of audited disclosure information.

sch ref		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5	CY+6	CY+7	CY+8	CY+9	CY+10
9	**11a(i): Expenditure on Assets Forecast**	**$000 (in nominal dollars)**										
10	Consumer connection	227	4,765	5,035	922	3,131	964	983	1,003	1,023	1,044	1,064
11	System growth	870	1,072	518	640	2,295	2,251	4,212	3,363	3,412	4,428	3,262
12	Asset replacement and renewal	14,416	12,816	15,863	14,204	13,397	12,339	12,726	12,930	14,452	14,970	15,205
13	Asset relocations	-	150	-	160	-	167	-	174	-	181	-
14	Reliability, safety and environment:											
15	Quality of supply	2,866	4,765	4,917	5,603	2,389	2,141	1,729	2,245	2,651	1,467	918
16	Legislative and regulatory	-	-	-	-	-	-	-	-	-	-	-
17	Other reliability, safety and environment	1,325	1,743	2,536	2,548	2,612	2,675	3,121	3,421	3,460	3,257	3,938
18	**Total reliability, safety and environment**	4,191	6,508	7,453	8,151	5,000	4,816	4,850	5,666	6,110	4,724	4,856
19	**Expenditure on network assets**	19,704	25,311	28,869	24,077	23,822	20,537	22,771	23,136	24,998	25,347	24,387
20	Expenditure on non-network assets	1,140	6,255	3,299	1,923	789	3,121	431	581	529	477	3,479
21	**Expenditure on assets**	20,844	31,566	32,167	26,000	24,612	23,658	23,202	23,717	25,527	25,825	27,866
22												
23	*plus* Cost of financing	394	506	577	482	476	411	455	463	500	507	488
24	*less* Value of capital contributions	1,800	3,800	4,140	-	2,185	-	-	-	-	-	-
25	*plus* Value of vested assets	-	-	-	-	-	-	-	-	-	-	-
26												
27	**Capital expenditure forecast**	19,438	28,272	28,605	26,482	22,903	24,069	23,657	24,180	26,027	26,332	28,354
28												
29	Assets commissioned	19,385	34,062	25,755	27,708	26,036	24,804	23,142	22,780	25,822	27,762	29,555

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5	CY+6	CY+7	CY+8	CY+9	CY+10
30												
31												
32		**$000 (in constant prices)**										
33	Consumer connection	227	4,765	4,865	865	2,865	865	865	865	865	865	865
34	System growth	870	1,072	500	600	2,100	2,020	3,705	2,900	2,885	3,670	2,651
35	Asset replacement and renewal	14,416	12,816	15,327	13,324	12,260	11,070	11,194	11,151	12,219	12,409	12,357
36	Asset relocations	-	150	-	150	-	150	-	150	-	150	-
37	Reliability, safety and environment:											
38	Quality of supply	2,866	4,765	4,751	5,256	2,186	1,921	1,521	1,936	2,241	1,216	746
39	Legislative and regulatory	-	-	-	-	-	-	-	-	-	-	-
40	Other reliability, safety and environment	1,325	1,743	2,450	2,390	2,390	2,400	2,745	2,950	2,925	2,700	3,200
41	**Total reliability, safety and environment**	4,191	6,508	7,201	7,646	4,576	4,321	4,266	4,886	5,166	3,916	3,946
42	**Expenditure on network assets**	19,704	25,311	27,893	22,585	21,801	18,426	20,030	19,952	21,135	21,010	19,818
43	Expenditure on non-network assets	1,140	6,255	3,187	1,804	722	2,800	379	501	447	396	2,827
44	**Expenditure on assets**	20,844	31,566	31,080	24,389	22,524	21,226	20,409	20,453	21,582	21,406	22,645
45												
46	**Subcomponents of expenditure on assets (where known)**											
	**EDBs' must disclose both a public version of this Schedule (excluding cybersecurity cost data) and a confidential version of this Schedule (including cybersecurity costs)*											
47	Energy efficiency and demand side management, reduction of energy losses	-	-	-	-	-	-	-	-	-	-	-
48	Overhead to underground conversion	-	-	-	-	-	-	-	-	-	-	-
49	Research and development	-	-	-	-	-	-	-	-	-	-	-
50	Cybersecurity (Commission only)	-	-	-	-	-	-	-	-	-	-	-
51												

Company Name	**The Lines Company**
AMP Planning Period	**1 April 2024 – 31 March 2034**

SCHEDULE 11a: REPORT ON FORECAST CAPITAL EXPENDITURE

This schedule requires a breakdown of forecast expenditure on assets for the current disclosure year and a 10 year planning period. The forecasts should be consistent with the supporting information set out in the AMP. The forecast is to be expressed in both constant price and nominal dollar terms. Also required is a forecast of the value of commissioned assets (i.e., the value of RAB additions)

EDBs must provide explanatory comment on the difference between constant price and nominal dollar forecasts of expenditure on assets in Schedule 14a (Mandatory Explanatory Notes). EDBs must express the information in this schedule (11a) as a specific value rather than ranges. Any supporting information about these values may be disclosed in Schedule 15 (Voluntary Explanatory Notes).

This information is not part of audited disclosure information.

sch ref

		Current Year CY	*CY+1*	*CY+2*	*CY+3*	*CY+4*	*CY+5*	*CY+6*	*CY+7*	*CY+8*	*CY+9*	*CY+10*
54	**Difference between nominal and constant price forecasts**	$000										
55	Consumer connection	-	-	170	57	266	99	118	138	158	179	199
56	System growth	-	-	18	40	195	231	507	463	527	758	611
57	Asset replacement and renewal	-	-	536	880	1,137	1,268	1,532	1,779	2,233	2,562	2,849
58	Asset relocations	-	-	-	10	-	17	-	24	-	31	-
59	Reliability, safety and environment:											
60	Quality of supply	-	-	166	347	203	220	208	309	410	251	172
61	Legislative and regulatory	-	-	-	-	-	-	-	-	-	-	-
62	Other reliability, safety and environment	-	-	86	158	222	275	376	471	535	557	738
63	**Total reliability, safety and environment**	-	-	252	505	424	495	584	780	944	808	910
64	**Expenditure on network assets**	-	-	976	1,492	2,021	2,111	2,741	3,184	3,863	4,337	4,569
65	Expenditure on non-network assets	-	-	112	119	67	321	52	80	82	82	652
66	**Expenditure on assets**	-	-	1,088	1,611	2,088	2,432	2,793	3,264	3,945	4,419	5,221
67												

Commentary on options and considerations made in the assessment of forecast expenditure

EDBs may provide explanatory comment on the options they have considered (including scenarios used) in assessing forecast expenditure on assets for the current disclosure year and a 10 year planning period in Schedule 15

11a(ii): Consumer Connection

		Current Year CY	*CY+1*	*CY+2*	*CY+3*	*CY+4*	*CY+5*
	*Consumer types defined by EDB**	$000 (in constant prices)					
	NXC: 1 - Standard Connection - High Density	227	692	692	692	692	692
	NXC: 2 - Standard Connection - Low Density	-	173	173	173	173	173
	NXC: 3 - Non-standard connection	-	3,900	4,000	-	2,000	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	**include additional rows if needed*						
	Consumer connection expenditure	227	4,765	4,865	865	2,865	865
less	Capital contributions funding consumer connection	-	3,800	4,000	-	2,000	-
	Consumer connection less capital contributions	227	965	865	865	865	865

11a(iii): System Growth

	Subtransmission	-	-	-	-	-	120
	Zone substations	800	1,072	500	560	1,740	1,900
	Distribution and LV lines	70	-	-	-	-	-
	Distribution and LV cables	-	-	-	-	-	-
	Distribution substations and transformers	-	-	-	-	-	-
	Distribution switchgear	-	-	-	40	360	-
	Other network assets	-	-	-	-	-	-
	System growth expenditure	870	1,072	500	600	2,100	2,020
less	Capital contributions funding system growth	-	-	-	-	-	-
	System growth less capital contributions	870	1,072	500	600	2,100	2,020

Company Name	**The Lines Company**
AMP Planning Period	**1 April 2024 – 31 March 2034**

SCHEDULE 11a: REPORT ON FORECAST CAPITAL EXPENDITURE

This schedule requires a breakdown of forecast expenditure on assets for the current disclosure year and a 10 year planning period. The forecasts should be consistent with the supporting information set out in the AMP. The forecast is to be expressed in both constant price and nominal dollar terms. Also required is a forecast of the value of commissioned assets (i.e., the value of RAB additions)

EDBs must provide explanatory comment on the difference between constant price and nominal dollar forecasts of expenditure on assets in Schedule 14a (Mandatory Explanatory Notes). EDBs must express the information in this schedule (11a) as a specific value rather than ranges. Any supporting information about these values may be disclosed in Schedule 15 (Voluntary Explanatory Notes).

This information is not part of audited disclosure information.

sch ref

11a(iv): Asset Replacement and Renewal

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
	$000 (in constant prices)						
	Subtransmission	935	296	241	-	-	-
	Zone substations	723	1,270	3,413	1,462	1,149	190
	Distribution and LV lines	11,128	7,033	9,172	9,257	8,806	8,743
	Distribution and LV cables	946	831	145	348	348	400
	Distribution substations and transformers	206	2,765	1,886	1,786	1,786	1,566
	Distribution switchgear	275	525	375	375	75	75
	Other network assets	203	96	96	96	96	96
	Asset replacement and renewal expenditure	14,416	12,816	15,327	13,324	12,260	11,070
less	Capital contributions funding asset replacement and renewal	-	-	-	-	-	-
	Asset replacement and renewal less capital contributions	14,416	12,816	15,327	13,324	12,260	11,070

11a(v): Asset Relocations

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
	*Project or programme**	**$000 (in constant prices)**					
	NXL: 1 - Miscellaneous	-	150	-	150	-	150
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
	include additional rows if needed						
	All other project or programmes - asset relocations	-	-	-	-	-	-
	Asset relocations expenditure	-	150	-	150	-	150
less	Capital contributions funding asset relocations	-	-	-	-	-	-
	Asset relocations less capital contributions	-	150	-	150	-	150

11a(vi): Quality of Supply

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
	*Project or programme**	**$000 (in constant prices)**					
	NXEQ: 1 - 11kV Fdr Development - Feeders	1,162	100	100	100	100	100
	NXEQ: 2 - Network sectionalisation and automation	919	1,720	1,145	915	700	300
	NXEQ: 3 - Security of supply improvement	-	425	2,050	4,050	870	1,455
	NXEQ: 4 - Zone substation improvement	785	2,340	1,356	91	266	16
	NXEQ: 5 - Scada and Radio improvement	-	180	100	100	250	50
	include additional rows if needed						
	All other projects or programmes - quality of supply	-	-	-	-	-	-
	Quality of supply expenditure	2,866	4,765	4,751	5,256	2,186	1,921
less	Capital contributions funding quality of supply	-	-	-	-	-	-
	Quality of supply less capital contributions	2,866	4,765	4,751	5,256	2,186	1,921

Company Name	**The Lines Company**
AMP Planning Period	**1 April 2024 – 31 March 2034**

SCHEDULE 11a: REPORT ON FORECAST CAPITAL EXPENDITURE

This schedule requires a breakdown of forecast expenditure on assets for the current disclosure year and a 10 year planning period. The forecasts should be consistent with the supporting information set out in the AMP. The forecast is to be expressed in both constant price and nominal dollar terms. Also required is a forecast of the value of commissioned assets (i.e., the value of RAB additions)

EDBs must provide explanatory comment on the difference between constant price and nominal dollar forecasts of expenditure on assets in Schedule 14a (Mandatory Explanatory Notes). EDBs must express the information in this schedule (11a) as a specific value rather than ranges. Any supporting information about these values may be disclosed in Schedule 15 (Voluntary Explanatory Notes).

This information is not part of audited disclosure information.

sch ref

11a(vii): Legislative and Regulatory

	*Project or programme**	$000 (in constant prices)	*Current Year CY*	*CY+1*	*CY+2*	*CY+3*	*CY+4*	*CY+5*
			-	-	-	-	-	-
			-	-	-	-	-	-
			-	-	-	-	-	-
			-	-	-	-	-	-
			-	-	-	-	-	-
	include additional rows if needed							
	All other projects or programmes - legislative and regulatory		-	-	-	-	-	-
	Legislative and regulatory expenditure		-	-	-	-	-	-
less	Capital contributions funding legislative and regulatory		-	-	-	-	-	-
	Legislative and regulatory less capital contributions		-	-	-	-	-	-

11a(viii): Other Reliability, Safety and Environment

	*Project or programme**	$000 (in constant prices)	*Current Year CY*	*CY+1*	*CY+2*	*CY+3*	*CY+4*	*CY+5*
	NXEO: 1 - 11kV Fdr Dev - Switchgear, Cables		167	340	1,600	1,600	1,600	1,600
	NXEO: 2 - Sub and 33kV Dev - Substations		11	-	850	790	790	800
	NXEO: 3 - Sub and 33kVDev -Supply Points		39	-	-	-	-	-
	NXEO: 4 - Tx & Service Boxes - GMT, 2 Pole Structures		1,108	1,403	-	-	-	-
	NXEO: 5 - SCADA, Radio, Data Systems, Other		-	-	-	-	-	-
	include additional rows if needed							
	All other projects or programmes - other reliability, safety and environment		-	-	-	-	-	-
	Other reliability, safety and environment expenditure		1,325	1,743	2,450	2,390	2,390	2,400
less	Capital contributions funding other reliability, safety and environment		-	-	-	-	-	-
	Other reliability, safety and environment less capital contributions		1,325	1,743	2,450	2,390	2,390	2,400

11a(ix): Non-Network Assets

Routine expenditure

	*Project or programme**	$000 (in constant prices)	*Current Year CY*	*CY+1*	*CY+2*	*CY+3*	*CY+4*	*CY+5*
	NXNR: 1 - Eng & Asset Capital - Data and Data Systems		53	439	194	180	209	2,539
	NXNR: 2 - Eng & Asset Capital - Office Area		39	49	22	20	23	31
	NXNR: 3 - Eng & Asset Capital - Miscellaneous Equipment		4	600	600	600	-	-
	NXNR: 4 - Eng & Asset Capital - Vehicles		-	120	150	100	110	110
	NXNR: 5 - General business support		-	-	-	-	-	-
	include additional rows if needed							
	All other projects or programmes - routine expenditure		-	-	-	-	-	-
	Routine expenditure		96	1,208	966	900	342	2,680

Atypical expenditure

	*Project or programme**							
	NXNA: 1 - Eng & Asset Capital - Building Re-structure		-	2,880	928	20	20	20
	NXNA: 2 - Eng & Asset Capital - Data and Data Systems		1,044	2,168	1,294	884	360	100
			-	-	-	-	-	-
			-	-	-	-	-	-
			-	-	-	-	-	-
	include additional rows if needed							
	All other projects or programmes - atypical expenditure		-	-	-	-	-	-
	Atypical expenditure		1,044	5,048	2,221	904	380	120
	Expenditure on non-network assets		1,140	6,255	3,187	1,804	722	2,800

Company Name	**The Lines Company**
AMP Planning Period	**1 April 2024 – 31 March 2034**

SCHEDULE 11b: REPORT ON FORECAST OPERATIONAL EXPENDITURE

This schedule requires a breakdown of forecast operational expenditure for the disclosure year and a 10 year planning period. The forecasts should be consistent with the supporting information set out in the AMP. The forecast is to be expressed in both constant price and nominal dollar terms.
EDBs must provide explanatory comment on the difference between constant price and nominal dollar operational expenditure forecasts in Schedule 14a (Mandatory Explanatory Notes). EDBs must express the information in this schedule (11b) as a specific value rather than ranges. If EDBs wish to provide any supporting information about these values, this may be disclosed in Schedule 15 (Voluntary Explanatory Notes).
This information is not part of audited disclosure information.

sch ref		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5	CY+6	CY+7	CY+8	CY+9	CY+10
9	**Operational Expenditure Forecast**	**$000 (in nominal dollars)**										
10	Service interruptions and emergencies	2,109	2,067	2,149	2,214	2,258	2,303	2,349	2,396	2,444	2,493	2,543
11	Vegetation management	1,711	1,747	1,817	1,871	1,908	1,947	1,986	2,025	2,066	2,107	2,149
12	Routine and corrective maintenance and inspection	1,941	2,118	2,203	2,269	2,314	2,360	2,408	2,456	2,505	2,555	2,606
13	Asset replacement and renewal	373	613	638	657	670	683	697	711	725	740	755
14	**Network Opex**	6,134	6,544	6,806	7,010	7,151	7,294	7,440	7,588	7,740	7,895	8,053
15	System operations and network support	5,369	6,018	6,617	6,842	6,991	7,145	7,302	7,464	7,629	7,799	7,973
16	Business support	5,890	6,075	6,257	6,525	6,740	6,601	6,721	6,843	6,968	7,096	7,226
17	**Non-network opex**	11,259	12,094	12,874	13,367	13,731	13,745	14,023	14,307	14,597	14,895	15,199
18	**Operational expenditure**	17,393	18,638	19,680	20,378	20,882	21,039	21,462	21,895	22,337	22,789	23,251

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5	CY+6	CY+7	CY+8	CY+9	CY+10
21		**$000 (in constant prices)**										
22	Service interruptions and emergencies	2,109	2,067	2,077	2,079	2,072	2,075	2,079	2,084	2,089	2,095	2,102
23	Vegetation management	1,711	1,747	1,755	1,757	1,751	1,754	1,757	1,761	1,766	1,771	1,776
24	Routine and corrective maintenance and inspection	1,941	2,118	2,128	2,130	2,123	2,127	2,131	2,135	2,141	2,147	2,154
25	Asset replacement and renewal	373	613	616	617	615	616	617	618	620	622	624
26	**Network Opex**	6,134	6,544	6,576	6,583	6,560	6,571	6,584	6,599	6,615	6,634	6,655
27	System operations and network support	5,369	6,018	6,393	6,425	6,414	6,437	6,462	6,490	6,521	6,554	6,589
28	Business support	5,890	6,075	6,045	6,127	6,184	5,947	5,947	5,951	5,956	5,963	5,972
29	**Non-network opex**	11,259	12,094	12,438	12,552	12,597	12,383	12,410	12,441	12,476	12,516	12,561
30	**Operational expenditure**	17,393	18,638	19,014	19,134	19,158	18,954	18,993	19,039	19,092	19,151	19,216

31	**Subcomponents of operational expenditure (where known)**											
	**EDBs' must disclose both a public version of this Schedule (excluding cybersecurity cost data) and a confidential version of this Schedule (including cybersecurity costs)*											
32	Energy efficiency and demand side management, reduction of energy losses	-	-	-	-	-	-	-	-	-	-	-
33	Direct billing*	-	-	-	-	-	-	-	-	-	-	-
34	Research and Development	-	-	-	-	-	-	-	-	-	-	-
35	Insurance	-	-	-	-	-	-	-	-	-	-	-
36	Cybersecurity (Commission only)	-	-	-	-	-	-	-	-	-	-	-
37	** Direct billing expenditure by suppliers that direct bill the majority of their consumers*											

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5	CY+6	CY+7	CY+8	CY+9	CY+10
40												
41												
42	**Difference between nominal and real forecasts**	**$000**										
43	Service interruptions and emergencies	-	-	73	135	186	228	270	313	355	398	441
44	Vegetation management	-	-	61	114	158	193	228	264	300	336	373
45	Routine and corrective maintenance and inspection	-	-	74	138	191	234	277	320	364	408	452
46	Asset replacement and renewal	-	-	22	40	55	68	80	93	105	118	131
47	**Network Opex**	-	-	230	428	590	723	856	990	1,125	1,261	1,398
48	System operations and network support	-	-	224	418	577	708	840	974	1,109	1,245	1,384
49	Business support	-	-	212	398	557	654	773	893	1,012	1,133	1,254
50	**Non-network opex**	-	-	435	816	1,134	1,362	1,613	1,866	2,121	2,378	2,638
51	**Operational expenditure**	-	-	666	1,244	1,724	2,085	2,469	2,856	3,246	3,639	4,035

52		
53	**Commentary on options and considerations made in the assessment of forecast expenditure**	
54	*EDBs may provide explanatory comment on the options they have considered (including scenarios used) in assessing forecast operational expenditure for the current disclosure year and a 10 year planning period in Schedule 15.*	
55		

Company Name	**The Lines Company**
AMP Planning	**1 April 2024 – 31 March 2034**

SCHEDULE 12a: REPORT ON ASSET CONDITION

This schedule requires a breakdown of asset condition by asset class as at the start of the forecast year. The data accuracy assessment relates to the percentage values disclosed in the asset condition columns. Also required is a forecast of the percentage of units to be replaced in the next 5 years. All information should be consistent with the information provided in the AMP and the expenditure on assets forecast in Schedule 11a. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

sch ref					**Asset condition at start of planning period (percentage of units by grade)**							
	Voltage	**Asset category**	**Asset class**	**Units**	**H1**	**H2**	**H3**	**H4**	**H5**	**Grade unknown**	**Data accuracy (1–4)**	**% of asset forecast to be replaced in next 5 years**
10	All	Overhead Line	Concrete poles / steel structure	No.	0.92%	4.19%	15.77%	40.40%	36.20%	2.51%	3	5.11%
11	All	Overhead Line	Wood poles	No.	9.35%	5.45%	14.47%	45.36%	20.46%	4.90%	2	14.81%
12	All	Overhead Line	Other pole types	No.	-	-	-	-	-	-	N/A	-
13	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	-	-	31.17%	60.98%	7.85%	-	2	-
14	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	-	-	-	-	-	-	N/A	-
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	-	1.75%	1.75%	12.28%	84.21%	-	3	1.75%
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	-	-	-	-	-	-	N/A	-
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km	-	-	-	-	-	-	N/A	-
18	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km	-	-	-	-	-	-	N/A	-
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	-	-	-	-	-	-	N/A	-
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km	-	-	-	-	-	-	N/A	-
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km	-	-	-	-	-	-	N/A	-
22	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km	-	-	-	-	-	-	N/A	-
23	HV	Subtransmission Cable	Subtransmission submarine cable	km	-	-	-	-	-	-	N/A	-
24	HV	Zone substation Buildings	Zone substations up to 66kV	No.	-	-	-	56.00%	44.00%	-	4	-
25	HV	Zone substation Buildings	Zone substations 110kV+	No.	-	-	-	-	-	-	N/A	-
26	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	-	-	-	-	-	-	N/A	-
27	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	1.64%	-	-	16.39%	80.33%	1.64%	3	1.64%
28	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	-	-	-	-	-	-	N/A	-
29	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	18.23%	-	7.88%	21.18%	52.71%	-	3	18.23%
30	HV	Zone substation switchgear	33kV RMU	No.	-	-	-	-	-	-	N/A	-
31	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	-	-	-	-	-	-	N/A	-
32	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	-	-	-	-	-	-	N/A	-
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	36.07%	-	-	27.87%	34.43%	1.64%	3	36.07%
34	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	-	12.24%	8.16%	65.31%	14.29%	-	3	12.24%

Company Name	**The Lines Company**
AMP Planning	**1 April 2024 – 31 March 2034**

SCHEDULE 12a: REPORT ON ASSET CONDITION

This schedule requires a breakdown of asset condition by asset class as at the start of the forecast year. The data accuracy assessment relates to the percentage values disclosed in the asset condition columns. Also required is a forecast of the percentage of units to be replaced in the next 5 years. All information should be consistent with the information provided in the AMP and the expenditure on assets forecast in Schedule 11a. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

sch ref

					Asset condition at start of planning period (percentage of units by grade)							
	Voltage	**Asset category**	**Asset class**	**Units**	**H1**	**H2**	**H3**	**H4**	**H5**	**Grade unknown**	**Data accuracy (1–4)**	**% of asset forecast to be replaced in next 5 years**
39	HV	Zone Substation Transformer	Zone Substation Transformers	No.	-	2.56%	25.64%	51.28%	20.51%	-	4	2.56%
40	HV	Distribution Line	Distribution OH Open Wire Conductor	km	0.23%	1.20%	9.84%	74.27%	14.47%	-	2	1.42%
41	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	-	-	-	-	-	-	N/A	-
42	HV	Distribution Line	SWER conductor	km	0.31%	0.04%	24.54%	66.97%	8.14%	-	2	0.35%
43	HV	Distribution Cable	Distribution UG XLPE or PVC	km	0.58%	0.29%	14.40%	33.85%	50.88%	-	2	0.88%
44	HV	Distribution Cable	Distribution UG PILC	km	-	-	-	-	-	-	N/A	-
45	HV	Distribution Cable	Distribution Submarine Cable	km	-	-	-	-	-	-	N/A	-
46	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionalisers	No.	18.91%	-	3.36%	9.66%	67.23%	0.84%	3	18.91%
47	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	-	-	-	-	100.00%	-	3	-
48	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	6.71%	2.33%	11.29%	39.11%	40.55%	-	2	9.04%
49	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.	-	1.27%	1.27%	22.78%	74.68%	-	3	1.27%
50	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	4.89%	7.34%	-	13.59%	73.64%	0.54%	3	12.23%
51	HV	Distribution Transformer	Pole Mounted Transformer	No.	1.00%	1.34%	10.86%	59.89%	26.91%	-	2	2.34%
52	HV	Distribution Transformer	Ground Mounted Transformer	No.	1.29%	3.31%	3.31%	63.17%	28.91%	-	3	4.60%
53	HV	Distribution Transformer	Voltage regulators	No.	3.67%	4.59%	3.67%	33.03%	55.05%	-	3	8.26%
54	HV	Distribution Substations	Ground Mounted Substation Housing	No.	-	-	-	-	-	-	N/A	-
55	LV	LV Line	LV OH Conductor	km	0.35%	0.74%	13.19%	73.23%	12.48%	-	2	1.09%
56	LV	LV Cable	LV UG Cable	km	1.61%	0.05%	1.51%	85.13%	11.70%	-	2	1.66%
57	LV	LV Streetlighting	LV OH/UG Streetlight circuit	km	-	-	11.32%	86.49%	2.18%	-	2	-
58	LV	Connections	OH/UG consumer service connections	No.	0.75%	1.79%	11.34%	28.61%	15.34%	42.18%	2	2.54%
59	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.	3.70%	11.11%	-	63.27%	21.60%	0.31%	3	14.81%
60	All	SCADA and communications	SCADA and communications equipment operating as a single system	Lot	7.97%	7.44%	0.09%	43.26%	40.28%	0.96%	3	15.41%
61	All	Capacitor Banks	Capacitors including controls	No.	-	-	-	18.18%	81.82%	-	4	-
62	All	Load Control	Centralised plant	Lot	-	30.77%	-	53.85%	15.38%	-	3	30.77%
63	All	Load Control	Relays	No.	-	-	-	62.41%	11.38%	26.21%	3	-
64	All	Civils	Cable Tunnels	km	-	-	-	-	-	-	N/A	-

Company Name	**The Lines Company**
AMP Planning Period	**1 April 2024 – 31 March**

SCHEDULE 12b: REPORT ON FORECAST CAPACITY

This schedule requires a breakdown of current and forecast capacity and utilisation for each zone substation and current distribution transformer capacity. The data provided should be consistent with the information provided in the AMP. Information provided in this table should relate to the operation of the network in its normal steady state configuration.

sch ref

12b(i): System Growth - Zone Substations

Existing Zone Substations	Current Peak Load (MVA)	Installed Firm Capacity (MVA)	Security of Supply Classification (type)	Transfer Capacity (MVA)	Utilisation of Installed Firm Capacity %	Installed Firm Capacity +5 years (MVA)	Utilisation of Installed Firm Capacity + 5yrs %	Installed Firm Capacity Constraint +5 years (cause)	Explanation
Arohena	3.2	-	N	1	-	-	-	Transformer	Transformer upgrade FY24.
Atiamuri	11.4	-	N	10	-	-	-	Transformer	Scheduled upgrade to Atiamuri planned in next 5 yrs
Awamate	0.7	-	N	1	-	-	-	No constraint within +5 years	
Borough	7.1	8.1	N-1	2	87%	8.1	91%	No constraint within +5 years	
Gadsby Rd	3.9	-	N	5	-	-	-	Transformer	
Hangatiki	4.0	-	N	3	-	-	-	Transformer	Transformer upgrade FY27.
Kaahu Tee	1.8	-	N	1	-	-	-	Transformer	Retrofit fans on to existing TXs and rerate FY32.
Kiko Road	1.2	-	N	-	-	-	-	No constraint within +5 years	11kV backup supply reinforcement FY25-27.
Kuratau	2.1	3.0	N-1	0	68%	3.0	89%	No constraint within +5 years	
Mahoenui	1.6	-	N	-	-	-	-	No constraint within +5 years	
Manunui	2.7	-	N	2	-	-	-	No constraint within +5 years	TX upgrade from 3MVA to 5MVA, FY30-32.
Maraetai	4.9	-	N	1	-	-	-	No constraint within +5 years	
Marotiri	2.4	-	N	1	-	-	-	No constraint within +5 years	TX upgrade from 3MVA to 5MVA, FY27-29.
Mokai	5.0	-	N	1	-	-	-	No constraint within +5 years	
National Park	1.6	-	N	3	-	-	-	No constraint within +5 years	
Nihoniho	0.6	-	N	1	-	-	-	No constraint within +5 years	
Oparure	1.7	-	N	1	-	-	-	No constraint within +5 years	
Otukou	0.1	-	N	-	-	-	-	No constraint within +5 years	
Piripiri	0.6	-	N	2	-	-	-	No constraint within +5 years	
Tahāroa	13.7	10.0	N-1	-	137%	20.0	137%	Transformer	Constraint managed through agreement with major customer
Tahāroa Village	0.4	-	N	-	-	-	-	No constraint within +5 years	
Tawhai	3.6	-	N	2	-	-	-	No constraint within +5 years	
Te Anga	2.5	-	N	2	-	-	-	No constraint within +5 years	
Te Waireka	10.8	9.4	N-1	1	115%	9.4	137%	Subtransmission circuit	Subtransmission upgrade FY32-34.
Tokaanu Village	0.2	-	N	-	-	-	-	No constraint within +5 years	
Tuhua	0.6	-	N	1	-	-	-	No constraint within +5 years	
Tūrangi	4.4	5.0	N-1	3	89%	5.0	152%	No constraint within +5 years	Retrofit fans on to existing TXs and rerate FY25.
Waiotaka	0.5	-	N	1	-	-	-	No constraint within +5 years	
Wairere Falls	3.0	-	N	1	-	-	-	No constraint within +5 years	11kV backup supply reinforcement FY25-27.
Waitete	8.4	12.7	N-1	3	66%	15.0	80%	Subtransmission circuit	Subtransmission upgrade FY29-31.

[1] *Extend forecast capacity table as necessary to disclose all capacity by each zone substation*

Company Name	**The Lines Company**
AMP Planning	**1 April 2024 – 31 March 2034**

SCHEDULE 12c: REPORT ON FORECAST NETWORK DEMAND

This schedule requires a forecast of new connections (by consumer type), peak demand and energy volumes for the disclosure year and a 5 year planning period. The forecasts should be consistent with the supporting information set out in the AMP as well as the assumptions used in developing the expenditure forecasts in Schedule 11a and Schedule 11b and the capacity and utilisation forecasts in Schedule 12b.

sch ref

12c(i): Consumer Connections

Number of ICPs connected during year by consumer type

Number of connections

*Consumer types defined by EDB**	*Current Year CY* **31 Mar 24**	*CY+1* **31 Mar 25**	*CY+2* **31 Mar 26**	*CY+3* **31 Mar 27**	*CY+4* **31 Mar 28**	*CY+5* **31 Mar 29**
Standard: Service Level Urban	121	121	122	122	123	124
Standard: Service Level Rural	151	152	152	153	154	155
Standard: Service Level Remote	13	13	13	13	13	13
Non standard connection	-	-	-	-	-	-
0						
Connections total	284	286	287	289	290	292

**include additional rows if needed*

Distributed generation

	Current Year CY	*CY+1*	*CY+2*	*CY+3*	*CY+4*	*CY+5*
Number of connections made in year	19	23	29	37	46	57
Capacity of distributed generation installed in year (MVA)	0.14	0.18	0.22	0.27	0.34	0.43

12c(ii) System Demand

		Current Year CY **31 Mar 24**	*CY+1* **31 Mar 25**	*CY+2* **31 Mar 26**	*CY+3* **31 Mar 27**	*CY+4* **31 Mar 28**	*CY+5* **31 Mar 29**
Maximum coincident system demand (MW)							
	GXP demand	66	82	85	70	71	71
plus	Distributed generation output at HV and above	12	12	12	30	30	32
	Maximum coincident system demand	79	94	97	100	102	103
less	Net transfers to (from) other EDBs at HV and above	-	-	-	-	-	-
	Demand on system for supply to consumers' connection points	79	94	97	100	102	103
Electricity volumes carried (GWh)							
	Electricity supplied from GXPs	325	404	413	343	343	326
less	Electricity exports to GXPs	6	6	6	6	6	7
plus	Electricity supplied from distributed generation	68	68	68	150	150	168
less	Net electricity supplied to (from) other EDBs	(16)	(16)	(17)	(17)	(17)	(17)
	Electricity entering system for supply to ICPs	403	482	492	503	504	505
less	Total energy delivered to ICPs	375	443	452	461	462	463
	Losses	28	39	40	42	42	42
	Load factor	59%	59%	58%	57%	57%	56%
	Loss ratio	6.9%	8.0%	8.1%	8.3%	8.3%	8.3%

Company Name	**The Lines Company**
AMP Planning Period	**1 April 2024 – 31 March 2034**
Network / Sub-network	

SCHEDULE 12d: REPORT FORECAST INTERRUPTIONS AND DURATION

This schedule requires a forecast of SAIFI and SAIDI for disclosure and a 5 year planning period. The forecasts should be consistent with the supporting information set out in the AMP as well as the assumed impact of planned and unplanned SAIFI and SAIDI on the expenditures forecast provided in Schedule 11a and Schedule 11b.

sch ref		*Current Year CY*	*CY+1*	*CY+2*	*CY+3*	*CY+4*	*CY+5*
10	**SAIDI**						
11	Class B (planned interruptions on the network)	88.0	113.6	113.6	113.6	113.6	113.6
12	Class C (unplanned interruptions on the network)	150.9	158.0	156.0	154.0	152.0	150.0
13	**SAIFI**						
14	Class B (planned interruptions on the network)	0.70	0.70	0.70	0.70	0.70	0.70
15	Class C (unplanned interruptions on the network)	2.10	2.59	2.57	2.55	2.52	2.50

SCHEDULE 14A: MANDATORY EXPLANATORY NOTES ON FORECAST INFORMATION

1. This Schedule requires EDBs to provide explanatory notes to reports prepared in accordance with clause 2.6.6.

   This Schedule is mandatory – EDBs must provide the explanatory comment specified below, in accordance with clause 2.7.2. This information is not part of the audited disclosure information, and so is not subject to the assurance requirements specified in section 2.8.

Commentary on difference between nominal and constant price capital expenditure forecasts (Schedule 11a).

2. In the box below, comment on the difference between nominal and constant price capital expenditure for the current disclosure year and 10 year planning period, as disclosed in Schedule 11a.

Box 1: Commentary on difference between nominal and constant price capital expenditure forecasts:

Forecasts for current year (CY) and CY+1 in Schedule 11a are based on actual forecast spend, and therefore have no CPI increase.

The following increases have been applied to nominal forecasts for other years.

CY+2	3.5%
CY+3	3.0%
CY+4	2.5%
CY+5 onwards	2.0%

Commentary on difference between nominal and constant price capital expenditure forecasts (Schedule 11a).

3. In the box below, comment on the difference between nominal and constant price operational expenditure for the current disclosure year and 10 year planning period, as disclosed in Schedule 11b.

Box 2: Commentary on difference between nominal and constant price operational expenditure forecasts:

Forecasts for current year (CY) and CY+1 in Schedule 11b are based on actual forecast spend, and therefore have no CPI increase.

The following increases have been applied to nominal forecasts for other years.

CY+2	3.5%
CY+3	3.0%
CY+4	2.5%
CY+5 onwards	2.0%

SCHEDULE 17: CERTIFICATION FOR YEAR-BEGINNING DISCLOSURE

Clause 2.9.1

We, **Mike Underhill and Todd Spencer**, being Directors of The Lines Company Limited certify that, having made all reasonable enquiry, to the best of our knowledge:

a) the following attached information of The Lines Company Limited prepared for the purposes of clauses 2.4.1, 2.6.1, 2.6.3, 2.6.6 and 2.7.2 of the Electricity Distribution Information Disclosure Determination 2012 in all material respects complies with that determination.

b) The prospective financial or non-financial information included in the attached information has been measured on a basis consistent with regulatory requirements or recognised industry standards.

c) The forecasts in Schedules 11a, 11b, 12a, 12b, 12c and 12d are based on objective and reasonable assumptions which both align with The Lines Company's corporate vision and strategy and are documented in retained records.

DIRECTOR	**DIRECTOR**
Mike Underhill	**Todd Spencer**
Date: 28 March 2024	**Date:** 28 March 2024