Northpower

2025-2034 Asset Management Plan Update

March 2024

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Section 1

Asset Management Plan Update

1. Asset Management Plan Update

This supplement to our Asset Management Plan (AMP) published in March 2023 (for the period 2024-2034) provides an update to Northpower's approach to managing its assets and delivering the planned programmes of capital and operational spend, as well as planned maintenance work for the period 1 April 2024 to 30 March 2034.

Northpower's 2023 AMP is available from Northpower's website at: https://northpower.com/company/disclosures. This update should be read in conjunction with the 2023 AMP and outlines how we are managing our network assets for the efficient and reliable delivery of electricity to consumers.

Covered in this update are:

1. Our improvements underway that will be included in our next full AMP (in 2026)
2. Material changes to the network development plans disclosed in the last AMP
3. Material changes to the lifecycle asset management (maintenance and renewal) plans disclosed in the last AMP
4. Material changes to Northpower's asset management practices; and
5. An outline of the reasons for material changes to the previous disclosures in the Report on Forecast Capital Expenditure set out in Schedule 11a and Report on Forecast Operational Expenditure set out in Schedule 11b.

Information disclosure requirements

Our AMP update is written in accordance with the Commerce Commission's Electricity Distribution Information Disclosure Determination 2012. Clause 2.6.3 of this document requires that Northpower publicly disclose an AMP update prior to 1 April 2024.

Clause 2.6.5 states that the AMP update must:

1. Relate to the electricity distribution services supplied by the EDB
2. Identify any material changes to the network development plans disclosed in the last AMP under clause 11 of Attachment A or in the last AMP update disclosed under this clause
3. Identify any material changes to the lifecycle asset management (maintenance and renewal) plans disclosed in the last AMP pursuant to clause 12 of Attachment A
4. Provide the reasons for any material changes to the previous disclosures in the Report on Forecast Capital Expenditure set out in Schedule 11a and Report on Forecast Operational Expenditure set out in Schedule 11b
5. Identify any changes to the asset management practices of the EDB that would affect a Schedule 13 Report on Asset Management Maturity disclosure and
6. Contain the information set out in clause 2.6.6 which are schedules 11a, 11b, 12a, 12b, 12c and 12d.

Clause 2.7.2 also requires that the Mandatory Explanatory Notes on Forecast Information in Schedule 14a is publicly disclosed prior to the start of each disclosure year.

Stakeholder feedback

Northpower encourages feedback to enable continued improvement in meeting the needs of its consumers and stakeholders.

Feedback should be addressed to:

Mike Gibbs
General Manager – Network Investment & Strategy

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Section 2

Our Next Asset Management Plan

2. Our Next Asset Management Plan

We are continuing to work on several initiatives to improve our asset management that will be included in our next full AMP in 2026. These are outlined in the following sections:

Customer engagement

- **Customer notifications:** Through our ongoing surveys and customer engagement, customers tell us that communication is important, and they particularly need up to date and accurate information about outages (both planned and unplanned). Our investment in a Customer Relationship Management (CRM) system in recent years means we are now able to integrate this with our new outage management system and provide up to date information to customers about planned and unplanned outages. This will enable an improved customer experience with up to the minute outage information available on our website.
- **New website:** In 2024 a new website will be rolled out with a new outage centre where the above information will be easily accessible. Information covering everything from how to get a new connection or gain approval for solar installation right through to information for property developers and working safely around our network will be available on the new website.
- **Helping customers navigate their energy choices:** We recognise that energy hardship is a serious issue in our communities and one of our key goals is to reduce total energy costs for consumers. Northpower is continuing with our successful consumer outreach programme, where energy assessors visit homes providing practical energy saving advice and energy saving devices such as LED bulbs and energy-efficient shower heads to help customers reduce their total electricity costs. Over the past two years, Northpower has been awarded $260,000 funding from the Government's Support for Energy Education in Communities (SEEC) programme to support this activity. To date, we have completed assessments of over 2,500 homes and provided energy saving devices, saving these homes an estimated total $2.86m in power bills every year.

Risk management

- **Asset health modelling:** Following the exercise outlined in the 2023 AMP to create new asset forecast models, we have been building more detailed asset models that consider a wider range of factors that affect the degradation of our assets. This work will enable better risk prioritisation of asset replacement. We will continue the development of these models and the output of this work will be included in the full AMP in 2026.
- **Climate change resilience:** We continue our work on building the resilience of the network, including carrying out risk studies on strategically important assets on our network, enabling better backfeed capability on both the subtransmission and distribution network and updating our design standards to ensure our assets are fit for purpose for the future.
- **Emissions reduction:** We continue our work on reducing our carbon emissions. We have set a reduction target aligned a science-based target of a 1.5-degree global warming. We have completed reporting of our current emissions, prioritised areas for improvement and begun work on reducing vehicle idling and tighter SF6 leak management.

Network development

- **LV network management:** We have completed a trial of analytics software using smart meter data and are working on obtaining smart meter data on our network and implementing an analytics package. This smart meter data and analytics will be used for network planning and management, to be able to better understand our LV and distribution networks and possible constraints. This is becoming more important as customer behaviour is changing, particularly with the uptake of EVs and solar.
- **Decarbonisation:** We maintain communication with load customers who have the potential for an increase in demand due to decarbonisation. We engage with these customers to ensure alignment with Northpower's own demand forecasts and long-term development strategies. In 2023, the Energy Efficiency and Conservation Authority (EECA) published a report for Northland assessing the region's potential for decarbonisation, which closely aligns with Northpower's existing understanding of the future decarbonisation demand in the region. We continue to work with these customers and undertake scenario analysis to ensure that our investment decisions align with the future needs of our customers.

Lifecycle management

- **Asset strategies:** We are developing a set of asset strategies outlining our approach to managing assets throughout their lifecycle across various asset classes. Emphasis is placed on high-value and high-consequence assets commonly found in zone substations, such as power transformers, switchgear, and protection systems. Additionally, our pole strategy is complemented by prioritising the crossarm and conductor strategy, ensuring a comprehensive approach. These strategies assess current objectives and alignment with our practices, identifying opportunities for future enhancements across our fleets.
- **Asset condition assessment:** Following Cyclone Gabrielle and working through our new asset health models, we have identified the need to re-inspect and obtain better condition information on the network. This is both to identify any remaining defects following the cyclone and obtain information we have not captured before for input into our condition models and planning. We are working through defining our requirements and expect to start an aerial inspection programme summer FY25.
- **Vegetation management:** We have implemented our new risk-based vegetation management strategy and are working through inspecting the network to obtain a full vegetation risk profile. We are prioritising the high-risk vegetation for removal while we gain a full view of the risk on the network.

Supporting activities

- **Drawings management:** We are implementing Autodesk Vault to provide a single, accessible repository for engineering drawings. This specialist EDMS software allows collaboration within and outside the organisation while delivering change and version control, and structured workflows.
- **ADMS:** We have now completed two of the three phases of our ADMS implementation. We are fully operational in production with SCADA, DMS (distribution management) including GIS integration and a new integrated permitting system. The third and final phase of the programme is nearing completion, which involves implementing OMS (outage management), integrating our Salesforce fault ticketing system, IVR, Web and advanced applications (e.g. distribution power flow).
- **Asset management information system (AMIS):** We have begun the procurement process to implement a new asset management information system to replace our obsolete WASP system. We intend to complete the system selection in FY25 and begin implementation in FY26.

Section 3

Material Changes

3. Material Changes

3.1 Overview

Since the 2023 AMP, we have continued to review the existing AMP for the electricity business, including our approach to investment and maintenance, with a focus on continual improvement.

The key inputs into this review have included:

- A review of forecast changes in investment need relating to asset renewal and load growth for the 10-year planning period FY25-FY34.
- A review of unit costs associated with our investment programmes, noting Northpower has seen significant price increase in costs across the board over the last few years.
- Reviewing security of supply criteria against updated demand forecasts.
- A review of Opex and Capex programmes to ensure SAIDI and SAIFI remain in line with long-term averages, taking into account an aging asset base, increases in planned work and ongoing vegetation challenges.

This 2024 AMP update summarises the resulting changes to our AMP.

3.2 Material changes to network development plan

Overall $20.3M increase in the 10-year network development profile compared with the 2023 AMP[1]

We have revisited growth forecasts to validate the need for our network development investments for the next 10-year period, updated our cost estimates and revalidated our plan. The majority of the changes relate to updated cost estimates reflecting new information from recent projects or updated scope following further investigation. The material changes to the plan are outlined in the below table.

Material changes to network development plan[2]

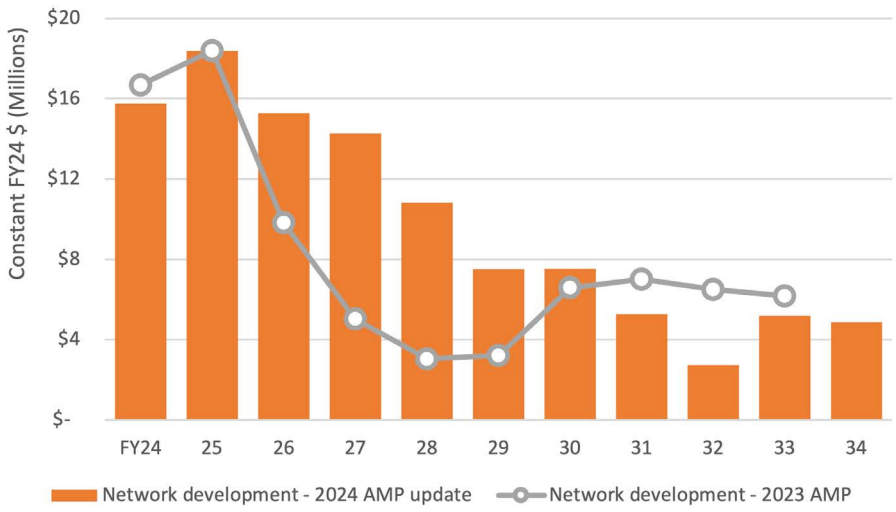
Year	Change ($)	Description of change	Reasons of change
FY24-FY28	+$8.8M	Mangawhai New Line updated estimate	Our previous AMP included an allowance for the Mangawhai line, after the recent concept design this cost estimate has been updated.
FY24-FY25	+$4.0M	MWI Central Zone substation	We have seen some recent increases in costs on the MWI Central Zone substation project with some spend rolled over from FY23.
FY25-FY27	+$3.9M	Maungatapere Transformer Replacement updated estimate	Based on our recent experience at Kensington we have lifted the cost estimate for Maungatapere transformer upgrade.
FY28-FY29	+$2.9M	New KEN – KMO cable	Updated the new cable cost estimate based on recent experience.
FY25	+$0.9M	Purchase of MTO GXP assets	We are in discussions with Transpower and expect to purchase the transformer assets at MTO in FY25.

The resulting investment profile sees an uplift in investment related to network development compared with our 2033 AMP.

[1] For the comparison period FY24 to FY33

[2] Includes the following investment categories: consumer connections, system growth, asset relocations, reliability, safety & environment

10-Year network development investment profile (2024 AMP update vs. 2023 AMP) - $M



3.3 Material changes to asset lifecycle management

Overall $4.9M increase in the 10-year asset lifecycle management profile compared with the 2023 AMP.[3]

We have updated our asset models with new asset information, updated our cost estimates and revalidated our asset renewal forecasts. We have also reviewed and updated our non-network assets forecasts.

The key resulting changes to our plan are outlined in the below table.

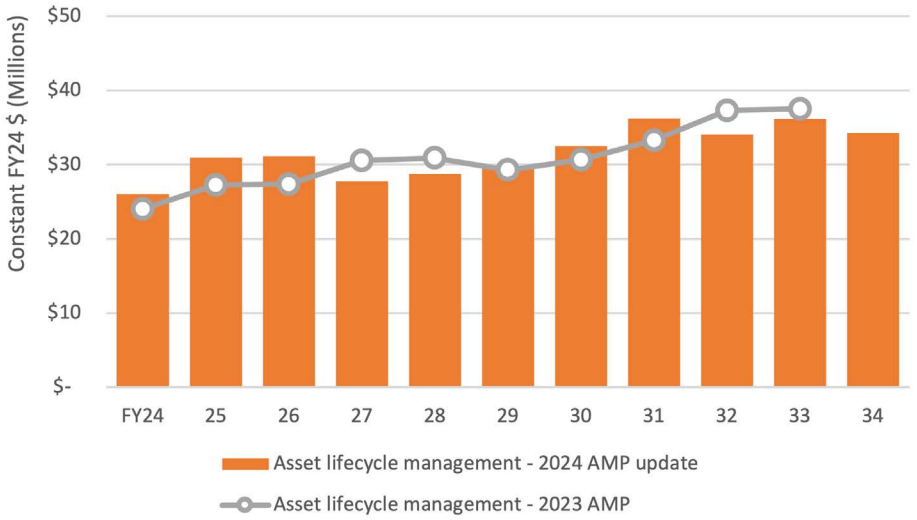
Material changes to network development plan[4]

Year	Change ($)	Description of change	Reasons for change
FY25-FY26	+$2.5M	Allowance for Lidar and pole top topography ("digital twin")	As discussed in the Our Next Asset Management Plan section, we have identified a need to get better asset condition information and have included allowance to carry out an aerial survey on the network.
All	+$2.0M	Allowance for network system upgrades and implementation	Our previous forecast did not make allowance for long term capital expenditure on system upgrades and implementation beyond the next 3-4 years, as it is difficult to forecast. A modest allowance has been made for this work over the 10-year period.

The resulting investment profile sees an uplift in investment related to asset lifecycle management, compared with our 2023 AMP across the planning period.

[4] Includes the following investment categories: asset replacement and renewal, non-network assets

10-year asset lifecycle management investment profile (2024 AMP update vs. 2023 AMP) - $M



3.4 Material changes to expenditure forecasts (Schedule 11a and 11b)

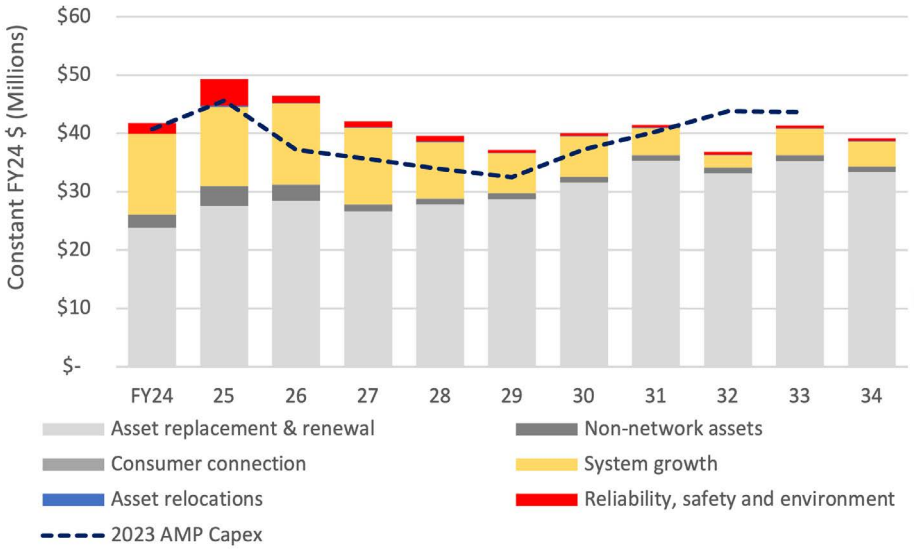
Compared to the 2021 AMP we are forecasting an increase across both Capex and Opex.

- The reasons for the Capex increase are detailed in sections 3.2 and 3.3.
- The reasons for the Opex increase are detailed at the end of this section.

Capex forecast

The 10-year forecast capital expenditure is $413.2M for the period FY25-FY34, up $22.6M from the 2023 AMP (for the period FY24-FY33) and is shown below.

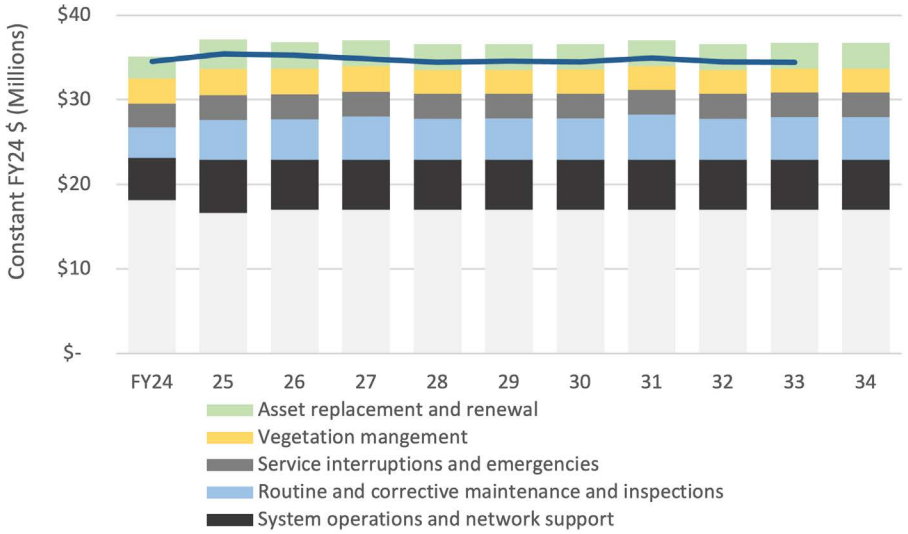
Forecast Capex 2023 AMP vs. 2024 AMP update



Opex forecast

The 10-year forecast operational expenditure is $367.9M for the period FY25-FY34, up $20.3M from the 2023 AMP (for the period FY24-FY33) and is shown below.

Forecast Opex 2023 AMP vs. 2024 AMP update



The changes in the operational expenditure forecast are detailed in the below table.

Change ($)	Description of change	Reason for change
+ $15.2M	Increase in payroll costs	To meet future needs of the network, a reorganisation was carried out during FY24. This has resulted in a number of new roles within the network team.

3.5 Material changes to asset management practices

There have been no material changes in our asset management practices since our 2023 AMP. However, as outlined in the Our Next Asset Management Plan section, we are working on several initiatives to improve our asset management approach and these will be discussed further in our next full AMP in 2026.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Section 4

Schedules

4.1 Schedule 11a: report on forecast Capital Expenditure

Company Name	**Northpower**
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*
		for year ended	**31 Mar 24**	**31 Mar 25**	**31 Mar 26**	**31 Mar 27**	**31 Mar 28**	**31 Mar 29**	**31 Mar 30**	**31 Mar 31**	**31 Mar 32**	**31 Mar 33**	**31 Mar 34**
	11a(i): Expenditure on Assets Forecast		**$000 (in nominal dollars)**										
	Consumer connection		5,803	3,154	6,073	6,195	6,319	6,445	6,574	6,706	6,840	6,977	7,116
	System growth		13,802	13,847	14,517	14,033	10,534	7,640	7,805	5,356	2,474	5,470	5,199
	Asset replacement and renewal		23,827	28,196	29,761	28,486	30,317	31,925	35,804	40,773	39,081	42,403	40,949
	Asset relocations		-	195	105	107	109	111	113	116	118	120	123
	Reliability, safety and environment:												
	Quality of supply		854	2,315	1,104	842	859	321	328	334	341	348	355
	Legislative and regulatory		380	952	-	-	-	-	-	-	-	-	-
	Other reliability, safety and environment		625	1,419	163	167	170	173	177	180	184	188	191
	Total reliability, safety and environment		1,860	4,686	1,268	1,009	1,029	494	504	514	525	535	546
	Expenditure on network assets		45,292	50,077	51,724	49,830	48,308	46,616	50,800	53,464	49,037	55,505	53,933
	Expenditure on non-network assets		2,172	3,464	2,831	1,115	974	994	1,014	1,034	1,055	1,076	1,097
	Expenditure on assets		47,465	53,542	54,555	50,945	49,282	47,610	51,814	54,498	50,092	56,581	55,030
	plus Cost of financing		1,378	2,283	2,629	1,533	1,457	993	1,056	1,294	813	1,049	1,160
	less Value of capital contributions		5,715	3,064	5,981	6,101	6,223	6,348	6,474	6,604	6,736	6,871	7,008
	plus Value of vested assets		-	922	-	-	-	-	-	-	-	-	-
	Capital expenditure forecast		43,127	53,682	51,202	46,377	44,516	42,255	46,395	49,188	44,169	50,758	49,182
	Assets commissioned		34,348	36,858	65,364	44,536	51,143	42,006	41,832	55,077	41,648	46,848	44,215

		Current Year CY	*CY+1*	*CY+2*	*CY+3*	*CY+4*	*CY+5*	*CY+6*	*CY+7*	*CY+8*	*CY+9*	*CY+10*
	for year ended	**31 Mar 24**	**31 Mar 25**	**31 Mar 26**	**31 Mar 27**	**31 Mar 28**	**31 Mar 29**	**31 Mar 30**	**31 Mar 31**	**31 Mar 32**	**31 Mar 33**	**31 Mar 34**
	$000 (in constant prices)											
	Consumer connection	5,803	5,803	5,803	5,803	5,803	5,803	5,803	5,803	5,803	5,803	5,803
	System growth	13,802	13,522	13,871	13,146	9,674	6,879	6,890	4,635	2,099	4,551	4,240
	Asset replacement and renewal	23,827	27,535	28,438	26,686	27,844	28,747	31,606	35,288	33,160	35,273	33,396
	Asset relocations	-	190	100	100	100	100	100	100	100	100	100
	Reliability, safety and environment:											
	Quality of supply	854	2,261	1,055	789	789	289	289	289	289	289	289
	Legislative and regulatory	380	930	-	-	-	-	-	-	-	-	-
	Other reliability, safety and environment	625	1,385	156	156	156	156	156	156	156	156	156
	Total reliability, safety and environment	1,860	4,577	1,211	945	945	445	445	445	445	445	445
	Expenditure on network assets	45,292	51,627	49,424	46,681	44,367	41,974	44,845	46,271	41,608	46,172	43,985
	Expenditure on non-network assets	2,172	3,383	2,705	1,045	895	895	895	895	895	895	895
	Expenditure on assets	47,465	55,010	52,129	47,726	45,262	42,869	45,740	47,166	42,503	47,067	44,880
	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)*											
	Energy efficiency and demand side management, reduction of energy losses											
	Overhead to underground conversion											
	Research and development											
	Cybersecurity (Commission only)											

4.1 Schedule 11a: report on forecast Capital Expenditure (contd)

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5	CY+6	CY+7	CY+8	CY+9	CY+10
	for year ended	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29	31 Mar 30	31 Mar 31	31 Mar 32	31 Mar 33	31 Mar 34
Difference between nominal and constant price forecasts		$000										
Consumer connection		-	(2,650)	270	391	515	642	771	902	1,036	1,173	1,313
System growth		-	325	645	887	859	761	915	721	375	920	959
Asset replacement and renewal		-	661	1,323	1,800	2,473	3,179	4,197	5,486	5,921	7,130	7,553
Asset relocations		-	5	5	7	9	11	13	16	18	20	23
Reliability, safety and environment:												
Quality of supply		-	54	49	53	70	32	38	45	52	58	65
Legislative and regulatory		-	22	-	-	-	-	-	-	-	-	-
Other reliability, safety and environment		-	33	7	11	14	17	21	24	28	32	35
Total reliability, safety and environment		-	110	56	64	84	49	59	69	79	90	101
Expenditure on network assets		-	(1,550)	2,300	3,149	3,940	4,642	5,955	7,193	7,429	9,333	9,948
Expenditure on non-network assets		-	81	126	70	79	99	119	139	160	181	202
Expenditure on assets		-	(1,469)	2,425	3,219	4,020	4,741	6,074	7,332	7,589	9,514	10,151

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

	Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
for year ended	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29
11a(ii): Consumer Connection						
*Consumer types defined by EDB**	$000 (in constant prices)					
Consumer connections (gross)	5,803	5,803	5,803	5,803	5,803	5,803
*include additional rows if needed						
Consumer connection expenditure	5,803	5,803	5,803	5,803	5,803	5,803
less Capital contributions funding consumer connection	5,715	5,715	5,715	5,715	5,715	5,715
Consumer connection less capital contributions	88	88	88	88	88	88
11a(iii): System Growth						
Subtransmission	550	1,650	4,000	5,250	8,539	5,744
Zone substations	10,785	10,196	8,211	6,761	-	-
Distribution and LV lines	397	271	100	100	100	100
Distribution and LV cables	-	-	-	-	-	-
Distribution substations and transformers	1,559	1,145	1,035	1,035	1,035	1,035
Distribution switchgear	-	-	525	-	-	-
Other network assets	511	260	-	-	-	-
System growth expenditure	13,802	13,522	13,871	13,146	9,674	6,879
less Capital contributions funding system growth	-	-	-	-	-	-
System growth less capital contributions	13,802	13,522	13,871	13,146	9,674	6,879

4.1 Schedule 11a: report on forecast Capital Expenditure (contd)

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
for year ended		31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29
11a(iv): Asset Replacement and Renewal		**$000 (in constant prices)**					
	Subtransmission	1,400	800	2,267	3,681	790	806
	Zone substations	9,394	10,243	8,850	2,525	3,136	2,635
	Distribution and LV lines	8,082	11,235	13,480	16,381	19,350	20,384
	Distribution and LV cables	778	1,772	775	436	358	432
	Distribution substations and transformers	940	1,246	1,068	1,360	1,638	1,822
	Distribution switchgear	1,736	2,167	1,925	2,230	2,500	2,595
	Other network assets	1,498	73	73	73	73	73
	Asset replacement and renewal expenditure	23,827	27,535	28,438	26,686	27,844	28,747
less	Capital contributions funding asset replacement and renewal	-	-	-	-	-	-
	Asset replacement and renewal less capital contributions	23,827	27,535	28,438	26,686	27,844	28,747

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
for year ended		31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29
11a(v): Asset Relocations							
	*Project or programme**	**$000 (in constant prices)**					
	Asset relocations (gross)	-	190	100	100	100	100
	**include additional rows if needed*						
	All other project or programmes - asset relocations	-	-	-	-	-	-
	Asset relocations expenditure	-	190	100	100	100	100
less	Capital contributions funding asset relocations	-	-	-	-	-	-
	Asset relocations less capital contributions	-	190	100	100	100	100

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
for year ended		31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29
11a(vi): Quality of Supply							
	*Project or programme**	**$000 (in constant prices)**					
	All QoS projects	854	2,261	1,055	789	789	289
	**include additional rows if needed*						
	All other projects or programmes - quality of supply	-	-	-	-	-	-
	Quality of supply expenditure	854	2,261	1,055	789	789	289
less	Capital contributions funding quality of supply	-	-	-	-	-	-
	Quality of supply less capital contributions	854	2,261	1,055	789	789	289

4.1 Schedule 11a: report on forecast Capital Expenditure (contd)

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
	for year ended	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29
11a(vii): Legislative and Regulatory							
*Project or programme**		$000 (in constant prices)					
[Description of material project or programme]		380	930	-	-	-	-
*include additional rows if needed							
All other projects or programmes - legislative and regulatory		-	-	-	-	-	-
Legislative and regulatory expenditure		380	930	-	-	-	-
less Capital contributions funding legislative and regulatory		-	-	-	-	-	-
Legislative and regulatory less capital contributions		380	930	-	-	-	-

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
	for year ended	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29
11a(viii): Other Reliability, Safety and Environment							
*Project or programme**		$000 (in constant prices)					
All ORSE projects		625	1,385	156	156	156	156
*include additional rows if needed							
All other projects or programmes - other reliability, safety and environment		-	-	-	-	-	-
Other reliability, safety and environment expenditure		625	1,385	156	156	156	156
less Capital contributions funding other reliability, safety and environment		-	-	-	-	-	-
Other reliability, safety and environment less capital contributions		625	1,385	156	156	156	156

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
	for year ended	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29
11a(ix): Non-Network Assets							
Routine expenditure							
*Project or programme**		$000 (in constant prices)					
Routine expenditure		517	275	245	245	95	95
*include additional rows if needed							
All other projects or programmes - routine expenditure		-	-	-	-	-	-
Routine expenditure		517	275	245	245	95	95
Atypical expenditure							
*Project or programme**							
Atypical expenditure		1,655	3,108	2,460	800	800	800
*include additional rows if needed							
All other projects or programmes - atypical expenditure		-	-	-	-	-	-
Atypical expenditure		1,655	3,108	2,460	800	800	800
Expenditure on non-network assets		2,172	3,383	2,705	1,045	895	895

4.2 Schedule 11b: report on forecast Operational Expenditure

Company Name	**Northpower**
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
	for year ended	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29	31 Mar 30	31 Mar 31	31 Mar 32	31 Mar 33	31 Mar 34
	Operational Expenditure Forecast	**$000 (in nominal dollars)**										
	Service interruptions and emergencies	2,813	3,099	3,171	3,234	3,299	3,365	3,432	3,501	3,571	3,642	3,715
	Vegetation management	2,944	3,161	3,234	3,299	3,128	3,191	3,255	3,320	3,386	3,454	3,523
	Routine and corrective maintenance and inspection	3,636	4,926	5,111	5,568	5,416	5,526	5,662	6,289	5,853	6,148	6,271
	Asset replacement and renewal	2,647	3,704	3,380	3,328	3,394	3,462	3,531	3,602	3,674	3,747	3,822
	Network Opex	12,041	14,891	14,895	15,428	15,237	15,544	15,880	16,711	16,483	16,991	17,331
	System operations and network support	4,971	6,224	6,408	6,595	6,788	6,924	7,063	7,204	7,348	7,495	7,645
	Business support	18,139	17,692	18,147	18,580	19,024	19,405	19,793	20,189	20,593	21,004	21,425
	Non-network opex	23,110	23,916	24,555	25,176	25,813	26,329	26,856	27,393	27,940	28,499	29,069
	Operational expenditure	35,151	38,807	39,450	40,604	41,050	41,872	42,736	44,103	44,424	45,490	46,400

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5	CY+6	CY+7	CY+8	CY+9	CY+10
	for year ended	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29	31 Mar 30	31 Mar 31	31 Mar 32	31 Mar 33	31 Mar 34
		$000 (in constant prices)										
	Service interruptions and emergencies	2,813	2,943	2,943	2,943	2,943	2,943	2,943	2,943	2,943	2,943	2,943
	Vegetation management	2,944	3,032	3,032	3,032	2,819	2,819	2,819	2,819	2,819	2,819	2,819
	Routine and corrective maintenance and inspection	3,636	4,725	4,792	5,119	4,881	4,883	4,905	5,341	4,873	5,019	5,019
	Asset replacement and renewal	2,647	3,543	3,159	3,048	3,048	3,048	3,048	3,048	3,048	3,048	3,048
	Network Opex	12,041	14,244	13,926	14,143	13,692	13,693	13,716	14,152	13,684	13,829	13,829
	System operations and network support	4,971	6,061	5,902	5,902	5,902	5,902	5,902	5,902	5,902	5,902	5,902
	Business support	18,139	16,868	17,027	17,027	17,027	17,027	17,027	17,027	17,027	17,027	17,027
	Non-network opex	23,110	22,929	22,929	22,929	22,929	22,929	22,929	22,929	22,929	22,929	22,929
	Operational expenditure	35,151	37,173	36,856	37,072	36,621	36,623	36,645	37,081	36,613	36,759	36,759

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)*

	Energy efficiency and demand side management, reduction of energy losses											
	Direct billing*											
	Research and Development											
	Insurance											
	Cybersecurity (Commission only)											

** 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
	for year ended	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27	31 Mar 28	31 Mar 29	31 Mar 30	31 Mar 31	31 Mar 32	31 Mar 33	31 Mar 34
	Difference between nominal and real forecasts	**$000**										
	Service interruptions and emergencies	-	156	228	291	356	422	489	558	628	699	772
	Vegetation management	-	129	202	266	309	372	436	501	567	635	704
	Routine and corrective maintenance and inspection	-	201	319	449	535	643	757	948	980	1,129	1,252
	Asset replacement and renewal	-	161	221	279	346	414	483	553	625	699	774
	Network Opex	-	647	969	1,286	1,545	1,850	2,164	2,559	2,800	3,162	3,502
	System operations and network support	-	163	506	693	886	1,022	1,161	1,302	1,446	1,593	1,743
	Business support	-	824	1,120	1,553	1,997	2,377	2,766	3,161	3,565	3,977	4,397
	Non-network opex	-	987	1,625	2,246	2,883	3,399	3,926	4,463	5,011	5,570	6,140
	Operational expenditure	-	1,634	2,594	3,532	4,428	5,250	6,090	7,022	7,811	8,732	9,641

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 operational expenditure for the current disclosure year and a 10 year planning period in Schedule 15.

4.3 Schedule 12a: report on asset condition

Company Name	**Northpower**
AMP Planning Period	**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.	0.20%	0.46%	2.68%	8.78%	87.88%		3	1.24%
11	All	Overhead Line	Wood poles	No.	3.04%	6.35%	22.99%	30.05%	37.57%		3	15.83%
12	All	Overhead Line	Other pole types	No.							N/A	
13	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	1.08%	2.47%	12.05%	22.64%	61.77%		3	6.46%
14	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	0.07%	0.22%	2.81%	15.67%	81.23%		3	0.68%
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	-	-	3.72%	77.61%	18.67%		3	0.09%
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	-	-	98.87%	1.13%	-		4	26.49%
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	-	-	-	100.00%	-		4	-
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	-	-	-	100.00%	-		4	-
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	-	-	-	100.00%	-		4	-
24	HV	Zone substation Buildings	Zone substations up to 66kV	No.	4.76%	-	47.62%	42.86%	4.76%		4	-
25	HV	Zone substation Buildings	Zone substations 110kV+	No.	-	-	-	100.00%	-		4	-
26	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	-	-	68.42%	-	31.58%		4	21.05%
27	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	-	-	1.69%	13.56%	84.75%		4	1.69%
28	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	-	-	65.79%	34.21%	-		2	18.42%
29	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	-	-	59.20%	40.23%	0.57%		2	0.57%
30	HV	Zone substation switchgear	33kV RMU	No.	-	-	-	100.00%	-		4	-
31	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	-	-	-	-	-		N/A	-
32	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	-	-	63.16%	36.84%	-		2	5.26%
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	3.33%	1.33%	6.67%	11.33%	77.33%		4	12.67%
34	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	-	-	-	-	-		N/A	-

4.3 Schedule 12a: report on asset condition (contd)

					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.	-	-	19.51%	26.83%	53.66%		4	21.95%
40	HV	Distribution Line	Distribution OH Open Wire Conductor	km	2.52%	3.52%	8.16%	11.01%	74.79%		4	8.67%
41	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	-	-	-	-	-		N/A	-
42	HV	Distribution Line	SWER conductor	km	-	-	-	-	-		N/A	-
43	HV	Distribution Cable	Distribution UG XLPE or PVC	km	0.01%	-	1.45%	8.47%	90.08%		3	0.56%
44	HV	Distribution Cable	Distribution UG PILC	km	-	-	-	14.45%	85.55%		2	0.89%
45	HV	Distribution Cable	Distribution Submarine Cable	km	-	100.00%	-	-	-		3	100.00%
46	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionalisers	No.	-	-	17.65%	41.18%	41.18%		4	2.94%
47	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	-	-	-	-	-		N/A	-
48	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	1.77%	3.21%	11.25%	16.55%	67.23%		3	5.23%
49	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.	-	-	-	-	-		N/A	-
50	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	3.28%	6.56%	29.10%	41.80%	19.26%		4	16.80%
51	HV	Distribution Transformer	Pole Mounted Transformer	No.	1.39%	2.29%	6.72%	13.30%	76.30%		3	3.75%
52	HV	Distribution Transformer	Ground Mounted Transformer	No.	1.49%	2.85%	9.46%	11.41%	74.79%		3	6.09%
53	HV	Distribution Transformer	Voltage regulators	No.	-	-	16.67%	66.67%	16.67%		4	-
54	HV	Distribution Substations	Ground Mounted Substation Housing	No.	18.97%	7.76%	27.59%	43.97%	1.72%		4	3.05%
55	LV	LV Line	LV OH Conductor	km	0.76%	1.39%	4.66%	8.00%	85.18%		4	3.48%
56	LV	LV Cable	LV UG Cable	km	0.01%	0.02%	0.27%	1.80%	97.89%		2	0.07%
57	LV	LV Streetlighting	LV OH/UG Streetlight circuit	km	16.55%	6.69%	34.59%	36.55%	5.63%		2	-
58	LV	Connections	OH/UG consumer service connections	No.	-	-	0.01%	26.62%	73.37%		3	-
59	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.	10.57%	6.50%	45.93%	31.71%	5.28%		3	18.29%
60	All	SCADA and communications	SCADA and communications equipment operating as a single system	Lot	-	-	-	100.00%	-		4	-
61	All	Capacitor Banks	Capacitors including controls	No.	-	-	-	95.83%	4.17%		4	-
62	All	Load Control	Centralised plant	Lot	66.67%	16.67%	16.67%	-	-		4	33.33%
63	All	Load Control	Relays	No.	23.43%	8.93%	41.26%	24.27%	2.12%		3	-
64	All	Civils	Cable Tunnels	km	-	-	-	-	-		N/A	-

4.4 Schedule 12b: report on forecast capacity

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

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
Alexander Street	10	15	N-1	10	68%	15	71%	No constraint within +5 years	
Bream Bay	5	10	N	3	50%	10	80%	No constraint within +5 years	
Dargaville	12	15	N-1	3	81%	15	85%	No constraint within +5 years	
Dargaville 110/50/66 kV	12	35	N-1	3	35%	35	37%	No constraint within +5 years	
Hikurangi	6	10	N-1	3	64%	10	68%	No constraint within +5 years	
Kaiwaka	3	5	N	3	54%	5	58%	No constraint within +5 years	
Kamo	13	15	N-1	4	87%	15	92%	No constraint within +5 years	
Kensington (Regional)	65	50	N-1	20	130%	100	70%	No constraint within +5 years	Transformer Upgrade - (System Growth)
Kioreroa	9	20	N-1	5	44%	20	45%	No constraint within +5 years	
Mangawhai North	4	10	N	1	37%	10	57%	No constraint within +5 years	Load transferred to new Mangawhai Central Substation
Mangawhai Central	4	15	N	1	26%	15	44%	No constraint within +5 years	New Mangawhai Substation
Marereturu	3	5	N	2	68%	5	72%	No constraint within +5 years	
Maungatapere	6	8	N-1	6	77%	8	87%	No constraint within +5 years	
Maungatapere (Regional)	44	30	N-1	22	148%	100	47%	No constraint within +5 years	Transformer Upgrade - (System Growth)
Maungaturoto	6	8	N-1	2	76%	10	59%	No constraint within +5 years	Transformer Upgrade - (Asset Replacement & Renewal)
Maunu	4	10	N	4	37%	10	46%	No constraint within +5 years	
Ngunguru	3	5	N	1	62%	5	72%	No constraint within +5 years	
Onerahi	7	15	N-1 Switchable	3	48%	15	53%	No constraint within +5 years	
Parua Bay	4	5	N	2	74%	5	84%	No constraint within +5 years	
Poroti	3	5	N	3	60%	10	33%	No constraint within +5 years	Transformer Upgrade - (Asset Replacement & Renewal)
Ruakaka	9	10	N-1	4	86%	10	99%	No constraint within +5 years	
Ruawai	3	5	N	3	66%	5	70%	No constraint within +5 years	
Tikipunga	17	20	N-1	9	87%	20	94%	No constraint within +5 years	
Whangarei South	11	10	N-1	7	106%	10	112%	No constraint within +5 years	Strong 11 kV back feeds to maintain security

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

4.5 Schedule 12c: report on forecast network demand

Company Name	**Northpower**
AMP Planning Period	**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					
		Current Year CY	*CY+1*	*CY+2*	*CY+3*	*CY+4*	*CY+5*
	for year ended	**31 Mar 24**	**31 Mar 25**	**31 Mar 26**	**31 Mar 27**	**31 Mar 28**	**31 Mar 29**
	*Consumer types defined by EDB**						
	Very large industrial.						
	Commercial and industrial (demand based ND9)	2	2	2	2	2	2
	Mass market	648	661	674	688	701	715
	[EDB consumer type]						
	[EDB consumer type]						
	Connections total	650	663	676	690	703	717

**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	531	542	552	564	575	586
Capacity of distributed generation installed in year (MVA)	6.57	6.70	6.83	6.97	7.11	7.25

12c(ii) System Demand

		Current Year CY	*CY+1*	*CY+2*	*CY+3*	*CY+4*	*CY+5*
Maximum coincident system demand (MW)	for year ended	**31 Mar 24**	**31 Mar 25**	**31 Mar 26**	**31 Mar 27**	**31 Mar 28**	**31 Mar 29**
GXP demand		156	158	161	116	118	121
plus Distributed generation output at HV and above		5	5	5	54	54	54
Maximum coincident system demand		161	163	166	170	172	175
less Net transfers to (from) other EDBs at HV and above							
Demand on system for supply to consumers' connection points		161	163	166	170	172	175
Electricity volumes carried (GWh)							
Electricity supplied from GXPs		846	851	868	669	684	698
less Electricity exports to GXPs							
plus Electricity supplied from distributed generation		15	22	22	237	237	237
less Net electricity supplied to (from) other EDBs		-	-	-	-	-	-
Electricity entering system for supply to ICPs		861	873	890	906	921	935
less Total energy delivered to ICPs		815	826	842	857	871	884
Losses		46	47	48	49	50	50
Load factor		61%	61%	61%	61%	61%	61%
Loss ratio		5.4%	5.4%	5.4%	5.4%	5.4%	5.4%

4.6 Schedule 12d: report forecast interruptions and duration

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

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*
8							
9	for year ended	**31 Mar 24**	**31 Mar 25**	**31 Mar 26**	**31 Mar 27**	**31 Mar 28**	**31 Mar 29**
10	**SAIDI**						
11	Class B (planned interruptions on the network)	162.0	162.0	265.0	265.0	265.0	265.0
12	Class C (unplanned interruptions on the network)	93.0	93.0	111.0	111.0	111.0	111.0
13	**SAIFI**						
14	Class B (planned interruptions on the network)	0.72	0.72	1.05	1.05	1.05	1.05
15	Class C (unplanned interruptions on the network)	2.28	2.28	2.82	2.82	2.82	2.82

4.7 Schedule 14a: mandatory explanatory notes on forecast information

(In this Schedule, clause references are to the Electricity Distribution Information Disclosure Determination 2012 – as amended and consolidated 3 April 2018.)

1. This Schedule requires EDBs to provide explanatory notes to reports prepared in accordance with clause 2.6.6.
2. 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)

3. 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

The difference between constant and nominal prices is based on the New Zealand Institute of Economic Research (NZIER) September 23 forecast through to FY27, after which it is based on an escalation of 2%.

Commentary on difference between nominal and constant price operational expenditure forecasts (Schedule 11b)

4. 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

The difference between constant and nominal prices is based on the New Zealand Institute of Economic Research (NZIER) September 23 forecast through to FY27, after which it is based on an escalation of 2%.

Section 5

Director Certification

5. Director Certification

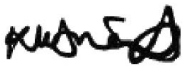
We, **Mark Trigg** and **Kerry Friend**, being directors of Northpower Ltd certify that, having made all reasonable enquiry, to the best of our knowledge:

a) The following attached information of Northpower Limited prepared for the purposes of clauses 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 Northpower Limited's corporate vision and strategy and are documented in retained records.

Mark Trigg, Director Date: 27 March 2024



Kerry Friend, Director Date: 27 March 2024