

Nelson Electricity Ltd Asset Management Plan Update

April 2017 – March 2027

April 2017



Nelson Electricity Ltd central Nelson city view

**In accordance with the Commerce Act
Electricity Distribution Information Disclosure Determination 2012**

Nelson Electricity Limited - Asset Management Plan Update 2017- 2027

**SCHEDULE 17
Certification of Year-beginning Disclosures**

Clause 2.9.1

We, Oliver Rupert Kearney and David William Richard Dew, being directors of Nelson Electricity Limited certify that, having made all reasonable inquiry, to the best of our knowledge:

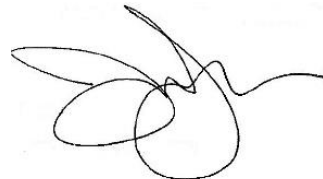
- a) The following attached information of Nelson Electricity Limited prepared for the purposes of clauses 2.4.1, 2.6.1, 2.6.3, 2.6.6 and 2.7.2 of the Electricity Distribution Information Disclosure Determination 2012 in all material respects complies with that determination.
- b) The prospective financial 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 Nelson Electricity Limited's corporate vision and strategy and are documented in retained records.

Signed



Date 31 March 2017

Signed



Date 31 March 2017

Table of Contents

<i>SECTION 1 – ASSET MANAGEMENT PLAN UPDATE</i>	<i>2</i>
<i>SECTION 2 – DEVELOPMENT PLAN – MATERIAL CHANGES</i>	<i>3</i>
<i>SECTION 3 – LIFECYCLE MANAGEMENT (MAINTENANCE AND RENEWAL) – MATERIAL CHANGES</i>	<i>5</i>
<i>SECTION 4 – CAPITAL AND OPERATIONAL EXPENDITURE FORECAST – MATERIAL CHANGES</i>	<i>6</i>
<i>SECTION 5 – CHANGES IN ASSET MANAGEMENT PRACTISES</i>	<i>7</i>
<i>SECTION 6 – ASSET MANAGEMENT PLAN DISCLOSURE SCHEDULES</i>	<i>8</i>

SECTION 1 – Asset Management Plan Update

This Asset Management Plan is prepared as the key internal asset planning document for Nelson Electricity. It is also designed to meet Electricity Distribution Information Disclosure Determination 2012.

Nelson Electricity has reviewed the 2017 – 2027 Asset Management Plan and has determined that there has not been any significant material changes to the plan and forecasts and has opted to disclose an update as per Electricity Distribution Information Disclosure Determination 2012 clause 2.6.3 instead of disclosing a full Asset Management Plan.

SECTION 2 – Development Plan – Material Changes

The Development Plan that is used as a basis for this AMP update is not materially different from that disclosed in the 2016 -2026 Asset Management Plan. This update is based on the peak demand (MW) remaining unchanged and kWh consumption reducing by 1.0% per year. The 2016/17 year is tracking at 1% below last year's volumes.

Figure 1: Nelson Electricity Historical Peak Demand and Forecast Demand

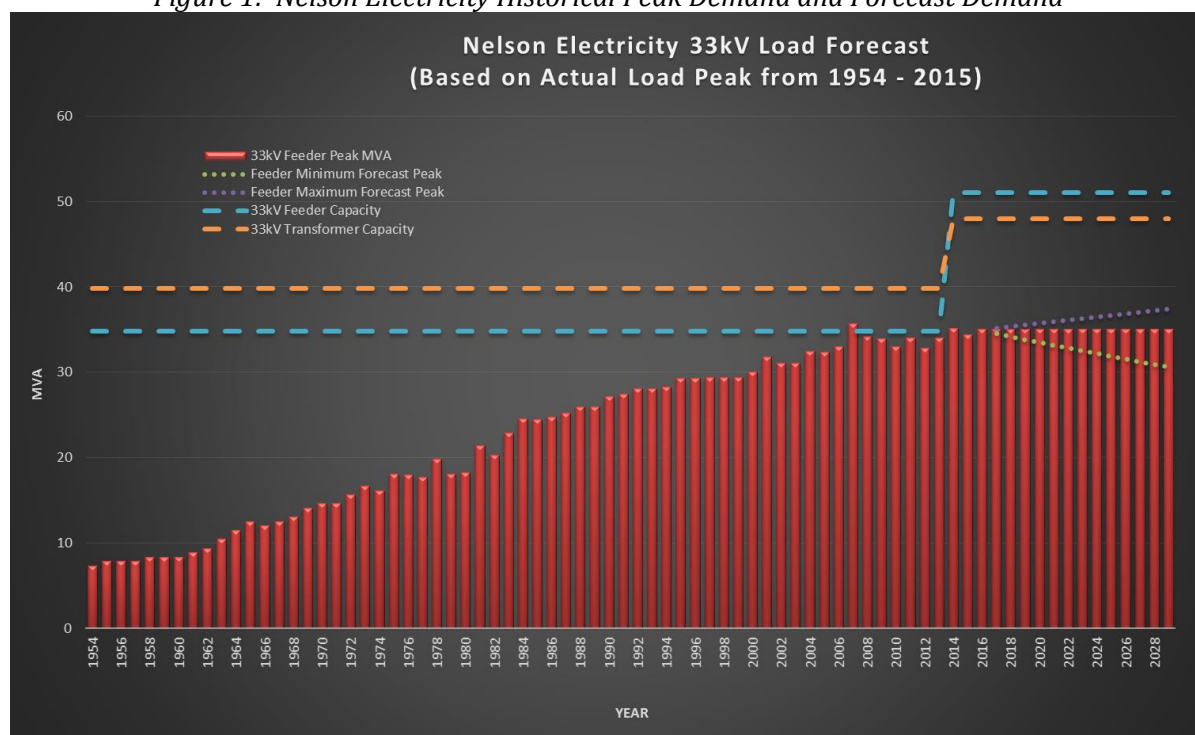
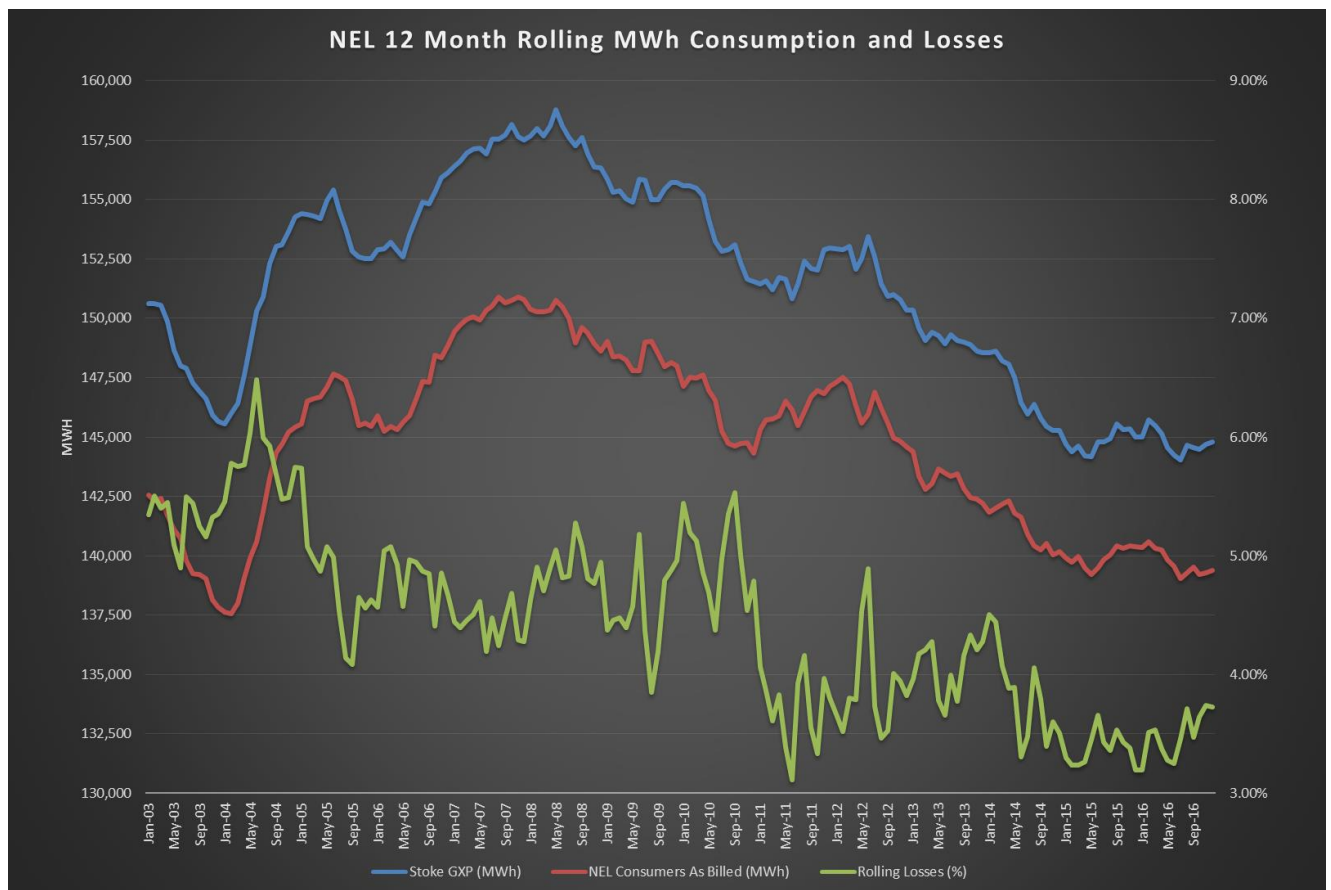


Figure 2: Nelson Electricity Historical GXP and Billed Consumption MWh



SECTION 3 – Lifecycle Management (Maintenance and Renewal) – Material Changes

There were no material changes to the lifecycle management since the April 2016 Asset Management Plan disclosure.

Operational Expenditure is in line with forecast of \$710k.

The 2017-2018 year will see operational expenditure will be in line with the 2016 – 2026 Asset management Plan forecast of \$724k.

The financial impact is outlined in Section 4.

SECTION 4 – Capital and Operational Expenditure Forecast – Material Changes

Capital Expenditure

There is no material change to the Asset Management Plan for the period 2017 to 2027, however the plan is continuously reviewed resulting in the following minor changes and updates:

- As outlined in Section 2, the growth forecast reduction has had an impact on growth related projects and NEL has re-categorised some of the existing projects between System Growth and Consumer Connections in Schedule 11a.
- NEL has re-prioritised several Reliability, Safety and Environment projects to accommodate a 4 year programme of lowering the 7 remaining pole top non-dedicated transformer substations to the ground.
- A replacement programme for the aging 11kV OCB's in the first out substations has been added to the plan.
- Ongoing development at Port Nelson requiring short notice customer driven works has resulted in deferment of some 2016 projects to the 2017/18/19 years due to demands on resource.

Operational Expenditure

The operational expenditure for the year 2017 to 2027 will be estimated at the budget of \$724,000. There are no material changes to operational expenditure.

SECTION 5 – Changes in Asset Management Practises

There are no material changes to existing asset management practises.

SECTION 6 – Asset management Plan Disclosure Schedules

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).

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 17	31 Mar 18	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22	31 Mar 23	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27
7												
8												
9	11a(i): Expenditure on Assets Forecast	\$000 (in nominal dollars)										
10	Consumer connection	-	81	86	107	36	-	-	-	-	-	-
11	System growth	132	100	101	46	118	156	158	160	162	165	167
12	Asset replacement and renewal	397	530	490	690	992	1,121	1,153	1,303	1,090	1,429	1,450
13	Asset relocations	117	-	-	-	52	-	-	-	-	-	-
14	Reliability, safety and environment:											
15	Quality of supply	75	30	116	-	258	-	-	-	-	-	-
16	Legislative and regulatory	-	50	-	-	-	-	-	-	-	-	-
17	Other reliability, safety and environment	84	179	182	-	52	499	378	197	502	110	112
18	Total reliability, safety and environment	159	259	298	-	309	499	378	197	502	110	112
19	Expenditure on network assets	805	970	975	843	1,507	1,776	1,689	1,660	1,755	1,703	1,729
20	Expenditure on non-network assets	49	98	63	22	43	84	65	45	24	90	47
21	Expenditure on assets	854	1,068	1,037	865	1,550	1,861	1,754	1,705	1,779	1,794	1,776
22												
23	plus Cost of financing											
24	less Value of capital contributions	93										
25	plus Value of vested assets											
26												
27	Capital expenditure forecast	761	1,068	1,037	865	1,550	1,861	1,754	1,705	1,779	1,794	1,776
28												
29	Assets commissioned	761	1,068	1,037	865	1,550	1,861	1,754	1,705	1,779	1,794	1,776
30												
31												
32												
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51			Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5	CY+6	CY+7	CY+8	CY+9	CY+10
52		for year ended	31 Mar 17	31 Mar 18	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22	31 Mar 23	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27
53			\$'000										
54		Difference between nominal and constant price forecasts											
55		Consumer connection	-	-	1	2	1	-	-	-	-	-	-
56		System growth	-	-	1	1	3	6	8	10	12	15	17
57		Asset replacement and renewal	-	-	5	14	29	44	56	82	83	129	150
58		Asset relocations	-	-	-	-	2	-	-	-	-	-	-
59		Reliability, safety and environment:											
60		Quality of supply	-	-	1	-	8	-	-	-	-	-	-
61		Legislative and regulatory	-	-	-	-	-	-	-	-	-	-	-
62		Other reliability, safety and environment	-	-	2	-	2	19	18	12	38	10	12
63		Total reliability, safety and environment	-	-	3	-	9	19	18	12	38	10	12
64		Expenditure on network assets	-	-	10	17	44	69	82	104	134	153	179
65		Expenditure on non-network assets	-	-	1	0	1	3	3	3	2	8	5
66		Expenditure on assets	-	-	10	17	46	73	85	107	136	162	184
67													
68		11a(ii): Consumer Connection											
69		Consumer types defined by EDB*											
70		Group 2		81	85	105	35	-					
71													
72													
73													
74													
75		*include additional rows if needed											
76		Consumer connection expenditure	-	81	85	105	35	-					
77	less	Capital contributions funding consumer connection											
78		Consumer connection less capital contributions	-	81	85	105	35	-					
79		11a(iii): System Growth											
80		Subtransmission	-	-	-	-	-	-					
81		Zone substations	-	-	-	-	-	-					
82		Distribution and LV lines	-	-	-	-	-	-					
83		Distribution and LV cables	18	-	-	-	-	-					
84		Distribution substations and transformers	114	55	40	-	15	50					
85		Distribution switchgear	-	-	-	-	-	-					
86		Other network assets	-	45	60	45	100	100					
87		System growth expenditure	132	100	100	45	115	150					
88	less	Capital contributions funding system growth	44										
89		System growth less capital contributions	88	100	100	45	115	150					
90													
91													
92													
93		11a(iv): Asset Replacement and Renewal											
94		Subtransmission	-	-	-	-	-	-					
95		Zone substations	-	-	-	-	-	-					
96		Distribution and LV lines	-	-	-	-	-	-					
97		Distribution and LV cables	251	460	460	471	713	827					
98		Distribution substations and transformers	56	-	-	-	-	-					
99		Distribution switchgear	20	15	15	175	210	205					
100		Other network assets	70	55	10	30	40	45					
101		Asset replacement and renewal expenditure	397	530	485	676	963	1,077					
102	less	Capital contributions funding asset replacement and renewal											
103		Asset replacement and renewal less capital contributions	397	530	485	676	963	1,077					
104													

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Current Year CY

CY+1

CY+2

CY+3

CY+4

CY+5

for year ended

31 Mar 17

31 Mar 18

31 Mar 19

31 Mar 20

31 Mar 21

31 Mar 22

11a(v):Asset Relocations

Project or programme*

Normanby Bridge substation relocation

St Vincent St North sub relocation

Low St substation relocation

\$000 (in constant prices)

*include additional rows if needed

All other project or programmes - asset relocations

Asset relocations expenditure

less Capital contributions funding asset relocations

Asset relocations less capital contributions

Current Year CY

CY+1

CY+2

CY+3

CY+4

CY+5

for year ended

31 Mar 17

31 Mar 18

31 Mar 19

31 Mar 20

31 Mar 21

31 Mar 22

11a(vi):Quality of Supply

Project or programme*

Transformer spares

\$000 (in constant prices)

*include additional rows if needed

All other projects or programmes - quality of supply

Quality of supply expenditure

less Capital contributions funding quality of supply

Quality of supply less capital contributions

Current Year CY

CY+1

CY+2

CY+3

CY+4

CY+5

for year ended

31 Mar 17

31 Mar 18

31 Mar 19

31 Mar 20

31 Mar 21

31 Mar 22

11a(vii): Legislative and Regulatory

Project or programme*

\$000 (in constant prices)

*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

Current Year CY

CY+1

CY+2

CY+3

CY+4

CY+5

for year ended

31 Mar 17

31 Mar 18

31 Mar 19

31 Mar 20

31 Mar 21

31 Mar 22

150			Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
151	11a(viii): Other Reliability, Safety and Environment	for year ended	31 Mar 17	31 Mar 18	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22
152	Project or programme*		\$000 (in constant prices)					
153	LV reinforcement		40					
154	Wooden Pole Replacement			92				
155								
156								
157								
158	*include additional rows if needed							
159	All other projects or programmes - other reliability, safety and environment		44	87	180	-	50	480
160	Other reliability, safety and environment expenditure		84	179	180	-	50	480
161	less Capital contributions funding other reliability, safety and environment							
162	Other reliability, safety and environment less capital contributions		84	179	180	-	50	480
163								
164			Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
165	for year ended		31 Mar 17	31 Mar 18	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22
166	11a(ix): Non-Network Assets							
167	Routine expenditure							
168	Project or programme*		\$000 (in constant prices)					
169	Purchase of New Vehicles			59		-	-	59
170	Computers		10	17		-	20	
171	Computer Network File Server			-	40	-	-	-
172	Office Equipment			2	2	2	2	2
173	Misc			20	20	20	20	20
174	*include additional rows if needed							
175	All other projects or programmes - routine expenditure							
176	Routine expenditure		10	98	62	22	42	81
177	Atypical expenditure							
178	Project or programme*							
179								
180								
181								
182								
183								
184	*include additional rows if needed							
185	All other projects or programmes - atypical expenditure		39					
186	Atypical expenditure		39	-	-	-	-	-
187								
188	Expenditure on non-network assets		49	98	62	22	42	81

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). 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 17	31 Mar 18	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22	31 Mar 23	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27
9	Operational Expenditure Forecast	\$000 (in nominal dollars)										
10	Service interruptions and emergencies	150	125	128	130	133	135	138	141	144	146	149
11	Vegetation management	34	35	36	37	37	38	39	40	40	41	42
12	Routine and corrective maintenance and inspection	250	234	239	243	248	253	258	264	269	274	280
13	Asset replacement and renewal	280	330	337	343	350	357	364	372	379	387	394
14	Network Opex	714	724	739	753	769	784	800	816	832	849	865
15	System operations and network support	300	250	253	255	258	260	260	264	268	272	276
16	Business support	1,100	1,150	1,162	1,173	1,185	1,197	1,197	1,215	1,233	1,251	1,270
17	Non-network opex	1,400	1,400	1,414	1,428	1,442	1,457	1,457	1,479	1,501	1,523	1,546
18	Operational expenditure	2,114	2,124	2,153	2,182	2,211	2,241	2,256	2,294	2,333	2,372	2,412

		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 17	31 Mar 18	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22	31 Mar 23	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27
21		\$000 (in constant prices)										
22	Service interruptions and emergencies	150	125	125	125	125	125	125	125	125	125	125
23	Vegetation management	34	35	35	35	35	35	35	35	35	35	35
24	Routine and corrective maintenance and inspection	250	234	234	234	234	234	234	234	234	234	234
25	Asset replacement and renewal	280	330	330	330	330	330	330	330	330	330	330
26	Network Opex	714	724	724	724	724	724	724	724	724	724	724
27	System operations and network support	300	250	250	250	250	250	250	250	250	250	250
28	Business support	1,100	1,150	1,150	1,150	1,150	1,150	1,150	1,150	1,150	1,150	1,150
29	Non-network opex	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400
30	Operational expenditure	2,114	2,124	2,124	2,124	2,124	2,124	2,124	2,124	2,124	2,124	2,124

Subcomponents of operational expenditure (where known)

32	Energy efficiency and demand side management, reduction of energy losses											
33	Direct billing*											
34	Research and Development											
35	Insurance											

* 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 17	31 Mar 18	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22	31 Mar 23	31 Mar 24	31 Mar 25	31 Mar 26	31 Mar 27
41	Difference between nominal and real forecasts	\$000										
42	Service interruptions and emergencies	-	-	3	5	8	10	13	16	19	21	24
43	Vegetation management	-	-	1	1	2	3	4	4	5	6	7
44	Routine and corrective maintenance and inspection	-	-	5	9	14	19	24	30	35	40	46
45	Asset replacement and renewal	-	-	7	13	20	27	34	42	49	57	64
46	Network Opex	-	-	14	29	44	60	75	91	108	124	141
47	System operations and network support	-	-	3	5	8	10	10	14	18	22	26
48	Business support	-	-	12	23	35	47	47	65	83	101	120
49	Non-network opex	-	-	14	28	42	57	57	79	101	123	146
50	Operational expenditure	-	-	28	57	87	117	132	170	209	248	288

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.

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Asset condition at start of planning period (percentage of units by grade)											
	Voltage	Asset category	Asset class	Units	Grade 1	Grade 2	Grade 3	Grade 4	Grade unknown	Data accuracy (1–4)	% of asset forecast to be replaced in next 5 years
All		Overhead Line	Concrete poles / steel structure	No.			80.00%	20.00%		4	1.00%
All		Overhead Line	Wood poles	No.		60.00%	20.00%	20.00%		4	1.00%
All		Overhead Line	Other pole types	No.						N/A	
HV		Subtransmission Line	Subtransmission OH up to 66kV conductor	km						N/A	-
HV		Subtransmission Line	Subtransmission OH 110kV+ conductor	km						N/A	
HV		Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km			100.00%			2	-
HV		Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km						N/A	
HV		Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km						N/A	
HV		Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km			100.00%			2	-
HV		Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km						N/A	
HV		Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km						N/A	
HV		Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km						N/A	
HV		Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km						N/A	
HV		Subtransmission Cable	Subtransmission submarine cable	km						N/A	
HV		Zone substation Buildings	Zone substations up to 66kV	No.				100.00%		4	
HV		Zone substation Buildings	Zone substations 110kV+	No.						N/A	
HV		Zone substation switchgear	22/33kV CB (Indoor)	No.						N/A	
HV		Zone substation switchgear	22/33kV CB (Outdoor)	No.						N/A	
HV		Zone substation switchgear	33kV Switch (Ground Mounted)	No.				100.00%		4	
HV		Zone substation switchgear	33kV Switch (Pole Mounted)	No.						N/A	
HV		Zone substation switchgear	33kV RMU	No.						N/A	
HV		Zone substation switchgear	50/66/110kV CB (Indoor)	No.						N/A	
HV		Zone substation switchgear	50/66/110kV CB (Outdoor)	No.						N/A	
HV		Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.				100.00%		4	
HV		Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.						N/A	

42 43	Asset condition at start of planning period (percentage of units by grade)										
	Voltage	Asset category	Asset class	Units	Grade 1	Grade 2	Grade 3	Grade 4	Grade unknown	Data accuracy (1–4)	% of asset forecast to be replaced in next 5 years
44											
45	HV	Zone Substation Transformer	Zone Substation Transformers	No.				100.00%		4	
46	HV	Distribution Line	Distribution OH Open Wire Conductor	km			90.00%	10.00%		3	5.00%
47	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km						N/A	
48	HV	Distribution Line	SWER conductor	km			100.00%			3	-
49	HV	Distribution Cable	Distribution UG XLPE or PVC	km			90.00%	10.00%		2	-
50	HV	Distribution Cable	Distribution UG PILC	km			60.00%	40.00%		2	7.00%
51	HV	Distribution Cable	Distribution Submarine Cable	km						N/A	
52	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionalisers	No.			100.00%			4	-
53	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.		23.00%	64.00%	13.00%		3	-
54	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.				100.00%		3	-
55	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.				100.00%		3	-
56	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.		1.00%	49.00%	50.00%		3	4.00%
57	HV	Distribution Transformer	Pole Mounted Transformer	No.			40.00%	60.00%		3	20.00%
58	HV	Distribution Transformer	Ground Mounted Transformer	No.		10.00%	75.00%	15.00%		3	4.00%
59	HV	Distribution Transformer	Voltage regulators	No.						N/A	
60	HV	Distribution Substations	Ground Mounted Substation Housing	No.			80.00%	20.00%		3	2.00%
61	LV	LV Line	LV OH Conductor	km			100.00%			3	2.00%
62	LV	LV Cable	LV UG Cable	km		20.00%	60.00%	20.00%		2	0.50%
63	LV	LV Streetlighting	LV OH/UG Streetlight circuit	km		30.00%	60.00%	10.00%		2	-
64	LV	Connections	OH/UG consumer service connections	No.			60.00%	40.00%		3	-
65	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.			10.00%	90.00%		3	2.00%
66	All	SCADA and communications	SCADA and communications equipment operating as a single system	Lot			10.00%	90.00%		3	-
67	All	Capacitor Banks	Capacitors including controls	No.						N/A	
68	All	Load Control	Centralised plant	Lot				100.00%		4	
69	All	Load Control	Relays	No.						N/A	
70	All	Civils	Cable Tunnels	km						N/A	

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

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
7	[Zone Substation_01]	35	48	N-1	4	73%	48	71%	No constraint within +5 years	
8	[Zone Substation_02]					-			[Select one]	
9	[Zone Substation_03]					-			[Select one]	
10	[Zone Substation_04]					-			[Select one]	
11	[Zone Substation_05]					-			[Select one]	
12	[Zone Substation_06]					-			[Select one]	
13	[Zone Substation_07]					-			[Select one]	
14	[Zone Substation_08]					-			[Select one]	
15	[Zone Substation_09]					-			[Select one]	
16	[Zone Substation_10]					-			[Select one]	
17	[Zone Substation_11]					-			[Select one]	
18	[Zone Substation_12]					-			[Select one]	
19	[Zone Substation_13]					-			[Select one]	
20	[Zone Substation_14]					-			[Select one]	
21	[Zone Substation_15]					-			[Select one]	
22	[Zone Substation_16]					-			[Select one]	
23	[Zone Substation_17]					-			[Select one]	
24	[Zone Substation_18]					-			[Select one]	
25	[Zone Substation_19]					-			[Select one]	
26	[Zone Substation_20]					-			[Select one]	
27	¹ Extend forecast capacity table as necessary to disclose all capacity by each zone substation									
28										
29										

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

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
7	[Zone Substation_01]	35	48	N-1	4	73%	48	71%	No constraint within +5 years	
8	[Zone Substation_02]					-			[Select one]	
9	[Zone Substation_03]					-			[Select one]	
10	[Zone Substation_04]					-			[Select one]	
11	[Zone Substation_05]					-			[Select one]	
12	[Zone Substation_06]					-			[Select one]	
13	[Zone Substation_07]					-			[Select one]	
14	[Zone Substation_08]					-			[Select one]	
15	[Zone Substation_09]					-			[Select one]	
16	[Zone Substation_10]					-			[Select one]	
17	[Zone Substation_11]					-			[Select one]	
18	[Zone Substation_12]					-			[Select one]	
19	[Zone Substation_13]					-			[Select one]	
20	[Zone Substation_14]					-			[Select one]	
21	[Zone Substation_15]					-			[Select one]	
22	[Zone Substation_16]					-			[Select one]	
23	[Zone Substation_17]					-			[Select one]	
24	[Zone Substation_18]					-			[Select one]	
25	[Zone Substation_19]					-			[Select one]	
26	[Zone Substation_20]					-			[Select one]	
27	¹ Extend forecast capacity table as necessary to disclose all capacity by each zone substation									
28										
29										

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 in year by consumer type

Consumer types defined by EDB*

Load Group 0 (Unmetered and Builders Temporary)
Load Group 1 (Low User)
Load Group 2 (Mass Market - Residential)
Load Group 2 (Mass Market - Business)
Load Group 3 (Time of Use)

Connections total

*include additional rows if needed

Distributed generation

Number of connections

Capacity of distributed generation installed in year (MVA)

	Number of connections					
	Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
for year ended	31 Mar 17	31 Mar 18	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22
	-	-	-	-	-	-
	14	24	24	24	24	24
	10	20	20	20	20	20
	15	15	15	15	15	15
	1	1	1	1	1	1
	40	60	60	60	60	60
	20	30	40	60	60	60
	0.1	0.1	0.1	0.2	0.2	0.2

12c(ii) System Demand

Maximum coincident system demand (MW)

GXP demand

plus Distributed generation output at HV and above

Maximum coincident system demand

less Net transfers to (from) other EDBs at HV and above

Demand on system for supply to consumers' connection points

	Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
for year ended	31 Mar 17	31 Mar 18	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22
	34	34	34	34	34	34
	-	-	-	-	-	-
	34	34	34	34	34	34
	34	34	34	34	34	34

Electricity volumes carried (GWh)

Electricity supplied from GXPs

less Electricity exports to GXPs

plus Electricity supplied from distributed generation

less Net electricity supplied to (from) other EDBs

Electricity entering system for supply to ICPs

less Total energy delivered to ICPs

Losses

Load factor

Loss ratio

	145	143	142	140	139	138
	-	-	-	-	-	-
	0	0	1	1	1	2
	-	-	-	-	-	-
	145	144	142	141	140	140
	139	138	137	136	135	134
	6	5	5	5	5	6
	49%	48%	48%	48%	47%	47%
	3.9%	3.7%	3.7%	3.8%	3.8%	4.0%

Company Name

Nelson Electricity Ltd

AMP Planning Period

1 April 2017 - 31 March 2027

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

sch ref

		Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
	for year ended	31 Mar 17	31 Mar 18	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22
8							
9							
10	SAIDI						
11	Class B (planned interruptions on the network)	7.6	15.0	15.0	15.0	15.0	15.0
12	Class C (unplanned interruptions on the network)	27.4	30.0	30.0	30.0	30.0	30.0
13	SAIFI						
14	Class B (planned interruptions on the network)	0.07	0.30	0.30	0.30	0.30	0.30
15	Class C (unplanned interruptions on the network)	0.18	0.60	0.60	0.60	0.60	0.60