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# Nelson Electricity Ltd Asset Management Plan Update

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**April 2019 - March 2029**

**April 2019**



*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 2019-2029**


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

Clause 2.9.1

We, Kenneth John Forrest and Oliver Rupert Kearney, 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 28 March 2019

Signed   
Date 28 March 2019

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## **SECTION 1 – Asset Management Plan Update**

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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 2018–2028 Asset Management Plan and has determined that there have 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.

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## SECTION 2 – Development Plan – Material Changes

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The Development Plan that is used as a basis for this AMP update is not materially different from that disclosed in the 2018 -2028 Asset Management Plan. This update is based on the peak demand (MW) remaining unchanged at 35MVA and kWh consumption remaining at current levels. The 2018-2019 year is tracking at 1.8% above previous year's volumes, but this is principally due to increases in larger customer consumption. A small mass market increase is directly attributable to the hot summer period. These increases are not predicted to be sustained.

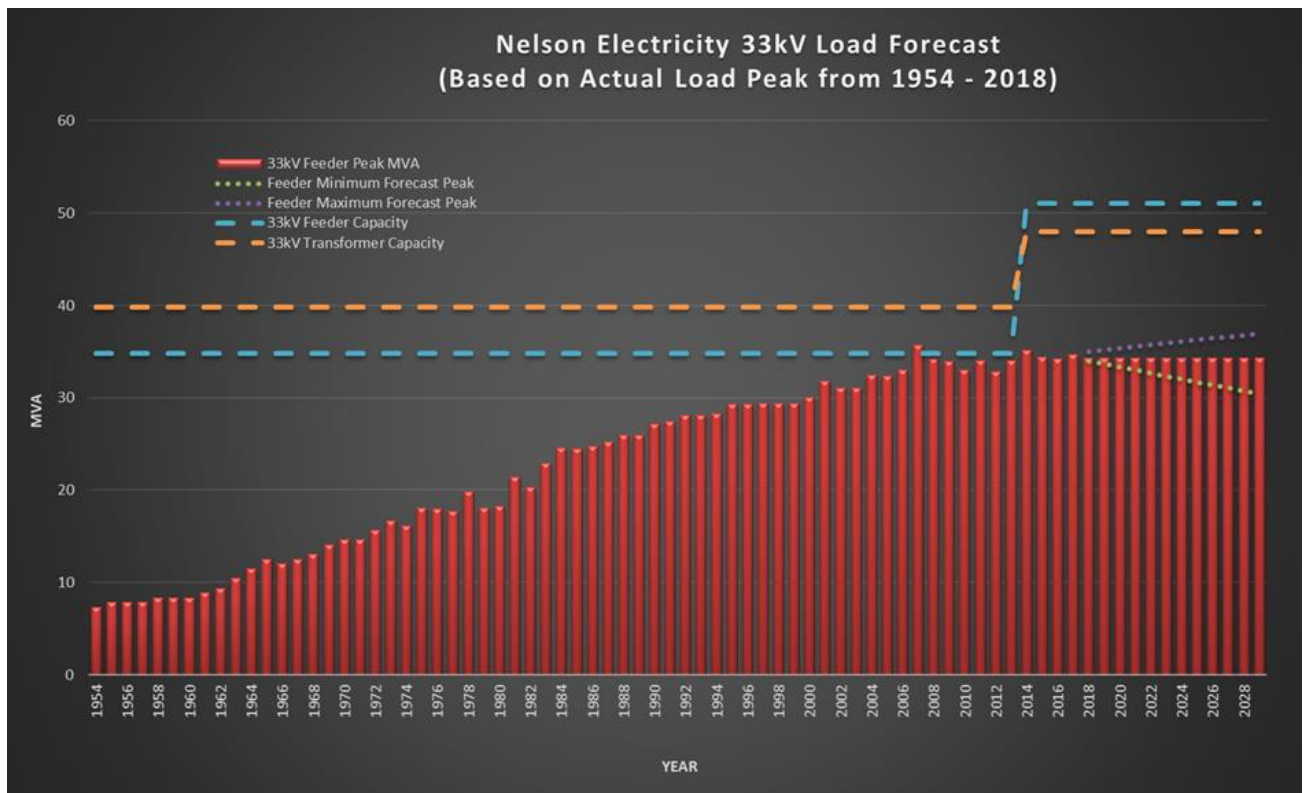


Figure 1: Nelson Electricity Historical Peak Demand and Forecast Demand

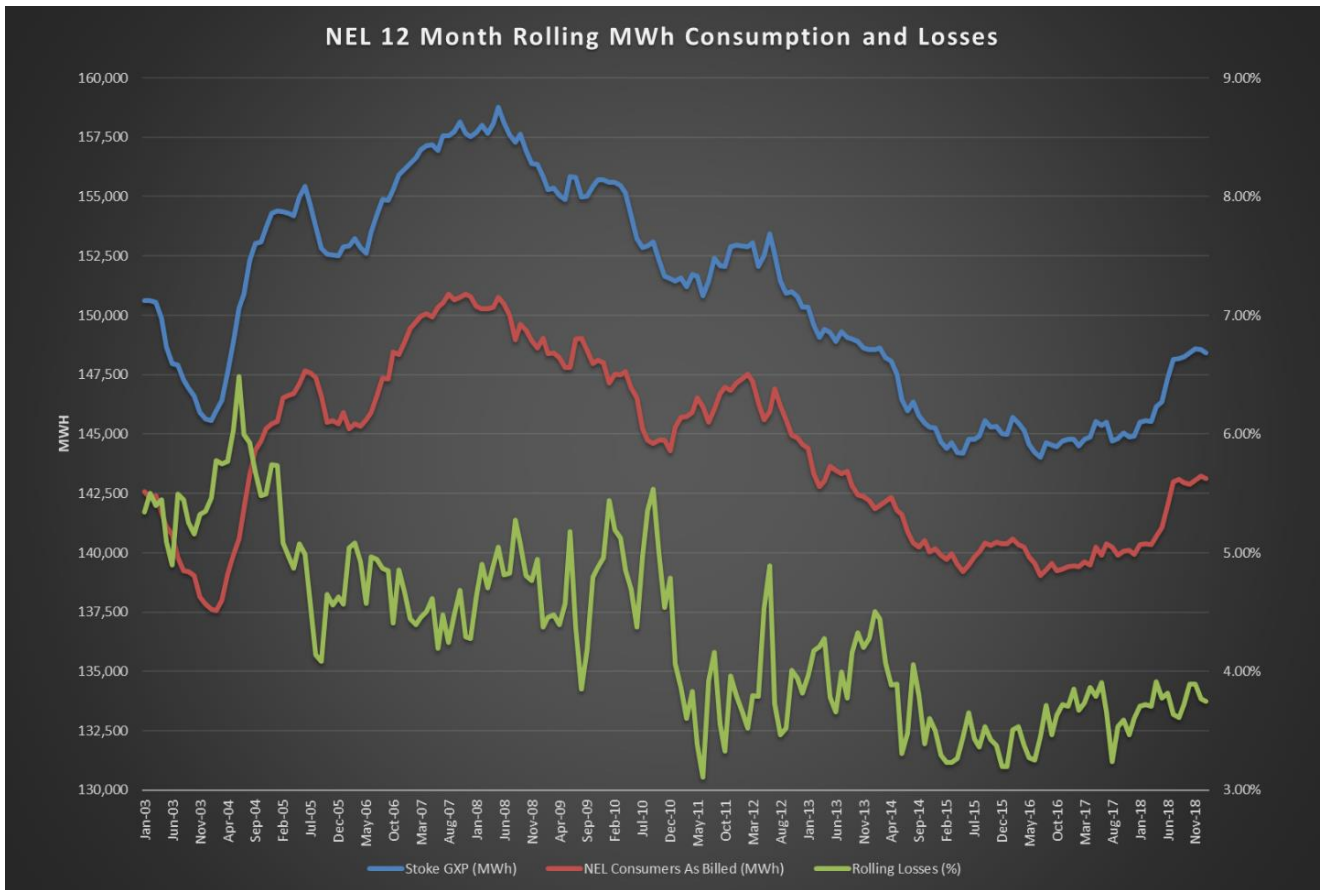


Figure 2: Nelson Electricity Historical GXP and Billed Consumption MWh

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

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There were no material changes to the lifecycle management since the April 2018 Asset Management Plan disclosure.

Operational Expenditure is forecast to be \$36k or 4.9% over the \$739k budget. This variance is not material.

The 2019-2020 year will see operational expenditure in line with the 2018–2028 Asset Management Plan forecast.

The financial impact is outlined in Section 4.

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## **SECTION 4 – Capital and Operational Expenditure Forecast – Material Changes**

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### ***Capital Expenditure***

There is no material change to the Asset Management Plan for the period 2019-2029.

Nelson Electricity continually reviews and prioritises planned projects. Where possible Nelson Electricity may reschedule projects within the Capital Expenditure Plan to align with Nelson City Council and other utility operator activities to minimise disruption and civil costs.

### ***Operational Expenditure***

The operational expenditure for the period 2019-2029 is estimated at \$2,124k with a 2.0% annual increase. There are no material changes to the overall operational expenditure. There has, however, been some re-allocation between categories which shifts approximately \$160k from Network Opex to Non-Network Opex.



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## **SECTION 5 – Changes in Asset Management Practises**

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There are no material changes to existing asset management practises.

# SECTION 6 – Asset Management Plan Disclosure Schedules

Company Name **Nelson Electricity Ltd**  
 AMP Planning Period **1 April 2019 – 31 March 2029**

## 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 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	31 Mar 28	31 Mar 29
<b>11a(i): Expenditure on Assets Forecast</b>	<b>\$000 (in nominal dollars)</b>										
Consumer connection	1	145	86	87	-	-	-	-	-	-	-
System growth	101	115	152	153	155	156	159	162	171	169	172
Asset replacement and renewal	986	665	944	1,066	1,130	1,113	1,136	1,158	1,226	1,171	1,229
Asset relocations	94	175	45	20	-	-	-	-	-	-	-
Reliability, safety and environment:											
Quality of supply	-	100	40	255	98	140	-	303	133	-	-
Legislative and regulatory	-	-	-	-	-	-	-	-	-	-	-
Other reliability, safety and environment	535	330	232	-	160	120	265	32	144	175	178
<b>Total reliability, safety and environment</b>	<b>535</b>	<b>430</b>	<b>273</b>	<b>255</b>	<b>258</b>	<b>260</b>	<b>265</b>	<b>336</b>	<b>276</b>	<b>175</b>	<b>178</b>
<b>Expenditure on network assets</b>	<b>1,716</b>	<b>1,530</b>	<b>1,500</b>	<b>1,581</b>	<b>1,542</b>	<b>1,530</b>	<b>1,560</b>	<b>1,656</b>	<b>1,673</b>	<b>1,515</b>	<b>1,580</b>
Expenditure on non-network assets	94	22	63	43	23	23	-	-	-	-	-
<b>Expenditure on assets</b>	<b>1,810</b>	<b>1,552</b>	<b>1,562</b>	<b>1,624</b>	<b>1,565</b>	<b>1,553</b>	<b>1,560</b>	<b>1,656</b>	<b>1,673</b>	<b>1,515</b>	<b>1,580</b>
plus Cost of financing											
less Value of capital contributions	102										
plus Value of vested assets											
<b>Capital expenditure forecast</b>	<b>1,708</b>	<b>1,552</b>	<b>1,562</b>	<b>1,624</b>	<b>1,565</b>	<b>1,553</b>	<b>1,560</b>	<b>1,656</b>	<b>1,673</b>	<b>1,515</b>	<b>1,580</b>
Assets commissioned	1,650	1,552	1,562	1,624	1,565	1,553	1,560	1,656	1,673	1,515	1,580
	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 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	31 Mar 28	31 Mar 29
	<b>\$000 (in constant prices)</b>										
Consumer connection	1	145	85	85	-	-	-	-	-	-	-
System growth	101	115	150	150	150	150	150	150	155	150	150
Asset replacement and renewal	986	665	935	1,045	1,097	1,070	1,070	1,070	1,110	1,040	1,070
Asset relocations	94	175	45	20	-	-	-	-	-	-	-
Reliability, safety and environment:											
Quality of supply	-	100	40	250	95	135	-	280	120	-	-
Legislative and regulatory	-	-	-	-	-	-	-	-	-	-	-
Other reliability, safety and environment	535	330	230	-	155	115	250	30	130	155	155
<b>Total reliability, safety and environment</b>	<b>535</b>	<b>430</b>	<b>270</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>310</b>	<b>250</b>	<b>155</b>	<b>155</b>
<b>Expenditure on network assets</b>	<b>1,716</b>	<b>1,530</b>	<b>1,485</b>	<b>1,550</b>	<b>1,497</b>	<b>1,470</b>	<b>1,470</b>	<b>1,530</b>	<b>1,515</b>	<b>1,345</b>	<b>1,375</b>
Expenditure on non-network assets	94	22	62	42	22	22	-	-	-	-	-
<b>Expenditure on assets</b>	<b>1,810</b>	<b>1,552</b>	<b>1,547</b>	<b>1,592</b>	<b>1,519</b>	<b>1,492</b>	<b>1,470</b>	<b>1,530</b>	<b>1,515</b>	<b>1,345</b>	<b>1,375</b>
<b>Subcomponents of expenditure on assets (where known)</b>											
Energy efficiency and demand side management, reduction of energy losses											
Overhead to underground conversion		150	230				120				
Research and development											

	for year ended	Current Year CY 31 Mar 19	CY+1 31 Mar 20	CY+2 31 Mar 21	CY+3 31 Mar 22	CY+4 31 Mar 23	CY+5 31 Mar 24	CY+6 31 Mar 25	CY+7 31 Mar 26	CY+8 31 Mar 27	CY+9 31 Mar 28	CY+10 31 Mar 29
<b>Difference between nominal and constant price forecasts</b>												
		<b>\$000</b>										
51	Consumer connection	-	-	1	2	-	-	-	-	-	-	-
52	System growth	-	-	2	3	5	6	9	12	16	19	22
53	Asset replacement and renewal	-	-	9	21	33	43	66	88	116	131	159
54	Asset relocations	-	-	0	0	-	-	-	-	-	-	-
55	Reliability, safety and environment:											
56	Quality of supply	-	-	0	5	3	5	-	23	13	-	-
57	Legislative and regulatory	-	-	-	-	-	-	-	-	-	-	-
58	Other reliability, safety and environment	-	-	2	-	5	5	15	2	14	20	23
59	<b>Total reliability, safety and environment</b>	-	-	3	5	8	10	15	26	26	20	23
60	<b>Expenditure on network assets</b>	-	-	15	31	45	60	90	126	158	170	205
61	Expenditure on non-network assets	-	-	1	1	1	1	-	-	-	-	-
62	<b>Expenditure on assets</b>	-	-	15	32	46	61	90	126	158	170	205
<b>11a(ii): Consumer Connection</b>												
		for year ended	Current Year CY 31 Mar 19	CY+1 31 Mar 20	CY+2 31 Mar 21	CY+3 31 Mar 22	CY+4 31 Mar 23	CY+5 31 Mar 24				
63	<i>Consumer types defined by EDB*</i>											
64	<b>\$000 (in constant prices)</b>											
65	Group 2	1	145	85	85	-	-	-	-	-	-	-
66												
67												
68												
69												
70												
71												
72												
73												
74												
75	<i>*include additional rows if needed</i>											
76	<b>Consumer connection expenditure</b>	1	145	85	85	-	-	-	-	-	-	-
77	less Capital contributions funding consumer connection											
78	<b>Consumer connection less capital contributions</b>	1	145	85	85	-	-	-	-	-	-	-
<b>11a(iii): System Growth</b>												
79												
80	Subtransmission											
81	Zone substations											
82	Distribution and LV lines											
83	Distribution and LV cables		45	-	-	-	-	-	-	-	-	-
84	Distribution substations and transformers	101	55	50	50	50	50	50				
85	Distribution switchgear											
86	Other network assets		15	100	100	100	100	100				
87	<b>System growth expenditure</b>	101	115	150	150	150	150	150				
88	less Capital contributions funding system growth											
89	<b>System growth less capital contributions</b>	101	115	150	150	150	150	150				
90												

	Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
for year ended	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22	31 Mar 23	31 Mar 24
<b>11a(iv): Asset Replacement and Renewal</b>	<b>\$000 (in constant prices)</b>					
Subtransmission	-	-	-	-	-	-
Zone substations	-	-	-	-	-	-
Distribution and LV lines	205	-	-	-	-	-
Distribution and LV cables	131	100	290	950	1,002	1,010
Distribution substations and transformers	-	-	-	-	-	-
Distribution switchgear	547	485	555	-	-	-
Other network assets	102	80	90	95	95	60
<b>Asset replacement and renewal expenditure</b>	<b>986</b>	<b>665</b>	<b>935</b>	<b>1,045</b>	<b>1,097</b>	<b>1,070</b>
less Capital contributions funding asset replacement and renewal	-	-	-	-	-	-
<b>Asset replacement and renewal less capital contributions</b>	<b>986</b>	<b>665</b>	<b>935</b>	<b>1,045</b>	<b>1,097</b>	<b>1,070</b>
	Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
for year ended	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22	31 Mar 23	31 Mar 24
<b>11a(v): Asset Relocations</b>	<b>\$000 (in constant prices)</b>					
<i>Project or programme*</i>						
Relocate Normanby Bridge Substation	-	155	-	-	-	-
Relocate AMP substation (programme)	-	20	45	20	-	-
Dormans Substation	94	-	-	-	-	-
<i>*include additional rows if needed</i>						
All other project or programmes - asset relocations	-	-	-	-	-	-
<b>Asset relocations expenditure</b>	<b>94</b>	<b>175</b>	<b>45</b>	<b>20</b>	<b>-</b>	<b>-</b>
less Capital contributions funding asset relocations	78	-	-	-	-	-
<b>Asset relocations less capital contributions</b>	<b>16</b>	<b>175</b>	<b>45</b>	<b>20</b>	<b>-</b>	<b>-</b>
	Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
for year ended	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22	31 Mar 23	31 Mar 24
<b>11a(vi): Quality of Supply</b>	<b>\$000 (in constant prices)</b>					
<i>Project or programme*</i>						
Valley Heights LV link	-	40	-	-	-	-
Hardy St West LV reconfig and sectionalisation	-	30	-	-	-	-
Trafalgar St South LV Sectionalisation	-	30	-	-	-	-
Emano St North Tripping VCB	-	-	-	250	-	-
Kirkpatricks to Gloucester St 0.0225 HV PI cable (1969)	-	-	-	-	-	135
<i>*include additional rows if needed</i>						
All other projects or programmes - quality of supply	-	-	40	-	95	-
<b>Quality of supply expenditure</b>	<b>-</b>	<b>100</b>	<b>40</b>	<b>250</b>	<b>95</b>	<b>135</b>
less Capital contributions funding quality of supply	-	-	-	-	-	-
<b>Quality of supply less capital contributions</b>	<b>-</b>	<b>100</b>	<b>40</b>	<b>250</b>	<b>95</b>	<b>135</b>

	Current Year CY	CY+1	CY+2	CY+3	CY+4	CY+5
for year ended	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22	31 Mar 23	31 Mar 24
<b>11a(vii): Legislative and Regulatory</b>						
<i>Project or programme*</i>	<b>\$000 (in constant prices)</b>					
<i>*include additional rows if needed</i>						
All other projects or programmes - legislative and regulatory						
<b>Legislative and regulatory expenditure</b>	-	-	-	-	-	-
less Capital contributions funding legislative and regulatory						
<b>Legislative and regulatory less capital contributions</b>	-	-	-	-	-	-
<b>11a(viii): Other Reliability, Safety and Environment</b>						
<i>Project or programme*</i>	<b>\$000 (in constant prices)</b>					
Hanby Park - Replace O/H sub with GM		70				
Matipo Tce - Replace O/H sub with GM		80				
St Vincent St Central RMU replacement		65				
Hathaway Terrace RMU replacement		55				
Cable replacement (programme)		-	-	-	125	115
<i>*include additional rows if needed</i>						
All other projects or programmes - other reliability, safety and environment	535	60	230		30	
<b>Other reliability, safety and environment expenditure</b>	535	330	230		155	115
less Capital contributions funding other reliability, safety and environment	24					
<b>Other reliability, safety and environment less capital contributions</b>	511	330	230	-	155	115
<b>11a(ix): Non-Network Assets</b>						
<b>Routine expenditure</b>	<b>\$000 (in constant prices)</b>					
<i>Project or programme*</i>						
Computers	33			20		
Vehicles	28		40			
Office Equipment		2	2	2	2	2
Misc	33	20	20	20	20	20
<i>*include additional rows if needed</i>						
All other projects or programmes - routine expenditure						
<b>Routine expenditure</b>	94	22	62	42	22	22
<b>Atypical expenditure</b>						
<i>Project or programme*</i>						
<i>*include additional rows if needed</i>						
All other projects or programmes - atypical expenditure						
<b>Atypical expenditure</b>	-	-	-	-	-	-
<b>Expenditure on non-network assets</b>	94	22	62	42	22	22

**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 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	31 Mar 28	31 Mar 29

<b>Operational Expenditure Forecast</b>		<b>\$000 (in nominal dollars)</b>										
Service interruptions and emergencies	125	127	132	135	138	141	143	146	149	152	152	
Vegetation management	31	33	34	35	36	37	37	38	39	40	40	
Routine and corrective maintenance and inspection	348	347	361	368	376	383	391	399	407	415	415	
Asset replacement and renewal	82	82	85	87	89	91	92	94	96	98	98	
<b>Network Opex</b>	<b>586</b>	<b>589</b>	<b>613</b>	<b>625</b>	<b>638</b>	<b>651</b>	<b>664</b>	<b>677</b>	<b>691</b>	<b>704</b>	<b>704</b>	
System operations and network support	284	255	258	260	263	265	265	269	273	277	277	
Business support	1,285	1,280	1,293	1,306	1,319	1,332	1,332	1,352	1,372	1,393	1,393	
<b>Non-network opex</b>	<b>1,569</b>	<b>1,535</b>	<b>1,550</b>	<b>1,566</b>	<b>1,582</b>	<b>1,597</b>	<b>1,597</b>	<b>1,621</b>	<b>1,646</b>	<b>1,670</b>	<b>1,670</b>	
<b>Operational expenditure</b>	<b>2,155</b>	<b>2,124</b>	<b>2,164</b>	<b>2,191</b>	<b>2,220</b>	<b>2,248</b>	<b>2,261</b>	<b>2,298</b>	<b>2,336</b>	<b>2,375</b>	<b>2,375</b>	

	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 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	31 Mar 28	31 Mar 29
<b>\$000 (in constant prices)</b>											
Service interruptions and emergencies	125	127	127	127	127	127	127	127	127	127	127
Vegetation management	31	33	33	33	33	33	33	33	33	33	33
Routine and corrective maintenance and inspection	348	347	347	347	347	347	347	347	347	347	347
Asset replacement and renewal	82	82	82	82	82	82	82	82	82	82	82
<b>Network Opex</b>	<b>586</b>	<b>589</b>	<b>589</b>	<b>589</b>	<b>589</b>	<b>589</b>	<b>589</b>	<b>589</b>	<b>589</b>	<b>589</b>	<b>589</b>
System operations and network support	284	255	255	255	255	255	255	255	255	255	255
Business support	1,285	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280	1,280
<b>Non-network opex</b>	<b>1,569</b>	<b>1,535</b>	<b>1,535</b>	<b>1,535</b>	<b>1,535</b>	<b>1,535</b>	<b>1,535</b>	<b>1,535</b>	<b>1,535</b>	<b>1,535</b>	<b>1,535</b>
<b>Operational expenditure</b>	<b>2,155</b>	<b>2,124</b>	<b>2,124</b>	<b>2,124</b>	<b>2,124</b>	<b>2,124</b>	<b>2,124</b>	<b>2,124</b>	<b>2,124</b>	<b>2,124</b>	<b>2,124</b>

**Subcomponents of operational expenditure (where known)**

Energy efficiency and demand side management, reduction of energy losses											
Direct billing*											
Research and Development											
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 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	31 Mar 28	31 Mar 29

<b>Difference between nominal and real forecasts</b>		<b>\$000</b>										
Service interruptions and emergencies	-	-	5	8	10	13	16	19	22	25	25	
Vegetation management	-	-	1	2	3	3	4	5	6	6	6	
Routine and corrective maintenance and inspection	-	-	14	21	29	36	44	52	60	68	68	
Asset replacement and renewal	-	-	3	5	7	9	10	12	14	16	16	
<b>Network Opex</b>	<b>-</b>	<b>-</b>	<b>24</b>	<b>36</b>	<b>49</b>	<b>61</b>	<b>74</b>	<b>88</b>	<b>101</b>	<b>115</b>	<b>115</b>	
System operations and network support	-	-	3	5	8	10	10	14	18	22	22	
Business support	-	-	13	26	39	52	52	72	92	113	113	
<b>Non-network opex</b>	<b>-</b>	<b>-</b>	<b>15</b>	<b>31</b>	<b>47</b>	<b>62</b>	<b>62</b>	<b>86</b>	<b>111</b>	<b>135</b>	<b>135</b>	
<b>Operational expenditure</b>	<b>-</b>	<b>-</b>	<b>39</b>	<b>67</b>	<b>95</b>	<b>124</b>	<b>137</b>	<b>174</b>	<b>212</b>	<b>250</b>	<b>250</b>	

### 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)											% of asset forecast to be replaced in next 5 years	
	Voltage	Asset category	Asset class	Units	H1	H2	H3	H4	H5	Grade unknown	Data accuracy (1-4)		
7													
8													
9													
10	All	Overhead Line	Concrete poles / steel structure	No.			5.00%	75.00%	20.00%		4	1.00%	
11	All	Overhead Line	Wood poles	No.			15.00%	85.00%			4	1.00%	
12	All	Overhead Line	Other pole types	No.							[Select one]		
13	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km							[Select one]		
14	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km							[Select one]		
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km				100.00%			3		
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km							[Select one]		
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km							[Select one]		
18	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km				100.00%			3		
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km							[Select one]		
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km							[Select one]		
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km							[Select one]		
22	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km							[Select one]		
23	HV	Subtransmission Cable	Subtransmission submarine cable	km							[Select one]		
24	HV	Zone substation Buildings	Zone substations up to 66kV	No.					100.00%		4		
25	HV	Zone substation Buildings	Zone substations 110kV+	No.							[Select one]		
26	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.					100.00%		4		
27	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.							[Select one]		
28	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.							[Select one]		
29	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.							[Select one]		
30	HV	Zone substation switchgear	33kV RMU	No.							[Select one]		
31	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.							[Select one]		
32	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.							[Select one]		
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.					100.00%		4		
34	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.							[Select one]		
35													

		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
36												
37												
38												
39	HV	Zone Substation Transformer	Zone Substation Transformers	No.					100.00%		4	
40	HV	Distribution Line	Distribution OH Open Wire Conductor	km		2.00%		78.00%	20.00%		3	2.00%
41	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km							[Select one]	
42	HV	Distribution Line	SWER conductor	km							[Select one]	
43	HV	Distribution Cable	Distribution UG XLPE or PVC	km			20.00%	65.00%	15.00%		2	10.00%
44	HV	Distribution Cable	Distribution UG PILC	km			60.00%	40.00%			2	1.00%
45	HV	Distribution Cable	Distribution Submarine Cable	km							[Select one]	
46	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionalisers	No.				100.00%			4	
47	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.			56.00%	13.00%	31.00%		4	56.00%
48	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.				100.00%			3	40.00%
49	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.				100.00%			3	
50	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.			1.00%	49.00%	50.00%		3	5.00%
51	HV	Distribution Transformer	Pole Mounted Transformer	No.			30.00%	70.00%			3	30.00%
52	HV	Distribution Transformer	Ground Mounted Transformer	No.			9.00%	74.00%	17.00%		3	2.00%
53	HV	Distribution Transformer	Voltage regulators	No.							[Select one]	
54	HV	Distribution Substations	Ground Mounted Substation Housing	No.				80.00%	20.00%		3	
55	LV	LV Line	LV OH Conductor	km				100.00%			3	
56	LV	LV Cable	LV UG Cable	km			20.00%	60.00%	20.00%		2	
57	LV	LV Streetlighting	LV OH/UG Streetlight circuit	km			30.00%	60.00%	10.00%		2	
58	LV	Connections	OH/UG consumer service connections	No.				60.00%	40.00%		3	
59	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.					100.00%		3	
60	All	SCADA and communications	SCADA and communications equipment operating as a single system	Lot				10.00%	90.00%		3	
61	All	Capacitor Banks	Capacitors including controls	No.							[Select one]	
62	All	Load Control	Centralised plant	Lot					100.00%		4	
63	All	Load Control	Relays	No.							[Select one]	
64	All	Civils	Cable Tunnels	km							[Select one]	



**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

**7 12b(i): System Growth - Zone Substations**

8	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
9	Haven Road Zone Substation	35	48	N-1	4	73%	48	71%	[Select one]	
10						-			[Select one]	
11						-			[Select one]	
12						-			[Select one]	
13						-			[Select one]	
14						-			[Select one]	
15						-			[Select one]	
16						-			[Select one]	
17						-			[Select one]	
18						-			[Select one]	
19						-			[Select one]	
20						-			[Select one]	
21						-			[Select one]	
22						-			[Select one]	
23						-			[Select one]	
24						-			[Select one]	
25						-			[Select one]	
26						-			[Select one]	
27						-			[Select one]	
28						-			[Select one]	

<sup>1</sup> Extend forecast capacity table as necessary to disclose all capacity by each zone substation

## 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

7 <b>12c(i): Consumer Connections</b>		Number of connections					
		Current Year CY for year ended 31 Mar 19	CY+1 31 Mar 20	CY+2 31 Mar 21	CY+3 31 Mar 22	CY+4 31 Mar 23	CY+5 31 Mar 24
8	Number of ICPs connected in year by consumer type						
11	Consumer types defined by EDB*						
12	Load Group 0 (Unmetered and Builders Temporary)	9	-	-	-	-	-
13	Load Group 1 (Low User)	5	24	24	24	24	24
14	Load Group 2 (Mass Market - Residential)	21	20	20	20	20	20
15	Load Group 2 (Mass Market - Business)	14	15	15	15	15	15
16	Load Group 3 (Time of Use)	-	1	1	1	1	1
17	<b>Connections total</b>	<b>49</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>
18	*include additional rows if needed						
19	<b>Distributed generation</b>						
20	Number of connections	24	40	60	90	120	160
21	Capacity of distributed generation installed in year (MVA)	0.1	0.1	0.2	0.2	0.3	0.4
22	<b>12c(ii) System Demand</b>						
23							
24	<b>Maximum coincident system demand (MW)</b>						
25	GXP demand	34	34	34	34	34	34
26	plus Distributed generation output at HV and above	-	-	-	-	-	-
27	<b>Maximum coincident system demand</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>
28	less Net transfers to (from) other EDBs at HV and above						
29	<b>Demand on system for supply to consumers' connection points</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>	<b>34</b>
30	<b>Electricity volumes carried (GWh)</b>						
31	Electricity supplied from GXPs	148	148	148	147	147	147
32	less Electricity exports to GXPs	-	-	-	-	-	-
33	plus Electricity supplied from distributed generation	0	0	1	1	1	2
34	less Net electricity supplied to (from) other EDBs	-	-	-	-	-	-
35	<b>Electricity entering system for supply to ICPs</b>	<b>148</b>	<b>148</b>	<b>148</b>	<b>148</b>	<b>148</b>	<b>148</b>
36	less Total energy delivered to ICPs	143	143	143	143	143	143
37	<b>Losses</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>
38							
39	<b>Load factor</b>	<b>50%</b>	<b>50%</b>	<b>50%</b>	<b>50%</b>	<b>50%</b>	<b>50%</b>
40	<b>Loss ratio</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>

Company Name

Nelson Electricity Ltd

AMP Planning Period

1 April 2019 – 31 March 2029

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
	for year ended	31 Mar 19	31 Mar 20	31 Mar 21	31 Mar 22	31 Mar 23	31 Mar 24
8							
9							
10	<b>SAIDI</b>						
11	Class B (planned interruptions on the network)	16.8	15.0	15.0	15.0	15.0	15.0
12	Class C (unplanned interruptions on the network)	7.6	30.0	30.0	30.0	30.0	30.0
13	<b>SAIFI</b>						
14	Class B (planned interruptions on the network)	0.05	0.30	0.30	0.30	0.30	0.30
15	Class C (unplanned interruptions on the network)	0.11	0.60	0.60	0.60	0.60	0.60

## **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.
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*

Given the low level of inflation and interest rates, the difference between nominal and constant was assessed at 1% for the 2019-2020 to 2023-2024 years and 2% for every year thereafter for the planning period.

### *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*

Given the low level of inflation and interest rates, the difference between nominal and constant was assessed at 2% per year for the planning period.