

Nelson Electricity Limited

DEFAULT PRICE QUALITY PATH COMPLIANCE STATEMENT

FOR THE ASSESSMENT DATE 31 MARCH 2018

*Pursuant to the Electricity Distribution Services Default Price-Quality
Path Determination 2015*

13 June 2018

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1) Compliance with the Price Path (Clause 11.2(a)(i))

Nelson Electricity Limited complies with the price path at the assessment date, 31 March 2018, as specified in the *Electricity Distribution Services Default Price-Quality Path Determination 2015*.

Clause 8.3 - The notional revenue of a Non-exempt EDB in an Assessment Period must not exceed the allowable notional revenue for the Assessment Period.

Compliance is demonstrated in the following table. The table demonstrates that notional revenue derived using posted prices during the Assessment Period is less than the allowable notional revenue.

Test:	$NR_{2018} \leq ANR_{2018}$
NR ₂₀₁₈ :	\$ 6,635,307
ANR ₂₀₁₈ :	\$ 6,701,245
Result:	0.9902 < 1
Result:	Price Path has not been exceeded

Supporting evidence is presented in Appendices A,B,C,D,E and F.

2) Compliance with the Quality Standards (Clause 11.2(a)(ii))

Nelson Electricity Limited does comply with all requirements of the quality standards at the assessment date, 31 March 2018, as specified in the *Electricity Distribution Services Default Price-Quality Path Determination 2015*.

2018 Reliability Assessment (9.1(a))

Clause 9.1(a) requires compliance with Clause 9.2: To comply with the annual reliability assessment for the current Assessment Period:

- a Non-exempt EDB's SAIDI Assessed Values for the Assessment Period must not exceed the SAIDI Limit specified in Schedule 4A; and
- a Non-exempt EDB's SAIFI Assessed Values for the Assessment Period must not exceed the SAIFI Limit specified in Schedule 4A.

Compliance is demonstrated in the following tables.

Clause 9.2(a) - A Non-exempt EDB's SAIDI Assessed Value for the Assessment Period must not exceed the SAIDI Limit specified in Schedule 4A.

Test:	$SAIDI_{Assess\ 2018} \leq SAIDI_{Limit}$
SAIDI _{Assess 2018}	9.28
SAIDI _{Limit}	22.23
Result:	0.4175 < 1
Result:	SAIDI Limit has not been exceeded

Clause 9.2(b) - A Non-exempt EDB's SAIFI Assessed Value for the Assessment Period must not exceed the SAIFI Limit specified in Schedule 4A.

Test:	$SAIFI_{Assess\ 2018} \leq SAIFI_{Limit}$
SAIFI _{Assess 2018}	0.089
SAIFI _{Limit}	0.241
Result:	0.3693 < 1
Result:	SAIFI Limit has not been exceeded

Prior Period Reliability Assessment (9.1(b))

Clause 9.1(b): A Non-exempt EDB must have complied with the annual reliability assessments in each of the two preceding Assessment Periods.

Compliance is demonstrated in the following tables.

Reliability Assessment for Period Ending 31 March 2017

SAIDI _{Assess 2017}	10.64	SAIFI _{Assess 2017}	0.101
SAIDI _{Limit}	22.23	SAIFI _{Limit}	0.241
	0.4787 < 1	Result:	0.3297 < 1
	SAIDI Limit has not been exceeded	Result:	SAIFI Limit has not been exceeded

Reliability Assessment for Period Ending 31 March 2016

SAIDI _{Assess 2016}	5.76	SAIFI _{Assess 2016}	0.079
SAIDI _{Limit}	22.23	SAIFI _{Limit}	0.241
	0.2591 < 1	Result:	0.3297 < 1
	SAIDI Limit has not been exceeded	Result:	SAIFI Limit has not been exceeded

Compliance Summary

Clause 9.1 A Non-exempt EDB must, in respect of each Assessment Period, either:

- (a) comply with the annual reliability assessment specified in clause 9.2 for that Assessment Period; or
- (b) have complied with the annual reliability assessment in each of the two preceding Assessment Periods

	SAIDI	SAIFI	Compliance
Compliance with 9.1(a)			
2018 Assessment Period	Does not exceed Limit	Does not exceed Limit	Complies
or			
Compliance with 9.1(b)			
2017 Assessment Period	Does not exceed Limit	Does not exceed Limit	Complies
2016 Assessment Period	Does not exceed Limit	Does not exceed Limit	Complies
Clause 9.1 Result:	<i>Complies with Quality Standard</i>		

- Clause 11.5(a) Not required due to complying with Clause 11.2(a)
- Clause 11.5(b) Not required due to complying with Clause 11.2(a)

Supporting evidence is presented in Appendices G and H.

3) Director Certification (Clause 11.3(a))

I, Oliver Rupert Kearney being director of Nelson Electricity Limited certify that, having made all reasonable enquiry, to the best of my knowledge and belief, the attached Annual Compliance Statement of Nelson Electricity Limited, and related information, prepared for the purposes of the *Electricity Distribution Services Default Price-Quality Path Determination 2015* are true and accurate.

A handwritten signature in blue ink, appearing to read 'O. R. Kearney', is written over the text.

13 June 2018



INDEPENDENT ASSURANCE REPORT

TO THE DIRECTORS OF NELSON ELECTRICITY LIMITED AND THE COMMERCE COMMISSION

The Auditor-General is the auditor of Nelson Electricity Limited (the company). The Auditor-General has appointed me, Michael Wilkes, using the staff and resources of Deloitte Limited, to provide an opinion, on his behalf, on whether the Annual Compliance Statement for the year ended on 31 March 2018 on pages 2 to 5 and 9 to 27 has been prepared, in all material respects, with the Electricity Distribution Services Default Price-Quality Path Determination 2015 (the Determination).

Directors' responsibilities for the Annual Compliance Statement

The directors of the company are responsible for the preparation of the Annual Compliance Statement in accordance with the Determination, and for such internal control as the directors determine is necessary to enable the preparation of an Annual Compliance Statement that is free from material misstatement.

Our responsibility for the Annual Compliance Statement

Our responsibility is to express an opinion on whether the Annual Compliance Statement has been prepared, in all material respects, in accordance with the Determination.

Basis of opinion

We conducted our engagement in accordance with the International Standard on Assurance Engagements (New Zealand) 3000 (Revised): *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* and the Standard on Assurance Engagements 3100: *Compliance Engagements* issued by the External Reporting Board. Copies of these standards are available on the External Reporting Board's website.

These standards require that we comply with ethical requirements and plan and perform our assurance engagement to provide reasonable assurance about whether the Annual Compliance Statement has been prepared in all material respects in accordance with the Determination.

We have performed procedures to obtain evidence about the amounts and disclosures in the Annual Compliance Statement. The procedures selected depend on our judgement, including the assessment of the risks of material misstatement of the Annual Compliance Statement, whether due to fraud or error or non-compliance with the Determination. In making those risk assessments, we considered internal control relevant to the company's preparation of the Annual Compliance Statement in order to design procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.

In assessing the disclosures about compliance with the price path in clause 8 of the Determination for the assessment period ended on 31 March 2018, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 2 to 5 and 9 to 27 of the Annual Compliance Statement.

In assessing the disclosures about compliance with the quality standards in clause 9 of the Determination for the assessment period ended on 31 March 2018, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 2 to 5 and 9 to 27 of the Annual Compliance Statement.

Our assurance engagement also included assessment of the significant estimates and judgements, if any, made by the company in the preparation of the Annual Compliance Statement.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Use of this report

This independent assurance report has been prepared solely for the directors of the company and for the Commerce Commission for the purpose of providing those parties with reasonable assurance



about whether the Annual Compliance Statement has been prepared, in all material respects, in accordance with the Determination. We disclaim any assumption of responsibility for any reliance on this report to any person other than the directors of the company or the Commerce Commission, or for any other purpose than that for which it was prepared.

Scope and inherent limitations

Because of the inherent limitations of a reasonable assurance engagement, and the test basis of the procedures performed, it is possible that fraud, error or non-compliance may occur and not be detected.

We did not examine every transaction, adjustment or event underlying the Annual Compliance Statement nor do we guarantee complete accuracy of the Annual Compliance Statement. Also we did not evaluate the security and controls over the electronic publication of the Annual Compliance Statement.

The opinion expressed in this independent assurance report has been formed on the above basis.

Independence and quality control

When carrying out the engagement, we complied with the Auditor-General's:

- independence and other ethical requirements, which incorporate the independence and ethical requirements of Professional and Ethical Standard 1 (Revised) issued by the New Zealand Auditing and Assurance Standards Board; and
- quality control requirements, which incorporate the quality control requirements of Professional and Ethical Standard 3 (Amended) issued by the New Zealand Auditing and Assurance Standards Board.

We also complied with the independent auditor requirements specified in the Determination.

The Auditor-General, and his employees, and Deloitte Limited and its partners and employees may deal with the company on normal terms within the ordinary course of trading activities of the company. Other than any dealings on normal terms within the ordinary course of business, this engagement, and the annual audit of the company's financial statements, we have no relationship with, or interests in the company.

Opinion

In our opinion:

- as far as appears from an examination, the information used in the preparation of the Annual Compliance Statement has been properly extracted from the company's accounting and other records, and has been sourced, where appropriate, from its financial and non-financial systems; and
- the Annual Compliance Statement of company for the year ended on 31 March 2018, has been prepared, in all material respects, in accordance with the Determination.

In forming our opinion, we have obtained sufficient recorded evidence and all the information and explanations we have required.

Michael Wilkes
Deloitte Limited
On behalf of the Auditor-General
Christchurch, New Zealand
13 June 2018

Appendix A – Price Path Compliance Calculation (Clause 11.4(c))

Price Path Inputs and Calculations for the Assessment Date 31 March 2018

Clause 8.4

Allowable Notional Revenue 31 March 2018		
Term	Description	Value \$
<i>ANR₂₀₁₈</i>	Allowable Notional Revenue for year ending 31 March 2018	6,701,245

Clause 8.5

Notional Revenue for the year ending March 2018		
Term	Description	Value \$
<i>DP₂₀₁₈ * Q₂₀₁₆</i>	Distribution Prices at 31 March 2018 multiplied by 31 March 2016 Base Quantities	6,635,307
<i>NR₂₀₁₈</i>	Notional Revenue for the year ending 31 March 2018	6,635,307

Supported by P*Q
schedules presented in
Appendix B

Default Price Path Calculation for Period Ending 31 March 2018

1. The allowable notional revenue for all Assessment Periods other than the first Assessment Period of a Regulatory Period or CPP Regulatory Period must be calculated in accordance with the formula -

$$ANR_t = (\sum_i DP_{i,t-1} Q_{i,t-2} + (ANR_{t-1} - NR_{t-1}))(1 + \Delta CPI_t)(1 - X)$$

where-

- t is the year in which the Assessment Period ends;
- i denotes each Distribution Price;
- $DP_{i,t-1}$ is the i^{th} Distribution Price during any part of the Assessment Period ending the year prior to year t ;
- $Q_{i,t-2}$ is the Quantity for the Assessment Period ending 2 years prior to year t corresponding to the i^{th} Distribution Price;
- $ANR_{t-1} - NR_{t-1}$ is the difference between allowable notional revenue and notional revenue for the Assessment Period ending the year prior to year t ;
- X is the annual rate of change applicable to the Non-exempt EDB, as specified in Schedule 2; and
- ΔCPI_t is the derived change in the CPI to be applied for the Assessment Period ending in year t , being equal to:
- $$\frac{CPI_{Dec,t-3} + CPI_{Mar,t-2} + CPI_{Jun,t-2} + CPI_{Sep,t-2}}{CPI_{Dec,t-4} + CPI_{Mar,t-3} + CPI_{Jun,t-3} + CPI_{Sep,t-3}} - 1$$
- where-
- $CPI_{q,t-n}$ is the CPI for the quarter year ending q in the 12 month period n years prior to year t .

From 31 March 2017 Default Price Quality Path Compliance Statement

ANR ₂₀₁₇	=	\$6,690,067
NR ₂₀₁₇	=	\$6,781,860

ANR ₂₀₁₈	=	($\sum DP_{2017} \times Q_{2016} + (ANR_{2017} - NR_{2017})$)	x	(1+CPI ₂₀₁₈)	x	(1-X)
ANR ₂₀₁₈	=	\$6,770,756	+	-\$91,793	x	1.003336 x 1
ANR ₂₀₁₈	=	\$6,701,245				
NR ₂₀₁₈	=	\$6,635,307				

Distribution Price - Price Revenue Table using 31 March 2018 Prices and 2015/2016 Audited Billed Quantities

Number of Days:		366								
Tariff or Fee	Number of ICPs at 31/03/2016 From Registry	Billed kWh at 31/3/2016	Billed kVA at 31/3/2016	Billed Days at 31/3/2016	Distribution Prices			Notional Distribution Revenue (\$)		Total Revenue (\$) P ₂₀₁₈ Q ₂₀₁₆
					Fixed		Variable (c/kWh)	Fixed	Variable	
					\$/day	c/kVA/day				
Group 0										
Streetlights	1	1,159,348	-	366	220.000			80,520		80,520
Unmetered Fixed	33	-	-	10,532	0.05825			613		613
Unmetered Capacity	0	-	4,490	-		60.600		2,721		2,721
Builders Temp	16	-	-	5,926	0.608			3,603		3,603
BT-kWh	0	36,422	-	-			6.293	-	2,292	2,292
Group 1										
Fixed	3466	-	16,508,310	-		0.985		162,607		162,607
Anytime	0	11,277,356	-	-			6.293	-	709,684	709,684
Controlled	0	5,170,613	-	-			3.807	-	196,845	196,845
Nightrate	0	460,492	-	-			2.373	-	10,927	10,927
DG	0	84,660	-	-			0.500	-	423	423
Group 2										
Fixed	5589	-	43,811,839	-		6.361		2,786,871		2,786,871
Anytime	0	53,534,373	-	-			1.877	-	1,004,840	1,004,840
Controlled	0	10,398,308	-	-			1.240	-	128,939	128,939
Nightrate	0	1,197,479	-	-			0.958	-	11,472	11,472
DG	0	144,433	-	-			0.500	-	722	722
Time of Use										
Metered Installation Charge	91	-	-	32,940	1.1675			38,457		38,457
Energy	0	34,076,873	-	-			0.252	-	85,874	85,874
Winter Demand	0	-	3,907,233	-		12.470		487,232		487,232
Capacity Supply (Sum of kVA)	0	-	10,197,858	-		4.8684		496,473		496,473
Power Factor	0	-	7,951	-			6.500	51,684		51,684
DG	0	-	-	-			0.000	-	-	-
TOU Sealord										
Fixed	1	13,707,565	-	-		193,609.000		193,609		193,609
Power Factor	0	-	-	-		6.500		-		-
	0	-	-	-				-		-
Direct Connection										
Energy	0	9,305,849	-	-			0.252	-	23,451	23,451
Installation	2	-	-	732	1.1675			855		855
Winter Demand	0	-	658,983	-		12.470		82,175		82,175
Capacity Supplied	0	-	1,427,400	-		4.8684		69,492		69,492
Power Factor	0	-	450	-			6.500	2,925		2,925
Transpower Cold Storage	0	-	-	-			0.000	-		-
Transpower NMDHB	0	-	-	-			0.000	-		-
DG	0	-	-	-			0.000	-	-	-
Σ P₂₀₁₈ Q₂₀₁₆	9,199	140,324,679								6,635,307

Appendix B – Portion of Distribution and Pass-Through Prices (Clause 11.4(d))

Price Summary Table using 31 March 2018 Prices

Price Description	Type	PRICES			SPLIT %	
		Distribution Price (DP ₂₀₁₈)	Pass Through Price (PTP ₂₀₁₈)	Total (P ₂₀₁₈)	Distribution Price (DP ₂₀₁₈)	Pass Through Price (PTP ₂₀₁₈)
Group 0						
Streetlights	\$/Day	220.000	65.000	285.000	77%	23%
Unmetered Fixed	\$/Day	0.058	0.001	0.059	99%	1%
Unmetered Capacity	cents/kW/day	60.600	50.300	110.900	55%	45%
Builders Temp	\$/Day	0.608	0.011	0.619	98%	2%
BT-kWh	cents/kWh	6.293	2.955	9.248	68%	32%
Group 1						
Fixed	cents/kVA/day	0.985	0.015	1.000	99%	2%
Anytime	cents/kWh	6.293	2.955	9.248	68%	32%
Controlled	cents/kWh	3.807	1.680	5.487	69%	31%
Nightrate	cents/kWh	2.373	0.995	3.368	70%	30%
DG	cents/kWh	0.500	0.000	0.500	100%	0%
Group 2						
Fixed	cents/kVA/day	6.361	0.099	6.460	98%	2%
Anytime	cents/kWh	1.877	2.888	4.765	39%	61%
Controlled	cents/kWh	1.240	1.639	2.879	43%	57%
Nightrate	cents/kWh	0.958	0.971	1.929	50%	50%
DG	cents/kWh	0.500	0.000	0.500	100%	0%
Time of Use						
Metered Installation Charge	\$/Day	1.168	0.023	1.190	98%	2%
Energy	cents/kWh	0.252	1.335	1.587	16%	84%
Winter Demand	cents/kVA/day	12.470	9.893	22.363	56%	44%
Capacity Supply (Sum of kVA)	cents/kVA/day	4.868	0.083	4.952	98%	2%
Power Factor (kVAr)	\$/kVAr/month	6.500	0.000	6.500	100%	0%
TOU Seaford						
Fixed	\$/year	193,609	295,793	489,402	40%	60%
Power Factor (kVAr)	\$/kVAr/month	6.500	0.000	6.500	100%	0%
Direct Connection						
Energy	cents/kWh	0.252	0.005	0.257	98%	2%
Installation	\$/Day	1.168	0.023	1.190	98%	2%
Winter Demand	cents/kVA/day	12.470	0.203	12.673	98%	2%
Capacity Supplied	cents/kVA/day	4.868	0.083	4.952	98%	2%
Power Factor (kVAr)	\$/kVAr/month	6.500	0.000	6.500	100%	0%
Transporter Cold Storage	\$/year	0.000	42,694.619	42,695	0%	100%
Transporter NMDHB	\$/year	0.000	120,028.715	120,029	0%	100%

Appendix C – Methodology used to calculate Distribution and Pass-Through Prices (Clause 11.4(e))

In setting of prices Nelson Electricity attempts to provide consumers a smooth price path attempting to reduce annual variations while complying with the Electricity Distribution Services Default Price-Quality Path Determination 2015.

Distribution prices

Distribution Prices are set to recover indirect operating costs, direct operating costs, depreciation and cost of capital. The setting of the prices also takes into account historical charging practices and methodologies.

We recover our costs to serve each load group via our distribution prices. The cost allocation is based on the following:

- Operating Costs - Operational Expenditure Budget that covers both the planned and unplanned network R&M expenditure on the network. The Operational Expenditure Budget is split into the different asset types as per the Regulatory Asset Value of System Fixed Assets table groups. The asset group expenses are then allocated to each load group first based on whether the Group utilises that class of asset (eg Group 4 does not utilise the 400V network so does not contribute towards those associated costs) then through the assessed balance of each groups kWh consumption (60%) and Winter Demand contribution (40%). This percentage allocation attempts to provide a balance between a Group's peak demand utilisation and overall usage. Some re balancing is required for load group specific costs.
- Overhead Costs – Are apportioned by using two measures; the number of network connections and the maximum demand of the load group. This gives a balance of spreading overhead costs between the business of selling capacity and the number of consumers connected.
- Depreciation – This is apportioned by using the assessed depreciation using the NEL Regulatory Asset Base model as a base and follows the same rationale as Operating Costs (except without re-allocation of Load Group specific costs).
- Target Return - This is apportioned to load groups as per the Regulatory Asset Base % split per load group as per the rationale of the operating costs.

Pass-Through Prices

The Pass-Through prices as have been applied for the year ending 31 March 2018 include both the Pass-Through costs and Recoverable Costs as specified in the Electricity Distribution Services Default Price-Quality Path Determination 2015. The methodology to calculate the Pass-Through and Recoverable Costs differs and described below.

Pass-Through Cost and setting of Price

Nelson Electricity forecasts Pass-Through costs (where not known at time of setting prices) based on the previous year's costs plus an adjustment based on the best information available. Typically the adjustment has been a growth factor linked to previous year's historical change of costs. For example, the Electricity Authority

Levies were assessed to have a 2% increase and Local Authority Rates 4% (for the unknown period July 2017 – March 2018).

For the purposes of setting Prices, the forecasted Pass-Through costs also includes any Recoverable Cost (excluding transmission).

The costs are originally included in the setting of the Distribution Prices (so are allocated in the same manner as the Distribution Prices) then separated back out based on the percentage of Pass-Through (excluding transmission) divided by Distribution price. This then allocates the Pass-Through costs in a fair manner across all consumers.

Recoverable cost and Setting of Price

The major component in transmission costs (90%) is the Interconnection charge - Regional Coincident Peak Demand (RCPD) of the Top of the South Island. Transmission peaks are typically encountered during the winter period. Transmission costs are apportioned based on each group's influence. This is achieved through peak demand analysis of each Load Group. Groups 0, 1 and 2 currently recover transmission costs 100% via the kWh charge and Groups 3 and 4 via a mixture of winter control period demand charge (46%) and a kWh charge (54%).

The Nelson Electricity cost allocation methodology has remained relatively stable for a number of years but does from time to time have adjustments made to account for changes in Transmission Costs or the methodology used to determine Transmission Costs. When making changes to the allocation methodology Nelson Electricity attempts to align the allocation methodology with the way costs are incurred as far as is reasonable considering the practicalities of allocating these to the different Load groups.

Appendix D – Pass-Through Balance Assessment (Clauses 11.4(f), (g) and (k))

Nelson Electricity - Pass-Through Balance for Year Ending 31 March 2018

	31 March 2017	31 March 2018
Actual Assessed Pass-Through Prices X Quantities	<u><u>\$3,663,292</u></u>	<u><u>\$3,529,685</u></u>
less		
Pass-Through Costs		
Local Authority Rates	\$30,408	\$31,448
Electricity Authority Levies	\$40,267	\$39,801
Commerce Commission Levies	\$16,953	\$15,355
Electricity and Gas Complaints Commissioner Scheme	\$4,606	\$4,861
	<u><u>\$92,234</u></u>	<u><u>\$91,466</u></u>
Recoverable Costs		
Transmission	\$3,425,376	\$3,366,332
Schedule 5A Energy Efficiency	\$0	\$0
Schedule 5B Quality Incentive Adjustment	\$0	\$68,240
Schedule 5C Claw Back	\$0	\$0
Schedule 5D 2013 - 2015 NPV Washup	\$0	\$0
Schedule 5E Avoided transmission costs	\$0	\$0
Schedule 5F Transmission Asset Wash-up Adj	\$0	\$0
Schedule 5G Opex and Capex Incentive	\$0	\$0
Schedule 5H Extended Reserve Allowance	\$0	\$0
Capex Washup	\$24,000	\$25,000
	<u><u>\$3,449,376</u></u>	<u><u>\$3,459,572</u></u>
Total	<u><u>\$3,541,610</u></u>	<u><u>\$3,551,038</u></u>
Equals (Over or Under Recovery)	<u><u>\$121,682</u></u>	<u><u>-\$21,353</u></u>
plus		
Pass-Through Balance from Previous Period	<u><u>\$72,678</u></u>	<u><u>\$198,786</u></u>
Cost of Debt		
Risk Free Rate		
Debt Premium		
Debt Issuance Costs		
	<u><u>6.09%</u></u>	<u><u>6.09%</u></u>
Pass-Through Balance x Cost of Debt	<u><u>\$77,104</u></u>	<u><u>\$210,892</u></u>
Pass-Through Balance as at 31 March 2017 (Positive is over recovery)	<u><u>\$198,786</u></u>	<u><u>\$189,539</u></u>

Clause 11.4(f)

Pass-Through Cost Recovery Schedule for Assessment Period Ending 31 March 2018

Distribution Price - Total Pass Through Price Revenue Table using 31 March 2018 Prices and 2017/2018 Quantities

Number of Days:		365									
Tariff or Fee	Number of ICPs at 31/03/2018 From Registry	Billed kWh at 31/3/2018	Billed kVA at 31/3/2018	Billed Days at 31/3/2018	Total Pass Through Prices			Notional Distribution Revenue (\$)		Total Revenue (\$) PT ₂₀₁₈ Q ₂₀₁₈	
					Fixed		Variable (c/kWh)	Fixed	Variable		
					\$/day	c/kVA/day					Other
Group 0											
Streetlights	1	981,013	-	365	65.000			23,725		23,725	
Unmetered Fixed	32	-	-	10,727	0.001			8		8	
Unmetered Capacity		-	1,969	-		50.300		990		990	
Builders Temp	13	-	-	5,306	0.011			58		58	
BT-kWh		5,088	-	-			2.955	-	150	150	
Group 1											
Fixed	3753	-	20,039,535	-		0.015		3,006		3,006	
Anytime		12,875,802	-	-			2.955	-	380,480	380,480	
Controlled		5,753,731	-	-			1.680	-	96,663	96,663	
Nightrate		466,065	-	-			0.995	-	4,637	4,637	
DG		73,680	-	-			0.000	-	-	-	
Group 2											
Fixed	5316	-	41,709,280	-		0.099		41,292		41,292	
Anytime		52,072,783	-	-			2.888	-	1,503,862	1,503,862	
Controlled		9,298,551	-	-			1.639	-	152,403	152,403	
Nightrate		928,895	-	-			0.971	-	9,020	9,020	
DG		157,301	-	-			0.000	-	-	-	
Time of Use											
Metered Installation Charge	91	-	-	32,950	0.023			741		741	
Energy		34,114,059	-	-			1.335	-	455,423	455,423	
Winter Demand		-	3,911,962	-		9.893		387,010		387,010	
Capacity Supply (Sum of kVA)		-	10,323,966	-		0.083		8,579		8,579	
Power Factor		-	4,821	-			0.000	-	-	-	
DG		-	-	-			0.000	-	-	-	
TOU Sealord											
Fixed	1	13,020,098	-	-			295,793.248	295,793		295,793	
Power Factor		-	-	-			0.000	-	-	-	
Direct Connection											
Energy		10,826,177	-	-			0.005	-	541	541	
Installation	2	-	-	730	0.023			16		16	
Winter Demand		-	679,238	-		0.203		1,379		1,379	
Capacity Supplied		-	1,423,500	-		0.083		1,183		1,183	
Power Factor		-	1,107	-			0.000	-	-	-	
Transpower Cold Storage		-	-	-			42,694.619	42,695		42,695	
Transpower NMDHB		-	-	-			120,028.715	120,029		120,029	
DG		-	-	-			0.000	-	-	-	
Σ PT₂₀₁₈ Q₂₀₁₈	9,209	140,342,264								3,529,685	

Pass-Through Cost Recovery Schedule for Assessment Period Ending 31 March 2017

Pass-Through Cost Recovery - Revenue Table using 31 March 2017 Prices and 2016/2017 Quantities

Number of Days:		365									
Tariff or Fee	Number of ICPS at 31/03/2017 From Registry	Billed kWh at 31/3/2017	Billed kVA at 31/3/2017	Billed Days at 31/3/2017	Pass-Through Prices			Pass-Through Revenue (\$)		Total Revenue (\$) PTP ₂₀₁₇ Q ₂₀₁₇	
					Fixed		Variable (c/kWh)	Fixed	Variable		
					\$/day	c/kVA/day					Other
Group 0											
Streetlights	1	1,046,902	-	365	69.090	0.000	0.000	0.000	25,218	-	25,218
Unmetered Fixed	33	-	-	10,316	0.001	0.000	0.000	0.000	10	-	10
Unmetered Capacity	0	-	1,469	-	0.000	53.260	0.000	0.000	782	-	782
Builders Temp	15	-	-	5,120	0.014	0.000	0.000	0.000	72	-	72
BT-kWh	0	5,988	-	-	0.000	0.000	0.000	3.140	-	188	188
Group 1											
Fixed	3580	-	19,461,030	-	0.000	0.020	0.000	0.000	3,892	-	3,892
Anytime	0	12,351,319	-	-	0.000	0.000	0.000	3.140	-	387,831	387,831
Controlled	0	5,741,802	-	-	0.000	0.000	0.000	1.786	-	102,549	102,549
Nightrate	0	462,862	-	-	0.000	0.000	0.000	1.060	-	4,906	4,906
DG	0	77,192	-	-	0.000	0.000	0.000	0.000	-	-	-
Group 2											
Fixed	5483	-	42,497,354	-	0.000	0.132	0.000	0.000	56,097	-	56,097
Anytime	0	52,106,204	-	-	0.000	0.000	0.000	3.050	-	1,589,239	1,589,239
Controlled	0	9,878,682	-	-	0.000	0.000	0.000	1.732	-	171,099	171,099
Nightrate	0	1,030,895	-	-	0.000	0.000	0.000	1.028	-	10,598	10,598
DG	0	155,800	-	-	0.000	0.000	0.000	0.000	-	-	-
Time of Use											
Metered Installation Charge	91	-	-	32,859	0.030	0.000	0.000	0.000	986	-	986
Energy	0	34,165,927	-	-	0.000	0.000	0.000	1.406	-	480,373	480,373
Winter Demand	0	-	3,896,698	-	0.000	10.470	0.000	0.000	407,984	-	407,984
Capacity Supply (Sum of kVA)	0	-	10,214,407	-	0.000	0.1108	0.000	0.000	11,318	-	11,318
Power Factor	0	-	6,427	-	0.000	0.000	0.000	0.000	-	-	-
DG											
TOU Sealord	0	-	-	-	0.000	0.000	0.000	0.000	-	-	-
Fixed	1	13,095,498	-	-	0.000	0.000	262,264	0.000	262,264	-	262,264
Power Factor	0	-	-	-	0.000	0.000	0.000	0.000	-	-	-
Direct Connection											
Energy	0	9,720,631	-	-	0.000	0.000	0.000	0.006	-	583	583
Installation	2	-	-	730	0.030	0.000	0.000	0.000	22	-	22
Winter Demand	0	-	652,391	-	0.000	0.270	0.000	0.000	1,761	-	1,761
Capacity Supplied	0	-	1,423,500	-	0.000	0.111	0.000	0.000	1,577	-	1,577
Power Factor	0	-	1,319	-	0.000	0.000	0.000	0.000	-	-	-
Transpower Cold Storage	0	-	-	-	0.000	0.000	28,248	0.000	28,248	-	28,248
Transpower NMDHB	0	-	-	-	0.000	0.000	115,694	0.000	115,694	-	115,694
DG											
Σ PTP₂₀₁₇ Q₂₀₁₇	9,206	139,606,711									3,663,292

Appendix E – Pass-Through Costs (Clauses 11.4(i) and (j))

Commerce Act Electricity Distribution Services Default Price-Quality Path Determination 2015

Pass-Through and Recoverable Costs for the Assessment Date 31 March 2018

Pass Through and Recoverable Costs for year ending 31 March 2018				
K ₂₀₁₈ and V ₂₀₁₈	Actual (\$)	Forecast (\$)	Variance (\$)	Variance (%)
Recoverable Costs V₂₀₁₈				
Transmission	3,366,332	3,364,292	2,040	0.06%
Schedule 5A - Energy Efficiency	-	-	-	-
Schedule 5B - Quality Incentive Adjustment	68,240	68,240	-	(100.00%)
Schedule 5C - Claw Back	-	-	-	-
Schedule 5D - NPV Washup Allowances	-	-	-	-
Schedule 5E - Avoided Transmission Costs	-	-	-	-
Schedule 5F - Transmission Asset Wash-up Adj	-	-	-	-
Schedule 5G - Opex and Capex Adjustment	-	-	-	-
Schedule 5H - Extended Reserve Allowance	-	-	-	-
Capex Washup	24,000		24,000	100.00%
Pass-through Costs K₂₀₁₈				
Rates	30,408	31,017	(609)	(2.00%)
Electricity Authority Levies	39,801	41,163	(1,362)	(3.42%)
Commerce Act Levies	15,355	14,460	895	5.83%
EGCC	4,861	4,718	143	2.94%
Total Pass Through and Recoverable Costs	3,548,997	3,523,890	25,107	0.71%

Explanation:

The table above represents the variances between the forecast Pass-Through and Recoverable Costs versus the Actual Costs for the year ending 31 March 2018.

The key variances were:

- Capex Washup estimate was excluded as a Pass-Through cost in the estimates for the year.

The other variances are within acceptable limits.

Appendix F – Transmission Assets, Transactions and Restructuring of Prices (Clauses 11.2(d), 11.4(h) and 11.6 – 11.8)

Clauses 11.2(d)(i), 11.7 and 11.8 – Nelson Electricity Limited did not undertake a Restructure of its Prices that first applied during the current or preceding Assessment Period and therefore clauses 8.7 - 8.10 did not apply during the Assessment Period.

Clause 11.2(d)(ii) – Nelson Electricity Limited did not receive a transfer of transmission assets from Transpower that became system fixed assets, or transferred system fixed assets to Transpower during the Assessment Period.

Clauses 11.2(d)(iii)-(iv) and 11.6 – Nelson Electricity Limited did not participate in an Amalgamation, a Merger or Major Transaction for the Assessment Period. Clauses 10.1 – 10.4 therefore did not apply for the Assessment Period.

Clauses 11.4(h) Nelson Electricity Limited did not enter into any new investment contracts during the assessment period.

Appendix G – Quality Standard Compliance Calculations (Clauses 11.5(c), (d) and (f))

Quality Standard Compliance Calculations

Reliability Limits and Boundary Values

<i>SAIDI and SAIFI Limits</i>	
<i>SAIDI Limit</i> 2015-2020 regulatory period	22.23
<i>SAIFI Limit</i> 2015-2020 regulatory period	0.241
<i>SAIDI Unplanned Boundary Vanlue</i> 2015-2020 regulatory period	2.699
<i>SAIFI Unplanned Boundary Vanlue</i> 2015-2020 regulatory period	0.033
<i>SAIDI Limit</i> 2010-2015 regulatory period	71.536
<i>SAIFI Limit</i> 2010-2015 regulatory period	1.126

Reliability Assessment Calculations (2017 Assessment Period)

<i>SAIDI Assessed Values</i>		
<i>Raw Data</i>		<i>Adjusted Data</i>
<i>SAIDI_B</i>	Planned SAIDI	6.86
<i>SAIDI_C</i>	Unplanned SAIDI	9.55
<i>SAIDI_B</i>	Planned SAIDI multiplied by 0.5	3.43
<i>SAIDI_C</i>	Normalised Unplanned SAIDI	5.85
<i>SAIDI_{Assess (B+C)}</i>		9.28

<i>SAIFI Assessed Values</i>		
<i>Raw Data</i>		<i>Adjusted Data</i>
<i>SAIFI_B</i>	Planned SAIFI	0.036
<i>SAIFI_C</i>	Unplanned SAIFI	0.220
<i>SAIFI_B</i>	Planned SAIFI multiplied by 0.5	0.018
<i>SAIFI_C</i>	Normalised Unplanned SAIFI	0.071
<i>SAIFI_{Assess (B+C)}</i>		0.089

Normalisation

Days Exceeding SAIDI Boundary Value within the 2017/18 Assessment Dataset

Date	Pre-Normalised unplanned SAIDI	Normalised unplanned SAIDI
19-May-17	5.509	2.699
3-Nov-17	3.590	2.699

Days Exceeding SAIFI Boundary Value within the 2017/18 Assessment Dataset

Date	Pre-Normalised unplanned SAIFI	Normalised unplanned SAIFI
19-May-17	0.141	0.033
3-Nov-17	0.075	0.033

Prior Period Assessed Values

Assessed SAIDI Value 2017

SAIDI ₂₀₁₆	10.64
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The sum of daily SAIDI values in the 1 April 2016 - 31 March 2017 Normalised Assessment Dataset

Assessed SAIFI Value 2017

SAIFI ₂₀₁₆	0.10
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The sum of daily SAIFI values in the 1 April 2016 - 31 March 2017 Normalised Assessment Dataset

Assessed SAIDI Value 2016

SAIDI ₂₀₁₅	5.76
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The sum of daily SAIDI values in the 1 April 2015 - 31 March 2016 Normalised Assessment Dataset

Assessed SAIFI Value 2016

SAIFI ₂₀₁₅	0.08
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The sum of daily SAIFI values in the 1 April 2015 - 31 March 2016 Normalised Assessment Dataset

Quality Incentive Adjustment		
Term	Description	Value \$
S_{SAIDI}	SAIDI Incentive	\$34,120
S_{SAIFI}	SAIFI Incentive	\$34,120
S_{TOTAL}	SAIDI Incentive plus SAIFI Incentive	\$68,240

SAIDI Incentive		
Term	Description	Value \$
$SAIDI_{Target}$	SAIDI Target specified in DPP Determination	16.2056
$SAIDI_{Collar}$	SAIDI incentive range Collar specified in DPP Determination	10.1810
$SAIDI_{Cap}$	SAIDI incentive range Cap specified in DPP Determination	22.2302
$Starting Price_{MAR}$	Maximum allowable revenue for 2015/16 year	\$6,824,000
REV_{RISK}	Revenue at (equal to 1% of MAR)	\$68,240
$SAIDI_{IR}$	SAIDI incentive rate per unit (equal to 50% of revenue at risk divided by Cap minus Target)	\$5,663
$SAIDI_{ASSESS}$	Assessed SAIDI value for purpose of incentive	9.28
S_{SAIDI}	SAIDI incentive adjustment assessment $SAIDI_{ASSESS}$ between SAIDI Collar and SAIDI Cap = $SAIDI_{IR}$ multiplied by ($SAIDI_{Target}$ minus $SAIDI_{ASSESS}$), or $SAIDI_{ASSESS}$ below SAIDI Collar = 50% of REV_{RISK} , or $SAIDI_{ASSESS}$ above SAIDI Cap = -50% of REV_{RISK} .	\$34,120

SAIFI Incentive		
Term	Description	Value \$
$SAIFI_{Target}$	SAIFI Target specified in DPP Determination	0.1751
$SAIFI_{Collar}$	SAIFI incentive range Collar specified in DPP Determination	0.1091
$SAIFI_{Cap}$	SAIFI incentive range Cap specified in DPP Determination	0.2411
MAR	Maximum allowable revenue for 2016/17 year	\$6,824,000
REV_{RISK}	Revenue at (equal to 1% of MAR)	\$68,240
$SAIFI_{IR}$	SAIFI incentive rate per unit (equal to 50% of revenue at risk divided by Cap minus Target)	\$516,970
$SAIFI_{ASSESS}$	Assessed SAIFI value for purpose of incentive	0.0887
S_{SAIFI}	SAIFI incentive adjustment assessment $SAIFI_{ASSESS}$ between SAIFI Collar and SAIFI Cap = $SAIFI_{IR}$ multiplied by ($SAIFI_{Target}$ minus $SAIFI_{ASSESS}$), or $SAIFI_{ASSESS}$ below SAIFI Collar = 50% of REV_{RISK} , or $SAIFI_{ASSESS}$ above SAIFI Cap = -50% of REV_{RISK} .	\$34,120

Clause 11.5(d) - There were no recalculations of Limits, Boundary Values, Targets, Caps or Collars required for the assessment period.

Clause 11.5(f) – Description of the cause of each Major Event Day

19/05/2017	Emano Street	Bird Strike
03/11/2017	Washington Valley	11kV Line Flashover

Appendix H – Policies and Procedures for Recording SAIDI and SAIFI (Clause 11.5(e))

Nelson Electricity Limited follows the procedure “NEL Network System Outage Statistics” to record SAIDI and SAIFI statistics. The procedure covers the collection of customer numbers, the assessments required to assess the numbers of customers affected, the times outages occur and where the data is to be stored.

Wherever possible outage times are collected from an accurate electronic source, the SCADA being the preferred source, other sources are from phone records from the Nelson Electricity call centre, fault forms received from the Nelson Electricity fault contractor or referring to written switching instructions.

Calculations of customer minutes are prepared on the switching record for each individual outage based on switching times and ICP records. The customer minutes for each event are then added to the SAIDI/SAIFI Spreadsheet which summarises all events for the year and is used to calculate the annual SAIDI and SAIFI. The number of outages on the Nelson Electricity network is low compared to other Electricity Line Companies and so it is a relatively easy task to manage these data requirements. A hard copy summary of each outage is held on file.

NEL Network System Outage Statistics Procedure

Background:

Nelson Electricity has to collect and record accurate information regarding all transmission, sub-transmission and 11kV outages. The methods and information used have to be robust as the information is used in the disclosure of both SAIDI and SAIFI statistics as part of the Quality Threshold disclosure.

Purpose:

To ensure all information used in the outage statistics information is as accurate as possible. Evidence of outage times and consumer numbers must also be collected.

Scope:

Applies to all outages both planned and unplanned regarding transmission, sub-transmission and 11kV.

Procedure:

The Asset Manager is responsible for the collection, assessment and reporting of all network outage statistics. The information used in the assessments can be from many sources:

- ICP Database
- New Connections
- SCADA system
- Fault forms
- Call Care (fault call reports)
- Control room switching instructions

These sources of information are all valid and defensible sources of information.

ICP Database and New Connections:

The ICP Database and New Connections are updated as ICPs are added and removed from the network. The Business Systems Administrator ensures that these databases are maintained and accurate.

SCADA System:

The SCADA System installed in 2004 has a detailed reporting function. All reports are time stamped. This gives accurate timings of any 33kV or 11kV feeder outages and restoration times.

Fault Forms:

Fault forms provided by the NEL fault provider contain times of fault and restoration times recorded from the contractors who were working on the fault. This source of information is used if there are no other sources.

Call Care:

All fault calls are initially answered by the NEL answer phone service provided by Call Care. All calls are logged and time stamped and all faults reported to NEL the next day. This source of information is used as NEL receives calls as soon as an outage occurs.

Control Room Switching Instructions:

The switching instructions are a valuable source of information. This is used mainly for the restoration times especially when backfeeding areas in the restoration phase.

The Network Manager uses all these sources to evaluate the outage statistics in the SAIDI Stats Spreadsheet.

Calculations of customer minutes are prepared on the switching record for each individual outage based on switching times and ICP records. The customer minutes for each event are then added to the SAIDI/SAIFI Spreadsheet which summarises all events for the year and is used to calculate the annual SAIDI and SAIFI. The number of outages on the Nelson Electricity network is low compared to other Electricity Line Companies and so it is a relatively easy task to manage these data requirements. A hard copy summary of each outage is held on file.

The Network Manager reports to the General Manager all individual unplanned outage statistics and provides monthly summaries, which are used and reported to NEL Directors.

The outage statistics are also collected and accumulated for the year from 1 April – 31 March the following year. This accumulated result is used in all the information disclosures including the Quality Assessment disclosure.

The Business System Administrator audits the results to ensure the process and results are accurate.

Outage Statistics Reporting Flow Chart

