

# Nelson Electricity Limited

## **DEFAULT PRICE QUALITY PATH COMPLIANCE STATEMENT**

**FOR THE ASSESSMENT DATE 31 MARCH 2011**

*Pursuant to the Commerce Act (Electricity Distribution Default Price-  
Quality Path) Determination 2010*

8 July 2011

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**1) Compliance with the Price Path (Clause 11.1(a))**

Nelson Electricity Limited does comply with the price path at the assessment date, 31 March 2011, as specified in the *Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010*.

**Clause 8.4** - The notional revenue (NR<sub>t</sub>) of a Non-exempt EDB at any time during the Assessment Period must not exceed the allowable notional revenue (R<sub>t</sub>) for the Assessment Period.

Compliance is demonstrated in the following tables. The first table demonstrates that notional revenue derived using posted prices at the end of the Assessment Period is less than allowable notional revenue. The second table demonstrates that the maximum notional revenue during the Assessment Period does not exceed allowable notional revenue thus illustrating that at no time during the Assessment Period is the price path breached.

Test:	$\frac{NR_{2011}}{R_{2011}} \leq 1$	
NR <sub>2011</sub> :	\$	6,455,530
R <sub>2011</sub> :	\$	6,762,441
Result:	0.9546 < 1	
Result:	Price Path has not been breached	

Test:	$\frac{NR_{Max}}{R_{2011}} \leq 1$	
NR <sub>Max</sub> :	\$	6,455,530
R <sub>2011</sub> :	\$	6,762,441
Result:	0.9546 < 1	
Result:	Price Path has not been breached	

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

## 2) Compliance with the Quality Standards (Clause 11.1(a))

Nelson Electricity Limited does comply with all requirements of the quality standards at the assessment date, 31 March 2011, as specified in the *Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010*.

**Clause 9.2** - A Non-exempt EDB's Assessed Values for an Assessment Period must not exceed its Reliability Limits for that Assessment Period.

Compliance is demonstrated in the following tables. The first table demonstrates compliance with the SAIDI Limit and the second table compliance with the SAIFI limit.

Test:	$\frac{SAIDI_{Assess\ 2011}}{SAIDI_{Limit}} \leq 1$
SAIDI <sub>Assess 2011</sub>	56.514
SAIDI <sub>Limit</sub>	71.536
Result:	0.7900 < 1
Result:	SAIDI Limit has not been breached

Test:	$\frac{SAIFI_{Assess\ 2011}}{SAIFI_{Limit}} \leq 1$
SAIFI <sub>Assess 2011</sub>	0.579
SAIFI <sub>Limit</sub>	1.126
Result:	0.5145 < 1
Result:	SAIFI Limit has not been breached

Supporting evidence is presented in Appendices D and E.

### **3) Director Certification (Clause 11.1(c))**

I Paul Donald LeGros, 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 *Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010* are true and accurate.

A handwritten signature in black ink, appearing to read 'P. Le Gros', is positioned above the printed name.

*Paul Donald Le Gros*

8 July 2011

## 4. Auditor's Report (Clause 11.2)



### ***Independent Auditors' Report***

#### **to the readers of the Annual Compliance Statement of Nelson Electricity Limited for the assessment period ended on 31 March 2011**

The Auditor-General is the auditor of Nelson Electricity Limited (the company). The Auditor-General has appointed me, Robert Harris, using the staff and resources of PricewaterhouseCoopers, to provide an opinion, on her behalf, on the company's Annual Compliance Statement for the assessment period ended on 31 March 2011 on pages 2 to 3 and 7 to 17 regarding compliance with the Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010.

We have audited the Annual Compliance Statement in respect of the default price-quality path prepared by the company for the assessment period ended on 31 March 2011 and dated 8 July 2011 for the purposes of clause 11 of the Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010 ("the Determination").

#### ***Directors' Responsibilities***

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, whether due to fraud or error.

#### ***Auditor's Responsibilities***

Our responsibility is to express an opinion on the Annual Compliance Statement based on our audit. We conducted our audit in accordance with the New Zealand Institute of Chartered Accountants Standard on Assurance Engagements 3100: *Compliance Engagements*. This standard requires that we comply with ethical and quality control requirements and plan and perform the audit to obtain reasonable assurance about whether the Annual Compliance Statement has been prepared in accordance with the Determination and is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Annual Compliance Statement. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the Annual Compliance Statement, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of the Annual Compliance Statement in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.

In relation to the price path set out in clause 8 of the Determination, our audit included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 2 and 7 to 11 of the Annual Compliance Statement.

In relation to the SAIDI and SAIFI statistics for the Reference Period and the Assessment Period ended on 31 March 2011, including the calculation of the Reliability Limits and the Assessed Values, which are relevant to the quality standards set out in clause 9 of the Determination, our audit included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 3 and 12 to 17 of the Annual Compliance Statement.



## ***Independent Auditors' Report*** **Nelson Electricity Limited**

Our audit also included assessment of the significant estimates and judgments, if any, made by the company in the preparation of the Annual Compliance Statement and whether adequate information has been disclosed in accordance with clause 11.1(b) of the Determination.

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

### ***Limitations and Use of this Independent Auditor's Report***

This independent auditor's report has been prepared solely for the Directors of Nelson Electricity Limited and the Commissioners of the New Zealand Commerce Commission in accordance with the Determination. We disclaim any assumption of responsibility for any reliance on this report to any persons or users other than the Directors of Nelson Electricity Limited and the Commissioners, or for any purpose other than that for which it was prepared.

Because of the inherent limitations in evidence gathering procedures, it is possible that fraud, error or non-compliance may occur and not be detected. As the procedures performed for this engagement are not performed continuously throughout the assessment period and the procedures performed in respect of the company's compliance with the Determination are undertaken on a test basis, our engagement cannot be relied on to detect all instances where the company may not have complied with the Determination. Our opinion has been formed on the above basis.

### ***Independence***

We have no relationship with, or interests in the company, other than the provision of other professional advisory services. We are not aware of any relationships between our firm and Nelson Electricity Limited that, in our professional judgment, may reasonably be thought to impair our independence.

### ***Opinion***

In our opinion, the Annual Compliance Statement of Nelson Electricity Limited for the Assessment Period ended on 31 March 2011, has been prepared, in all material respects, in accordance with the Determination.

Our audit was completed on 8 July 2011 and our opinion is expressed as at that date.

A handwritten signature in blue ink, appearing to read 'Robert Harris', is written over a faint, larger version of the same signature.

Robert Harris  
On behalf of the Auditor-General  
Christchurch, New Zealand

PricewaterhouseCoopers

## Appendix A – Price Path Compliance Calculations (Clause 11.1(b)(i))

### Clause 8.4

Notional Revenue for the year ending March 2011		
Term	Description	Value \$
$P_{2011} * Q_{2009}$	Prices at 31 March 2011 multiplied by 31 March 2009 Base Quantities	8,966,843
$K_{2011}$	Transmission Charges for year ending 31 March 2011	2,454,993
	Avoided Transmission Charges for year ending 31 March 2011	-
	Rates for year ending 31 March 2011	20,571
	Electricity Authority Levies for year ending 31 March 2011	20,312
	Commerce Act Levies for year ending 31 March 2011 + 1/5 of Commerce Act Levies for year ending 31 March 2010	15,437
$NR_{2011}$	Notional Revenue for the year ending 31 March 2011	6,455,530

Supported by P\*Q schedules presented in Appendix B

Maximum Notional Revenue for the year ending March 2011		
Term	Description	Value \$
$P_{Max} * Q_{2009}$	Maximum Prices between 1 April 2010 and 31 March 2011 multiplied by 31 March	8,966,843
$K_{2011}$	Transmission Charges for year ending 31 March 2011	2,454,993
	Avoided Transmission Charges for year ending 31 March 2011	-
	Rates for year ending 31 March 2011	20,571
	Electricity Authority Levies for year ending 31 March 2011	20,312
	Commerce Act Levies for year ending 31 March 2011 + 1/5 of Commerce Act Levies for year ending 31 March 2010	15,437
$NR_{Max}$	Notional Revenue for the year ending 31 March 2011	6,455,530

Supported by P\*Q schedules presented in Appendix B

**Clause 8.5**

Allowable Notional Revenue 2011		
Term	Description	Value \$
$P_{2010} * Q_{2009}$	Prices at 31 March 2010 multiplied by 31 March 2009 Base Quantities	8,966,843
$K_{2010}$	Transmission Charges for year ending 31 March 2010	2,309,465
	Avoided Transmission Charges for 2010	-
	Rates for year ending 31 March 2010	19,792
	Electricity Commission Levies for year ending 31 March 2010	37,832
$X$	X Factor	-
$(1 + \Delta CPI_{2011})$	Average change in Consumer Price Index	1.0247
$R_{2011}$	Allowable Notional Revenue under the CPI-X Price Path for the year ending 31 March 2011	6,762,441

Supported by P\*Q schedules presented in Appendix B

$\Delta CPI_{2011}$			
Numerator		Denominator	
$CPI_{Dec2008}$	1072	$CPI_{Dec2007}$	1037
$CPI_{Mar2009}$	1075	$CPI_{Mar2008}$	1044
$CPI_{Jun2009}$	1081	$CPI_{Jun2008}$	1061
$CPI_{Sep2009}$	1095	$CPI_{Sep2008}$	1077
<b>Total</b>	<b>4323</b>	<b>Total</b>	<b>4219</b>
$\Delta CPI_{2011}$			2.47%



## Appendix B – Price and Quantity Schedules (Clause 11.1(b)(i))

**Revenue Table using 31 March 2010 Prices and 2008/2009 Quantities**

Number of Days:		365								
Tariff or Fee	Number of ICPs at 31/03/09	kWh at 31/3/09	kVA at 31/3/09	Distribution Charges			Notional Distribution Revenue		Total Revenue (\$)	
				Fixed		Variable (c/kWh)	Fixed	Variable	P <sub>,2010</sub>	Q <sub>,2009</sub>
				\$/day	c/kVA/day					
<b>Group 0</b>										
Streetlights	1			236.64				86,375		86,375
Unmetered Supply	7			0.49				1,260		1,260
Builders Temp	30			0.50				5,475		5,475
BT-kWh		35,906				7.50		-	2,693	2,693
<b>Group 1</b>										
RE1	1512		22,680		1.00			82,782		82,782
RE2		4,043,805				7.40		-	299,242	299,242
RE3		2,014,344				4.50		-	90,645	90,645
RE4		247,229				2.80		-	6,922	6,922
<b>Group 2</b>										
Fixed	7297		150,525		4.30			2,362,490		2,362,490
Anytime		62,596,067				4.67		-	2,920,420	2,920,420
Controlled		15,416,977				2.95		-	454,107	454,107
Nightrate		2,191,981				2.09		-	45,714	45,714
<b>Time of Use</b>										
Metered Installation Charge	96			1.08				37,668		37,668
Energy		44,270,523				1.60		-	709,103	709,103
Winter Demand			13,851		17.52			885,744		885,744
Capacity Supply Group 3	4			1.81				2,637		2,637
Capacity Supply Group 4	1			2.97				1,083		1,083
Capacity Supply Group 5	7			4.73				12,085		12,085
Capacity Supply Group 6	8			5.93				17,327		17,327
Capacity Supply Group 7	36			9.37				123,174		123,174
Capacity Supply Group 8	14			12.90				65,919		65,919
Capacity Supply Group 9	11			21.50				86,323		86,323
Capacity Supply Group 10	10			32.25				117,713		117,713
Capacity Supply Group 11	3			43.00				47,085		47,085
Capacity Supply Group 12	1			64.50				23,543		23,543
Capacity Supply Group 13	1			86.00				31,390		31,390
Power Factor			620			64.50		39,990		39,990
<b>TOU Sealord</b>										
Fixed	1					388,586		388,586		388,586
Power Factor			300			64.50		19,350		19,350
<b>Σ P<sub>,2010</sub> Q<sub>,2009</sub></b>										<b>8,966,843</b>

Revenue Table using 31 March 2011 Prices and 2008/2009 Quantities

Number of Days:		365									
Tariff or Fee	Number of ICPs at 31/03/09	kWh at 31/3/09	kVA at 31/3/09	Distribution Charges			Notional Distribution Revenue (\$)		Total Revenue (\$)		
				Fixed		Variable (c/kWh)	Fixed	Variable			
				\$/day	c/kVA/day				Other	P <sub>,2011</sub> Q <sub>,2009</sub>	
<b>Group 0</b>											
Streetlights	1			236.64				86,375		86,375	
Unmetered Supply	7			0.49				1,260		1,260	
Builders Temp	30			0.50				5,475		5,475	
BT-kWh		35,906					7.50	-	2,693	2,693	
<b>Group 1</b>											
RE1	1512		22,680		1.00			82,782		82,782	
RE2		4,043,805					7.40	-	299,242	299,242	
RE3		2,014,344					4.50	-	90,645	90,645	
RE4		247,229					2.80	-	6,922	6,922	
<b>Group 2</b>											
Fixed	7297		150,525		4.30			2,362,490		2,362,490	
Anytime		62,596,067					4.67	-	2,920,420	2,920,420	
Controlled		15,416,977					2.95	-	454,107	454,107	
Nightrate		2,191,981					2.09	-	45,714	45,714	
<b>Time of Use</b>											
Metered Installation Charge	96			1.08				37,668		37,668	
Energy		44,270,523					1.60	-	709,103	709,103	
Winter Demand			13,851		17.52			885,744		885,744	
Capacity Supply Group 3	4			1.81				2,637		2,637	
Capacity Supply Group 4	1			2.97				1,083		1,083	
Capacity Supply Group 5	7			4.73				12,085		12,085	
Capacity Supply Group 6	8			5.93				17,327		17,327	
Capacity Supply Group 7	36			9.37				123,174		123,174	
Capacity Supply Group 8	14			12.90				65,919		65,919	
Capacity Supply Group 9	11			21.50				86,323		86,323	
Capacity Supply Group 10	10			32.25				117,713		117,713	
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Capacity Supply Group 13	1			86.00				31,390		31,390	
Power Factor			620			64.50		39,990		39,990	
<b>TOU Sealord</b>											
Fixed	1					388,586		388,586		388,586	
Power Factor			300			64.50		19,350		19,350	
<b>Σ P<sub>,2011</sub> Q<sub>,2009</sub></b>										<b>8,966,843</b>	

## Appendix C – Pass Through Costs (Clause 11.1(b)(ii))

Pass Through Costs for year ending March 2011				
K 2011	Actual (\$)	Forecast (\$)	Variance (\$)	Variance (%)
Transmission	2,454,993	2,450,000	4,993	.2%
Avoided Transmission	-	-	-	-
Rates	20,571	20,400	171	.83%
Electricity Authority Levies	20,312	36,000	(15,688)	(77.24)%
Commerce Act Levies	15,437	16,000	(563)	(3.64)%
Total Pass Through Costs	2,511,313	2,522,400	(11,087)	(.44)%

### Explanation

The significant variance between actual and forecast was in the Electricity Authority Levies. A refund issued by the Nelson Electricity transmission provider for an incorrect invoicing of Electricity Commission levies from April 2011 to July 2010 of \$5,336 created the majority of the variance. The balance was the effect of forecasting the Electricity Commission/Electricity Authority levies at the higher level before the error was identified.



**SAIDI Limit**

$\mu_{SAIDI}$	46.3026	The average annual SAIDI Value in the Normalised Reference Dataset
$\sigma_{SAIDI}$	25.2338	The standard deviation of daily SAIDI Values in the Normalised Reference Dataset multiplied by $\sqrt{365}$
$SAIDI_{Limit} = \mu_{SAIDI} + \sigma_{SAIDI}$	71.5364	SAIDI Limit Value

**SAIFI Limit**

$\mu_{SAIFI}$	0.6853	The average annual SAIFI Value in the Normalised Reference Dataset
$\sigma_{SAIFI}$	0.4404	The standard deviation of daily SAIFI Values in the Normalised Reference Dataset multiplied by $\sqrt{365}$
$SAIFI_{Limit} = \mu_{SAIFI} + \sigma_{SAIFI}$	1.1256	SAIFI Limit Value

**Reliability Assessment Calculations**

**Event Days exceeding SAIDI Boundary Value within the Assessment Dataset**

Date	Pre-Normalised SAIDI	Pre-Normalised SAIFI	Normalised SAIDI	Normalised SAIFI
10-Aug-10	104.2931	0.5255	46.1580	0.5255
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-

**Assessed SAIDI Value**

$SAIDI_{2011}$	56.5143	The sum of daily SAIDI Values in the 1 April 2010 - 31 March 2011 Normalised Assessment Dataset
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**Assessed SAIFI Value**

$SAIFI_{2011}$	0.5791	The sum of daily SAIFI Values in the 1 April 2010 - 31 March 2011 Normalised Assessment Dataset
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## **Appendix E – Policies and Procedures for Recording SAIDI and SAIFI (Clause 11.1(b)(v))**

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 numbers of outages on the Nelson Electricity network are 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.



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## **NEL Network System Outage Statistics Procedure**

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### **Background:**

Nelson Electricity has to collect and record accurate information regarding all transmission, sub-transmission and 11kV outages. The methods and information used has 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 statistic 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 Asset 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 numbers of outages on the Nelson Electricity network are 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 Asset 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 Threshold disclosure.

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



# Outage Statistics Reporting Flow Chart

