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# Default Price Quality Path Annual Compliance Statement 

For the assessment period ending 31 March 2012

Pursuant to
Electricity Distribution Services Default Price-Quality Path
Determination 2010
(consolidating all amendments as of 22 March 2012)

13 June 2012

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## 1 COMPLIANCE WITH THE PRICE PATH

### 1.1 Compliance with the Price Path (Clause 11.1(a))

Centralines complies with the price path at the assessment date, 31 March 2012, as specified in the Electricity Distribution Services Default Price-Quality Path Determination 2010 (consolidating all amendments as of 22 March 2012).

### 1.2 Allowable Notional Revenue (Clause 8.4)

The notional revenue (NRt) of a Non-exempt EDB at any time during the Assessment Period must not exceed the allowable notional revenue (Rt) for the Assessment Period.

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

| Test: | $\frac{N R_{2012}}{R_{2012}} \leq 1$ |
| :---: | :---: |
| $\mathrm{NR}_{2012}$ : | \$ 7,459,706 |
| $\mathrm{R}_{2012}$ : | \$ 7,491,221 |
| Result: | 0.9958 < 1 |
| Result: | Price Path has not been breached |


| Test: | $\frac{N R_{\text {Max }}}{R_{2012}} \leq 1$ <br>  <br>  <br> $\mathrm{NR}_{\text {Max }}:$ <br> $\mathrm{R}_{2012}:$ <br> Result: <br> Result: Price Path has not been breached |
| :--- | :--- |

[^0]
## 2 ASSESSMENT WITH THE QUALITY STANDARDS

### 2.1 Compliance with Quality Standards (Clause 11.1(a))

Centralines complies with all requirements of the quality standards at the assessment date 31 March 2012, as specified in the Electricity Distribution Services Default PriceQuality Path Determination 2010 (consolidating all amendments as of 22 March 2012).

## $2.2 \quad 2012$ Reliability Assessment (9.1(a))

Clause 9.1(a) requires compliance with 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.



### 2.3 Prior Period Reliability Assessment (9.1(b))

Clause 9.1.(b) requires: compliance with annual reliability assessments for the two immediately preceding extant Assessment Periods.

|  |  |  |  |
| :---: | :---: | :---: | :---: |
| SAIDI $_{\text {Assess 2011 }}$ | 191.4486 | SAIFI Assess 2011 | 4.72 |
| SAIDI $_{\text {Limit }}$ | 197.5487 | SAIFI Limit | 1.0419 |

### 2.4 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; or
(b) have complied with those annual reliability assessments for the two immediately preceding extant Assessments Periods.

|  | SAIDI | SAIR | Compliance |
| :--- | :---: | :---: | :---: |
| Compliance with 9.1(a) | Does not <br> Exceed Limit | Does not <br> Exceed Limit | Complies |
| or | Does not <br> Exceed Limit | Exceeds Limit | Does not <br> Comply |
| Clause 9.1 Result: | Complies with Quality Standard |  |  |

## 3 DISCLAIMER

The information presented in this Annual Compliance Statement has been prepared solely for the purpose of complying with the requirements of the Electricity Distribution Services Default Price-Quality Path Determination 2010 (consolidating all amendments as of 22 March 2012). This statement has not been prepared for any other purpose and Centralines Limited expressly disclaims any liability to any other party who may rely on this statement for any other purpose.

## 4 CERTIFICATION OF ANNUAL COMPLIANCE STATEMENT

We, Sam Robinson and Jon Nichols, being Directors of Centralines Limited certify that, having made all reasonable enquiry, to the best of our knowledge and belief, the attached Annual Compliance Statement of Centralines Limited, and related information, prepared for the purposes of the Electricity Distribution Services Default Price Quality Path Determination 2010 are true and accurate.


13 June 2012


13 June 2012

## 5 AUDITOR'S REPORT

## Independent Auditors' Report

to the readers of the Annual Compliance Statement of Centralines Limited for the assessment period ended on 31 March 2012

The Auditor-General is the auditor of Centralines Limited (the Company). The Auditor-General has appointed me, Pip Cameron, using the staff and resources of PricewaterhouseCoopers, to provide an opinion, on her behalf, on Centralines Limited's Annual Compliance Statement for the assessment period ended on 31 March 2012 on pages 3 to 5 and 10 to 20 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 Centralines Limited for the assessment period ended on 31 March 2012 and dated 13 June 2012 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 Centralines Limited 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 3 and 10 to 15 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 2012, 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 4 to 5 and 16 to 20 of the Annual Compliance Statement.

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## Independent Auditors' Report Centralines 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 Centralines 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 Centralines 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 Centralines Limited that, in our professional judgment, may reasonably be thought to impair our independence.

## Opinion

In our opinion, the Annual Compliance Statement of Centralines Limited for the Assessment Period ended on 31 March 2012, has been prepared, in all material respects, in accordance with the Determination.

Our audit was completed on 13 June 2012 and our opinion is expressed as at that date.


Pip Cameron
On behalf of the Auditor-General Auckland, New Zealand


PricewaterhouseCoopers

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## APPENDIX A - PRICE PATH COMPLIANCE CALCULATIONS (Clause 11.1 (b) (i))

## Clause 8.4

| Notional Revenue for the year ending March 2012 |  |  |
| :---: | :---: | :---: |
| Term | Description | Value \$ |
| $P_{2012} * Q_{2010}$ | Prices at 31 March 2012 <br> multiplied by 31 March 2010 <br> Base Quantities | $9,834,209$ |
| $K_{2012}$ | Transmission Charges for year <br> ending 31 March 2012 | $2,313,214$ |
|  | Avoided Trans mission Charges <br> for year ending 31 March 2012 |  |
|  | Rates for year ending 31 March <br> 2012 | 19,770 |
|  | 17,781 |  |
| Commerce Act Levies for year <br> ending 31 March 2012 + 1/5 of <br> Commerce Act Levies for year <br> ending 31 March 2010 | 23,738 |  |
| $N R_{2012}$ | Notional Revenue for the year <br> ending 31 March 2012 | $7,459,706$ |


| Maximum Notional Revenue for the year ending March 2012 |  |  |
| :---: | :---: | :---: |
| Term | Description | Value \$ |
| $P_{\text {Max }}{ }^{*} Q_{2010}$ | Maximum Prices between 1 April 2011 and 31 March 2012 multiplied by 31 March 2010 Base Quantities | 9,834,209 |
| $K_{2012}$ | Transmission Charges for year ending 31 March 2012 | 2,313,214 |
|  | Avoided Transmission Charges for year ending 31 March 2012 |  |
|  | Rates for year ending 31 March $2012$ | 19,770 |
|  | Electricity Authority Levies for year ending 31 March 2012 | 17,781 |
|  | Commerce Act Levies for year ending 31 March $2012+1 / 5$ of Commerce Act Levies for year ending 31 March 2010 | 23,738 |
| $N R_{\text {Max }}$ | Notional Revenue for the year ending 31 March 2012 | 7,459,706 |

Supported by P*Q schedules presented in Appendix B

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Clause 8.5

| Allowable Notional Revenue 2012 |  |  |
| :---: | :---: | :---: |
| Term | Description | Value \$ |
| $P_{2011} * Q_{2010}$ | Prices at 31 March 2011 multiplied by 31 March 2010 Base Quantities | 9,467,812 |
| $K_{2011}$ | Transmission Charges for year ending 31 March 2011 | 2,259,458 |
|  | Avoided Transmission Charges for 2011 |  |
|  | Rates for year ending 31 March 2011 | 19,904 |
|  | Electricity Authority Levies for year ending 31 March 2011 | 16,583 |
|  | Commerce Act Levies for year ending 31 March $2011+1 / 5$ of Commerce Act Levies for year ending 31 March 2010 | 28,576 |
| Under Recovery | Under recovery relative to allowable revenue in year to 31 March 2011 | 216,833 |
| $X$ | X Factor | - |
| $\left(1+\Delta C P I_{2012}\right)$ | Average change in Consumer Price Index | 1.0178 |
| $R_{2012}$ | Allowable Notional Revenue under the CPIX Price Path for the year ending 31 March 2012 | 7,491,221 |

Supported by $\mathrm{P}^{*} \mathrm{Q}$ schedules presented in Appendix B

| $\Delta \mathrm{CPI}_{\text {2012 }}$ |  |  |  |  |  |
| :---: | ---: | :---: | ---: | :---: | :---: |
| Numerator |  | Denominator |  |  |  |
| $\mathrm{CPI}_{\text {Dec2009 }}$ | 1093 | $\mathrm{CPI}_{\text {Dec2008 }}$ | 1072 |  |  |
| $\mathrm{CPI}_{\text {Mar2010 }}$ | 1097 | $\mathrm{CPI}_{\text {Mar2009 }}$ | 1075 |  |  |
| $\mathrm{CPI}_{\text {Jun2010 }}$ | 1099 | $\mathrm{CPI}_{\text {Jun2009 }}$ | 1081 |  |  |
| $\mathrm{CPI}_{\text {Sep2010 }}$ | 1111 | $\mathrm{CPI}_{\text {Sep2009 }}$ | 1095 |  |  |
| Total | 4400 | Total | 4323 |  |  |
| $\Delta \mathrm{CPI}_{2012}$ | $1.78 \%$ |  |  |  |  |

## APPENDIX B - PRICE AND QUANTITY SCHEDULES (Clause 11.1(b)(i))

| Tariff Code | Net Quantity | Units | 2010-11 Price |  | 2011-12 Price |  | $\begin{aligned} & \text { Quantity* 2010-11 } \\ & \text { Price } \end{aligned}$ | $\begin{aligned} & \text { Quantity * 2011-12 } \\ & \text { Price } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E-C-PRE | 3,214,750.00 | \$/kWh | \$ | 0.0685 | \$ | 0.0760 | 220,210.38 | 244,321.00 |
| E-C-T1P-24UC | 27,463.00 | \$/kWh | \$ | 0.1072 | \$ | 0.1100 | 2,944.03 | 3,020.93 |
| E-C-T1P-24UC | 27,463.00 | \$/kWh | \$ | 0.1072 | \$ | 0.1100 | 1,696.55 | 1,740.86 |
| E-C-CH1-AICO | 6,112,150.00 | \$/kWh | \$ | 0.1065 | \$ | 0.1150 | 650,943.98 | 702,897.25 |
| E-C-CH1-CTRL | 280,370.00 | \$/kWh | \$ | 0.0835 | \$ | 0.0820 | 23,410.90 | 22,990.34 |
| E-C-CH1-CTUD | 233,743.00 | \$/kWh | \$ | 0.1500 | \$ | 0.1430 | 35,061.45 | 33,425.25 |
| E-C-CH1-CTUN | 82,733.00 | \$/kWh | \$ | 0.0230 | \$ | 0.0490 | 1,902.86 | 4,053.92 |
| E-C-CH1-NITE | 3.00 | \$/kWh | \$ | 0.0563 | \$ | 0.0490 | 0.17 | 0.15 |
| E-C-CH1-24UC | 360,022.00 | \$/kWh | \$ | 0.1217 | \$ | 0.1370 | 43,814.68 | 49,323.01 |
| E-C-CH2-24UC | 22,004,070.00 | \$/kWh | \$ | 0.0837 | \$ | 0.0900 | 1,841,740.66 | 1,980,366.30 |
| E-C-CH2-AICO | 18,964,909.00 | \$/kWh | \$ | 0.0685 | \$ | 0.0760 | 1,299,096.27 | 1,441,333.08 |
| E-C-CH2-CTRL | 2,008,776.00 | \$/kWh | \$ | 0.0458 | \$ | 0.0550 | 92,001.94 | 110,482.68 |
| E-C-CH2-CTUD | 3,255,105.00 | \$/kWh | \$ | 0.1072 | \$ | 0.0940 | 348,947.26 | 305,979.87 |
| E-C-CH2-CTUN | 1,734,631.00 | \$/kWh | \$ | 0.0133 | \$ | 0.0340 | 23,070.59 | 58,977.45 |
| E-C-CH2-NITE | 32,958.00 | \$/kWh | \$ | 0.0186 | \$ | 0.0340 | 613.02 | 1,120.57 |
| E-C-CH2-24UC | 22,004,070.00 | \$/kWh | \$ | 0.0837 | \$ | 0.0900 | 414,100.56 | 445,269.42 |
| E-C-CH3-24UC | 1,034,102.00 | \$/kWh | \$ | 0.0624 | \$ | 0.0760 | 64,527.96 | 78,591.75 |
| E-C-CH3-CTUD | 1,633,004.00 | \$/kWh | \$ | 0.0797 | \$ | 0.0790 | 130,150.42 | 129,007.32 |
| E-C-CH3-CTUN | 639,796.00 | \$/kWh | \$ | 0.0099 | \$ | 0.0290 | 6,333.98 | 18,554.08 |
| E-C-CH3-DMND | 2,839.36 | \$/kW/month | \$ | 4.9700 | \$ | 5.0000 | 14,111.62 | 14,196.80 |
| E-C-CH3-24UC | 1,034,102.00 | \$/kWh | \$ | 0.0624 | \$ | 0.0760 | 11,870.16 | 14,457.25 |
| E-C-CH3-SOPD | 1,378.08 | \$/kW/month | \$ | 3.9000 | \$ | 8.5000 | 5,374.51 | 11,713.68 |
| E-C-CH3-WOPD | 1,370.00 | \$/kW/month | \$ | 14.0900 | \$ | 8.5000 | 19,303.30 | 11,645.00 |
| E-C-CH4-24UC | 330,993.00 | \$/kWh | \$ | 0.0560 | \$ | 0.0560 | 18,535.61 | 18,535.61 |
| E-C-CH4-CTUD | 229,623.00 | \$/kWh | \$ | 0.0717 | \$ | 0.0710 | 16,463.97 | 16,303.23 |
| E-C-CH4-CTUN | 76,700.00 | \$/kWh | \$ | 0.0090 | \$ | 0.0090 | 690.30 | 690.30 |
| E-C-CH4-DMND | 3,353.04 | \$/kW/month | \$ | 4.3700 | \$ | 3.5000 | 14,652.78 | 11,735.64 |
| E-C-CH4-24UC | 330,993.00 | \$/kWh | \$ | 0.0560 | \$ | 0.0560 | 3,147.31 | 3,147.31 |
| E-C-CH4-SOPD | 2,040.04 | \$/kW/month | \$ | 3.7100 | \$ | 7.5000 | 7,568.55 | 15,300.30 |
| E-C-CH4-WOPD | 1,244.00 | \$/kW/month | \$ | 13.3800 | \$ | 7.5000 | 16,644.72 | 9,330.00 |
| E-C-CH5-24UC | 203,840.00 | \$/kWh | \$ | 0.0467 | \$ | 0.0460 | 9,519.33 | 9,376.64 |

Approved by: Unison General Manager Business Assurance

| E-C-CH5-CTUD | 80,650.00 | \$/kWh | \$ | 0.0598 | \$ | 0.0590 | 4,822.87 | 4,758.35 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E-C-CH5-CTUN | 236,659.00 | \$/kWh | \$ | 0.0074 | \$ | 0.0070 | 1,751.28 | 1,656.61 |
| E-C-CH5-DMND | 2,747.04 | \$/kW/month | \$ | 3.4800 | \$ | 3.3000 | 9,559.70 | 9,065.23 |
| E-C-CH5-24UC | 203,840.00 | \$/kWh | \$ | 0.0467 | \$ | 0.0460 | 1,135.74 | 1,118.72 |
| E-C-CH5-SOPD | 1,725.76 | \$/kW/month | \$ | 3.4100 | \$ | 6.5000 | 5,884.84 | 11,217.44 |
| E-C-CH5-WOPD | 962.00 | \$/kW/month | \$ | 12.3100 | \$ | 6.5000 | 11,842.22 | 6,253.00 |
| E-C-CH6-CTUD | 288,500.00 | \$/kWh | \$ | 0.0564 | \$ | 0.0560 | 16,271.40 | 16,156.00 |
| E-C-CH6-CTUN | 97,700.00 | \$/kWh | \$ | 0.0070 | \$ | 0.0070 | 683.90 | 683.90 |
| E-C-CH6-DMND | 2,754.76 | \$/kW/month | \$ | 3.2200 | \$ | 3.0000 | 8,870.33 | 8,264.28 |
| E-C-CH6-SOPD | 1,528.98 | \$/kW/month | \$ | 3.3300 | \$ | 7.5000 | 5,091.50 | 11,467.35 |
| E-C-CH6-WOPD | 1,174.00 | \$/kW/month | \$ | 12.0000 | \$ | 7.5000 | 14,088.00 | 8,805.00 |
| E-C-CH7-DMND | 2,195.18 | \$/kW/month | \$ | 4.2400 | \$ | 3.5000 | 9,307.56 | 7,683.13 |
| E-C-CH7-SOPD | 898.80 | \$/kW/month | \$ | 2.5500 | \$ | 5.0000 | 2,291.94 | 4,494.00 |
| E-C-CH7-WOPD | 619.00 | \$/kW/month | \$ | 10.8000 | \$ | 5.0000 | 6,685.20 | 3,095.00 |
| E-C-CH8-DMND | 3,168.04 | \$/kW/month | \$ | 4.0700 | \$ | 3.5000 | 12,893.92 | 11,088.14 |
| E-C-CH8-SOPD | 1,823.78 | \$/kW/month | \$ | 2.5400 | \$ | 5.0000 | 4,632.40 | 9,118.90 |
| E-C-CH8-WOPD | 1,308.00 | \$/kW/month | \$ | 10.7200 | \$ | 5.0000 | 14,021.76 | 6,540.00 |
| E-C-CH9-DMND | 1,866.14 | \$/kW/month | \$ | 3.9500 | \$ | 3.5000 | 7,371.25 | 6,531.49 |
| E-C-CH9-SOPD | 1,082.58 | \$/kW/month | \$ | 2.5200 | \$ | 4.0000 | 2,728.10 | 4,330.32 |
| E-C-CH9-WOPD | 724.00 | \$/kW/month | \$ | 10.6500 | \$ | 4.0000 | 7,710.60 | 2,896.00 |
| E-C-CH10-DMND | 3,011.72 | \$/kW/month | \$ | 2.2100 | \$ | 1.4000 | 6,655.90 | 4,216.41 |
| E-C-CH10-SOPD | 1,797.72 | \$/kW/month | \$ | 3.0500 | \$ | 3.0000 | 5,483.05 | 5,393.16 |
| E-C-CH10-WOPD | 1,207.00 | \$/kW/month | \$ | 8.9700 | \$ | 3.0000 | 10,826.79 | 3,621.00 |
| E-C-CH11-DMND | 16,600.40 | \$/kW/month | \$ | 2.1200 | \$ | - | 35,192.85 | - |
| E-C-CH3-Kvar | 265.12 | \$/kVAr/month | \$ | - | \$ | 7.0000 | - | 1,855.84 |
| E-C-CH4-Kvar | 568.51 | \$/kVAr/month | \$ | - | \$ | 7.0000 | - | 3,979.59 |
| E-C-CH5-Kvar | 808.27 | \$/kVAr/month | \$ | - | \$ | 7.0000 | - | 5,657.87 |
| E-C-CH6-Kvar | 371.72 | \$/kVAr/month | \$ | - | \$ | 7.0000 | - | 2,602.07 |
| E-C-CH7-Kvar | 516.64 | \$/kVAr/month | \$ | - | \$ | - | - | - |
| E-C-CH8-Kvar | 521.94 | \$/kVAr/month | \$ | - | \$ | - | - | - |
| E-C-CH9-Kvar | 571.08 | \$/kVAr/month | \$ | - | \$ | - | - | - |
| E-C-CH10-Kvar | 1,565.45 | Cents/kWh | \$ | - | \$ | - | - | - |
| E-C-CH11-Kvar | 840.71 | Cents/kWh | \$ | - | \$ | - | - | - |
| E-C-CH12-Kvar | 14,997.24 | Cents/kWh | \$ | - | \$ | - | - | - |

Approved by: Unison General Manager Business Assurance

| E-C-CH11-SOPD | 9,886.30 | \$/kW/month | \$ | 3.0400 | \$ | - | 30,054.35 | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E-C-CH11-WOPD | 6,620.00 | \$/kW/month | \$ | 8.9200 | \$ | - | 59,050.40 | - |
| E-C-CH1-24UC | 360,022.00 | \$/kWh | \$ | 0.1217 | \$ | 0.1370 | 192,068.77 | 216,215.46 |
| E-C-CH12-DMND | 49,759.80 | \$/kW/month | \$ | 1.2200 | \$ | 1.3000 | 60,706.96 | 64,687.74 |
| E-C-CH12-SOPD | 29,428.80 | \$/kW/month | \$ | 2.9000 | \$ | 3.0000 | 85,343.52 | 88,286.40 |
| E-C-CH12-WOPD | 19,527.00 | \$/kW/month | \$ | 8.5500 | \$ | 3.0000 | 166,955.85 | 58,581.00 |
| F-C-CH1 | 1,709.40 | \$/day | \$ | 0.1500 | \$ | 0.1500 | 93,589.50 | 93,589.50 |
| F-C-CH10 | 1.00 | \$/day | \$ | 67.0600 | \$ | 93.0000 | 24,485.07 | 33,956.32 |
| F-C-CH11 | 1.00 | \$/day | \$ | 450.8600 | \$ | 446.1200 | 164,572.70 | 162,842.51 |
| F-C-CH12 | 1.00 | \$/day | \$ | 1,012.2600 | \$ | 1,287.6200 | 369,492.09 | 470,003.17 |
| F-C-CH2 | 6,194.37 | \$/day | \$ | 0.9800 | \$ | 1.0000 | 2,215,726.59 | 2,260,945.50 |
| F-C-CH3 | 28.01 | \$/day | \$ | 14.5700 | \$ | 14.0000 | 148,949.55 | 143,122.43 |
| F-C-CH4 | 7.00 | \$/day | \$ | 29.1400 | \$ | 27.0000 | 74,474.49 | 69,005.19 |
| F-C-CH5 | 4.00 | \$/day | \$ | 36.4200 | \$ | 33.0000 | 53,188.86 | 48,194.19 |
| F-C-CH6 | 3.00 | \$/day | \$ | 52.4500 | \$ | 50.0000 | 57,451.99 | 54,768.35 |
| F-C-CH7 | 2.00 | \$/day | \$ | 51.6600 | \$ | 56.0000 | 37,722.46 | 40,891.55 |
| F-C-CH8 | 2.00 | \$/day | \$ | 67.1600 | \$ | 74.0000 | 49,041.46 | 54,036.15 |
| F-C-CH9 | $1.00$ | \$/day | \$ | 72.3300 | \$ | 82.9500 | $26,407.08$ | $30,284.35$ |
| F-CH2 | 0.46 | \$/day | \$ | 0.9800 | \$ | 1.0000 | 163.50 | 166.84 |
| F-C-T1P <br> Under Veranda | 12.19 | \$/day | \$ | 0.9800 | \$ | 1.0000 | 4,361.15 | 4,450.15 |
| Lights | 1.00 | \$/month | \$ | 840.0000 | \$ | 840.0000 | 10,080.00 | 10,080.00 |
| Total |  |  |  |  |  |  | \$ 9,467,812 | \$ 9,834,209 |

## APPENDIX C - PASS THROUGH COSTS (Clause 11.1(b)(ii))

| Pass Through Costs for year ending March 2012 |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| $\mathrm{~K}_{2012}$ | Actual (\$) | Forecast (\$) | Variance (\$) | Variance (\%) |
| Transmission | $2,313,214$ | $2,354,345$ | $(41,130)$ | $(1.78) \%$ |
| Avoided Transmission | - | - | - | - |
| Rates | 19,770 | 19,719 | 51 | $.26 \%$ |
| Electricity Authority Levies | 17,781 | 14,479 | 3,303 | $18.57 \%$ |
| Commerce Act Levies | 23,738 | 24,484 | $(746)$ | $(3.14) \%$ |
| Total Pass Through Costs | $2,374,503$ | $2,413,026$ | $(38,523)$ | $(1.62) \%$ |

Explanations for variances:

- Transmission - Forecast and actual costs match for interconnection and connection costs. There is some minor variance in the new investment agreement costs as the WACC used by Transpower for these charges varies year to year and was not known at the time of settings tariffs.
- Avoided Transmission - Centralines does not pay any avoided transmission costs.
- Rates - The rates to be paid were not known at the time of setting tariffs so were estimated based on a $2 \%$ increase. The actual increase was marginally higher.
- EA Levies - 2011-12 Electricity Authority levies were not known at the time of setting tariffs so were estimated based on the previous year.
- Commerce Act levies variance - 2011-12 Commerce Act levies were not known at the time of setting tariffs so were estimated based on the previous year.


## APPENDIX D - QUALITY STANDARD COMPLIANCE CALCULATIONS

(Clause 11.1(b)(iv))
Reliability Data (Before Normalisation)

| Year | SAIDI (Interruption Duration) |  |  | SAIFI (Interruption Frequency) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Class B | Class C | Total | Class B | Class C | Total |
| $\mathbf{2 0 0 5}$ | 15.60 | 155.79 | 171.39 | 0.07 | 3.38 | 3.45 |
| $\mathbf{2 0 0 6}$ | 41.19 | 99.54 | 140.73 | 0.14 | 3.76 | 3.90 |
| $\mathbf{2 0 0 7}$ | 38.97 | 148.08 | 187.05 | 0.12 | 3.06 | 3.18 |
| $\mathbf{2 0 0 8}$ | 49.57 | 105.64 | 155.21 | 0.15 | 2.50 | 2.65 |
| $\mathbf{2 0 0 9}$ | 66.24 | 132.52 | 198.76 | 0.26 | 4.69 | 4.95 |
|  | Reference Period Total SAIDI | $\mathbf{8 5 3 . 1 4}$ | Reference Period Total SAIFI | $\mathbf{1 8 . 1 3}$ |  |  |
|  | Reference Period Average SAIDI | $\mathbf{1 7 0 . 6 3}$ | Reference Period Average SAIFI | $\mathbf{3 . 6 3}$ |  |  |
|  | 84.81 | 106.64 | 191.45 | 0.42 | 4.30 | 4.72 |
|  | 33.86 | 233.47 | 267.33 | 0.22 | 3.50 | 3.71 |

## Reliability Limit Calculations (using Reference Period Dataset)

## SAIDI Boundary Calculations

| $\alpha_{\text {SAIDI }}$ | -1.0592 |
| :--- | ---: |
| $\beta_{\text {SAIDI }}$ | 1.6883 |

The average of the natural logarithm (In) of each daily SAIDI Value in the non-zero data set The standard deviation of the natural logarithm (In) of each daily SAIDI Value in the non-zero data set


## SAIFI Boundary Calculations

| $\alpha_{\text {SAIFI }}$ -5.3931 | The average of the natural logarithm (In) of each <br> daily SAIFI Value in the non-zero data set <br> The standard deviation of the natural logarithm (In) |
| :--- | :--- | :--- |
| $\beta_{\text {SAIFI }}$ | 1.8502of each daily SAIFI Value in the non-zero data set <br> The |
| $B_{\text {SAIFI }}=e^{(\alpha \text { SAIFI +2.5* } \beta \text { SAIFI) }}$ 0.4641 <br> SAIFI Boundary Value  |  |

Event Days exceeding SAIDI Boundary Value within the Reference Dataset

| Date | Pre-Normalised <br> SAIDI | Pre-Normalised <br> SAIFI | Normalised SAIDI | Normalised <br> SAIFI |
| :---: | :---: | ---: | ---: | ---: |
| $30-J u n-04$ | 42.3883 | 0.6694 | 23.6089 | 0.4641 |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |

## SAIDI Limit

| $\mu_{\text {SAIDI }}$ | 166.8715 | The average annual SAIDI Value in the Normalised <br> Reference Dataset <br> The standard deviation of daily SAIDI Values in the |
| :--- | ---: | :--- |
| $\sigma_{\text {SAIDI }}$ | 30.6772 | Normalised Reference Dataset multiplied by $\sqrt{ } 365$ <br> Norm |
| SAIDI <br> Limit$=\mu_{\text {SAIDI }}+\sigma_{\text {SAIDI }}$ | 197.5487 | SAIDI Limit Value |

## SAIFI Limit

| $\mu_{\text {SAIFI }}$ | 3.5838 | The average annual SAIFI Value in the Normalised <br> Reference Dataset |
| :--- | :--- | :--- |
| $\sigma_{\text {SAIFI }}$ | 0.9422 | The standard deviation of daily SAIFI Values in the <br> Normalised Reference Dataset multiplied by $\sqrt{ } 365$ |
| SAIFI <br> Limit$=\mu_{\text {SAIFI }}+\sigma_{\text {SAIFI }}$ | 4.5260 | SAIFI Limit Value |

## Reliability Assessment Calculations (2012 Assessment Period)

Event Days exceeding SAIDI Boundary Value within the 2012 Assessment Dataset

| Date | Pre-Normalised <br> SAIDI | Pre-Normalised <br> SAIFI | Normalised SAIDI | Normalised <br> SAIFI |
| :---: | ---: | ---: | ---: | ---: |
| 27-Apr-11 | 107.5229 | 0.1266 | 23.6089 | 0.1266 |
| 16-May-11 | 48.1440 | 0.5399 | 23.6089 | 0.4641 |
| 3-Mar-12 | 25.7359 | 0.1581 | 23.6089 | 0.1581 |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  |  | - | - |
|  |  | - | - |  |

Assessed SAIDI Value 2012

| SAIDI 2012 | 156.7515 | The sum of daily SAIDI Values in the 1 April $2011-$ <br> 31 March 2012 Normalised Assessment Dataset |
| :--- | :--- | :--- |

## Assessed SAIFI Value 2012

| SAIFI $_{2012}$ | 3.6363The sum of daily SAIFI Values in the 1 April 2011 - <br> 31 March 2012 Normalised Assessment Dataset |
| :--- | :--- | :--- |

## Prior Period Assessed Values

## Assessed SAIDI Value 2011

| SAIDI $_{2011}$ | 191.4486 | The sum of daily SAIDI Values in the 1 April $2010-$ <br> 31 March 2011 Normalised Assessment Dataset |
| :--- | :--- | :--- |

## Assessed SAIFI Value 2011

| SAIFI $_{2011}$ | 4.7156 | The sum of daily SAIFI Values in the 1 April 2010- <br> 31 March 2011 Normalised Assessment Dataset |
| :--- | :--- | :--- |

## APPENDIX E - POLICIES AND PROCEDURES FOR RECORDING SAIDI AND SAIFI (Clause 11.1(b)(v))

## Outage Data Capture Process

The capture of outage data uses the following data sources and utilities.

## Data

1) Numbers of ICPs attached to $11 \mathrm{kv} / 400 \mathrm{v}$ transformers
2) Transformers connected between Isolation Points
3) Real time data.

## Source

- GIS
- GIS
- RealFlex Scada

The data from SCADA is accurate within the abilities of operators and field staff to report and record each manual event. The logging of SCADA connected devices is automatic.

## SCADA Timing

Automatically recorded SCADA data is time stamped at the remote terminal units (RTU). These RTUs are time corrected to the master station each half hour.

## Utilities

## RealFlex SCADA

Centralines SCADA is part of Unison's Taupo-Rotorua SCADA System, with all Zone Substation 33 kV and 11 kV CBs linked by RTUs that report automatically and time stamp all changes of state devices directly to the SCADA Daily Log File.

Each Zone Substation and 11 kV Feeder is represented by a schematic picture, a SCADA tile, or series of SCADA tiles if the feeder is extensive in the real world.

The SCADA Event Search tool is used to search and print a report for each unplanned outage.
The resulting report is used with GIS data to compile a report, in preparation for entry into the Faults database.

## Faults Access Database

All Unplanned and Planned Outages are processed from their initiation to completion using Access modules contained in the Faults database.

Each unplanned or planned outage has a unique identifier, the Sheet Number / Record Number.

A summary of general details for each unplanned and planned Outage is recorded by the operator.

For planned outages, the Switching Update form is used to collate all relevant data entered on the Switching Instruction.

Times of power off, power restored and ICPs affected, are entered in the database from the data entered on the Switching Instruction.

All ICP data comes from GIS.

Supply Off and Supply Restored times are annotated on the Switching Instruction in real time.
At the end of the process the calculator checks that the total number of ICPs restored is correct before final calculations are made.

The record cannot be saved until both values are equal.

Only the final, calculated data is held in the table 'Datafile'.
All the incremental step values are held in a common table, 'Outage Calculator'.
Both tables are linked using the Sheet No field of the Datafile record.

For unplanned outages, the Network Update Form is used to collate all relevant data.
The times of restoration or interruption, are taken from an extract of the SCADA Daily Log File.
The operator enters the total number of ICPs affected, calculated from the Excel spreadsheets, time of Supply Fail, and time of Total Restoration of Supply.

In the case of faults where sequential restorations and further interruptions to supply occur, the elapsed times, interruption times, ICPs and feeder amps restored or interrupted at each step, are entered in a custom built calculator.

At the end of the process the calculator checks that the total number of ICPs restored is correct before final calculations are made.

The record cannot be saved until both values are equal.
Only the final, calculated data is held in the table 'Datafile'. All the incremental step values are held in a common table, 'Outage Calculator'. Both tables are linked using the Sheet Number field of the Datafile record.

## CLARIFICATION

Clarification of any matter referred to in this document should be directed to:

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[^0]:    Supporting evidence is provided in Appendices A, B and C.

