Default Price-Quality Path Compliance

Wellington Electricity Lines Limited

Annual Compliance Statement

12 July 2011

Contents

1. INTRODUCTION....3
   1.1. Compliance with 2010 DPP Determination's price – quality requirements....3
   1.2. Disclaimer....4
2. PRICE PATH COMPLIANCE....5
   2.1. Price path compliance as at 31 March 2011....5
   2.2. Pass-Through Costs....7
   2.3. Price restructures....7
   2.4. Excluded Services....7
3. QUALITY STANDARDS THRESHOLD....8
   3.1. Quality standards threshold assessment as at 31 March 2011....8
   3.2. Assessed Values and Reliability Limits....8
   3.3. Policies and procedures used for recording SAIDI and SAIFI statistics....9

ATTACHMENT 1: AUDITOR'S REPORT....12

ATTACHMENT 2: DIRECTOR'S CERTIFICATE....13

ATTACHMENT 3: SUMMARY NOTIONAL REVENUE....14

ATTACHMENT 4: CALCULATION OF SAIDI AND SAIFI....18

ATTACHMENT 5: CUSTOMER NUMBERS FOR SAIDI AND SAIFI....19

1. Introduction

Clause 11.1(a) of the of the *Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010* (**2010 DPP Determination**) requires that all non-exempt electricity distribution businesses (**EDB**) provide a written statement that confirms whether or not they have complied with the following aspects of the 2010 DPP Determination for the relevant assessment period:

- The price path as per clause 8 of the 2010 DPP Determination ; and
- The quality standards as per clause 9 of the 2010 DPP Determination.

This statement is Wellington Electricity Lines Limited (**WELL**) Annual Compliance Statement (**the Statement**) for the first Assessment Period ending 31 March 2011.

WELL is pleased to advise the Commerce Commission (Commission) that it has not breached the price path or the quality standards for this Assessment Period.

Attachment 1 of this Statement provides the Auditor's report relating to this Statement as required by clause 11.2 of the 2010 DPP Determination.

Attachment 2 of this Statement contains the Director's certificate signed by one director of WELL, as required by clause 11.1(c) of the 2010 DPP Determination. This certificate certifies that the information contained in this Statement is true and accurate. The attached Director's certificate is in the form required by Schedule 5 of the 2010 DPP Determination.

The remainder of this Statement is structured as follows:

- Section 2 details WELL's compliance with the price path; and
- Section 3 details WELL's compliance with the quality standards.

1.1. Compliance with 2010 DPP Determination's price – quality requirements

This Statement is made in accordance with the requirements of clause 11.1 of the 2010 DPP Determination. In particular, it includes:

- A written statement that confirms that WELL has complied with the price path in clause 8 and the quality standards in clause 9 in respect of the Assessment Period ending on the Assessment Date 31 March 2011; and
- Sufficient information to support the statement required by the above paragraph, including:
    - Information relating to amount of allowable notional revenue, the amount of notional revenue, Prices, Quantities, units of measurement associated with all numeric data, and other relevant data, information, and calculations; and
    - Information relating to Pass-Through Costs, including both the forecast amounts and the actual amounts for the Assessment Period, and information relevant to the variance between the forecast and actual amounts; and

- Information relating to any price restructures as referred to in clause 8.6 of the 2010 DPP Determination and information of the kind set out in clause 11.1(b) paragraphs (i) and (ii) of the 2010 DPP Determination that demonstrates:
  - If clause 8.6(a) applies, whether or not the restructuring has of itself increased the WELL's allowable notional revenue above that which would have applied if the restructuring had not occurred, using both the previous and restructured Prices and Quantities; and
  - If clause 8.6(b) applies, whether or not the restructuring has of itself increased WELL's revenue above that which would have applied if the restructuring had not occurred, using both the previous and restructured Prices and Quantities, and reasoning why it is not practicable for WELL to demonstrate the effects of the restructuring on allowable notional revenue; and
  - If clause 8.7 applies, why it is not practicable for WELL to demonstrate the effects of the restructuring on allowable notional revenue or revenue; and
- Assessed Values and Reliability Limits for the Assessment Period, relevant SAIDI and SAIFI statistics and calculations (including those in Schedule 3), the annual reliability assessments for the two immediately preceding extant Assessment Periods, and other relevant data and information; and
- A description of policies and procedures which WELL has used to record the SAIDI and SAIFI statistics for the Assessment Period; and
- If System Fixed Assets were transferred from Transpower to WELL, SAIDI and SAIFI statistics and calculations (including those in Schedule 3) for the Assessment Period in which the transfer was completed that demonstrate whether or not the transfer increased WELL's Assessed Values; and
- If WELL used an alternative approach to demonstrate compliance as referred to in clause 10.3, an explanation as to why that alternative approach was needed; and
- The date on which the statement was prepared.

1.2. Disclaimer

The information contained in this Statement has been prepared for the express purpose of complying with the requirements of clause 11 of the 2010 DPP Determination. This statement has not been prepared for any other purpose. WELL expressly disclaims any liability to any other party who may rely on this statement for any other purpose.

Representations in this statement made by WELL relate solely to the services offered on the electricity distribution network in the Wellington region.

2. Price Path Compliance

This section of the Statement provides information on WELL's compliance with the price path for the Assessment Period ending 31 March 2011. Under the 2010 DPP Determination WELL is required to:

- Demonstrate that Notional Revenue calculated in accordance has not exceeded the Allowable Notional Revenue under the CPI-X price path at that Assessment Date; and
- Explain any variance between the forecast and actual pass through costs, for the period from 1 April 2010 to 31 March 2011; and
- Provide information relating to any price restructures.

WELL notes that:

- *Tables contained in this Chapter of the Statement are aggregates of the detail provided at Attachment 3 that reflect the price multiplied by the appropriate quantity for each pricing category; and*
- *For presentation purposes some numbers in this document have been rounded. In most cases calculations are based on more detailed numbers (i.e. to more decimal places than shown in this document). This may cause small discrepancies or rounding inconsistencies when aggregating some of the information presented in this document. These discrepancies do not affect the overall compliance calculations which have been based on the more detailed information.*

2.1. Price path compliance as at 31 March 2011

As required by clauses 8.4 and 8.5 of the 2010 DPP Determination, in order to demonstrate compliance with the price path, EDBs are required to demonstrate that their Notional Revenue for the Assessment Period has not exceeded the Allowable Notional Revenue under the CPI-X price path for the Assessment Period.

As demonstrated by Table 1 below, WELL has not breached the price path threshold on the basis that Notional Revenue is less than Allowable Notional Revenue by an amount of $158,108.

Determination Requirement	Actual notional revenue divided by allowable notional revenue at the assessment date	Is not to exceed	One
Notice expression	$\frac{NR_{2011}}{R_{2011}}$	≤	1
WELL Result	$\frac{\$95,813,356}{\$95,971,464} = 0.9984$	≤	1

Table 1: Price path compliance

The summary calculation of NR_{2011} and R_{2011} is provided in Table 2 below.

WELL's Actual Notional revenue, $NR_{2011} = \Sigma P_{i,2011} Q_{i,2009} - K_{2011}$	
Calculation Components	**Amount**
$\Sigma P_{i,2011} Q_{i,2009}$ – the sum of the i^{th} prices during any part of the Pricing Period 1 April 2010 to 31 March 2011 multiplied by the corresponding base quantities for the Pricing Period 1 April 2008 to 31 March 2009	$143,673,083
K_{2011} – the sum of all Pass-Through Costs for the Pricing Period 1 April 2010 to 31 March 2011	$47,859,727
Total Actual Notional Revenue as at 31 March 2011	**$95,813,356**

Table 2: NR2011 and R2011

WELL's Allowable Notional Revenue, $R_{2011} = (\sum P_{i,2010} Q_{i,2009} - K_{2010})(1+\Delta CPI_{2011})(1-X)$	
Calculation Components	**Amount**
$P_{i,2010}$ – is the i^{th} starting Price as specified in Schedule 1 for the Pricing Period 1 April 2009 to 31 March 2010 $Q_{i,2009}$ – is the Quantity corresponding to the i^{th} Price for the Pricing Period 1 April 2008 to 31 March 2009 K_{2010} – is the sum of all Pass-Through Costs, other than Commerce Act Levies, during the Pricing Period 1 April 2009 to 31 March 2010	$140,236,788 46,574,144 $ 93,662,644
ΔCPI_{2011} – is the derived change in the CPI to be applied during the First Assessment Period, being equal to: $\Delta CPI_{2011} = \frac{CPI_{Dec,2008} + CPI_{Mar,2009} + CPI_{Jun,2009} + CPI_{Sep,2009}}{CPI_{Dec,2007} + CPI_{Mar,2008} + CPI_{Jun,2008} + CPI_{Sep,2008}} - 1$ Where $CPI_{j,y}$ is the consumer price index stipulated in the "All Groups Index SE9A" as published by Statistics New Zealand for the month j in the calendar year y	(4323/4219)-1 =2.47%
X – is the rate of change for WELL as specified in Schedule 2	0.00%
Total Allowable Notional Revenue as at 31 March 2011	**$95,971,464**

Table 3: WELL's Allowable Notional Revenue

2.2. Pass-Through Costs

Table 4 below provides the break down of Pass-Through Costs incurred by WELL during the Assessment Period.

Description	Year to 31 March 2011 (million) Actual	Year to 31 March 2011 (million) Forecast	Variance
Transmission	$45.419	$45.248	$0.171
Utility Rates Summary	$1.887	$1.826	$0.061
Energy Authority Levies	$0.313	$0.332	-$0.019
Commerce Commission levies	$0.241	$0.377	-$0.136
Total	**$47.860**	**$47.783**	**$0.077**

Table 4: Comparison of WELL's actual and forecast Pass-Through Costs

The small overall variance between WELL's actual and forecast Pass-Through Costs for the current Assessment Period is due to the minor "business as usual" variability, in relation to:

- The "actual" transmission pass-through costs: these reflect the total charges paid by WELL to Transpower for the year ended 31 March 2011. These charges are regulated under the Transmission Pricing Methodology (**TPM**) in the Electricity Industry Participation Code; and
- The actual utility rate costs: these are the total cost of utility rates charged to WELL and (all other electricity distribution businesses (**EDB**)) for the year ended 31 March 2011; and
- The Electricity Authority's (**EA**) Levies: these costs include all applicable components (Common Quality, Registry and Consumer, Transmission, Other Activities and MACQS Reform invoice lines) charged to WELL for the year ended 31 March 2011.

2.3. Price restructures

WELL confirms that it has not restructured its prices that applied during the Assessment Period ending on the Assessment Date 31 March 2011.

2.4. Excluded Services

The price path under the 2010 DPP Determination relates to "electricity lines services", defined under section 54C of the *Commerce Act 1986* (**Act**) as services related to "the conveyance of electricity by line in New Zealand".

WELL provides a number of services which do not meet this definition and are referred to as "excluded" services. These services are not relevant to price path compliance and are therefore not considered in this Statement. WELL confirms however that it complies with the necessary regulations for these services by demonstrating that there is workable or effective competition for the provision of those services.

The following activities are excluded services as WELL believes that these services fall outside the definition of Electricity Lines Services as defined by section 54C of the Act:

- Electrical work carried out at the request of consumers on their property; and
- Use of network poles by third parties e.g. telecommunication companies (noting that there are options available to network operators other than use of WELL's poles); and
- Miscellaneous other revenue, for example, rentals received from properties, profit on sale of assets and interest received; and
- Connections services, disconnection services; and reconnection services. These are contestable activities for which there is workable or effective competition. WELL allows other suitably trained and authorised service providers to undertake connection, disconnection and reconnection services.

WELL also receives income from parties requiring network extensions or alterations, reflecting the level of investment undertaken by WELL. This has been excluded from the price path threshold compliance calculation because:

- WELL contributes to the total cost of the extension. Assets are vested in WELL on behalf of consumers, but consumers can also elect to own the works or vest them in a third party. Examples of such situations include shopping malls, retirement villages, and residential subdivisions. Additionally, third parties can select the contractors to construct the works; and
- Consumers may choose to contract with a third party to construct and maintain such assets, rather than providing WELL with a contribution. Therefore, workable or effective competition exists for such services and customer contributions are appropriately excluded. (Refer also to the Commerce Commission Investigation Ref J5131, which is publicly available).

In addition, WELL operates in the instantaneous reserves market. The market is fully contestable and income is derived as a result of a competitive tendering process and is not associated with the conveyance of electricity.

3. Quality Standards Threshold

3.1. Quality standards threshold assessment as at 31 March 2011

This section of the Statement provides information on WELL's compliance with the quality standards under clause 9 of the 2010 DPP Determination for the Assessment Period ending 31 March 2011.

3.2. Assessed Values and Reliability Limits

Clause 9.1 of the 2010 DPP Determination requires WELL to demonstrate that for the Assessment Period it:

- Complies with the annual reliability assessment specified in clause 9.2 of the 2010 DPP Determination; or

- Has complied with the annual reliability assessments for the two immediately preceding extant assessment periods.

Clause 9.2 of the 2010 DPP Determination defines “annual reliability assessment”.

Table 5 below shows that for the current assessment year WELL complies with both reliability assessments outlined in clause 9.1 of the 2010 DPP Determination.

Requirement	Assessment	Limit	Result	Variance
SAIDI	34.738	40.744	0.853	6.006
SAIFI	0.536	0.602	0.890	0.066

Table 5: WELL’s reliability performance for the current assessment year

Further detailed calculations in relation to the assessment detailed in Table 5 are provided at Attachment 4 of this Statement.

3.3. Policies and procedures used for recording SAIDI and SAIFI statistics

Clause 11.1 of the 2010 DPP Determination requires WELL to describe the policies and procedures which it has used to record the SAIDI and SAIFI statistics for the Assessment Period.

WELL submits that the primary control system used to record the SAIDI and SAIFI statistics for the Assessment Period is the Foxboro SCADA system at the Haywards Control Centre. This system provides information about major devices operating on the network (e.g. circuit breaker status) and can remotely control the device (e.g. open or close the circuit breaker). In particular, the Foxboro SCADA system records:

- All planned and unplanned outages of 11 kV and greater;
- All unplanned outages less than one minute in duration (including successful auto-reclose events), however, the SAIDI and SAIFI details are not counted.
- Outages using Foxboro (**SCADA**), manual logs, ENMAC and manual data entering in the Reliability Report Sheet.

WELL is presently implementing a new GE ENMAC control system which will ultimately replace the Foxboro SCADA system, however until this system is fully operational, WELL will continue to operate the Foxboro SCADA. ENMAC will be the database that stores the outage information, as well as being a live SCADA system. During the changeover, the recording of outage information has a number of additional steps between the systems, and undergoes a process of manual validation.

The current procedure that is followed to capture network performance information for planned and unplanned outages is shown in the following diagram and discussed in detail in Figure 1 below:

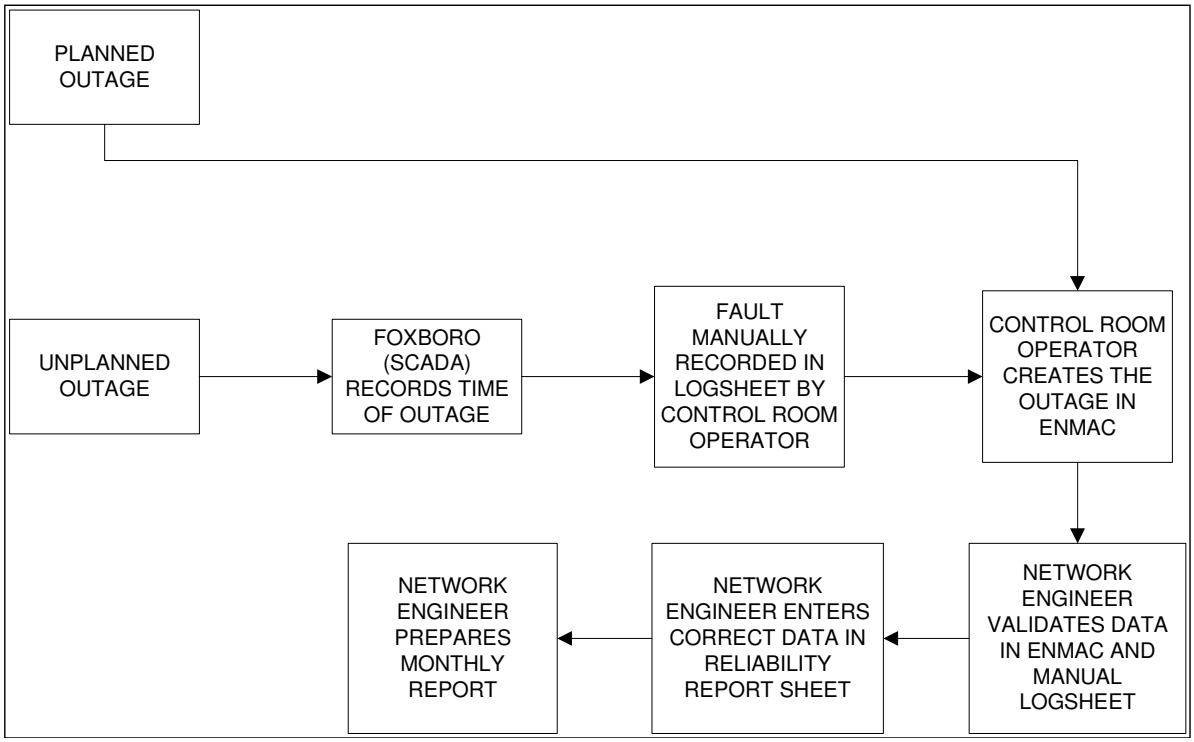


Figure 1: Summary of process for capturing network outage information

For unplanned outages, the initial indication is provided by the Foxboro SCADA system and the fault is time stamped, along with subsequent switching operations. Where the outage relates to a non-SCADA indicating device, such as a drop-out fuse, the outage is recorded from the time the faultman confirms on site that it is an HV fault, then subsequent switching operations are completed on the Foxboro SCADA system (as a system mimic) and are time stamped.

The fault is manually recorded by the Control Room Operator to keep details of the switching procedure which includes the time of switching operations (taken from Foxboro). The Control Room Operator will then create an outage in ENMAC and enter the data manually. The total number of customers is in ENMAC's database and ENMAC computes the SAIDI and SAIFI statistics automatically.

After an outage is resolved, an outage report is generated by ENMAC which the Network Engineer validates by comparing the details in ENMAC to the manual log sheet. The information that is validated is as follows:

- Date outage started and ended; and
- Time outage started and ended; and
- Duration of outage; and
- Number of customers impacted; and
- Total customers minutes lost (based on switching operations); and
- Total customer number (on network); and

- SAIDI for outage; and
- SAIFI for outage; and
- Fault type; and
- Fault cause.

As the ENMAC control system is still in the process of implementation, there is a requirement to ensure the data transferred from Foxboro SCADA to ENMAC is correct. The Network Engineer makes sure of this by comparing the ENMAC reports with the manual fault logs, and where necessary re-entering the correct data into an external spreadsheet. Correctness of this data is ensured by the Foxboro timestamp. The information from this reporting spreadsheet is used for the monthly reporting of SAIDI and SAIFI indices and also for the reporting of yearly performance.

For planned outages, the proposed switching operations are entered into ENMAC by the Outage Planner prior to the event. During the event the Control Room Operator enters the time the operation occurred. The data is also validated by the network engineer before it is entered in the reliability report sheet.

In time, with the full implementation of the ENMAC system, records of planned and unplanned events will occur automatically in ENMAC and will not need to be verified against another system and reported externally as currently occurs. All data and reports will then come directly from ENMAC.

Attachment 1: Auditor's Report

Deloitte.

AUDITOR'S REPORT

To the Commerce Commission regarding the Annual Compliance Statement of Wellington Electricity Lines Limited ('WELL') for the Assessment Period ended on 31 March 2011

We have audited the attached Annual Compliance Statement on pages 5 to 11 and 14 to 19 in respect of the default price-quality path prepared by WELL for the assessment period ended on 31 March 2011 and dated 12 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 WELL 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 International Standards on Auditing, International Standards on Auditing (New Zealand) and the New Zealand Institute of Chartered Accountants Standard on Assurance Engagements 3100: *Compliance Engagements*. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Annual Compliance Statement 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 an examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 5 to 8 and 14 to 17 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 8 to 11 and 18 to 19 of the Annual Compliance Statement.

Our audit also included an assessment of the significant estimates and judgments, if any, made by WELL 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 Assurance Report
This independent assurance report has been prepared solely for the Directors of WELL 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 WELL 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 WELL's compliance with the Determination are undertaken on a test basis, our engagement cannot be relied on to detect all instances where WELL 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 WELL, other than in our capacity as auditor (including other regulatory audit services) and the provision of taxation advice.

Opinion
In our opinion, the Annual Compliance Statement on pages 5 to 11 and 14 to 19 of Wellington Electricity Lines 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 12 July 2011 and our opinion is expressed as at that date.

Deloitte

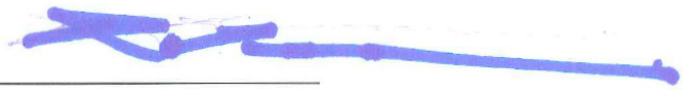
Chartered Accountants
Wellington, New Zealand

This audit report relates to the Annual Compliance Statement of Wellington Electricity Lines Limited for the assessment period ended 31 March 2011 included on Wellington Electricity Lines Limited's website. The Board of Directors is responsible for the maintenance and integrity of Wellington Electricity Lines Limited's website. We have not been engaged to report on the integrity of the Wellington Electricity Lines Limited's website. We accept no responsibility for any changes that may have occurred to the Annual Compliance Statement since they were initially presented on the website. The audit report refers only to the Annual Compliance Statement named above. It does not provide an opinion on any other information which may have been hyperlinked to/from the Annual Compliance Statement. If readers of this report are concerned with the inherent risks arising from electronic data communication they should refer to the published hard copy of the Annual Compliance Statement and related audit report dated 12 July 2011 to confirm the information included in the Annual Compliance Statement presented on this website. Legislation in New Zealand governing the preparation and dissemination of Annual Compliance Statements may differ from legislation in other jurisdictions.

Attachment 2: Director's certificate

DIRECTORS' CERTIFICATE ON ANNUAL COMPLIANCE STATEMENT

I, Richard C. Pearson, being a director of Wellington Electricity Lines Limited certify that, having made all reasonable enquiry, to the best of my knowledge and belief, the attached Annual Compliance Statement of Wellington Electricity Lines Limited, and related information, prepared for the purposes of the *Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2010* are true and accurate.



Director

12 July 2011

Attachment 3: Summary Notional Revenue

- For each load group the base quantity (number of end consumers or annual energy of all consumers) was retrieved from the appropriate information systems for the year ended 31 March 2009.

- Prices applicable for the assessment period have been taken from WELL's published price schedules.

- Base quantities were multiplied by the price applicable to determine the Notional Revenue for the Assessment Period.

Charge Type	2010 Tariff Code	Base Quantity	Base Q Unit	2010/11 Price	Price Unit	Notional Revenue ($)
Variable	G001-24UC	45,316	ICPs	0.1240	$/kWh	5,619
Variable	G001-24UC	37,729	ICPs	0.1240	$/kWh	4,678
Variable	G001-24UC	23,184	ICPs	0.1240	$/kWh	2,875
Variable	G001-24UC	52,638	ICPs	0.1240	$/kWh	6,527
Variable	G001-24UC	43,603	ICPs	0.1240	$/kWh	5,407
Variable	G001-24UC	6,044	ICPs	0.1240	$/kWh	749
Variable	G001-24UC	99,829	ICPs	0.1240	$/kWh	12,379
Variable	G001-24UC	3,538	ICPs	0.1240	$/kWh	439
Variable	G001-24UC	28,148	ICPs	0.1240	$/kWh	3,490
Variable	G001-24UC	253,722	ICPs	0.1240	$/kWh	31,462
Variable	G001-24UC	127,491	ICPs	0.1240	$/kWh	15,809
Variable	G001-24UC	1,007	ICPs	0.1240	$/kWh	125
Variable	G001-24UC	149,629	ICPs	0.1240	$/kWh	18,554
Variable	G001-24UC	8,130	ICPs	0.1240	$/kWh	1,008
Variable	G001-24UC	50,500	ICPs	0.1240	$/kWh	6,262
Variable	G001-24UC	68,515	ICPs	0.1240	$/kWh	8,496
Variable	G001-24UC	74,419	ICPs	0.1240	$/kWh	9,228
Variable	G001-24UC	55,812	ICPs	0.1240	$/kWh	6,921
Variable	G001-24UC	48,725	ICPs	0.1240	$/kWh	6,042
Variable	G001-24UC	28,458	ICPs	0.1240	$/kWh	3,529
Variable	G001-24UC	5,314	ICPs	0.1240	$/kWh	659
Variable	G001-24UC	12,931	ICPs	0.1240	$/kWh	1,603
Variable	G001-24UC	16,835	ICPs	0.1240	$/kWh	2,088
Variable	G001-24UC	13,047	ICPs	0.1240	$/kWh	1,618
Variable	G001-24UC	5,824	ICPs	0.1240	$/kWh	722
Variable	G001-24UC	55,632	ICPs	0.1240	$/kWh	6,898
Variable	G001-24UC	2,375	ICPs	0.1240	$/kWh	295
Variable	G001-24UC	9,915	ICPs	0.1240	$/kWh	1,229
Variable	G001-24UC	5,629	ICPs	0.1240	$/kWh	698
Variable	G001-24UC	4,752	ICPs	0.1240	$/kWh	589
Variable	G001-24UC	4,836	ICPs	0.1240	$/kWh	600
Variable	G001-24UC	1,979	ICPs	0.1240	$/kWh	245
Variable	G001-24UC	2,112	ICPs	0.1240	$/kWh	262
Variable	G001-24UC	4,398	ICPs	0.1240	$/kWh	545
Variable	G001-24UC	21,111	ICPs	0.1240	$/kWh	2,618
Variable	G001-24UC	6,897	ICPs	0.1240	$/kWh	855

Charge Type	2010 Tariff Code	Base Quantity	Base Q Unit	2010/11 Price	Price Unit	Notional Revenue ($)
Variable	G001-24UC	9,967	ICPs	0.1240	$/kWh	1,236
Variable	G001-24UC	14,399	ICPs	0.1240	$/kWh	1,785
Variable	G001-24UC	1,992	ICPs	0.1240	$/kWh	247
Variable	G001-24UC	7,309	ICPs	0.1240	$/kWh	906
Variable	G001-24UC	30,114	ICPs	0.1240	$/kWh	3,734
Variable	G001-24UC	23,254	ICPs	0.1240	$/kWh	2,883
Variable	G001-24UC	5,539	ICPs	0.1240	$/kWh	687
Variable	G001-24UC	41,858	ICPs	0.1240	$/kWh	5,190
Variable	G001-24UC	70,874	ICPs	0.1240	$/kWh	8,788
Variable	G001-24UC	55,343	ICPs	0.1240	$/kWh	6,863
Variable	G001-24UC	2,090,315	ICPs	0.1240	$/kWh	259,199
Variable	G001-24UC	1,249,611	ICPs	0.1240	$/kWh	154,952
Variable	G001-24UC	855,449	ICPs	0.1240	$/kWh	106,076
Variable	G001-24UC	91,338	ICPs	0.1240	$/kWh	11,326
Variable	G001-24UC	365,750	ICPs	0.1240	$/kWh	45,353
Variable	G001-24UC	300,774	ICPs	0.1240	$/kWh	37,296
Variable	G001-24UC	3,076,679	ICPs	0.1240	$/kWh	381,508
Variable	G001-24UC	3,026	ICPs	0.1240	$/kWh	375
Variable	G001-24UC	16,253	ICPs	0.1240	$/kWh	2,015
Variable	G001-24UC	1,519,790	ICPs	0.1240	$/kWh	188,454
Variable	G001-24UC	5,050	ICPs	0.1240	$/kWh	626
Variable	G001-24UC	7,123	ICPs	0.1240	$/kWh	883
Variable	G001-24UC	158,772	ICPs	0.1240	$/kWh	19,688
Variable	G001-24UC	38,106	ICPs	0.1240	$/kWh	4,725
Variable	G001-24UC	6,519	ICPs	0.1240	$/kWh	808
Variable	G001-24UC	12,876	ICPs	0.1240	$/kWh	1,597
Variable	G001-24UC	72,405	ICPs	0.1240	$/kWh	8,978
Variable	G001-24UC	10,322	ICPs	0.1240	$/kWh	1,280
Variable	G001-24UC	14,292	ICPs	0.1240	$/kWh	1,772
Variable	G001-24UC	13,085	ICPs	0.1240	$/kWh	1,623
Variable	G001-24UC	6,265	ICPs	0.1240	$/kWh	777
Variable	G001-24UC	21,108	ICPs	0.1240	$/kWh	2,617
Variable	G001-24UC	3,737	ICPs	0.1240	$/kWh	463
Variable	G001-24UC	14,512	ICPs	0.1240	$/kWh	1,799
Variable	G001-24UC	13,195	ICPs	0.1240	$/kWh	1,636
Variable	G001-24UC	975,234	ICPs	0.1240	$/kWh	120,929
Variable	G001-24UC	26,176	ICPs	0.1240	$/kWh	3,246
Variable	G001-24UC	106,334	ICPs	0.1240	$/kWh	13,185
Variable	G001-24UC	13,313	ICPs	0.1240	$/kWh	1,651
Variable	G001-24UC	56,992	ICPs	0.1240	$/kWh	7,067
Variable	G001-24UC	54,985	ICPs	0.1240	$/kWh	6,818
Variable	G001-24UC	3,760	ICPs	0.1240	$/kWh	466
Variable	G001-24UC	49,741	ICPs	0.1240	$/kWh	6,168
Variable	G001-24UC	1,911	ICPs	0.1240	$/kWh	237
Variable	G001-24UC	759,135	ICPs	0.1240	$/kWh	94,133
Variable	G001-24UC	1,230	ICPs	0.1240	$/kWh	153
Variable	G001-24UC	5,855	ICPs	0.1240	$/kWh	726
Variable	G001-24UC	171,964	ICPs	0.1240	$/kWh	21,324
Variable	G001-24UC	28,328	ICPs	0.1240	$/kWh	3,513
Variable	G001-24UC	191,192	ICPs	0.1240	$/kWh	23,708
Variable	G001-24UC	1,760	ICPs	0.1240	$/kWh	218
Variable	G001-24UC	1,406	ICPs	0.1240	$/kWh	174
Variable	G001-24UC	1,760	ICPs	0.1240	$/kWh	218
Variable	G001-24UC	2,637	ICPs	0.1240	$/kWh	327
Variable	G001-24UC	2,425	ICPs	0.1240	$/kWh	301
Variable	G001-24UC	1,198	ICPs	0.1240	$/kWh	149
Variable	G001-24UC	3,176	ICPs	0.1240	$/kWh	394
Variable	G001-24UC	14,510	ICPs	0.1240	$/kWh	1,799
Variable	G001-24UC	9,757	ICPs	0.1240	$/kWh	1,210

Charge Type	2010 Tariff Code	Base Quantity	Base Q Unit	2010/11 Price	Price Unit	Notional Revenue ($)
Variable	G001-24UC	7,916	ICPs	0.1240	$/kWh	982
Variable	G001-24UC	3,518	ICPs	0.1240	$/kWh	436
Variable	G001-24UC	178	ICPs	0.1240	$/kWh	22
Variable	G001-24UC	1,044	ICPs	0.1240	$/kWh	129
Variable	G001-24UC	10,311	ICPs	0.1240	$/kWh	1,279
Variable	G001-24UC	4,505	ICPs	0.1240	$/kWh	559
Variable	G001-24UC	2,151	ICPs	0.1240	$/kWh	267
Variable	G001-24UC	8,973	ICPs	0.1240	$/kWh	1,113
Variable	G001-24UC	16,619	ICPs	0.1240	$/kWh	2,061
Variable	G001-24UC	838	ICPs	0.1240	$/kWh	104
Variable	G001-24UC	2,318	ICPs	0.1240	$/kWh	287
Variable	G001-24UC	65,528	ICPs	0.1240	$/kWh	8,125
Variable	G001-24UC	2,521	ICPs	0.1240	$/kWh	313
Variable	G001-24UC	17,975	ICPs	0.1240	$/kWh	2,229
Variable	G001-24UC	2,663,399	ICPs	0.1240	$/kWh	330,261
Variable	G001-24UC	121,914	ICPs	0.1240	$/kWh	15,117
Variable	G001-24UC	995,891	ICPs	0.1240	$/kWh	123,490
Variable	G001-24UC	2,276,227	ICPs	0.1240	$/kWh	282,252
Variable	G001-24UC	1,321,658	ICPs	0.1240	$/kWh	163,886
Variable	G001-24UC	295,843	ICPs	0.1240	$/kWh	36,685
Variable	G001-24UC	5,496	ICPs	0.1240	$/kWh	682
Variable	G001-24UC	46,177	ICPs	0.1240	$/kWh	5,726
Variable	G001-24UC	1,320	ICPs	0.1240	$/kWh	164
Variable	G001-24UC	869,046	ICPs	0.1240	$/kWh	107,762
Variable	G001-24UC	11,632	ICPs	0.1240	$/kWh	1,442
Variable	G001-24UC	47,648	ICPs	0.1240	$/kWh	5,908
Variable	G001-24UC	750	ICPs	0.1240	$/kWh	93
Variable	G001-24UC	134,261	ICPs	0.1240	$/kWh	16,648
Variable	G001-24UC	5,014	ICPs	0.1240	$/kWh	622
Variable	G001-24UC	42,091	ICPs	0.1240	$/kWh	5,219
Variable	G001-24UC	1,979	ICPs	0.1240	$/kWh	245
Variable	G001-24UC	15,473	ICPs	0.1240	$/kWh	1,919
Variable	G001-24UC	245,305	ICPs	0.1240	$/kWh	30,418
Variable	G001-24UC	30,346	ICPs	0.1240	$/kWh	3,763
Variable	G001-24UC	4,838	ICPs	0.1240	$/kWh	600
Variable	G001-24UC	13,986	ICPs	0.1240	$/kWh	1,734
Variable	G001-24UC	7,916	ICPs	0.1240	$/kWh	982
Variable	G001-24UC	381	ICPs	0.1240	$/kWh	47
Variable	G001-24UC	8,870	ICPs	0.1240	$/kWh	1,100
Variable	G001-24UC	5,541	ICPs	0.1240	$/kWh	687
Variable	G001-24UC	2,637	ICPs	0.1240	$/kWh	327
Variable	G001-24UC	70,809	ICPs	0.1240	$/kWh	8,780
Variable	G001-24UC	481	ICPs	0.1240	$/kWh	60
Variable	G001-24UC	2,660	ICPs	0.1240	$/kWh	330
Variable	G001-24UC	19,095	ICPs	0.1240	$/kWh	2,368
Fixed	GCU	61,343	ICPs	0.0324	$/day	1,988
Variable	G100-24UC	128,225,084	ICPs	0.0901	$/kWh	11,553,080
Variable	G100-24UC	13,196,218	ICPs	0.0901	$/kWh	1,188,979
Fixed	G100-FIXD	6,589,924	ICPs	0.1500	$/day	988,489
Fixed	G100-FIXD	671,029	ICPs	0.1500	$/day	100,654
Variable	G100-NITE	3,855,925	ICPs	0.0153	$/kWh	58,996
Variable	G100-NITE	160,779	ICPs	0.0153	$/kWh	2,460
Variable	G101-24UC	43,041,618	ICPs	0.0901	$/kWh	3,878,050
Variable	G101-CTRL	18,329,496	ICPs	0.0422	$/kWh	773,505
Fixed	G101-FIXD	2,651,886	ICPs	0.1500	$/day	397,783
Variable	G101-NITE	326,136	ICPs	0.0153	$/kWh	4,990
Variable	G101-NITE	18,110,885	ICPs	0.0153	$/kWh	277,097
Variable	G102-AICO	878,815,898	ICPs	0.0709	$/kWh	62,308,047
Variable	G102-AICO	-	ICPs	0.0709	$/kWh	-
Fixed	G102-FIXD	43,169,711	ICPs	0.1500	$/day	6,475,457

Charge Type	2010 Tariff Code	Base Quantity	Base Q Unit	2010/11 Price	Price Unit	Notional Revenue ($)
Variable	G102-NITE	-	ICPs	0.0153	$/kWh	-
Variable	G103-24UC	4,532,177	ICPs	0.0911	$/kWh	412,881
Fixed	G103-FIXD	130,065	ICPs	0.1500	$/day	19,510
Variable	GC60-24UC	99,349,798	ICPs	0.0012	$/kWh	119,220
Capacity	GC60-CAPY	663,350	ICPs	0.0257	$/kVA/day	17,048
On Peak Demand	GC60-DOPC	280,821	ICPs	10.2446	$/kW/month	2,876,899
Power Factor	GC60-PWRF	18,266	ICPs	7.5787	$/kVAr/month	138,433
Variable	GR60-24UC	2,548,624	ICPs	0.0012	$/kWh	3,058
Capacity	GR60-CAPY	47,160	ICPs	0.0257	$/kVA/day	1,212
On Peak Demand	GR60-DOPC	13,578	ICPs	12.8546	$/kW/month	174,540
Power Factor	GR60-PWRF	140	ICPs	7.5787	$/kVAr/month	1,061
Variable	GU60-24UC	87,206,355	ICPs	0.0012	$/kWh	104,648
Capacity	GU60-CAPY	524,970	ICPs	0.0257	$/kVA/day	13,492
On Peak Demand	GU60-DOPC	227,525	ICPs	10.6670	$/kW/month	2,427,009
Power Factor	GU60-PWRF	15,937	ICPs	7.5787	$/kVAr/month	120,782
Variable	GV02-24UC	15,204	ICPs	0.0524	$/kWh	797
Variable	GV02-24UC	38,149,244	ICPs	0.0524	$/kWh	1,999,020
Fixed	GV02-FIXD	1,531,800	ICPs	0.4557	$/day	698,041
Variable	GV07-24UC	26,210,646	ICPs	0.0364	$/kWh	954,068
Variable	GV07-24UC	368,471,482	ICPs	0.0364	$/kWh	13,412,362
Fixed	GV07-FIXD	4,063,291	ICPs	1.1273	$/day	4,580,548
Variable	GV14-24UC	36,820,844	ICPs	0.0430	$/kWh	1,583,296
Variable	GV14-24UC	24,731,028	ICPs	0.0430	$/kWh	1,063,434
Fixed	GV14-FIXD	122,759	ICPs	6.3871	$/day	784,074
Variable	GV30-24UC	41,239,406	ICPs	0.0178	$/kWh	734,061
Variable	GV30-24UC	18,531,414	ICPs	0.0178	$/kWh	329,859
Fixed	GV30-FIXD	65,684	ICPs	9.0984	$/day	597,619
Variable	GV99-24UC	222,742,206	ICPs	0.0080	$/kWh	1,781,938
Demand	GV99-DAMD	697,323	ICPs	7.0636	$/kVA/month	4,925,611
Fixed	GV99-FIXD	119,899	ICPs	22.9422	$/day	2,750,747
Variable	GX07-24UC	68	ICPs	0.0331	$/kWh	2
Fixed	GX07-FIXD	11	ICPs	1.0248	$/day	11
Variable	GX14-24UC	1,626,598	ICPs	0.0391	$/kWh	63,600
Fixed	GX14-FIXD	4,599	ICPs	5.8064	$/day	26,704
Variable	GX30-24UC	40,735,511	ICPs	0.0162	$/kWh	659,915
Variable	GX30-24UC	1,223,072	ICPs	0.0162	$/kWh	19,814
Fixed	GX30-FIXD	26,995	ICPs	8.2712	$/day	223,281
Variable	GX99-24UC	277,966,787	ICPs	0.0063	$/kWh	1,751,191
Capacity	GX99-CAPY	1,710,514	ICPs	0.0149	$/kVA/day	25,487
Demand	GX99-DAMD	817,112	ICPs	5.7897	$/kVA/month	4,730,833
Fixed	GX99-FIXD	75,558	ICPs	17.8461	$/day	1,348,416
Fixed	GCU	456	ICPs	0.0324	$/day	15
Variable	GV02-24UC	1,737	ICPs	0.0524	$/kWh	91
Power Factor	GC60-PWRF	6	ICPs	7.5787	$/kVAr/month	45
Fixed	GC60-FIXD	91	ICPs	0.0397	$/day	4
On Peak Demand	GC60-DOPC	10,094	ICPs	10.2446	$/kW/month	103,409
On Peak Demand	GC60-DOPC	9,843	ICPs	10.2446	$/kW/month	100,838
Capacity	GC60-CAPY	15,000	ICPs	0.0257	$/kVA/day	386
Standard Charges Total ($)						**142,603,486**
Non Standard Fixed Charges Total ($)						**921,886**
Non Standard Variable Charges Total ($)						**147,711**
Notional Revenue Total ($)						**143,673,083**

Attachment 4: Calculation of SAIDI and SAIFI

WELL's SAIDI Boundary Value, $B_{SAIDI} = e^{(\alpha_{SAIDI}+2.5\beta_{SAIDI})}$	
Calculation Components	**Amount**
α_{SAIDI}	-2.979
β_{SAIDI}	5.254
Total SAIDI Boundary Value as at 31 March 2011	**9.724**

WELL's SAIFI Boundary Value, $B_{SAIFI} = e^{(\alpha_{SAIFI}+2.5\beta_{SAIFI})}$	
Calculation Components	**Amount**
α_{SAIFI}	-7.333
β_{SAIFI}	5.893
Total SAIFI Boundary Value as at 31 March 2011	**0.237**

WELL's SAIDI Reliability Limit, $SAIDI_{LIMIT} = \mu_{SAIDI} + \sigma_{SAIDI}$	
Calculation Components	**Amount**
μ_{SAIDI}	33.897
σ_{SAIDI}	6.847
Total SAIDI Reliability Limit as at 31 March 2011	**40.744**

WELL's SAIFI Reliability Limit, $SAIFI_{LIMIT} = \mu_{SAIFI} + \sigma_{SAIFI}$	
Calculation Components	**Amount**
μ_{SAIFI}	0.517
σ_{SAIFI}	0.085
Total SAIFI Reliability Limit as at 31 March 2011	**0.602**

Wellington Electricity purchased the Wellington network on 24 July 2008, and therefore did not have ownership during the entire five year reference period to 31 March 2009 for SAIDI and SAIFI. Necessary information was sourced from Vector, the previous owner of the network.

Attachment 5: Customer numbers for SAIDI and SAIFI

Year	Regulation Customers	Customers Impacted	Customer Minutes Lost
04/05	157,410	60,717	6,288,957
05/06	158,555	80,086	4,980,787
06/07	159,625	103,168	5,583,921
07/08	161,476	83,057	5,111,293
08/09	162,625	86,274	5,745,190
09/10	163,591	111,077	8,626,989
10/11	164,081	88,112	5,699,846