



★ wellington electricity™

## **Default Price-Quality Path Compliance**

**Wellington Electricity Lines Limited**

**Annual Compliance Statement**

**5 June 2012**

**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 2012*.....5
  - 2.2. *Pass-Through Costs* .....7
  - 2.3. *Price restructures* .....7
  - 2.4. *Excluded Services*.....7
- 3. QUALITY STANDARDS.....8
  - 3.1. *Quality standards assessment as at 31 March 2012*.....8
  - 3.2. *Assessed Values and Reliability Limits*..... 8
  - 3.3. *Policies and procedures used for recording SAIDI and SAIFI statistics*.....9
    - 3.3.1 *Process for outage data capture* ..... 10
- ATTACHMENT 1: AUDITOR’S REPORT ..... 12
- ATTACHMENT 2: DIRECTOR’S CERTIFICATE.....13
- ATTACHMENT 3: SUMMARY NOTIONAL REVENUE .....14
- ATTACHMENT 4: ANNUAL RELIABILITY ASSESSMENT FOR EXTANT ASSESSMENT PERIODS .....15
- ATTACHMENT 5: CALCULATION OF SAIDI AND SAIFI .....16
- ATTACHMENT 6: CUSTOMER NUMBERS FOR SAIDI AND SAIFI.....17

## 1. Introduction

Clause 11.1(a) of the *Electricity Distribution Services Default Price-Quality Path Determination 2010 (2010 DPP Determination)* requires that all non-exempt electricity distribution businesses (**EDB's**) 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 second Assessment Period ending 31 March 2012.

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. WELL confirms that the form of the Auditor's report is consistent with the form specified in Schedule 4 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 Directors 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 price path compliance; and
- Section 3 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 not 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 2012; and
- Sufficient information to support the statement required by the above paragraph, including:
  - o 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
  - o 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

- o 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 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
- o 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
- o A description of policies and procedures which WELL has used to record the SAIDI and SAIFI statistics for the Assessment Period; and
- o 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
- o 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
- o The date on which the statement was prepared.

## **1.2. Disclaimer**

The information contained in the Statement has been prepared for the express purpose of complying with the requirements of clause 11 of the 2010 DPP Determination. The Statement has not been prepared for any other purpose. WELL expressly disclaims any liability to any other party who may rely on the 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 ended 31 March 2012. Under the 2010 DPP Determination WELL is required to:

- Demonstrate that Notional Revenue calculated in accordance with clause 8.4 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 2011 to 31 March 2012; and
- Provide information relating to any price restructures.

WELL notes that:

- Tables contained in this Section 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 2012

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 breached the price path threshold on the basis that Notional Revenue is greater than Allowable Notional Revenue by an amount of \$116,757. This is an unintentional breach mainly due to a minor variation between forecast and actual pass through costs. Tariff prices are set each year based on forecast pass through costs. (refer to Table 4).

Determination Requirement	Actual notional revenue divided by allowable notional revenue at the assessment date	Is not to exceed	One
Notice expression	$\frac{NR_{2012}}{R_{2012}}$	≤	1
WELL Result	$\frac{103,278,333}{103,161,576} = 1.0011$	≥	1

Table 1: Price path compliance

The summary calculation of  $NR_{2012}$  is provided in Table 2 below.

<b>WELL's Actual Notional revenue, <math>NR_{2012} = \sum P_{i,2012} Q_{i,2010} - K_{2012}</math></b>	
<b>Calculation Components</b>	<b>Amount (\$)</b>
$\sum P_{i,2012} Q_{i,2010}$ – the sum of the $i^{th}$ prices during any part of the Pricing Period 1 April 2011 to 31 March 2012 multiplied by the corresponding base quantities for the Pricing Period 1 April 2009 to 31 March 2010	154,017,125
$K_{2012}$ – the sum of all Pass-Through Costs for the Pricing Period 1 April 2011 to 31 March 2012	50,738,792
<b>Total Actual Notional Revenue as at 31 March 2012</b>	<b>103,278,333</b>

**Table 2:  $NR_{2012}$**

<b>WELL's Allowable Notional Revenue, <math>R_{2012} = (\sum P_{i,2011} Q_{i,2010} - K_{2011})(R_{2011} - NR_{2011})(1 + \Delta CPI_{2012})(1 - X)</math></b>	
<b>Calculation Components</b>	<b>Amount (\$)</b>
$P_{i,2011}$ – is the $i^{th}$ starting Price as specified in Schedule 1 for the Pricing Period 1 April 2010 to 31 March 2011	
$Q_{i,2010}$ – is the Quantity corresponding to the $i^{th}$ Price for the Pricing Period 1 April 2009 to 31 March 2010	149,058,037
$K_{2011}$ – is the sum of all Pass-Through Costs during the Pricing Period 1 April 2010 to 31 March 2011	<u>47,859,727</u>
	101,198,310
$R_{2011}$ – Is the allowable notional revenue during the assessment period $t-1$	95,971,464
$NR_{2011}$ – Is the notional revenue during the assessment period $t-1$	<u>95,813,356</u>
$R_{2011} - NR_{2011}$ = Difference between the $R_{t-1}$ and $NR_{t-1}$	158,108
$\Delta CPI_{2012}$ – is the derived change in the CPI to be applied during the First Assessment Period, being equal to:  $\Delta CPI_{2011} = \frac{CPI_{Dec,2009} + CPI_{Mar,2010} + CPI_{Jun,2010} + CPI_{Sep,2010}}{CPI_{Dec,2008} + CPI_{Mar,2009} + CPI_{Jun,2009} + CPI_{Sep,2009}} - 1$	(4,400/4,323)-1 = 1.781%
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 $y$	
$X$ – is the rate of change for WELL	0.00%
<b>Total Allowable Notional Revenue as at 31 March 2012</b>	<b>103,161,576</b>

**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 2012	Year to 31 March 2012	Variance (\$000)
	(\$000) Actual	(\$000) Forecast	
Transmission	48,118	48,233	(115)
Council Rates Summary	2,001	2,020	(19)
Electricity Authority Levies	409	322	87
Commerce Commission Levies	212	315	(103)
<b>Total</b>	<b>50,739</b>	<b>50,890</b>	<b>(150)</b>

**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 2012. These charges are regulated under the Transmission Pricing Methodology (**TPM**) in the Electricity Industry Participation Code; and
- The actual council rate costs: these are the total cost of utility rates charged to WELL for the year ended 31 March 2012; 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 2012.
- Commerce Commission Levies: these costs include WELL's contribution to the Electricity and Price / Quality regulations.

## 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 2012.

## 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**

#### **3.1. Quality standards assessment as at 31 March 2012**

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 2012.

#### **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 breached both reliability assessments outlined in clause 9.1 of the 2010 DPP Determination.

Requirement	Assessment	Limit	Result	Variance
SAIDI	45.858	40.740	1.126	(5.118)
SAIFI	0.715	0.600	1.192	(0.115)

**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.

The breaches of the SAIDI and SAIFI limits were due to a number of unusual weather related events which included snow and strong winds. These in turn caused vegetation interference with the overhead network, and delayed restoration due to adverse weather and access difficulties. Individually the outages resulting from these weather events did not qualify as major event days and therefore cannot be excluded from the final SAIDI and SAIFI results.

A separate explanation paper has been prepared and supplied to the Commerce Commission under separate cover and in confidence about this matter.

### **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 (1 April 2011- 15 November 2011) and ENMAC SCADA (16 November 2011 – to present) 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 addition, other devices on the network including fuses, manual switches and some circuit breakers are represented in the ENMAC system and although are operated in the field manually, their status (e.g. open or closed) is updated in ENMAC by the network controller at the time of manual field operation. In particular, the Foxboro and ENMAC SCADA system records:

- All planned and unplanned outages of 11 kV and greater; and
- All unplanned outages less than one minute in duration (including successful auto-reclose events), however, the SAIDI and SAIFI details are not counted; and

- Outages using Foxboro (**SCADA**), manual logs, ENMAC and manual data entering in the Reliability Report Sheet.

WELL fully commissioned the GE ENMAC control system in mid November 2011 which replaced the Foxboro SCADA system. ENMAC includes a database that stores the outage information, as well as being a live SCADA system. During the changeover, the recording of outage information had a number of additional steps between the systems, and underwent a process of manual validation.

The current procedure that is followed to capture network performance information for planned and unplanned outages is shown in Figure 1 below and described in section 3.3.1:

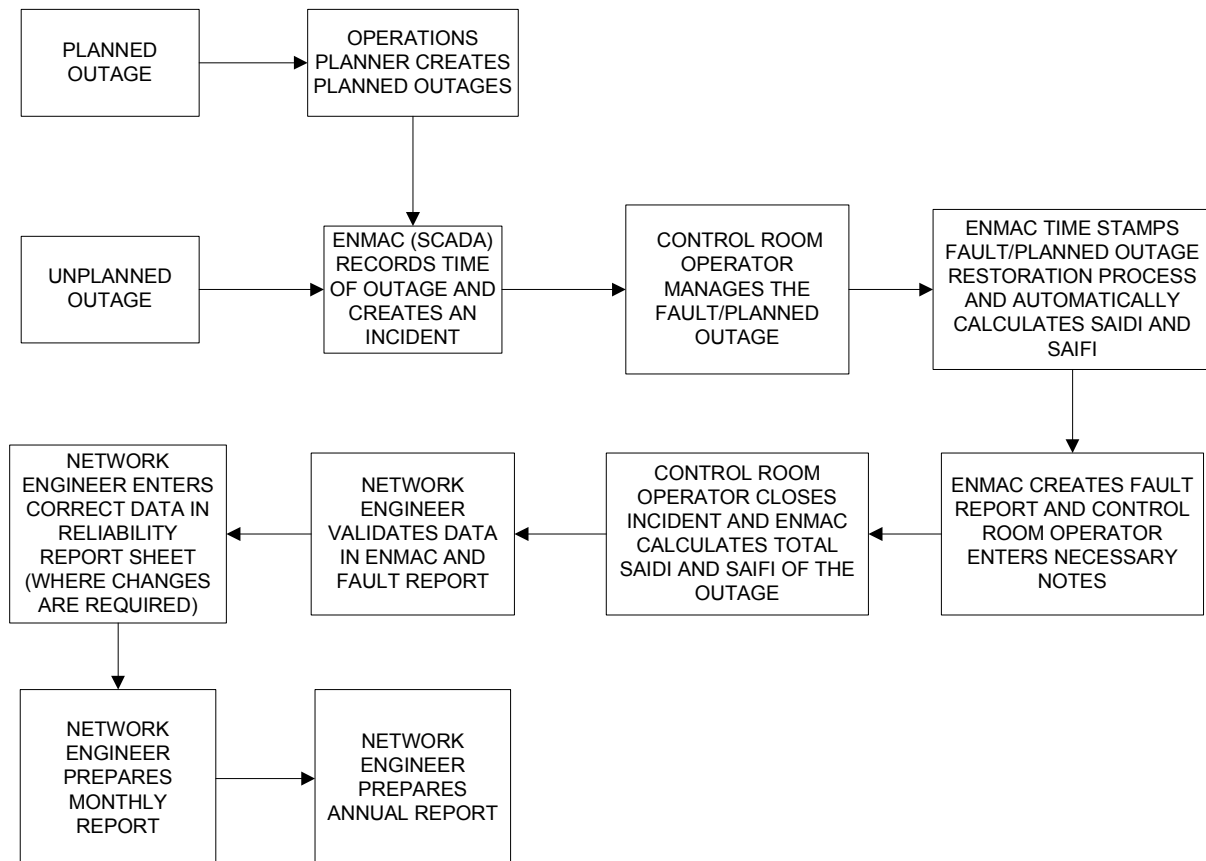


Figure 1: Summary of process for capturing network outage information

### 3.3.1 Process for outage data capture

For unplanned outages, the initial indication is provided by the ENMAC 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 ENMAC SCADA system (as a system mimic) and are time stamped. Where the fault is notified by a customer reporting no-power, and is then subsequently found to be an HV fault, the start time is taken from the time of the first phone call notification. In some cases, there is no means to confirm the time the fault actually occurred until it is notified to WELL or discovered in the field.

The ENMAC system automatically creates an incident when a telemetered device is opened due to a fault. The fault is automatically recorded by the ENMAC system to keep details of the switching procedure which includes the time of switching operations. The total number of customers is included 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 with the notes of the control room operators. The information that is validated is as follows:

- Date outage started and ended;
- Time outage started and ended;
- Duration of outage;
- Number of customers impacted;
- Total customers minutes lost (based on switching operations);
- Total customer number (on network);
- SAIDI for outage;
- SAIFI for outage;
- Fault type; and
- Fault cause.

As the ENMAC control system has been fully commissioned, there is a requirement to ensure the data in ENMAC is correct, particularly for non-SCADA controlled devices where the incident is generated by the control room operator. There may be a short time delay between the action in the field occurring, and the time the ENMAC system is updated (e.g. field device manually operated at 3.10pm, ENMAC updated at 3.12pm, but with an action entered timestamp of 3.10pm which was recorded in the manual switching log). Correctness of this data is ensured by the ENMAC timestamp.

The Network Engineer confirms this by reviewing the ENMAC reports (generated automatically from the system) with a manual log kept by the Control Room Operator to ensure the times are correctly recorded in ENMAC, and where necessary making corrections.

Once confirmed as accurate, the corrected ENMAC individual event reports are compiled into a Reliability Master Spreadsheet which 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 ENMAC creates an incident and the Control Room Operator enters the time the operation occurred. Some planned works appear as outages, however due to LV back feeds or the use of generators there is no loss of supply. Whether the planned events result in an outage or not is validated by the network engineer by confirming with the Network Control Room who refer to the job specific documents, before it is entered in the reliability report sheet as an outage.

With the full implementation of the ENMAC system, records of planned and unplanned events occur automatically in ENMAC. All data now comes directly from ENMAC.

# Attachment 1: Auditor's Report



## AUDITOR'S REPORT ON ANNUAL COMPLIANCE STATEMENT

To the Directors of Wellington Electricity Lines Limited (WELL).

We have audited the attached Annual Compliance Statement on pages 5 to 11 and 14 to 17, which is an Annual Compliance Statement in respect of the default price-quality path prepared by WELL for the period of 1 April 2011 to 31 March 2012 (the assessment period) and dated 5 June 2012 for the purposes of clause 11 of the 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 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. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates, as well as evaluating the overall presentation of the Annual Compliance Statement.

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 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 8 to 11 and 15 to 17 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 an assessment of whether the basis of preparation has been adequately disclosed.

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

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 of Wellington Electricity Lines Limited for the Assessment Period ended on 31 March 2012, has been prepared, in all material respects, in accordance with the Determination.

### 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.

Our audit was completed on 5 June 2012 and our opinion is expressed as at that date.

Chartered Accountants  
Wellington, New Zealand

## 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 *Electricity Distribution Services Default Price-Quality Path Determination 2010* are true and accurate



---

Director

5 June 2012

### 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 2010.
- 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	2011 Tariff Code	Base Quantity (2009/10)	Base Q Unit	2010/11 Price	2011/12 Price	Price Unit	Notional Revenue 2010/11	Notional Revenue 2011/12
Fixed	G001-FIXD	-	ICPs	0.03090	0.0332	\$/day/fitting	-	-
Variable	G001-24UC	3,601,699	ICPs	0.12400	0.1282	\$/kWh	446,611	461,738
Fixed	G002-FIXD	74,079	ICPs	0.03090	0.0332	\$/day/fitting	2,289	2,459
Variable	G002-24UC	19,757,597	ICPs	0.12400	0.1282	\$/kWh	2,449,942	2,532,924
Fixed	G100-FIXD	7,835,686,000	ICPs	0.15000	0.1500	\$/day	1,175,353	1,175,353
Variable	G100-24UC	160,711,107	ICPs	0.09010	0.0932	\$/kWh	14,480,071	14,978,275
Variable	G100-NITE	4,089,603	ICPs	0.01530	0.0158	\$/kWh	62,571	64,616
Fixed	G101-FIXD	2,896,162	ICPs	0.15000	0.1500	\$/day	434,424	434,424
Variable	G101-24UC	50,009,939	ICPs	0.09010	0.0932	\$/kWh	4,505,896	4,660,926
Variable	G101-CTRL	20,010,801	ICPs	0.04220	0.0437	\$/kWh	844,456	874,472
Variable	G101-NITE	790,788	ICPs	0.01530	0.0158	\$/kWh	12,099	12,494
Fixed	G102-FIXD	42,633,754	ICPs	0.15000	0.1500	\$/day	6,395,063	6,395,063
Variable	G102-AICO	912,812,423	ICPs	0.07090	0.0732	\$/kWh	64,718,401	66,817,869
Variable	G102-NITE	19,553,161	ICPs	0.01530	0.0158	\$/kWh	299,163	308,940
Fixed	G103-FIXD	147,352	ICPs	0.15000	0.1500	\$/day	22,103	22,103
Variable	G103-24UC	5,665,911	ICPs	0.09110	0.0942	\$/kWh	516,164	533,729
Fixed	GV02-FIXD	1,602,745	ICPs	0.45570	0.471	\$/day	730,371	754,893
Variable	GV02-24UC	40,621,036	ICPs	0.05240	0.0541	\$/kWh	2,128,542	2,197,598
Variable	GV07-FIXD	4,051,814	ICPs	1.12730	1.1651	\$/day	4,567,610	4,720,768
Variable	GV07-24UC	393,768,547	ICPs	0.03640	0.0376	\$/kWh	14,333,175	14,805,697
Fixed	GV14-FIXD	126,012	ICPs	6.38710	6.6016	\$/day	804,851	831,881
Variable	GV14-24UC	61,375,126	ICPs	0.04300	0.0444	\$/kWh	2,639,130	2,725,056
Fixed	GV30-FIXD	71,615	ICPs	9.09840	9.4039	\$/day	651,582	673,460
Variable	GV30-24UC	64,567,873	ICPs	0.01780	0.0184	\$/kWh	1,149,308	1,188,049
Fixed	GV99-FIXD	116,859	ICPs	22.94220	23.7126	\$/day	2,681,003	2,771,031
Variable	GV99-24UC	213,833,145	ICPs	0.00800	0.0082	\$/kWh	1,710,665	1,753,432
Variable	GV99-DAMD	669,775	ICPs	7.06360	7.3008	\$/kVA/month	4,731,023	4,889,893
Fixed	GX02-FIXD	1	ICPs	0.41440	0.4284	\$/day	0	0
Variable	GX02-24UC	1	ICPs	0.04770	0.0493	\$/kWh	0	0
Fixed	GX07-FIXD	-	ICPs	1.02480	1.0592	\$/day	-	-
Variable	GX07-24UC	-	ICPs	0.03310	0.0342	\$/kWh	-	-
Fixed	GX14-FIXD	4,692	ICPs	5.80640	6.0014	\$/day	27,244	28,159
Variable	GX14-24UC	1,891,533	ICPs	0.03910	0.0404	\$/kWh	73,959	76,418
Fixed	GX30-FIXD	27,118	ICPs	8.27120	8.5489	\$/day	224,298	231,829
Variable	GX30-24UC	41,103,152	ICPs	0.01620	0.0167	\$/kWh	665,871	686,423
Fixed	GX99-FIXD	79,433	ICPs	17.84610	18.4454	\$/day	1,417,569	1,465,173
Variable	GX99-24UC	298,677,495	ICPs	0.00630	0.0065	\$/kWh	1,881,668	1,941,404
Variable	GX99-CAPY	1,823,754	ICPs	0.01490	0.0154	\$/kVA/day	27,174	28,086
Variable	GX99-DAMD	874,888	ICPs	5.78970	5.9841	\$/kVA/month	5,065,339	5,235,417
Fixed	GC60-FIXD	-	ICPs	0.03970	0.041	\$/day	-	-
Variable	GC60-24UC	92,561,588	ICPs	0.0012	0.0012	\$/kWh	111,074	111,074
Variable	GC60-CAPY	614,800	ICPs	0.0257	0.0265	\$/kVA/day	15,800	16,292
Variable	GC60-DOPC	261,466	ICPs	10.2446	10.5886	\$/kW/month	2,678,615	2,768,559
Variable	GC60-PWRF	17,695	ICPs	7.5787	7.8332	\$/kVAr/month	134,105	138,608
Fixed	GU60-FIXD	-	ICPs	0.0397	0.041	\$/day	-	-
Variable	GU60-24UC	83,702,428	ICPs	0.0012	0.0012	\$/kWh	100,443	100,443
Variable	GU60-CAPY	476,220	ICPs	0.0257	0.0265	\$/kVA/day	12,239	12,620
Variable	GU60-DOPC	217,294	ICPs	10.6670	11.0252	\$/kW/month	2,317,875	2,395,710
Variable	GU60-PWRF	14,768	ICPs	7.5787	7.8332	\$/kVAr/month	111,922	115,681
Fixed	GR60-FIXD	-	ICPs	0.0397	0.041	\$/day	-	-
Variable	GR60-24UC	2,923,767	ICPs	0.0012	0.0012	\$/kWh	3,509	3,509
Variable	GR60-CAPY	47,160	ICPs	0.0257	0.0265	\$/kVA/day	1,212	1,250
Variable	GR60-DOPC	15,767	ICPs	12.8546	13.2863	\$/kW/month	202,678	209,485
Variable	GR60-PWRF	143	ICPs	7.5787	7.8332	\$/kVAr/month	1,084	1,120
<b>Standard Charges Total (\$)</b>		<b>2,556,729,772</b>					<b>147,565,545</b>	<b>152,154,403</b>
<b>Non Standard Charges Total (\$)</b>							<b>1,492,493</b>	<b>1,862,721</b>
<b>Notional Revenue Total (\$)</b>							<b>149,058,037</b>	<b>154,017,125</b>

## **Attachment 4: Annual reliability assessment for extant Assessment Periods**

The tables below show the reliability assessments for the first and second Assessment Periods:

### First Assessment Period (2011) – no breach

<b>Requirement</b>	<b>Assessment</b>	<b>Limit</b>	<b>Result</b>	<b>Variance</b>
SAIDI	34.738	40.744	0.853	6.006
SAIFI	0.536	0.602	0.890	0.066

### Second Assessment Period (2012) – breach

<b>Requirement</b>	<b>Assessment</b>	<b>Limit</b>	<b>Result</b>	<b>Variance</b>
SAIDI	45.858	40.740	1.126	(5.118)
SAIFI	0.715	0.600	1.192	(0.115)

## Attachment 5: Calculation of SAIDI and SAIFI

WELL's SAIDI Boundary Value, $B_{SAIDI} = e^{(\alpha_{SAIDI} + 2.5\beta_{SAIDI})}$	
Calculation Components	Amount
$\alpha_{SAIDI}$	-2.979
$\beta_{SAIDI}$	5.254
<b>Total SAIDI Boundary Value as at 31 March 2012</b>	<b>9.724</b>

WELL's SAIFI Boundary Value, $B_{SAIFI} = e^{(\alpha_{SAIFI} + 2.5\beta_{SAIFI})}$	
Calculation Components	Amount
$\alpha_{SAIFI}$	-7.333
$\beta_{SAIFI}$	5.893
<b>Total SAIFI Boundary Value as at 31 March 2012</b>	<b>0.237</b>

WELL's SAIDI Reliability Limit, $SAIDI_{LIMIT} = \mu_{SAIDI} + \sigma_{SAIDI}$	
Calculation Components	Amount
$\mu_{SAIDI}$	33.897
$\sigma_{SAIDI}$	6.847
<b>Total SAIDI Reliability Limit as at 31 March 2012</b>	<b>40.744</b>

WELL's SAIFI Reliability Limit, $SAIFI_{LIMIT} = \mu_{SAIFI} + \sigma_{SAIFI}$	
Calculation Components	Amount
$\mu_{SAIFI}$	0.517
$\sigma_{SAIFI}$	0.085
<b>Total SAIFI Reliability Limit as at 31 March 2012</b>	<b>0.602</b>

WELL 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 6: Customer numbers for SAIDI and SAIFI**

<b>Year</b>	<b>Regulation Customer</b>	<b>Customer Impacted</b>	<b>Customer Minutes Lost</b>
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
11/12	164,602	111,645	7,551,791

WELL 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.