Eastland Network

Annual Compliance Statement

Electricity Distribution Services Default Price-Quality Path Determination 2015

For the assessment period:

1 April 2015 to 31 March 2016

Contents

1 Summary of Compliance

For the assessment period 1 April 2015 – 31 March 2016, Eastland Network Limited complied with the Price path and the quality standards.

Test	Result	Result
Price path threshold	$\frac{NR_{2016}}{R_{2016}} \leq 1$	Compliant
Quality threshold - SAIDI	$\frac{SAIDI_{ASSESS,2016}}{SAIDI_{LIMIT}} \leq 1$	Compliant
Quality threshold - SAIFI	$\frac{SAIFI_{ASSESS,2016}}{SAIFI_{LIMIT}} \leq 1$	Compliant

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Eastland Network Limited

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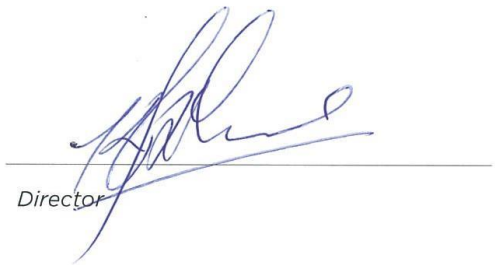
172 Carnarvon St

Gisborne

2 Director's Certificate

DIRECTORS' CERTIFICATE - ANNUAL COMPLIANCE STATEMENT

We, Kieran Devine and Tony Gray, being directors of Eastland Network Limited certify that, having made all reasonable enquiry, to the best of our knowledge and belief, the attached Annual Compliance Statement of Eastland Network Limited, and related information, prepared for the purposes of the Electricity Distribution Default Price-Quality Path Determination 2015 are true and accurate.



Director

Director

25 May 2016

Date

25 May 2016

Date

Note: Section 103(2) of the Commerce Act 1986 provides that no person shall attempt to deceive or knowingly mislead the Commission in relation to any matter before it. It is an offence to contravene section 103(2) and any person who does so is liable on summary conviction to a fine not exceeding $10,000 in the case of an individual or $30,000 in the case of a body corporate.

3 Introduction

This Threshold Compliance Statement is submitted by Eastland Network Ltd (Eastland) pursuant to the Electricity Distribution Services Default Price-Quality Path Determination 2015 (the Determination).

This statement provides threshold compliance information applicable to the Assessment Period of 1 April 2015 to 31 March 2016.

All financial figures in this Statement are represented in 000's unless stated otherwise.

4 Price Path

As required under clause 11.4 of the Determination, this Statement includes information to demonstrate compliance with clause 8. This information takes the form of:

- allowable notional revenue;
- notional revenue;
- prices (disaggregated into Distribution, Distribution Pass-through, Transmission prices);
- quantities;
- units of measurement associated with all numeric data;
- pass-through revenues;
- pass-through costs;
- recoverable costs; and
- other relevant data, information, and calculations, that states Eastland's position with respect to the price path threshold as described in clause 8 of the Determination.

4.1 Compliance with the price path

Eastland is compliant with the 2016 price path if at any time during the Assessment Period its notional revenue (NR_{2016}) did not exceed the allowable notional revenue (ANR_{2016});

$$\frac{NR_{2016}}{ANR_{2016}} \leq 1$$

Where -

NR_{2016} – Notional revenue from 1 April 2015 to 31 March 2016

ANR_{2016} – Allowable notional revenue from 1 April 2015 to 31 March 2016

Eastland's 2016 price path was 0.999 and is therefore compliant with clause 8.3 of the Default Price-Quality Path Determination 2015.

$$\frac{22{,}841}{22{,}853} = 0.999 \leq 1$$

5 Pass-through Balance

Under section 8.6 of the determination, Eastland must calculate a Pass-through Balance in accordance with the formula –

$$PTB_t = \sum_i PTP_{i,t} Q_{i,t} - K_t - V_t + PTB_{t-1}(1 + r)$$

Where –

t	is the year in which the Assessment Period ends;
i	denotes each Pass-through Price;
PTB_t	is the Pass-through Balance for the Assessment Period t;
PTB_{t-1}	is-
	a) nil in the first Assessment Period in which a Non-exempt EDB must calculate a Pass-through Balance, and
	b) in all other Assessment Periods the Pass-through Balance for the Assessment Period prior to year t, as calculated using any additional information available at the end of the Assessment period t;
$PTP_{i,t}$	is the i^{th} Pass-through Price during any part of the Assessment Period t;
$Q_{i,t}$	is the Quantity for the Assessment Period t corresponding to the i^{th} Pass-through Price;
K_t	is the sum of all Pass-through Costs that apply to the Assessment Period t;
V_t	is the sum of all Recoverable Costs that apply to the Assessment Period t; and
r	is the Cost of Debt.

The Pass-through Balance for Eastland for the first assessment period ending 31 March 2016 is:

$\sum_i PTP_{i,2016} Q_{i,2016}$	9,670
Less K_t	350
Less V_t	10,028
Pass-through Balance	**(709)**

6 Quality Standards

As required under clause 9 of the Determination, this Statement documents the assessed values and reliability limits for the Assessment Period as well as the relevant SAIDI and SAIFI statistics and calculations together with other relevant data and information.

6.1 Compliance with quality standards

To comply with Quality standards, Eastland must not exceed its SAIDI or SAIFI reliability limit for

a) the 2016 Assessment Period; or

b) the two immediately preceding extant Assessment Periods.

SAIDI compliance

Eastland does not exceed its reliability limit if

$$\frac{SAIDI_{ASSESS,2016}}{SAIDI_{LIMIT}} \leq 1$$

The SAIDI Reliability Limit for the 2015/16 Assessment Period is:

$$SAIDI_{LIMIT} = \quad 285.78$$

In 2015/16 Assessment Period, Eastland's SAIDI was 208.16 and therefore fell within Quality Thresholds. As a result, Eastland complies with clause 9.1(a) of the Determination.

$$SAIDI_{2016} \text{ Reliability Assessment} = \quad \frac{208.16}{285.78} = 0.73 \ < 1$$

The SAIDI Reliability Assessment for the two preceding periods were:

$$SAIDI_{2015} \text{ Reliability Assessment} = \frac{255.80}{302.38} = 0.85 \ < 1$$

$$SAIDI_{2014} \text{ Reliability Assessment} = \frac{279.80}{302.38} = 0.93 \ < 1$$

As a result, Eastland complies with clause 9.1(b) of the Determination.

SAIFI compliance

The SAIFI quality threshold performance is as follows:

$$\frac{SAIFI_{ASSESS,2016}}{SAIFI_{LIMIT}} \leq 1$$

The SAIFI Reliability Limit for the 2015/16 Assessment Period is:

$$SAIFI_{LIMIT} = 3.77$$

In 2015/16 Assessment Period, Eastland's SAIFI was 2.88 and therefore fell within Quality Thresholds. As a result Eastland complies with clause 9.1(a) of the Determination.

$SAIFI_{2016}$ Reliability Assessment = $\frac{2.88}{3.77} = 0.76 < 1$

The SAIFI Reliability Assessment for the two preceding periods were:

$SAIFI_{2015}$ Reliability Assessment = $\frac{3.98}{4.26} = 0.93 < 1$

$SAIFI_{2014}$ Reliability Assessment = $\frac{2.67}{4.26} = 0.63 < 1$

As a result, Eastland complies with clause 9.1(b) of the Determination.

6.2 Procedures and policies for recording SAIDI and SAIFI

As required under clause 11.5(e) of the Determination, the policies and procedures used by Eastland for recording the SAIDI and SAIFI statistics for the assessment period are described below.

Procedures

Connection Connectivity:

- Individual network connections are linked to a specific distribution transformer via GIS and ICP Billing system data outputs.
- Connection information and network connectivity is updated in GIS and ICP Billing systems from Network Alteration Application forms and/or as built Network Alteration data returns.
- GIS connection counts per network segment are updated and reviewed against ICP Billing system data six monthly.
- The process of Outage Notification to energy retailers provides an audit of connection and connectivity data accuracy.
- **Responsibility:** Project Engineers and Information Manager.

Interruption Data Capture:

- A Supply Interruption Data Input Form is completed for all notifiable outages. Data is captured in accordance with the definitions and requirements of the Electricity Distribution Information Disclosure Determination 2012, Electricity Distribution Services Default Price-Quality Path Determination 2012 and Reliability Performance Measurement Manual 1994 (and updates).
- **Responsibility:** System Operator

Interruption Data Analysis and Reporting:

- Interruption data entered into Outage Database and used for internal and external reporting.
- **Responsibility**: GM Electricity Operations

Policies

- Collection and analysis of interruption data is to be completed in accordance with Electricity Distribution Information Disclosure Determination 2012, Electricity Distribution Services Default Price-Quality Path Determination 2015 and Reliability Performance Measurement Manual 1994 (and updates).
- Monthly comparison of actual interruption performance with Asset Management Plan and Statement of Corporate Intent targets reported to and reviewed by the Board of Directors.
- Annual audits are undertaken on Connectivity, Interruption data capture and reporting processes to determine the accuracy and compliance of deliverables.

6.3 Major Event Day causes

09/07/2015 – A severe snowstorm caused extensive damage across sub-transmission and distribution networks. Repairs were delayed by remote locations and Council imposed road closures. The vast majority of faults and damage on this day were the result of snow laden trees contacting lines or falling on network assets.

The summed minutes of all interruptions on this day resulted in an assessed SAIDI value in excess of the Unplanned Boundary Value.

10/07/2015 – The severe snowstorm continued from 09/07/2015 and caused further damage to sub-transmission and distribution networks. For the second day in a row, repairs were delayed by Council imposed road closures. Snow loading on the 110kV Tuai-Gisborne transmission circuits led to phase clashes, tripped breakers, and resulted in the total loss of supply to Gisborne; this event alone accounted for both the SAIDI and SAIFI boundaries being exceeded.

The summed minutes of all interruptions on this day resulted in an assessed SAIDI value in excess of the SAIDI Unplanned Boundary Value. The summed number of ICPs whose supply was interrupted on this day also resulted in an assessed SAIFI which exceeded the SAIFI Unplanned Boundary Value.

21/09/2015 – Extremely intense rainfall led to heavy flooding in parts of the network. Most of the damage and minutes were recorded on seven particular feeders; damage was particularly severe in the Wairoa region. Repairs were delayed by Council imposed road closures.

The summed minutes of all interruptions on this day resulted in an assessed SAIDI value in excess of the Unplanned Boundary Value.

7 Restructuring of Prices

Eastland did not restructure any prices during the Assessment Period.

8 Transfer of Transmission Assets with Transpower

Eastland did not receive a transfer of transmission assets from Transpower, nor did it transfer system fixed assets to Transpower.

9 Amalgamation or Merger

Eastland did not enter into an amalgamation or merger during the Assessment Period.

10 Major Transactions

Eastland did not enter into any major transactions during the Assessment Period.

11 Auditor's Report

INDEPENDENT AUDITOR'S REPORT

Deloitte.

INDEPENDENT ASSURANCE REPORT
TO THE DIRECTORS OF EASTLAND NETWORK LIMITED AND TO THE COMMERCE COMMISSION

The Auditor-General is the auditor of Eastland Network Limited (the company). The Auditor-General has appointed me, Trevor Deed, using the staff and resources of Deloitte, to provide an opinion, on her behalf, on whether the Annual Compliance Statement for the year ended on 31 March 2016 on pages 4 to 9 and 13 to 23 has been prepared, in all material respects, with the Electricity Distribution Services Default Price-Quality Path Determination 2015 (the Determination).

Directors' responsibilities for the Annual Compliance Statement

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

Our responsibility for the Annual Compliance Statement

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

Basis of opinion

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

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

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

In assessing the disclosures about compliance with the price path in clause 8 of the Determination for the assessment period ended on 31 March 2016, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 4 to 9 and 13 to 23 of the Annual Compliance Statement.

In assessing the disclosures about compliance with the quality standards in clause 9 of the Determination for the assessment period ended on 31 March 2016, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 4 to 5 and 13 to 23 of the Annual Compliance Statement.

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

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

Use of this report

This independent assurance report solely for the directors of the company and for the Commerce Commission for the purpose of providing those parties with reasonable assurance about whether the

Deloitte.

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

Scope and inherent limitations

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

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

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

Independence and quality control

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

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

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

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

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

Opinion

In our opinion:

- As far as appears from an examination, the information used in the preparation of the Annual Compliance statement has been properly extracted from the company's accounting and other records, and has been sourced, where appropriate, from its financial and non-financial systems; and

- The Annual Compliance Statement of company for the year ended on 31 March 2016, has been prepared, in all material respects, in accordance with the Determination.

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

Trevor Deed
Deloitte
On behalf of the Auditor-General
Wellington, New Zealand
25 May 2016

12 Price Path Threshold Supporting Calculations

12.1 Notional revenue for the assessment period

Notional revenue ($NR_{2015/16}$) for the period from 1 April 2015 to 31 March 2016 is calculated in accordance with the following formula:

$$NR_{2015/16} = \sum DP_{i,2015/16} Q_{i,2013/14}$$

Definitions:

$NR_{2015/16}$ = The Allowable Notional Revenue for the period of 1 April 2015 to 31 March 2016.

$DP_{i,2015/16}$ = The Eastland distribution prices that applied during the Assessment Period 1 April 2015 to 31 March 2016.

$Q_{i,2013/14}$ = The Eastland quantities that applied for the pricing period 1 April 2013 to 31 March 2014.

The calculation can be shown as follows:

Notional Revenue ($NR_{2015/16}$)	$\sum DP_{i,2015/16} Q_{i,2013/14}$	22,841

12.2 Allowable notional revenue for the assessment period

The allowable notional revenue ($ANR_{2015/16}$) for the period from 1 April 2015 to 31 March 2016 is calculated in accordance with the following formula:

$$ANR_{2015/16} = \frac{MAR_{2015/16}}{\Delta D}$$

Definitions:

$ANR_{2015/16}$ = The Allowable Notional Revenue for the period of 1 April 2015 to 31 March 2016.

$MAR_{2015/16}$ = The Maximum Allowable Revenue for the period of 1 April 2015 to 31 March 2016 as prescribed in Schedule 1 of the Electricity Distribution Services Default Price-Quality Path Determination 2015.

ΔD = The change in constant price revenue specified in Schedule 1 of the Electricity Distribution Services Default Price-Quality Path Determination 2015.

The calculation can be shown as follows:

$MAR_{2015/16}$	22,732
Divided by ΔD	0.9947
Allowable Notional Revenue ($ANR_{2015/16}$)	22,853

12.3 Pass-through cost variance to forecast

As required by clause 11.1(b)(ii) of the Determination, the following discusses the differences between the forecasted pass through costs that were used when Eastland set prices and the actual amounts during the Assessment Period.

The forecasted and actual Pass-through costs are as follows:

Pass-through cost	Forecast	Actual	Difference
Territorial Rates	213	239	(26)
Commerce Act, EA & EGCC	162	111	51
Total	375	350	25

Variance explanation:

- **Territorial rates** – The difference between forecast and actual is minor.
- **Commerce Act, EA & EGCC Levies** – The difference between forecast and actual is not material.

The forecasted and actual Recoverable costs are as follows:

Recoverable costs	Forecast	Actual	Difference
Transpower Connection & Interconnection Charges	5,493	5,499	(6)
Transpower New Investment Contract	116	108	8
Avoided Transmission	3,808	4,420	(612)
Total	9,417	10,027	(610)

Variance explanation:

- **Transpower Charges** – Forecast figures used the amounts notified by Transpower in their Transmission charge notice, consequently actual figures are very similar those budgeted.

- **Avoided Transmission** – Generation output during peaks was much higher than expected resulting in a variance of $140K to budget. The budgeted value of ACOT in relation to the acquisition of Transpower assets was estimated based on the prior year charges, however Transpower later advised the actual value of ACOT to be $203K higher than budgeted.

12.4 Quantities for period from 1 April 2013 to 31 March 2014

				2013/14	
Price Category	Notes	Consumer Group	Charge Type	ICPs	kWh
Domestic					
PDH0030		Domestic	Fixed Daily Charge	13,692	
PDH0030		Domestic	Consumption Uncontrolled		58,028,901
PDH0030		Domestic	Consumption Controlled		24,425,218
PDH0030		Domestic	Consumption Night		27,513
PDL0030		Domestic	Fixed Daily Charge	6,102	
PDL0030		Domestic	Consumption Uncontrolled		27,434,633
PDL0030		Domestic	Consumption Controlled		9,841,720
PDL0030		Domestic	Consumption Night		44,287

				2013/14	
Price Category		Consumer Group	Charge Type	ICPs	kWh
Non-Domestic - High Density					
PNH0003	Mainly	Low Capacity (0 to 3kVA)	Fixed Daily Charge	132	
PNH0003	street	Low Capacity (0 to 3kVA)	Capacity Charge		
PNH0003	lighting	Low Capacity (0 to 3kVA)	Demand Charge		
PNH0003	(protecti	Low Capacity (0 to 3kVA)	Consumption Uncontrolled		636,991
PNH0003	ve	Low Capacity (0 to 3kVA)	Consumption Controlled		
PNH0003	circuits)	Low Capacity (0 to 3kVA)	Consumption Night		
PNH0030	Holiday	Demand (0 to 30kVA)	Fixed Daily Charge	1,619	
PNH0030	homes,	Demand (0 to 30kVA)	Capacity Charge		
PNH0030	shearers	Demand (0 to 30kVA)	Demand Charge		
PNH0030	quarters	Demand (0 to 30kVA)	Consumption Uncontrolled		20,455,476
PNH0030	& small	Demand (0 to 30kVA)	Consumption Controlled		911,093
PNH0030	business	Demand (0 to 30kVA)	Consumption Night		35,435
PNH0100		Demand (31 to 100kVA)	Fixed Daily Charge	268	
PNH0100		Demand (31 to 100kVA)	Capacity Charge		
PNH0100		Demand (31 to 100kVA)	Demand Charge		
PNH0100		Demand (31 to 100kVA)	Consumption Uncontrolled		20,571,898
PNH0100		Demand (31 to 100kVA)	Consumption Controlled		388,303
PNH0100		Demand (31 to 100kVA)	Consumption Night		28,458
PNH0300		Demand (101 to 300kVA)	Fixed Daily Charge	65	
PNH0300		Demand (101 to 300kVA)	Capacity Charge		
PNH0300		Demand (101 to 300kVA)	Demand Charge		
PNH0300		Demand (101 to 300kVA)	Consumption Uncontrolled		14,189,768
PNH0300		Demand (101 to 300kVA)	Consumption Controlled		14,426
PNH0300		Demand (101 to 300kVA)	Consumption Night		0
PTH0300		TOU - Demand (201-300kVA)	Fixed Daily Charge	4	
PTH0300		TOU - Demand (201-300kVA)	Capacity Charge		
PTH0300		TOU - Demand (201-300kVA)	Demand Charge		
PTH0300		TOU - Demand (201-300kVA)	Consumption Evening Peak		307,248
PTH0300		TOU - Demand (201-300kVA)	Consumption Morning Peak		448,127
PTH0300		TOU - Demand (201-300kVA)	Consumption Off Peak		598,049
PTH0300		TOU - Demand (201-300kVA)	Consumption Night		389,220
PNH0500		TOU - Demand (301-500kVA)	Fixed Daily Charge	15	
PNH0500		TOU - Demand (301-500kVA)	Capacity Charge		
PNH0500		TOU - Demand (301-500kVA)	Demand Charge		
PNH0500		TOU - Demand (301-500kVA)	Consumption Evening Peak		1,283,729
PNH0500		TOU - Demand (301-500kVA)	Consumption Morning Peak		2,157,144
PNH0500		TOU - Demand (301-500kVA)	Consumption Off Peak		2,830,641
PNH0500		TOU - Demand (301-500kVA)	Consumption Night		2,063,515
PNH1000		TOU - Demand (501-1000kVA)	Fixed Daily Charge	19	
PNH1000		TOU - Demand (501-1000kVA)	Capacity Charge		
PNH1000		TOU - Demand (501-1000kVA)	Demand Charge		
PNH1000		TOU - Demand (501-1000kVA)	Consumption Evening Peak		3,696,846
PNH1000		TOU - Demand (501-1000kVA)	Consumption Morning Peak		5,418,178
PNH1000		TOU - Demand (501-1000kVA)	Consumption Off Peak		7,530,763
PNH1000		TOU - Demand (501-1000kVA)	Consumption Night		6,350,473
PNH4500		TOU - Demand (1001-4500kVA)	Fixed Daily Charge	1	
PNH4500		TOU - Demand (1001-4500kVA)	Capacity Charge		
PNH4500		TOU - Demand (1001-4500kVA)	Demand Charge		
PNH4500		TOU - Demand (1001-4500kVA)	Consumption Evening Peak		1,268,011
PNH4500		TOU - Demand (1001-4500kVA)	Consumption Morning Peak		1,510,752
PNH4500		TOU - Demand (1001-4500kVA)	Consumption Off Peak		2,301,010
PNH4500		TOU - Demand (1001-4500kVA)	Consumption Night		2,455,468
PNH6500		TOU - Demand (4501-6500kVA)	Fixed Daily Charge	1	
PNH6500		TOU - Demand (4501-6500kVA)	Capacity Charge		
PNH6500		TOU - Demand (4501-6500kVA)	Demand Charge		
PNH6500		TOU - Demand (4501-6500kVA)	Consumption Evening Peak		3,825,326
PNH6500		TOU - Demand (4501-6500kVA)	Consumption Morning Peak		5,348,427
PNH6500		TOU - Demand (4501-6500kVA)	Consumption Off Peak		7,366,025
PNH6500		TOU - Demand (4501-6500kVA)	Consumption Night		7,624,270

				2013/14	
Price Category		Consumer Group	Charge Type	ICPs	kWh
Non-Domestic - Low Density					
PNL0003	Mainly	Low Capacity (0 to 3kVA)	Fixed Daily Charge	112	
PNL0003	street	Low Capacity (0 to 3kVA)	Capacity Charge		
PNL0003	lighting	Low Capacity (0 to 3kVA)	Demand Charge		
PNL0003	(protecti	Low Capacity (0 to 3kVA)	Consumption Uncontrolled		269,411
PNL0003	ve	Low Capacity (0 to 3kVA)	Consumption Controlled		
PNL0003	circuits)	Low Capacity (0 to 3kVA)	Consumption Night		
PNL0030	Holiday	Demand (0 to 30kVA)	Fixed Daily Charge	3,309	
PNL0030	homes,	Demand (0 to 30kVA)	Capacity Charge		
PNL0030	shearers	Demand (0 to 30kVA)	Demand Charge		
PNL0030	quarters	Demand (0 to 30kVA)	Consumption Uncontrolled		15,965,214
PNL0030	& small	Demand (0 to 30kVA)	Consumption Controlled		1,248,802
PNL0030	business	Demand (0 to 30kVA)	Consumption Night		79,540
PNL0100		Demand (31 to 100kVA)	Fixed Daily Charge	84	
PNL0100		Demand (31 to 100kVA)	Capacity Charge		
PNL0100		Demand (31 to 100kVA)	Demand Charge		
PNL0100		Demand (31 to 100kVA)	Consumption Uncontrolled		4,129,371
PNL0100		Demand (31 to 100kVA)	Consumption Controlled		156,482
PNL0100		Demand (31 to 100kVA)	Consumption Night		11,797
PNL0300		Demand (101 to 300kVA)	Fixed Daily Charge	13	
PNL0300		Demand (101 to 300kVA)	Capacity Charge		
PNL0300		Demand (101 to 300kVA)	Demand Charge		
PNL0300		Demand (101 to 300kVA)	Consumption Uncontrolled		1,161,669
PNL0300		Demand (101 to 300kVA)	Consumption Controlled		745
PNL0300		Demand (101 to 300kVA)	Consumption Night		0
PTL0300		TOU - Demand (201-300kVA)	Fixed Daily Charge	1	
PTL0300		TOU - Demand (201-300kVA)	Capacity Charge		
PTL0300		TOU - Demand (201-300kVA)	Demand Charge		
PTL0300		TOU - Demand (201-300kVA)	Consumption Evening Peak		1,429
PTL0300		TOU - Demand (201-300kVA)	Consumption Morning Peak		39,823
PTL0300		TOU - Demand (201-300kVA)	Consumption Off Peak		42,158
PTL0300		TOU - Demand (201-300kVA)	Consumption Night		1,808
PNL0500		TOU - Demand (301-500kVA)	Fixed Daily Charge	3	
PNL0500		TOU - Demand (301-500kVA)	Capacity Charge		
PNL0500		TOU - Demand (301-500kVA)	Demand Charge		
PNL0500		TOU - Demand (301-500kVA)	Consumption Evening Peak		200,998
PNL0500		TOU - Demand (301-500kVA)	Consumption Morning Peak		301,964
PNL0500		TOU - Demand (301-500kVA)	Consumption Off Peak		427,360
PNL0500		TOU - Demand (301-500kVA)	Consumption Night		305,396
PNL1000		TOU - Demand (501-1000kVA)	Fixed Daily Charge	1	
PNL1000		TOU - Demand (501-1000kVA)	Capacity Charge		
PNL1000		TOU - Demand (501-1000kVA)	Demand Charge		
PNL1000		TOU - Demand (501-1000kVA)	Consumption Evening Peak		120,624
PNL1000		TOU - Demand (501-1000kVA)	Consumption Morning Peak		220,939
PNL1000		TOU - Demand (501-1000kVA)	Consumption Off Peak		281,673
PNL1000		TOU - Demand (501-1000kVA)	Consumption Night		156,229
PNL4500		TOU - Demand (1001-4500kVA)	Fixed Daily Charge	1	
PNL4500		TOU - Demand (1001-4500kVA)	Capacity Charge		
PNL4500		TOU - Demand (1001-4500kVA)	Demand Charge		
PNL4500		TOU - Demand (1001-4500kVA)	Consumption Evening Peak		2,013,760
PNL4500		TOU - Demand (1001-4500kVA)	Consumption Morning Peak		3,255,126
PNL4500		TOU - Demand (1001-4500kVA)	Consumption Off Peak		4,357,489
PNL4500		TOU - Demand (1001-4500kVA)	Consumption Night		3,598,382
PNL6500		TOU - Demand (4501-6500kVA)	Fixed Daily Charge		
PNL6500		TOU - Demand (4501-6500kVA)	Capacity Charge		
PNL6500		TOU - Demand (4501-6500kVA)	Demand Charge		
PNL6500		TOU - Demand (4501-6500kVA)	Consumption Evening Peak		
PNL6500		TOU - Demand (4501-6500kVA)	Consumption Morning Peak		
PNL6500		TOU - Demand (4501-6500kVA)	Consumption Off Peak		
PNL6500		TOU - Demand (4501-6500kVA)	Consumption Night		

				2013/14	
Price Category		Consumer Group	Charge Type	ICPs	Wh
Generation					
PNG0500		Assessed Capacity (301 to 500kVA)		0	
PNG1000		Assessed Capacity (501 to 1000kVA)		6	
PNG4500		Assessed Capacity (1001 to 4500kVA)		1	
PNG6500		Assessed Capacity (4501 to 6500kVA)		1	
				25,450	280,155,531

13 Pass-through Balance Supporting Statistics

13.1 Quantities for period from 1 April 2015 to 31 March 2016

			2015/16					
Price Category	Consumer Group	Charge Type	ICPs	kWh	Distribution Charge	Transmission Charge	Pass-through & Recoverable	Total Charge
Domestic								
PDH0030	Domestic	Fixed Daily Charge	13,667		0.1096	0.0375	0.0029	0.15
PDH0030	Domestic	Consumption Uncontrolled		59,117,019	0.108	0.0369	0.003	0.148
PDH0030	Domestic	Consumption Controlled		23,972,519	0.0561	0.0192	0.0015	0.077
PDH0030	Domestic	Consumption Night		25,041	0.014	0.0048	0.0004	0.019
PDL0030	Domestic	Fixed Daily Charge	5,667		0.1096	0.0375	0.0029	0.15
PDL0030	Domestic	Consumption Uncontrolled		26,877,590	0.1258	0.0435	0.0034	0.173
PDL0030	Domestic	Consumption Controlled		9,301,777	0.0679	0.0235	0.0019	0.093
PDL0030	Domestic	Consumption Night		42,373	0.0164	0.0056	0.0004	0.022

			2015/16					
Price Category	Consumer Group	Charge Type	ICPs	kWh	Distribution Charge	Transmission Charge	Pass-through & Recoverable	Total Charge
Non-Domestic - High Density								
PNH0003	Low Capacity (0 to 3kVA)	Fixed Daily Charge	134		0.2732	0.1115	0.0076	0.392
PNH0003	Low Capacity (0 to 3kVA)	Capacity Charge						
PNH0003	Low Capacity (0 to 3kVA)	Demand Charge						
PNH0003	Low Capacity (0 to 3kVA)	Consumption Uncontrolled		686,310	0.0876	0.0441	0.0024	0.134
PNH0003	Low Capacity (0 to 3kVA)	Consumption Controlled		226	0.0569	0.0311	0.0015	0.09
PNH0003	Low Capacity (0 to 3kVA)	Consumption Night			0.0109	0.006	0.0003	0.017
PNH0030	Demand (0 to 30kVA)	Fixed Daily Charge	1,699		1.5364	0.5774	0.042	2.156
PNH0030	Demand (0 to 30kVA)	Capacity Charge						
PNH0030	Demand (0 to 30kVA)	Demand Charge						
PNH0030	Demand (0 to 30kVA)	Consumption Uncontrolled		20,804,655	0.063	0.0317	0.0018	0.097
PNH0030	Demand (0 to 30kVA)	Consumption Controlled		1,043,044	0.041	0.0206	0.0011	0.063
PNH0030	Demand (0 to 30kVA)	Consumption Night		56,354	0.0109	0.0056	0.0003	0.017
PNH0100	Demand (31 to 100kVA)	Fixed Daily Charge	276		4.7814	1.9533	0.1309	6.866
PNH0100	Demand (31 to 100kVA)	Capacity Charge						
PNH0100	Demand (31 to 100kVA)	Demand Charge						
PNH0100	Demand (31 to 100kVA)	Consumption Uncontrolled		20,972,326	0.043	0.0216	0.0012	0.066
PNH0100	Demand (31 to 100kVA)	Consumption Controlled		378,459	0.0279	0.014	0.0008	0.043
PNH0100	Demand (31 to 100kVA)	Consumption Night		222,077	0.0109	0.0056	0.0003	0.017
PNH0300	Demand (101 to 300kVA)	Fixed Daily Charge	65		9.0164	3.6833	0.2467	12.95
PNH0300	Demand (101 to 300kVA)	Capacity Charge						
PNH0300	Demand (101 to 300kVA)	Demand Charge						
PNH0300	Demand (101 to 300kVA)	Consumption Uncontrolled		14,372,762	0.0351	0.0176	0.001	0.054
PNH0300	Demand (101 to 300kVA)	Consumption Controlled		32,971	0.0228	0.0114	0.0006	0.035
PNH0300	Demand (101 to 300kVA)	Consumption Night			0.0109	0.006	0.0003	0.017
PTH0300	TOU - Demand (201-300kVA)	Fixed Daily Charge	6		15.0274	6.1388	0.4112	21.58
PTH0300	TOU - Demand (201-300kVA)	Capacity Charge						
PTH0300	TOU - Demand (201-300kVA)	Demand Charge						
PTH0300	TOU - Demand (201-300kVA)	Consumption Evening Peak		390,696	0.0331	0.0157	0.0009	0.05
PTH0300	TOU - Demand (201-300kVA)	Consumption Morning Peak		543,886	0.031	0.0146	0.0008	0.046
PTH0300	TOU - Demand (201-300kVA)	Consumption Off Peak		701,835	0.0244	0.0115	0.0007	0.037
PTH0300	TOU - Demand (201-300kVA)	Consumption Night		505,505	0.0125	0.0056	0.0003	0.018
PNH0500	TOU - Demand (301-500kVA)	Fixed Daily Charge	15		16.94	6.9201	0.4635	24.32
PNH0500	TOU - Demand (301-500kVA)	Capacity Charge						
PNH0500	TOU - Demand (301-500kVA)	Demand Charge						
PNH0500	TOU - Demand (301-500kVA)	Consumption Evening Peak		1,267,452	0.0331	0.0157	0.0009	0.05
PNH0500	TOU - Demand (301-500kVA)	Consumption Morning Peak		2,139,892	0.031	0.0146	0.0008	0.046
PNH0500	TOU - Demand (301-500kVA)	Consumption Off Peak		2,829,202	0.0244	0.0115	0.0007	0.037
PNH0500	TOU - Demand (301-500kVA)	Consumption Night		2,123,049	0.0125	0.0056	0.0003	0.018
PNH1000	TOU - Demand (501-1000kVA)	Fixed Daily Charge	20		26.2295	10.715	0.7178	37.66
PNH1000	TOU - Demand (501-1000kVA)	Capacity Charge						
PNH1000	TOU - Demand (501-1000kVA)	Demand Charge						
PNH1000	TOU - Demand (501-1000kVA)	Consumption Evening Peak		4,119,458	0.0331	0.0157	0.0009	0.05
PNH1000	TOU - Demand (501-1000kVA)	Consumption Morning Peak		5,875,143	0.031	0.0146	0.0008	0.046
PNH1000	TOU - Demand (501-1000kVA)	Consumption Off Peak		7,731,589	0.0243	0.0115	0.0008	0.037
PNH1000	TOU - Demand (501-1000kVA)	Consumption Night		7,033,948	0.0125	0.0056	0.0003	0.018
PNH4500	TOU - Demand (1001-4500kVA)	Fixed Daily Charge	1		65.5739	26.7875	1.7946	94.16
PNH4500	TOU - Demand (1001-4500kVA)	Capacity Charge						
PNH4500	TOU - Demand (1001-4500kVA)	Demand Charge						
PNH4500	TOU - Demand (1001-4500kVA)	Consumption Evening Peak		1,342,435	0.0331	0.0157	0.0009	0.05
PNH4500	TOU - Demand (1001-4500kVA)	Consumption Morning Peak		1,879,005	0.031	0.0146	0.0008	0.046
PNH4500	TOU - Demand (1001-4500kVA)	Consumption Off Peak		2,545,164	0.0244	0.0115	0.0007	0.037
PNH4500	TOU - Demand (1001-4500kVA)	Consumption Night		2,515,878	0.0125	0.0056	0.0003	0.018
PNH6500	TOU - Demand (4501-6500kVA)	Fixed Daily Charge	1	365	99.7952	40.7674	2.7311	143.3
PNH6500	TOU - Demand (4501-6500kVA)	Capacity Charge						
PNH6500	TOU - Demand (4501-6500kVA)	Demand Charge						
PNH6500	TOU - Demand (4501-6500kVA)	Consumption Evening Peak		2,566,162	0.0331	0.0157	0.0009	0.05
PNH6500	TOU - Demand (4501-6500kVA)	Consumption Morning Peak		4,122,681	0.031	0.0146	0.0008	0.046
PNH6500	TOU - Demand (4501-6500kVA)	Consumption Off Peak		5,021,790	0.0244	0.0115	0.0007	0.037
PNH6500	TOU - Demand (4501-6500kVA)	Consumption Night		4,588,701	0.0125	0.0056	0.0003	0.018

			2015/16					
Price Category	Consumer Group	Charge Type	ICPs	kWh	Distribution Charge	Transmission Charge	Pass-through & Recoverable	Total Charge
Non-Domestic - Low Density								
PNL0003	Low Capacity (0 to 3kVA)	Fixed Daily Charge	119		0.2732	0.1115	0.0076	0.392
PNL0003	Low Capacity (0 to 3kVA)	Capacity Charge						
PNL0003	Low Capacity (0 to 3kVA)	Demand Charge						
PNL0003	Low Capacity (0 to 3kVA)	Consumption Uncontrolled		281,226	0.1012	0.0508	0.0029	0.155
PNL0003	Low Capacity (0 to 3kVA)	Consumption Controlled			0.0658	0.0358	0.0145	0.116
PNL0003	Low Capacity (0 to 3kVA)	Consumption Night			0.0127	0.0068	0.0028	0.022
PNL0030	Demand (0 to 30kVA)	Fixed Daily Charge	3,617		1.5364	0.5774	0.042	2.156
PNL0030	Demand (0 to 30kVA)	Capacity Charge						
PNL0030	Demand (0 to 30kVA)	Demand Charge						
PNL0030	Demand (0 to 30kVA)	Consumption Uncontrolled		16,880,553	0.0658	0.033	0.0018	0.101
PNL0030	Demand (0 to 30kVA)	Consumption Controlled		1,560,801	0.0428	0.0215	0.0012	0.066
PNL0030	Demand (0 to 30kVA)	Consumption Night		28,456	0.0127	0.0063	0.0003	0.019
PNL0100	Demand (31 to 100kVA)	Fixed Daily Charge	97		4.7814	1.9533	0.1309	6.866
PNL0100	Demand (31 to 100kVA)	Capacity Charge						
PNL0100	Demand (31 to 100kVA)	Demand Charge						
PNL0100	Demand (31 to 100kVA)	Consumption Uncontrolled		4,365,029	0.0501	0.0251	0.0014	0.077
PNL0100	Demand (31 to 100kVA)	Consumption Controlled		138,335	0.0325	0.0163	0.0009	0.05
PNL0100	Demand (31 to 100kVA)	Consumption Night		74,372	0.0127	0.0063	0.0003	0.019
PNL0300	Demand (101 to 300kVA)	Fixed Daily Charge	17		9.0164	3.6833	0.2467	12.95
PNL0300	Demand (101 to 300kVA)	Capacity Charge						
PNL0300	Demand (101 to 300kVA)	Demand Charge						
PNL0300	Demand (101 to 300kVA)	Consumption Uncontrolled		2,357,322	0.04	0.0201	0.0011	0.061
PNL0300	Demand (101 to 300kVA)	Consumption Controlled			0.026	0.013	0.0007	0.04
PNL0300	Demand (101 to 300kVA)	Consumption Night			0.0127	0.0068	0.0028	0.022
PTL0300	TOU - Demand (201-300kVA)	Fixed Daily Charge	1		15.0274	6.1388	0.4112	21.58
PTL0300	TOU - Demand (201-300kVA)	Capacity Charge						
PTL0300	TOU - Demand (201-300kVA)	Demand Charge						
PTL0300	TOU - Demand (201-300kVA)	Consumption Evening Peak		839	0.0348	0.0163	0.001	0.052
PTL0300	TOU - Demand (201-300kVA)	Consumption Morning Peak		50,614	0.0325	0.0153	0.0009	0.049
PTL0300	TOU - Demand (201-300kVA)	Consumption Off Peak		51,293	0.0255	0.0121	0.0007	0.038
PTL0300	TOU - Demand (201-300kVA)	Consumption Night		1,946	0.0131	0.0059	0.0003	0.019
PNL0500	TOU - Demand (301-500kVA)	Fixed Daily Charge	3		16.94	6.9201	0.4635	24.32
PNL0500	TOU - Demand (301-500kVA)	Capacity Charge						
PNL0500	TOU - Demand (301-500kVA)	Demand Charge						
PNL0500	TOU - Demand (301-500kVA)	Consumption Evening Peak		183,604	0.0348	0.0163	0.001	0.052
PNL0500	TOU - Demand (301-500kVA)	Consumption Morning Peak		261,045	0.0325	0.0153	0.0009	0.049
PNL0500	TOU - Demand (301-500kVA)	Consumption Off Peak		353,068	0.0255	0.0121	0.0007	0.038
PNL0500	TOU - Demand (301-500kVA)	Consumption Night		255,259	0.0131	0.0059	0.0003	0.019
PNL1000	TOU - Demand (501-1000kVA)	Fixed Daily Charge	1		26.2295	10.715	0.7178	37.66
PNL1000	TOU - Demand (501-1000kVA)	Capacity Charge						
PNL1000	TOU - Demand (501-1000kVA)	Demand Charge						
PNL1000	TOU - Demand (501-1000kVA)	Consumption Evening Peak		176,885	0.0348	0.0163	0.001	0.052
PNL1000	TOU - Demand (501-1000kVA)	Consumption Morning Peak		262,733	0.0325	0.0153	0.0009	0.049
PNL1000	TOU - Demand (501-1000kVA)	Consumption Off Peak		349,557	0.0255	0.0121	0.0007	0.038
PNL1000	TOU - Demand (501-1000kVA)	Consumption Night		231,386	0.0131	0.0059	0.0003	0.019
PNL4500	TOU - Demand (1001-4500kVA)	Fixed Daily Charge	1		65.5739	26.7876	1.7946	94.16
PNL4500	TOU - Demand (1001-4500kVA)	Capacity Charge						
PNL4500	TOU - Demand (1001-4500kVA)	Demand Charge						
PNL4500	TOU - Demand (1001-4500kVA)	Consumption Evening Peak		2,299,869	0.0348	0.0163	0.001	0.052
PNL4500	TOU - Demand (1001-4500kVA)	Consumption Morning Peak		3,392,476	0.0325	0.0153	0.0009	0.049
PNL4500	TOU - Demand (1001-4500kVA)	Consumption Off Peak		4,441,412	0.0255	0.0121	0.0007	0.038
PNL4500	TOU - Demand (1001-4500kVA)	Consumption Night		3,740,800	0.0131	0.0059	0.0003	0.019
PNL6500	TOU - Demand (4501-6500kVA)	Fixed Daily Charge			99.9122	40.7674	2.6141	143.3
PNL6500	TOU - Demand (4501-6500kVA)	Capacity Charge						
PNL6500	TOU - Demand (4501-6500kVA)	Demand Charge						
PNL6500	TOU - Demand (4501-6500kVA)	Consumption Evening Peak			0.0348	0.0163	0.0009	0.052
PNL6500	TOU - Demand (4501-6500kVA)	Consumption Morning Peak			0.0326	0.0153	0.0009	0.049
PNL6500	TOU - Demand (4501-6500kVA)	Consumption Off Peak			0.0255	0.0121	0.0007	0.038
PNL6500	TOU - Demand (4501-6500kVA)	Consumption Night			0.0131	0.0059	0.0003	0.019

			2015/16					
Price Category	Consumer Group	Charge Type	ICPs	kWh	Distribution Charge	Transmission Charge	Pass-through & Recoverable	Total Charge
Generation								
PNG0500	Assessed Capacity (301 to 500kVA)		0	0	16.9407	0	0	16.94
PNG1000	Assessed Capacity (501 to 1000kVA)		6	365	26.2295	0	0.7178	26.95
PNG4500	Assessed Capacity (1001 to 4500kVA)		1	365	65.5769	0	0	65.58
PNG6500	Assessed Capacity (4501 to 6500kVA)		1	365	99.7997	0	0	99.8
			25,415	279,487,854				

14 Quality Path Supporting Calculations

14.1 Schedule 4A and 5B quality threshold values

As required by clause 11.5(d) of the Determination, the quality threshold values from Schedules 4A, 5B.1, and 5B.2, of the Electricity Distribution Services Default Price-Quality Path Determination 2015 have been summarised below:

Reliability Measure	SAIDI	SAIFI
Limit	274.075	3.529
Cap	274.075	3.529
Target	242.149	3.086
Collar	210.224	2.642
Unplanned Boundary Value	13.065	0.183

14.2 Re-calculations following Transpower asset acquisition

In accordance with clause 11.5(d) of the Determination, the SAIDI and SAIFI Limits, Unplanned Boundary Values, Targets, Caps, and Collars, have been re-calculated following the acquisition of transmission assets from Transpower, which became System Fixed Assets.

Unplanned Boundary Value re-calculations

The re-calculated SAIDI Unplanned Boundary Value was determined in accordance with paragraph 2(a) of the Determination and is as follows:

β_{SAIDI} = 23rd highest SAIDI value in reference dataset (01/04/2004 – 31/3/2014)

$\boldsymbol{\beta_{SAIDI}}$ = 13.3902

The re-calculated SAIFI Unplanned Boundary Value was determined in accordance with paragraph 2(b) of the Determination and is as follows:

β_{SAIFI} = 23rd highest SAIFI value in reference dataset (01/04/2004 – 31/3/2014)

$\boldsymbol{\beta_{SAIFI}}$ = 0.2080

Target

The re-calculated SAIDI Target was determined in accordance with paragraph 3 of the Determination and is as follows:

$$SAIDI_{Target} = \frac{(P_{SAIDI} \times 0.5) + U_{SAIDI}}{10}$$

where:

P_{SAIDI} = Planned sum of SAIDI in 10 year dataset (01/04/2004 – 31/3/2014)

P_{SAIDI} = 639.5284

U_{SAIDI} = Unplanned sum of SAIDI in 10 year dataset (01/04/2004 – 31/3/2014)

U_{SAIDI} = 2,204.7285

$\boldsymbol{SAIDI_{Target}}$ = 252.45

The re-calculated SAIFI Target was determined in accordance with paragraph 4 of the Determination and is as follows:

$$SAIFI_{Target} = \frac{(P_{SAIFI} \times 0.5) + U_{SAIFI}}{10}$$

where:

P_{SAIFI} = Planned sum of SAIFI in 10 year dataset (01/04/2004 – 31/3/2014)

P_{SAIFI} = 3.6736

U_{SAIFI} = Unplanned sum of SAIFI in 10 year dataset (01/04/2004 – 31/3/2014)

U_{SAIFI} = 30.9294

$\boldsymbol{SAIFI_{Target}}$ = 3.28

Reliability Limit and Cap

The re-calculated SAIDI reliability Limit was determined in accordance with paragraph 5(a) of the Determination and is as follows:

$$SAIDI_{Limit} = SAIDI_{Target} + (SAIDI_{Dev} \times \sqrt{365})$$

where:

$SAIDI_{Target}$	=	Is the SAIDI Target re-calculated in accordance with paragraph 3
$SAIDI_{Target}$	=	252.45
$SAIDI_{Dev}$	=	Standard deviation of daily SAIDI values in 10 year dataset (01/04/2004 – 31/3/2014)
$SAIDI_{Dev}$	=	1.7446
$\boldsymbol{SAIDI_{Limit}}$	=	285.78

The re-calculated SAIFI reliability Limit was determined in accordance with paragraph 5(b) of the Determination and is as follows:

$$SAIFI_{Limit} = SAIFI_{Target} + (SAIFI_{Dev} \times \sqrt{365})$$

where:

$SAIFI_{Target}$	=	Is the SAIFI Target re-calculated in accordance with paragraph 4
$SAIFI_{Target}$	=	3.28
$SAIFI_{Dev}$	=	Standard deviation of daily SAIFI values in 10 year dataset (01/04/2004 – 31/3/2014)
$SAIFI_{Dev}$	=	0.0256
$\boldsymbol{SAIFI_{Limit}}$	=	3.77

The SAIDI and SAIFI Caps are equal to the respective SAIDI and SAIFI reliability Limits calculated above.

Collar

The re-calculated SAIDI Collar was determined in accordance with paragraph 5(e) of the Determination and is as follows:

$$SAIDI_{Collar} = SAIDI_{Target} - (SAIDI_{Dev} \times \sqrt{365})$$

where:

$SAIDI_{Target}$	=	Is the SAIDI Target re-calculated in accordance with paragraph 3
$SAIDI_{Target}$	=	252.45
$SAIDI_{Dev}$	=	Standard deviation of daily SAIDI values in 10 year dataset (01/04/2004 – 31/3/2014)
$SAIDI_{Dev}$	=	1.7446
$\boldsymbol{SAIDI_{Collar}}$	=	219.12

The re-calculated SAIFI Collar was determined in accordance with paragraph 5(f) of the Determination and is as follows:

$$SAIFI_{Collar} = SAIFI_{Target} - (SAIFI_{Dev} \times \sqrt{365})$$

where:

$SAIFI_{Target}$	=	Is the SAIFI Target re-calculated in accordance with paragraph 4
$SAIFI_{Target}$	=	3.28
$SAIFI_{Dev}$	=	Standard deviation of daily SAIFI values in 10 year dataset (01/04/2004 – 31/3/2014)
$SAIFI_{Dev}$	=	0.0256
$\boldsymbol{SAIFI_{Collar}}$	=	2.79

Historic transmission asset acquisition data supporting re-calculation

Transmission Asset Outage Data 2004/05 to 2013/14							
Start Date	Name of Asset	Planned/ Unplanned	Customers Interrupted	Customer Minutes	SAIDI	SAIFI	Cause
16/10/2005	Tuai GXP	Planned	383	137,428	5.53	0.02	
5/11/2006	Tuai GXP	Planned	327	107,583	4.32	0.01	
25/11/2007	Tuai CB23 & CB24	Planned	366	137,250	5.47	0.01	Defective Equipment
23/11/2008	Tuai GXP	Planned	378	90,720	3.59	0.01	
29/11/2009	Tuai GXP	Planned	365	131,400	5.18	0.01	
27/11/2010	Tuai GXP	Planned	365	181,770	7.12	0.01	
5/12/2010	Tuai GXP	Planned	366	157,380	6.18	0.01	
24/02/2013	Tuai T15	Planned	361	164,616	6.44	0.01	
2/02/2014	Tuai GXP	Planned	362	192,584	7.57	0.01	
14/10/2004	Tuai CB24	Unplanned	180	23,580	0.95	0.01	Unknown
29/11/2004	Tuai CB24	Unplanned	199	14,925	0.60	0.01	Unknown
20/02/2006	Tuai CB24	Unplanned	199	13,731	0.55	0.01	Unknown
31/10/2007	Tuai T15	Unplanned	366	129,930	5.18	0.01	Wildlife
31/01/2008	CB23 & CB24	Unplanned	366	2,562	0.10	0.01	Defective Equipment
14/10/2009	T1 & T2	Unplanned	4,477	35,816	1.41	0.18	Unknown
29/11/2009	Tuai CB23	Unplanned	189	25,281	1.00	0.01	Defective Equipment
1/02/2010	Tuai CB24	Unplanned	176	2,464	0.10	0.01	Unknown
13/02/2010	Tuai CB24	Unplanned	176	2,560	0.10	0.01	Unknown
1/03/2010	Gis CB152	Unplanned	5,434	67,828	2.67	0.21	Unknown
17/05/2010	T15	Unplanned	365	8,571	0.34	0.01	Defective Equipment
3/12/2010	T15	Unplanned	366	7,476	0.29	0.01	Unknown
3/05/2011	T15	Unplanned	365	12,045	0.47	0.01	Human Error
26/01/2012	GIS T4	Unplanned	20,657	330,042	12.92	0.81	Unknown
4/04/2013	Gis GXP	Unplanned	20,728	470,304	18.48	0.81	Human Error
17/04/2013	Gis GXP	Unplanned	20,726	556,719	21.87	0.81	Human Error
3/01/2014	Tuai CB24	Unplanned	170	4,080	0.16	0.01	Unknown
5/01/2014	Tuai CB24	Unplanned	170	16,150	0.63	0.01	Defective Equipment
19/01/2014	Tuai CB24	Unplanned	170	92,820	3.65	0.01	Defective Equipment
31/03/2014	Gis Tuai 110kV Line	Unplanned	20,726	1,036,290	40.72	0.81	Defective Equipment
		SUM	99,478	4,153,905	163.6	3.91	

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