

Electricity Distribution Services: Default Price-Quality Path Compliance Statement

Assessment period: 1/4/17 – 31/3/18

Powerco Limited

24 May 2018

Disclaimer: This document has been prepared to comply with the Commerce Act (Electricity Distribution Services Default Price-Quality Path) Determination 2015. The information in this document has been prepared with all care and diligence, in good faith. Any reliance on the information contained in this document, actual or purported, is at the user's own risk.

Director's Certificate

I, Paul Callow, being a director of Powerco Limited certify that, having made all reasonable enquiry, to the best of my knowledge and belief, the attached Annual Compliance Statement of Powerco Limited, and related information, prepared for the purposes of the Electricity Distribution Services Default Price-Quality Path Determination 2015 are true and accurate.



Director

20.5.18

Date

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1 Summary

Powerco Limited's electricity distribution business (Powerco) is subject to regulation under the Commerce Act 1986. Pursuant to the requirements of this Act, the Commerce Commission (Commission) has set a default price-quality path (DPP) which applies to all non-exempt Electricity Distribution Businesses (EDBs), including Powerco.

The default price-quality path requirements are set out in the Electricity Distribution Services Default Price-Quality Path Determination 2015 (Determination). During the regulatory period, Powerco must comply with the requirements of the Determination, in particular:

- The price path specified in clause 8; and
- The quality path specified in clause 9.

Clause 11 of the Determination requires Powerco to provide an Annual Compliance Statement (Statement) to the Commission and disclose information relevant to the assessment of its performance against

- Allowable notional revenue (the price path); and
- Prescribed reliability limits for system average interruption duration index (SAIDI) values and system average interruption frequency (SAIFI) values (the quality path).

As required by clause 11.2(a) of the Determination, this Statement confirms that Powerco has complied with the price path in clause 8 of the Determination and the quality standards in clause 9 of the Determination for the 12 month Assessment Period ended 31 March 2018.

Powerco is available to assist the Commission with its review of this Statement and will provide any additional information the Commission may request.

Powerco completed this Statement on 24 May 2018. A copy is available at Powerco's principal office (Powerco, Level 2, 84 Liardet Street, New Plymouth). The Statement is published on Powerco's website (www.Powerco.co.nz) and additional copies can be provided on request.

2 Assessment against the Price Path

Under the Determination, Price is separated into its two component parts:

- The portion attributable to the recovery of pass-through and recoverable costs (referred to as Pass-through prices); and
- The portion attributable to Distribution prices.

Compliance with the Distribution price segment is assessed by comparing the notional revenue¹ that the distribution prices have generated compared against allowable notional revenue.

Pass-through prices include the recovery of pass-through and recoverable costs attributable to the current period and any such costs from prior periods that have not previously been recovered. Pass-through and recoverable costs are defined in the Determination and include transmission costs, avoided cost of transmission, rates and levies. The Determination requires we demonstrate how we recover pass-through and recoverable costs through Pass-through prices.

Section Two of this Statement demonstrates our compliance with the price path and our recovery of pass-through and recoverable costs in pass-through prices.

2.1 Summary of Distribution Pricing Compliance Information

Powerco has complied with the price path for the Assessment Period 1 April 2017 to 31 March 2018 as demonstrated in Table 1.²

For presentation purposes, the Notional Revenue table set out in section 2.3 is an aggregate of the price and quantity information for each price group. More detailed information is contained in Attachment A of this Statement.

Clause 8.3 of the Determination states that to demonstrate compliance with the price path, “the notional revenue of a Non-exempt EDB in an Assessment Period must not exceed the allowable notional revenue for the assessment period.”

As demonstrated by the calculation in Table 1 below, Powerco complies with the price path for the Assessment Period.

Table 1: Demonstrating compliance with the price path

DPP Requirement	NR is less than or equal to ANR
DPP Expression	$NR \leq ANR$
Powerco’s Result (\$000)	$260,092 \leq 260,365$

¹ The revenue is considered ‘notional’ because it is based on quantities that are lagged by two years rather than the quantities for the year in question. This approach ensures that both Allowable Notional Revenue and Notional Revenue can be accurately calculated at the time Powerco sets its distribution prices as quantities are known.

² The figures in the pricing tables are in thousands of dollars. The underlying calculations are based on more detailed numbers (i.e. to more decimal places than shown in this document). This may cause rounding inconsistencies. These inconsistencies do not affect the overall compliance calculations which are based on the more detailed information.

2.2 Analysis of Allowable Notional Revenue

The 2018 Assessment Period is the third assessment period under the current DPP. The detailed calculation of Powerco’s ANR for the 2018 Assessment period is provided in Table 2 (rounded to the nearest \$1000).

Table 2: Calculating Powerco’s Allowable Notional Revenue (ANR)²

Powerco’s Allowable Notional Revenue (ANR)	
ANR ₂₀₁₈ = (∑ DP _{i,2017} , Q _{i,2016} + (ANR ₂₀₁₇ – NR ₂₀₁₇))(1 + ΔCPI ₂₀₁₈)(1 – X)	
Calculation Components	Amount (\$000)
DP _{i,2017} , Q _{i,2016} represents the allowable notional distribution revenue for the assessment period. The distribution price for 2017 assessment period is multiplied with the corresponding quantities for the 2016 assessment period. The resulting product reflects the unadjusted distribution ANR for 2018.	259,193
ANR ₂₀₁₇ -NR ₂₀₁₇ represents the revenue differential adjustment. It is the difference between allowable notional distribution revenue and notional distribution revenue for the prior assessment period.	309
1 + ΔCPI ₂₀₁₈ is where ΔCPI ₂₀₁₈ is the movement in the consumer price index between September 2015 and September 2016.	862
(1-X) is the annual rate of change applicable to non-exempt EDBs as specified in Schedule 2 of the Determination. For Powerco this is set to zero.	0
ANR₂₀₁₈	260,365

2.3 Analysis of Notional Revenue

Calculating Powerco’s Notional Revenue (NR)

Notional Revenue is the product of each distribution price during any part of the Assessment Period and the quantity for each price for the Assessment period ending two years prior corresponding to that distribution price.

A summary of Powerco’s Notional Revenue is included in Table 3 and a more detailed breakdown of how the Notional Revenue of \$260,092,416 has been calculated is provided in Attachment A.

Table 3: Summary of Powerco’s Notional Revenue (NR)

Region	NR by Price Component (\$000)				
	Fixed	Variable	Demand	Non-standard	
Western Region	10,933	84,199	43,024	2,693	140,849
Eastern Region	34,660	67,434	972	16,177	119,243
NR₂₀₁₈	45,593	151,633	43,996	18,870	260,092

2.4 Determining Distribution prices and Pass-through prices

The total price is comprised of distribution prices and pass-through prices. Distribution price is the portion of total price excluding the pass-through price. The pass-through price is the portion of total price attributable to pass-through and recoverable costs.

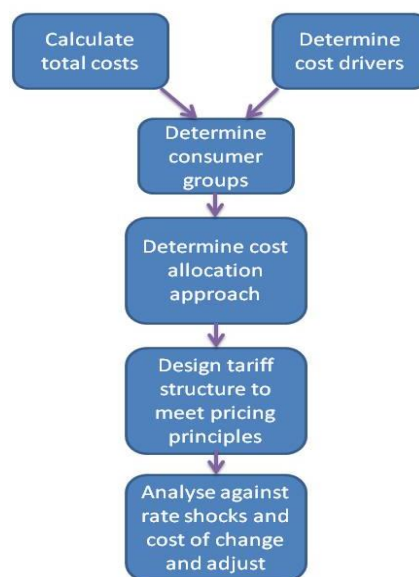
Determining distribution and pass-through prices

Powerco's pricing methodology³ provides a detailed overview of the processes involved in price setting and is available on Powerco's website. The methodology used to calculate the distribution prices and allocate distribution prices and pass-through prices to tariff groups is summarised in figure one below.

Distribution prices are capped by the Allowable Notional Revenue for the Assessment Period. Pass-through prices are a combination of recoverable and pass-through costs for the current period and may include the pass-through balance from prior periods.

The overview of the pricing process included in Figure 1 illustrates how we allocate costs between tariff groups.

Figure 1: Overview of the pricing process



A description of the pricing process is:

- Estimate total costs for the pricing period. These include:
 - pass-through and recoverable costs for the Assessment Period (including any applicable pass-through balance from prior periods); and
 - distribution costs (including, capital costs, operating costs, maintenance costs and administration costs).
- Determine the key drivers of network expenditure;
- Determine suitable groupings of connections across each network based on similarities of network and consumer characteristics such as geography, rural/urban connection density, mains size, protection rating and/or transformer capacity;
- Determine the allocation of costs (such as operating costs, transmission costs and cost of capital) across each network and tariff category;

³ Refer <http://www.powerco.co.nz/media/1927/powerco-electricity-pricing-methodology-2018.pdf>

- Calculate distribution prices based on the relevant cost allocations, ensuring compliance with the relevant legal requirements and Allowable Notional Revenue cap; and
- Assess the pricing structure to take account of the effect of rate shocks and adjust as needed.

Specifically, the process to determine Pass-through prices is:

- Estimate total pass-through costs for the relevant pricing year (including any applicable pass-through balance);
- Forecast chargeable quantities for the same period based on growth assumptions used for budget setting; and
- Calculate pass-through prices to align pass-through revenue to pass-through costs.

At the end of the relevant pricing year we determine the actual chargeable quantities and apply these to the pass-through prices to determine the actual pass-through revenue for the pricing year. The pass-through revenue is then compared against the actual pass-through costs to determine the pass-through balance. This is explained further in section 2.5 of this document.

The nature and timing of the pricing process means that prices are set for the following pricing year before the end of the current pricing year. This means that the pass-through balance for the current year cannot be accurately determined at the time prices are set. Therefore any pass-through balance for the current year is not recovered until the second subsequent year. For example, any pass-through balance determined in the 2016 Assessment Period will not be recovered through pass-through pricing until the 2018 Assessment Period (and pricing period) beginning 1 April 2017. To account for this delay in recovery, a time-value of money (TVM) adjustment is applied to the pass-through balance.

As noted above, pass-through prices for the Assessment Period are the sum of:

- Estimated pass-through and recoverable costs for the assessment period in question; and
- Any under or over- recovery of pass-through costs and recoverable costs from a prior assessment period as reflected by the pass-through balance.

The portion of pass-through prices attributable to the current Assessment Period and the portion attributed to prior Assessment Periods is summarised in Table 4.

Table 4: Portion of pass-through prices relating to costs for this period and carried forward from prior assessment periods

Pass-through and recoverable costs (\$000)	Forecast current assessment period	Carried forward from Prior assessment periods	Total pass-through costs to be recovered in Pass-through prices
Pass-through costs	3,453		
Recoverable costs	125,524		
Total pass-through and recoverable costs included in pass-through prices for the 2018 assessment period	128,977	(2,365)⁴	126,612

⁴ Equals the PTB₂₀₁₆ with two periods of TVM adjustment.

The portion of distribution prices and pass-through prices included in pricing for the 2018 Assessment Period

At the beginning of each Assessment Period, Powerco publishes the overall price, and the portion that relates to pass-through prices and the portion that is distribution prices. This publication is available on our website and included for convenience in Attachment B.

Forecast v Actual pass-through and recoverable costs

As noted above, when setting the pass-through prices, Powerco forecasts pass-through and recoverable costs for the period. These costs and any known pass-through balance from prior periods are included as pass-through prices. At the end of the Assessment period, the actual pass-through and recoverable costs for the period are applied to actual quantities. Any under or over-recovery of pass-through and recoverable costs that has occurred due to a variance in cost or quantities forecast, is rolled into future periods in the pass-through balance.

Table 5 compares the forecast pass-through and recoverable costs, used to set pass-through prices for the Assessment Period, to the actual pass-through and recoverable costs applied to determine the closing pass-through balance.

Table 5: Actual and Forecast pass-through and recoverable costs

Pass-through and Recoverable costs (\$000)	Actual	Forecast	Variance
Rates	2,039	1,793	(246)
Levies	1,627	1,660	33
Transpower connection and interconnection charges	106,933	106,952	18.7
Transpower new investment agreements	6,572	6,637	65
Distributed Generation Allowance (ACOT)	10,603	10,525	(78)
Capex Wash-up Adjustment	(675)	(675)	0
Quality Incentive Allowance	2,084	2,084	0
Total	129,184	128,977	(207)

Costs for the Assessment Period are forecast by Powerco in November as part of the company’s annual budgeting process. These budgeted costs are used to estimate the forecast pass-through and recoverable costs included in pass-through prices for the period.

When these costs are forecast, Transpower costs and Distributed Generation costs are mostly known. Rates and levies are difficult to accurately forecast as any changes to current levies or rate charges are not known at the time of setting prices. Levies are forecast based on historic costs and any indication of increased or decreased work plans from the Commerce Commission or Electricity Authority. Rates are forecast based on current invoicing.

Actual costs are extracted from Powerco's financial system for the Assessment Period. For the 2018 Assessment Period the actual pass-through and recoverable costs incurred are similar in total to that forecast.

2.5 Pass-Through Balance

Calculating the pass-through balance

The Determination separates price into Distribution price and pass-through price. The Determination further introduces a pass-through balance. This is the mechanism used to facilitate the recovery of pass-through and recoverable costs through the pass-through price.

The pass-through balance represents the unrecovered balance of the difference between forecast and actual pass-through costs and recoverable costs for prior years. This balance is adjusted for the time-value of money at the cost of debt specified by the Commission. The pass-through balance may be positive or negative in an assessment period.

When setting prices, pass-through and recoverable costs attributable to the period are forecast based on both known and expected costs. These costs are then applied to the forecast quantities for the pricing period. Both costs and quantities used are those applied in Powerco's budgeting process. The pricing period is the same as the assessment period.

At the end of the pricing period, actual pass-through and recoverable costs, and actual quantities for the period are known. Any difference between forecast and actual results is managed through the Pass-Through balance. The movement in the Pass-through balance for the 2018 assessment period is calculated in Table 6.

Table 6: Calculation of the Pass-Through Balance (PTB)

$PTB_{2018} = \sum_i PTP_{i,2018} \cdot Q_{i2018} - K_{2018} - V_{2018} + PTB_{2017}(1 + r)$		
Calculation Components		Result (\$000)
PTP _{2018,Q2018} for the Western Region	60,717	
PTP _{2018,Q2018} for the Eastern Region	65,831	
Total Powerco PTP _{2018,Q2018} is each pass-through price for the assessment period multiplied by the corresponding actual quantity for the assessment period (i.e. the pass-through and recoverable costs recovered in pass-through prices in the assessment period). Refer Attachment C for the detailed breakdown of this result.		126,548
K ₂₀₁₈ is the sum of all actual pass-through costs that apply to the assessment period	(3,666)	
V ₂₀₁₈ is the sum of all actual recoverable costs that apply to the assessment period	(125,518)	
Total Pass-Through and Recoverable costs applying to the Assessment Period		(129,184)
PTB ₂₀₁₇ is the closing Pass-Through Balance from the prior year	1,995	
1+r = 1+ the cost of debt prescribed for the regulatory period of 6.09% and applied to the opening balance of the PTB	121	
PTB _{2017,(1+r)} applies the cost of debt to the closing Pass-Through Balance from the prior year(s)		2,116
PTB ₂₀₁₈ is the closing Pass-Through Balance for the assessment period that will be included in future pass-through prices ⁵		(520)

Reconciliation between the Pass-Through Balance for this Assessment Period with the Pass-Through Balance for the preceding Assessment Period.

The closing Pass-Through Balance for the 2018 Assessment period is -\$520,000.

As demonstrated in the table below, the Pass-Through Balance has moved from an over-recovery of \$1.995 million for 2017 to an under-recovery of \$0.52 million for 2018. This is driven by the inclusion of the 2016 Pass-Through Balance in 2018 pass-through prices.⁶ This reduced pass-through prices for 2018, resulting in actual pass-through revenue that is lower than actual pass-through costs.⁷

⁵ A positive balance indicates costs have been over-recovered in the prior and current period. This balance will be carried through to a future pricing period and reduce pass-through prices in that period.

⁶ The PTB₂₀₁₆ is adjusted for two periods of TVM at the cost of debt.

⁷ Pass-through revenue is the product of estimated pass-through prices and actual quantities for the Assessment Period. Pass-through costs are the sum of pass-through and recoverable costs.

Table 7: Reconciliation of the Pass-Through Balance (PTB). All values \$000.

Pass-through and Recoverable costs	PTB ₂₀₁₆	PTB ₂₀₁₇	PTB ₂₀₁₈
Forecast pass-through costs	113,311	118,996	128,977
Actual pass-through revenue	115,476	118,846	126,548
Variance	2,165	(150)	(2,429)
Forecast pass-through costs	113,311	118,996	128,977
Actual pass-through costs	113,375	119,080	129,184
Variance	(64)	(84)	(207)
Adjustment to the PTB	2,101	(234)	(2,636)
Closing balance from the prior year adjusted for the cost of debt		2,229	2,116
Closing Pass-Through Balance for the assessment period that will be included in future pass-through prices	2,101	1,995	(520)

2.6 Price Restructuring

The Determination specifies that any restructure of prices is required to be disclosed. A restructure of prices means either:

- combining two or more consumer groups into one consumer group; or
- separating a consumer group into two or more new consumer groups.

Powerco has not combined consumer groups or separated a consumer group into two or more groups during the 2018 Assessment Period. Powerco has however,

- Introduced a power factor charge for the 457 customers on the E100 & E300 price categories across the Western region
- Introduced TOU tariffs in the Eastern region as part of a trial for all mass market consumers

E100 and E300 power factor charge

From 1 April 2017, Powerco introduced a power factor charge for the 457 customers on the E100 & E300 price categories across the Western region. This new charge totalled \$138,000 of revenue over the 2017/18 pricing year but the relevant demand charges have been reduced by a similar amount to ensure compliance under the DPP and to minimise the impact to customers at an aggregate level.

The power factor charge was implemented at an initial rate of \$1/kVAr/month and we will be transitioning this charge up to the full \$7/kVAr/month over the next three years.

TOU Pricing Trail – Eastern region

From 1 April 2017, Powerco introduced TOU tariffs in the Eastern region as part of a trial for all mass market consumers. This applies to all customers on the new price categories of T05S/T06S and V05S/V06S. At the start of the pricing year we did not know how many customers would be on these tariffs so we did not forecast any quantities for them initially. The "actual" quantities for FY17 reflect the resulting uptake over the course of the year.

3 Assessment against the Quality Path

3.1 Summary of Quality Path Compliance Information

To demonstrate compliance with the quality standards Powerco must:

- a) Comply with the annual reliability assessment specified in clause 9.2 of the Determination, such that the assessed values for SAIDI and SAIFI for the assessment period must not exceed the reliability limits for SAIDI and SAIFI; or
- b) Have complied with the annual reliability assessments for each of the two immediately preceding assessment periods.

Powerco has complied with the annual reliability assessment for both SAIDI and SAIFI.

Table 8: Annual Reliability Assessment

DPP Requirement	Powerco Result 2018	2018 Outcome
SAIDI _{Assess,2018} ≤ SAIDI Limit	205.265 ≤ 210.629	Complies
SAIFI _{Assess,2018} ≤ SAIFI Limit	2.120 ≤ 2.520	Complies

Schedules 4a and 5b of the Determination specify the reliability limits, unplanned boundary values, caps, collars and targets for the assessment period. These metrics are included in Attachment E of this document.

3.2 Reliability assessment – SAIDI

To calculate SAIDI, the assessment dataset is populated by listing all planned (Class B) and all unplanned (Class C) interruptions on Powerco’s network for the assessment period. Planned SAIDI is then multiplied by 0.5. Unplanned SAIDI (Class C) is normalised for Major Event Days (MEDs).

A MED occurs when the daily SAIDI value for Class C (unplanned) interruptions exceeds Powerco’s Unplanned SAIDI Boundary Value. The Unplanned SAIDI boundary value for Powerco for the current Regulatory Period is 11.214 minutes.

Table 9: Calculating Powerco’s SAIDI Assessment Values

SAIDI_{Assess,2018} = (0.5 x SAIDI_B) + SAIDI_C		
Calculation Components	Result	Contribution to SAIDI (Minutes)⁸
Assessment dataset for SAIDI _B – total planned SAIDI for the assessment period.	68.438	
0.5 x SAIDI _B - the contribution of planned SAIDI to the SAIDI assessment, being all planned SAIDI in the Assessment dataset multiplied by 0.5.		34.219
Assessment dataset for SAIDI _C – total unplanned SAIDI for the assessment period.	204.689	
<p>Normalise Assessment Dataset</p> <p>For any day in the Assessment dataset where the daily Unplanned SAIDI value is greater than the SAIDI Unplanned Boundary Value, replace the daily Unplanned SAIDI Value with the SAIDI Unplanned Boundary Value.</p> <p>There were three major event days where the daily unplanned SAIDI value exceeded the SAIDI Unplanned Boundary Value. This resulted in a decrease of 33.643 minutes in the dataset.</p>	(33.643)	
SAIDI _C		171.046
SAIDI_{Assess,2018}		205.265

Major Event Days in the Assessment Period

There were three SAIDI major event days in the Assessment Period.

Interruption Date	Pre-normalised Unplanned SAIDI	SAIDI Adjustment for normalisation	Normalised SAIDI (Boundary Value)
13/7/2017	89.351	78.137	11.214
5/1/2018	22.743	11.529	11.214
20/2/2018	96.947	85.733	11.214

Further information on these major event days is included in Attachment F.

⁸ The figures in the reliability tables are to three decimal places. The underlying calculations are based on more detailed numbers (i.e. to more decimal places than shown in this document). This may cause rounding inconsistencies. These inconsistencies do not affect the overall compliance calculations which are based on the more detailed information.

3.3 Reliability assessment – SAIFI

To calculate SAIFI, the assessment dataset is populated by listing all planned (Class B) and all unplanned (Class C) interruptions on Powerco’s network for the assessment period. Planned SAIDI is then multiplied by 0.5. Unplanned SAIDI (Class C) is normalised for Major Event Days (MEDs).

A MED occurs when the daily SAIFI value for Class C (unplanned) interruptions exceeds Powerco’s SAIFI Boundary Value. The SAIFI boundary value for Powerco is specified in Schedule 4a of the Determination. For the current Regulatory Period the SAIFI Boundary Value is an event frequency of 0.064.

Table 10: Calculating Powerco’s SAIFI Assessment Values

SAIFI_{Assess,2018} = (0.5 x SAIFI_B) + SAIFI_C		
Calculation Components	Result	Contribution to SAIDI (Minutes)
Assessment dataset for SAIFI _B – total planned SAIFI for the assessment period.	0.314	
0.5 x SAIFI _B - the contribution of planned SAIFI to the SAIFI assessment, being all planned SAIFI in the Assessment dataset multiplied by 0.5.		0.157
Assessment dataset for SAIFI _C – total unplanned SAIFI for the assessment period.	2.219	
Normalise Assessment Dataset For any day in the Assessment dataset where the daily Unplanned SAIFI value is greater than the SAIFI Unplanned Boundary Value, replace the daily Unplanned SAIFI Value with the SAIFI Unplanned Boundary Value. There were four SAIFI major event days in the Assessment Period. This resulted in a decrease of 0.256 in the dataset.	(0.256)	
SAIFI _C		1.963
SAIFI_{Assess,2018}		2.120

Major Event Days in the Assessment Period

There were four SAIFI major event days in the Assessment Period.

Interruption Date	Pre-normalised Unplanned SAIFI	SAIFI Adjustment for normalisation	Normalised SAIFI (Boundary Value)
13/7/2107	0.122	0.058	0.064
2/8/2017	0.073	0.009	0.064
5/1/2018	0.086	0.022	0.064
20/2/2018	0.180	0.116	0.064

Further information on these major event days is included in Attachment F.

3.4 Compliance with the Multi-Year Assessment for Quality Standards

Under clause 9.1(b) of the Determination, compliance with the quality standards may also be demonstrated by showing that compliance with the annual reliability assessments has been achieved in each of the two preceding assessment periods. Powerco’s reliability limits for 2018 are compliant, so achieving compliance via this multi-year assessment method is not required this year.

For continuity with future reliability assessments, we have included Powerco’s historic assessment data in Table 11. Table 12 indicates (✓ or X) if those results were compliant with the respective reliability limits. Powerco has met the requirements.

Table 11: Reliability results for 2016 to 2018

Year	Before Normalisation		Reliability Results	
	SAIDI	SAIFI	SAIDI	SAIFI
2016	195.96	2.07	178.44	2.07
2017	219.121	2.401	203.879	2.483
2018	238.908	2.376	205.265	2.120

Table 12: Compliance with the multi-year assessment

	2016	2017	2018	Result
SAIDI	✓	✓	✓	Complies
SAIFI	✓	✓	✓	Complies

3.5 Reliability Policies and Procedures

Recording Interruptions

Powerco has well developed processes to capture outage / interruption information and ensure the accuracy of these records. Key aspects of this calculation include:

- The underlying reliability records are created and maintained by Powerco's Network Operations Team who initiate and manage all fault reports;
- The start of an interruption is recorded when there is a SCADA alarm for assets that have a real time link to Powerco's SCADA system. For other assets, the interruption is recorded when Powerco is first notified of the fault by retailers or field staff.
- All fault reports contain switching sequences and SCADA printouts of transformers and areas affected, along with any other relevant information to support accurate evaluation.
- Details on the fault report are entered into the Powerco Outage Management System (OMS) database⁹. Information recorded includes the date, time and cause of the fault, voltage of the faulted circuit and the transformers affected.
- The faults recorded may be due to third party causes (transmission problems, generation problems, or the actions of other electricity industry participants or third parties) this information is also recorded in the OMS database but excluded for compliance reporting.

Calculating SAIDI and SAIFI

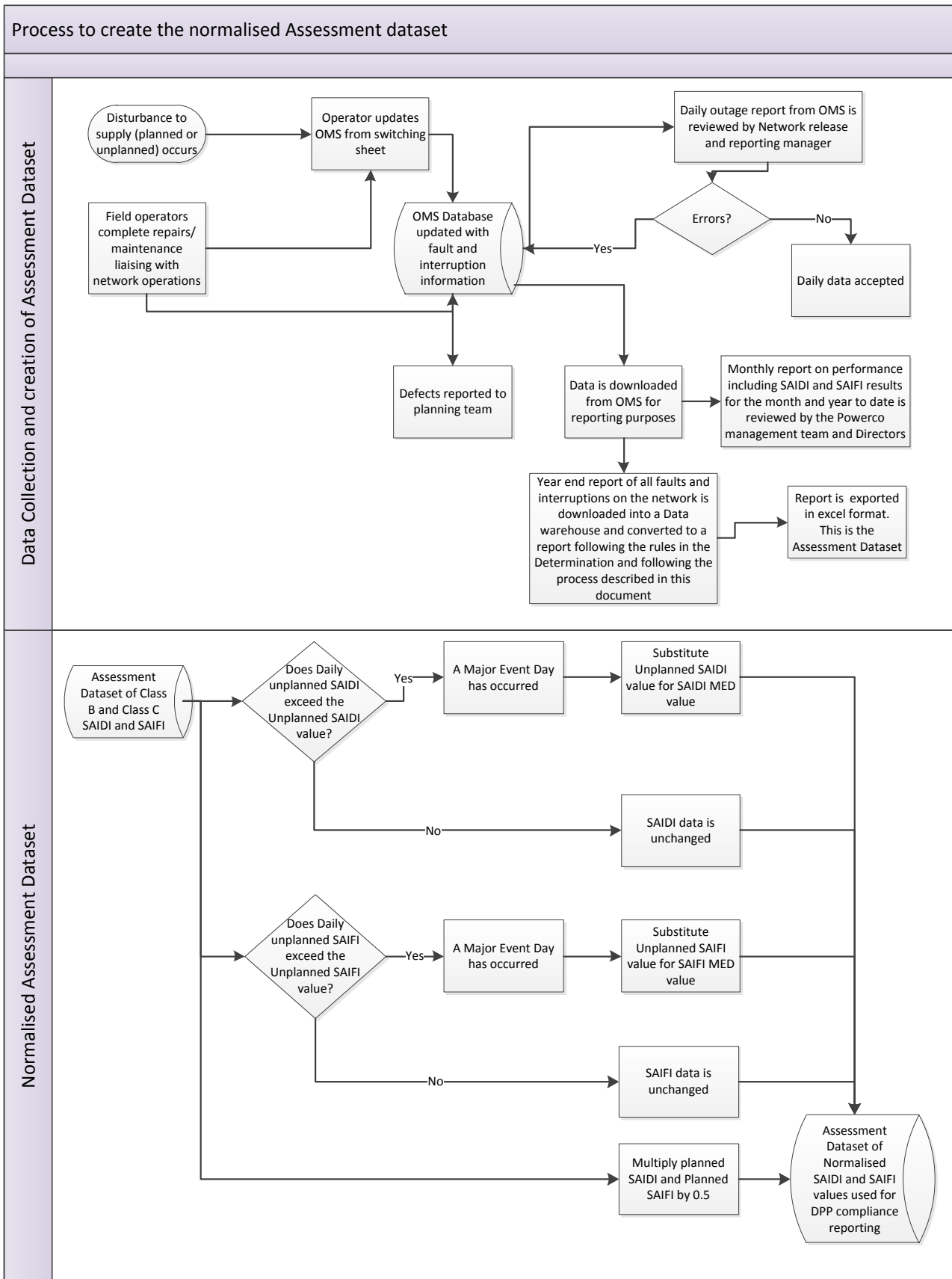
In utilising the input data noted above, Powerco applies processes to ensure compliance with Schedule 4a of the Determination, as shown diagrammatically in figure two below. In particular the following key calculation steps are applied:

- To calculate SAIDI and SAIFI customer connection numbers ("ICPs") are calculated from the Geographic Information System ("GIS") for the transformers affected. ICPs are updated to the GIS daily from the Electricity Registry.
- The customer connection number used in the annual calculation of SAIDI and SAIFI is the average of customer numbers at the end of each month of the Assessment year. The sum of all customer minutes interrupted is divided by the average customer connection numbers to derive the annual SAIDI minutes. The sum of the number of customer interruptions is divided by the average customer connection numbers to derive the annual SAIFI value.
- Calculation of the final year result is completed using the outage / interruption records in the Outage Management Database noting a range of global corrections and refinements are required as set out below.
- There are a number of practical delays affecting the recorded restoration time for many faults; these include SCADA polling delays, voice communication constraints and clock time coding discrepancies. To correct for these discrepancies an adjustment of three minutes per interruption is made across all fault records.¹⁰
- As specified by the Determination, data is limited to include only Powerco interruptions that cause a cessation of electricity for a period of at least one minute, affect at least one consumer and occur on an electricity line capable of conveying electricity at a voltage of at least 3.3 kV.
- The unplanned data is normalised to account for the impact of MEDs.
- Planned SAIDI and SAIFI data is multiplied by 0.5.

⁹ Powerco note the introduction of new systems to assist with the management of outages and interruptions during the 2015 Assessment Period. This Outage Management System (OMS) provides enhanced oversight and recording of outages, enhancing the robustness of recording processes.

¹⁰ This adjustment was included in the reference dataset that calculates the reliability limits under the Determination and hence the process ensures a comparison of results across periods.

Figure 2: Powerco’s process to create the normalised dataset



4 Amalgamation and Mergers

Powerco has not completed an amalgamation or merger with another EDB during the Assessment Period.

5 Major Transactions

Powerco has not entered into a major transaction where:

- (i) The regulatory investment value of Powerco's assets associated with the provision of electricity distribution services as at the start of the 2018 assessment period is anticipated to increase or decrease by more than 10% as a result of the transaction; or
- (ii) Powerco's notional revenue for the 2018 assessment period is anticipated to increase or decrease by more than 10% as a result of the transaction.

6 Transfer of System Fixed Assets from or to Transpower

Powerco has not received a transfer of transmission assets from Transpower that become system fixed assets, or transferred system fixed assets to Transpower in the 2018 assessment period.



INDEPENDENT ASSURANCE REPORT TO THE DIRECTORS OF POWERCO LIMITED AND THE COMMERCE COMMISSION

Report on Powerco Limited's Annual Compliance Statement

We have conducted a reasonable assurance on Powerco Limited's ('the Company') compliance with the Electricity Distribution Services Default Price-Quality Path Determination 2015 ('the Determination') in relation to the preparation of Sections 1, 2, 3, 4, 5 and 6 and the related Appendices A to G of the Company's Annual Compliance Statement ('the Annual Compliance Statement') for the period 1 April 2017 to 31 March 2018.

In our opinion, the Company has complied, in all material respects, with the Determination in relation to the Company's preparation of the Annual Compliance Statement for the period 1 April 2017 to 31 March 2018.

Basis for Opinion

We conducted our engagement in accordance with Standard on Assurance Engagements 3100 (Revised): *Compliance Engagements* ('SAE 3100 (Revised)') issued by the New Zealand Auditing and Assurance Standards Board.

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

Board of Directors' Responsibilities

The Board of Directors is responsible on behalf of the Company for the preparation of the Annual Compliance Statement in accordance with the Determination. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of the Annual Compliance Statement in accordance with the Determination.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the Professional and Ethical Standard 1 (Revised): *Code of Ethics for Assurance Practitioners* issued by the New Zealand Auditing and Assurance Standards Board, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Other than in our capacity as auditor and the provision of other assurance services including the audit of regulatory disclosure statements and trustee reporting, we have no relationship with or interests in the Company or any of its subsidiaries. These services have not impaired our independence as auditor of the Company or any of its subsidiaries.

The firm applies Professional and Ethical Standard 3 (Amended): *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance Engagements* issued by the New Zealand Auditing and Assurance Standards Board, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our Responsibilities

Our responsibility is to express an opinion on whether the Company has complied, in all material respects, with the Determination in relation to the preparation of the Annual Compliance Statement. SAE 3100 (Revised) requires that we plan and perform our procedures to obtain reasonable assurance that the Company has complied, in all material respects, with the Determination in relation to the preparation of the Annual Compliance Statement.

An assurance engagement to report on the Company's compliance with the Determination in relation to the preparation of the Annual Compliance Statement involves performing procedures to obtain evidence about the compliance activity and controls implemented to meet the requirements of the Determination. The procedures selected depend on our judgement, including the identification and assessment of risk of material non-compliance with the Determination.

Our procedures include:

- Examining, on a test basis, evidence relevant to the amounts and disclosures contained on pages 5 to 20 and 23 to 51 of the Annual Compliance Statement in relation to the Price Path Compliance Information and Quality Path Compliance Information set out in Clauses 8 and 9 of the Determination respective;
- Assessing significant estimates and judgements, if any, made by the Company in the preparation of the Annual Compliance Statement; and
- Assessing whether the basis of preparation of the Annual Compliance Statement has been adequately disclosed.

These procedures have been undertaken to form an opinion as to whether the Company has complied, in all material respects, with the Determination in relation to the preparation of the Annual Compliance Statement for the period 1 April 2017 to 31 March 2018.

Our Qualifications

We are qualified as an auditor as defined in the Determination.

Inherent Limitations

Because of the inherent limitations of an assurance engagement, together with the inherent limitations of any systems of internal control, there is unavoidable risk that fraud, error or non-compliance by the Company with the Determination in relation to the preparation of the Annual Compliance Statement may occur and not be detected, even though the engagement is properly planned and performed in accordance with SAE 3100 (Revised).

Use of Report

This report is provided solely for your exclusive use and solely for the purpose of Schedule 7 of the Determination. However we understand that a copy of this report has been requested by the Commerce Commission solely for the purpose above. We agree that a copy of our report may be provided to the Commerce Commission. This report is not to be used for any other purpose, recited or referred to in any document, copied or made available (in whole or in part) to any other person without our prior written consent. We accept or assume no duty, responsibility or liability to any party, other than you, in connection with the report or this engagement including without limitation, liability for negligence in relation to the opinion expressed in our report.

Deloitte Limited

Wellington, New Zealand
24 May 2018

Appendices

The following list of appendices provides further information supporting this compliance statement.

Attachment reference	Information provided
A – Calculating notional revenue	Details the distribution price and quantity for each tariff group. Powerco’s Western and Eastern regions are provided separately. The product of distribution price and quantity is Powerco’s notional revenue for the assessment period.
B – Portion of pass-through prices and distribution prices	Separates total price into pass-through prices and distribution prices. This information is published at the beginning of each assessment period. The prices referred to in the schedule as “transmission prices” is the pass-through price portion.
C – Pass-through prices and quantities for the assessment period	Details the pass-through price and corresponding actual quantities for each tariff group. Powerco’s Western and Eastern regions are provided separately. The product of pass-through price and quantity is Powerco’s pass-through revenue for the Assessment Period that is included in the pass-through balance information in section 2.5 of this document.
D – Transpower new investment contracts	Evidence of the amount of charge relating to any investment contract entered into in the Assessment Period consistent with clause 3.1.3(c) of the IM Determination. A table of all new investment contracts is also included.
E – Reliability limits, boundary values, target, cap and collar	Lists the SAIDI and SAIFI limits, boundary values used to determine Major Event Days, target, Cap and Collar values as specified in the Determination.
F – Commentary on Major Event Days	Provides further detail on reliability and major event days.
G – Compliance references	Notes the compliance requirements from the Determination and where they are evidenced in this Compliance Statement.

8 Attachment A – Calculating Notional Revenue

				Distribution Prices FY18 (Period 1 April 2017 to 31 March 2018)														
				Fixed					Variable				Individually Priced					
				Network Asset Charge					Volume Charge		Demand Charge							
Western Network	Tariff Group	GXP Group	GXP	ICP \$/Month	ICP cents/day	Transformer \$/day	Installed Capacity \$/kVA/Month	CT/VT Charge (\$/day)	Day Rate c/kWh	Night Rate c/kWh	Dist-\$/kWh /Month	Trans-\$/kWh /Month	\$/kVA /Month	ABP (\$/AMD)	Indirect Fixed (\$/ICP)	Indirect Variable (\$/OPD)	Connection charge (\$/AMD)	Interconnection charge (\$/OPD)
Residential/Small Commercial																		
E1CA	E1C	A	Brunswick	BRK	17	0.00			5.9600	1.2000	6.3900							
E1UCA	E1UC	A	Brunswick	BRK	18	15.00			5.9600	1.2000	6.3900							
E1CA	E1C	A	Burnynthorpe	BPE	19	0.00			5.9600	1.2000	6.3900							
E1UCA	E1UC	A	Burnynthorpe	BPE	20	15.00			5.9600	1.2000	6.3900							
E1CA	E1C	A	Carrington	CST	21	0.00			5.9600	1.2000	6.3900							
E1UCA	E1UC	A	Carrington	CST	22	15.00			5.9600	1.2000	6.3900							
E1CA	E1C	A	Huirangi	HUI	23	0.00			5.9600	1.2000	6.3900							
E1UCA	E1UC	A	Huirangi	HUI	24	15.00			5.9600	1.2000	6.3900							
E1CA	E1C	A	Linton	LTN	25	0.00			5.9600	1.2000	6.3900							
E1UCA	E1UC	A	Linton	LTN	26	15.00			5.9600	1.2000	6.3900							
E1CA	E1C	A	Moturoa / New Plymouth	NPL	27	0.00			5.9600	1.2000	6.3900							
E1UCA	E1UC	A	Moturoa / New Plymouth	NPL	28	15.00			5.9600	1.2000	6.3900							
E1CA	E1C	A	Stratford	SFD	29	0.00			5.9600	1.2000	6.3900							
E1UCA	E1UC	A	Stratford	SFD	30	15.00			5.9600	1.2000	6.3900							
E1CA	E1C	A	Wanganui	WGN	31	0.00			5.9600	1.2000	6.3900							
E1UCA	E1UC	A	Wanganui	WGN	32	15.00			5.9600	1.2000	6.3900							
E1CB	E1C	B	Greytown	GYT	34	0.00			8.1100	1.6100	9.1800							
E1UCB	E1UC	B	Greytown	GYT	35	15.00			8.1100	1.6100	9.1800							
E1CB	E1C	B	Hawera	HWA	36	0.00			8.1100	1.6100	9.1800							
E1UCB	E1UC	B	Hawera	HWA	37	15.00			8.1100	1.6100	9.1800							
E1CB	E1C	B	Mangamaire	MGM	38	0.00			8.1100	1.6100	9.1800							
E1UCB	E1UC	B	Mangamaire	MGM	39	15.00			8.1100	1.6100	9.1800							
E1CB	E1C	B	Marton	MTN	40	0.00			8.1100	1.6100	9.1800							
E1UCB	E1UC	B	Marton	MTN	41	15.00			8.1100	1.6100	9.1800							
E1CB	E1C	B	Masterton	MST	42	0.00			8.1100	1.6100	9.1800							
E1UCB	E1UC	B	Masterton	MST	43	15.00			8.1100	1.6100	9.1800							
E1CB	E1C	B	Mataroa	MTR	44	0.00			8.1100	1.6100	9.1800							
E1UCB	E1UC	B	Mataroa	MTR	45	15.00			8.1100	1.6100	9.1800							
E1CB	E1C	B	Ohakune	OKN	46	0.00			8.1100	1.6100	9.1800							
E1UCB	E1UC	B	Ohakune	OKN	47	15.00			8.1100	1.6100	9.1800							
E1CB	E1C	B	Opunake	OPK	48	0.00			8.1100	1.6100	9.1800							
E1UCB	E1UC	B	Opunake	OPK	49	15.00			8.1100	1.6100	9.1800							
E1CB	E1C	B	Waverley	WVY	50	0.00			8.1100	1.6100	9.1800							
E1UCB	E1UC	B	Waverley	WVY	51	15.00			8.1100	1.6100	9.1800							
Medium/Large Commercial																		
E100A	E100	A	Carrington	CST	54	291.00			8.06		0.3227		1.00					
E100A	E100	A	Huirangi	HUI	55	291.00			8.06		0.3227		1.00					
E100A	E100	A	Moturoa / New Plymouth	NPL	56	291.00			8.06		0.3227		1.00					
E100A	E100	A	Stratford	SFD	57	291.00			8.06		0.3227		1.00					
E100B	E100	B	Hawera	HWA	58	291.00			8.06		0.6577		1.00					
E100C	E100	C	Waverley	WVY	59	291.00			8.06		0.5745		1.00					
E100D	E100	D	Opunake	OPK	60	291.00			8.06		0.5891		1.00					
E100E	E100	E	Brunswick	BRK	61	291.00			8.06		0.3781		1.00					
E100E	E100	E	Wanganui	WGN	62	291.00			8.06		0.3781		1.00					
E100F	E100	F	Marton	MTN	63	291.00			8.06		0.4551		1.00					
E100G	E100	G	Mataroa	MTR	64	291.00			8.06		0.6202		1.00					
E100G	E100	G	Ohakune	OKN	65	291.00			8.06		0.6202		1.00					
E100H	E100	H	Masterton	MST	66	291.00			8.06		0.5580		1.00					
E100H	E100	H	Greytown	GYT	67	291.00			8.06		0.5580		1.00					
E100I	E100	I	Burnynthorpe	BPE	68	291.00			8.06		0.3415		1.00					
E100I	E100	I	Linton	LTN	69	291.00			8.06		0.3415		1.00					
E100J	E100	J	Mangamaire	MGM	70	291.00			8.06		0.4076		1.00					
E300A	E300	A	Carrington	CST	72		1.85	8.06			0.1409		1.00					
E300A	E300	A	Huirangi	HUI	73		1.85	8.06			0.1409		1.00					
E300A	E300	A	Moturoa / New Plymouth	NPL	74		1.85	8.06			0.1409		1.00					
E300A	E300	A	Stratford	SFD	75		1.85	8.06			0.1409		1.00					
E300B	E300	B	Hawera	HWA	76		1.85	8.06			0.2645		1.00					
E300C	E300	C	Waverley	WVY	77		1.85	8.06			0.5270		1.00					
E300D	E300	D	Opunake	OPK	78		1.85	8.06			0.2975		1.00					
E300E	E300	E	Brunswick	BRK	79		1.85	8.06			0.1499		1.00					
E300E	E300	E	Wanganui	WGN	80		1.85	8.06			0.1499		1.00					
E300F	E300	F	Marton	MTN	81		1.85	8.06			0.2389		1.00					
E300G	E300	G	Mataroa	MTR	82		1.85	8.06			0.4017		1.00					
E300G	E300	G	Ohakune	OKN	83		1.85	8.06			0.4017		1.00					
E300H	E300	H	Masterton	MST	84		1.85	8.06			0.3436		1.00					
E300H	E300	H	Greytown	GYT	85		1.85	8.06			0.3436		1.00					
E300I	E300	I	Burnynthorpe	BPE	86		1.85	8.06			0.2357		1.00					
E300I	E300	I	Linton	LTN	87		1.85	8.06			0.2357		1.00					
E300J	E300	J	Mangamaire	MGM	88		1.85	8.06			0.2498		1.00					
SPECIAL	SPECIAL		Asset Based					8.06				7.00	50.90	11,060.38	10.26			
SPECIAL	SPECIAL		By Pass					8.06				0.00		116,685.00				
SPECIAL	SPECIAL		BALANCE					8.06				0.00		272,035.00				
SPECIAL	SPECIAL		SWIFT					8.06				0.00		85,719.00				
SPECIAL	SPECIAL		Hau Nui Generation					8.06				0.00		102,619.75				
SPECIAL	SPECIAL		Taranui Generation					8.06				0.00		237,849.05				
SPECIAL	SPECIAL		Other Generation					8.06				0.00						
SPECIAL	SPECIAL							8.06				0.00						

						Distribution Revenue (FY18 Prices)					
						Fixed (Monthly)	Fixed (Daily)	Variable	Demand	Non-standard	Total
Western Network											
	Tariff Group	GXP Group	GXP								
Residential+Small Commercial											
E1CA	E1C	A	Brunswick	BRK	17	-	-	2,577,843	972,003	-	3,549,847
E1UCA	E1UC	A	Brunswick	BRK	18	-	297,171	2,118,833	798,929	-	3,214,933
E1CA	E1C	A	Bunynthorpe	BPE	19	-	-	7,792,964	2,403,450	-	10,196,413
E1UCA	E1UC	A	Bunynthorpe	BPE	20	-	932,983	8,058,622	2,485,382	-	11,476,987
E1CA	E1C	A	Carrington	CST	21	-	-	3,784,762	1,156,232	-	4,940,994
E1UCA	E1UC	A	Carrington	CST	22	-	673,287	5,393,213	1,647,609	-	7,714,110
E1CA	E1C	A	Huirangi	HUI	23	-	-	1,155,490	560,501	-	1,715,991
E1UCA	E1UC	A	Huirangi	HUI	24	-	184,971	1,097,375	532,311	-	1,814,656
E1CA	E1C	A	Linton	LTN	25	-	-	3,475,759	1,185,998	-	4,661,756
E1UCA	E1UC	A	Linton	LTN	26	-	480,533	3,926,176	1,339,689	-	5,746,398
E1CA	E1C	A	Moturoa / New Plymouth	NPL	27	-	-	1,447,017	492,776	-	1,939,793
E1UCA	E1UC	A	Moturoa / New Plymouth	NPL	28	-	248,924	1,553,648	529,088	-	2,331,660
E1CA	E1C	A	Stratford	SFD	29	-	-	2,750,870	911,015	-	3,661,885
E1UCA	E1UC	A	Stratford	SFD	30	-	223,699	2,692,366	891,640	-	3,807,705
E1CA	E1C	A	Wanganui	WGN	31	-	-	1,978,184	904,876	-	2,883,060
E1UCA	E1UC	A	Wanganui	WGN	32	-	249,165	1,715,859	784,881	-	2,749,905
E1CB	E1C	B	Greytown	GYT	34	-	-	2,327,019	681,594	-	3,008,613
E1UCB	E1UC	B	Greytown	GYT	35	-	180,458	2,229,640	653,072	-	3,063,170
E1CB	E1C	B	Hawera	HWA	36	-	-	2,135,415	677,121	-	2,812,536
E1UCB	E1UC	B	Hawera	HWA	37	-	317,482	3,673,546	1,164,848	-	5,155,876
E1CB	E1C	B	Mangamairi	MGM	38	-	-	1,251,963	385,729	-	1,637,692
E1UCB	E1UC	B	Mangamairi	MGM	39	-	122,954	1,377,896	424,529	-	1,925,379
E1CB	E1C	B	Matron	MTN	40	-	-	2,582,788	789,480	-	3,372,268
E1UCB	E1UC	B	Matron	MTN	41	-	112,013	1,319,947	403,468	-	1,835,428
E1CB	E1C	B	Masterton	MST	42	-	-	6,133,124	1,876,042	-	8,009,166
E1UCB	E1UC	B	Masterton	MST	43	-	373,149	3,979,932	1,217,409	-	5,570,489
E1CB	E1C	B	Mataroa	MTR	44	-	-	969,556	302,506	-	1,272,063
E1UCB	E1UC	B	Mataroa	MTR	45	-	57,446	581,392	181,397	-	820,235
E1CB	E1C	B	Ohakune	OKN	46	-	-	337,440	109,806	-	447,247
E1UCB	E1UC	B	Ohakune	OKN	47	-	30,243	291,227	94,768	-	416,237
E1CB	E1C	B	Opunake	OPK	48	-	-	990,126	396,173	-	1,386,299
E1UCB	E1UC	B	Opunake	OPK	49	-	100,806	1,503,623	601,636	-	2,206,065
E1CB	E1C	B	Waverley	WVY	50	-	-	-	-	-	-
E1UCB	E1UC	B	Waverley	WVY	51	-	73,701	995,519	337,204	-	1,406,424
Medium/Large Commercial											
E100A	E100	A	Carrington	CST	54	116,391	-	-	547,595	-	663,986
E100A	E100	A	Huirangi	HUI	55	31,428	2,950	-	160,060	-	194,438
E100A	E100	A	Moturoa / New Plymouth	NPL	56	13,968	-	-	52,737	-	66,705
E100A	E100	A	Stratford	SFD	57	29,548	-	-	146,050	-	175,598
E100B	E100	B	Hawera	HWA	58	31,428	-	-	277,961	-	309,389
E100C	E100	C	Waverley	WVY	59	-	-	-	-	-	-
E100D	E100	D	Opunake	OPK	60	3,492	-	-	32,087	-	35,579
E100E	E100	E	Brunswick	BRK	61	34,920	-	-	209,401	-	244,321
E100E	E100	E	Wanganui	WGN	62	36,928	-	-	172,343	-	209,271
E100F	E100	F	Matron	MTN	63	20,952	-	-	155,545	-	176,497
E100G	E100	G	Mataroa	MTR	64	13,968	-	-	158,952	-	172,920
E100G	E100	G	Ohakune	OKN	65	-	-	-	-	-	-
E100H	E100	H	Masterton	MST	66	80,316	-	-	677,285	-	757,601
E100H	E100	H	Greytown	GYT	67	17,460	-	-	118,015	-	135,475
E100I	E100	I	Bunynthorpe	BPE	68	218,262	2,950	-	1,137,965	-	1,359,176
E100I	E100	I	Linton	LTN	69	132,891	-	-	640,076	-	772,967
E100J	E100	J	Mangamairi	MGM	70	6,984	-	-	44,255	-	51,239
E300A	E300	A	Carrington	CST	72	437,210	11,800	-	603,561	-	1,052,571
E300A	E300	A	Huirangi	HUI	73	653,883	17,700	-	1,086,618	-	1,758,201
E300A	E300	A	Moturoa / New Plymouth	NPL	74	246,420	20,650	-	295,749	-	562,818
E300A	E300	A	Stratford	SFD	75	368,520	2,950	-	521,448	-	892,918
E300B	E300	B	Hawera	HWA	76	331,890	2,950	-	852,748	-	1,187,588
E300C	E300	C	Waverley	WVY	77	33,300	-	-	221,719	-	255,019
E300D	E300	D	Opunake	OPK	78	66,600	5,900	-	217,663	-	290,163
E300E	E300	E	Brunswick	BRK	79	229,770	5,900	-	315,755	-	551,425
E300E	E300	E	Wanganui	WGN	80	494,780	17,700	-	618,730	-	1,131,209
E300F	E300	F	Matron	MTN	81	231,990	8,850	-	524,494	-	765,334
E300G	E300	G	Mataroa	MTR	82	66,600	-	-	223,501	-	290,101
E300G	E300	G	Ohakune	OKN	83	-	-	-	-	-	-
E300H	E300	H	Masterton	MST	84	294,816	2,950	-	973,189	-	1,270,955
E300H	E300	H	Greytown	GYT	85	14,430	-	-	55,017	-	69,447
E300I	E300	I	Bunynthorpe	BPE	86	1,146,344	41,299	-	2,543,678	-	3,731,322
E300I	E300	I	Linton	LTN	87	662,670	17,700	-	1,402,405	-	2,082,775
E300J	E300	J	Mangamairi	MGM	88	25,996	2,950	-	70,337	-	99,283
SPECIAL	SPECIAL		Asset Based			-	11,800	-	73,959	1,397,034	1,482,792
SPECIAL	SPECIAL		By Pass			-	2,950	-	-	583,425	586,375
SPECIAL	SPECIAL		BALANCE			-	-	-	-	272,035	272,035
SPECIAL	SPECIAL		SWIFT			-	-	-	-	99,710	99,710
SPECIAL	SPECIAL		Hau Nui Generation			-	-	-	-	102,620	102,620
SPECIAL	SPECIAL		Taranua Generation			-	-	-	-	237,849	237,849
SPECIAL	SPECIAL		Other Generation			-	-	-	-	-	-
Western Region Western Region Total						6,094,153	4,838,934	84,199,136	43,024,058	2,692,672	140,848,954

Eastern Network			Distribution Prices FY18 (Prices 1 April 2017 to 31 March 2018)																	Individually Priced						
			Fixed					Variable																		
			Network Asset Charge					Volume Charge							Demand Charge											
Tariff Group	Network Group	Trif Description	ICP \$/Month	ICP cents/day	Transformer \$/day	Installed Capacity \$/kVA/Month	CT/VT Charge (\$/day)	Uncontrolled c/kWh	All Inclusive c/kWh	Controlled c/kWh	Night Only c/kWh	Summer Day c/kWh	Summer Night c/kWh	Winter Day c/kWh	Winter Night c/kWh	Winter AM Peak c/kWh	Winter PM Peak c/kWh	\$/kW /Month	\$/kVA /Month	\$/kVAr /Month	ABP (\$/AMD, value)	Indirect Fixed (\$/ICP)	Indirect Variable (\$/OPD)	Connection charge (\$/AMD)	Interconnection charge (\$/OPD)	
								24UC	AICO	CTRL	NITE	TS/1	TS/2	TW/1/3/5	TW/6	TW/2	TW/4									
Residential+Small Commercial																										
V05C	Valley	Low Usage - Controlled	16	15.0000			7.6600	6.7000	5.2700	5.3700																
V05U	Valley	Low Usage - Uncontrolled	17	15.0000			7.6600																			
V06C	Valley	Residential - Standard Cont	18	86.8600			5.5600	4.5900	3.1500	2.1000																
V06U	Valley	Residential - Standard Unctr	19	86.8600			5.5600			2.1000																
T05C	Tauranga	Low Usage - Controlled	21	15.0000			7.0100	6.3200	5.0600	4.5800																
T05U	Tauranga	Low Usage - Uncontrolled	22	15.0000			7.0100			4.5800																
T06C	Tauranga	Standard Residential & Cor	23	69.5300			5.1500	4.4700	3.2100	2.1000																
T06U	Tauranga	Standard Residential & Cor	24	69.5300			5.1500			2.1000																
Unmetered Supply																										
V01	Valley	Unmetered/Streetlighting	27				7.5300																			
V02	Valley	Unmetered/Streetlighting	28	10.5500																						
V03	Valley	Unmetered/Streetlighting	29																							
T01	Tauranga	Unmetered/Streetlighting	31				7.1300																			
T02	Tauranga	Unmetered/Streetlighting	32	10.6400																						
T03	Tauranga	Unmetered/Streetlighting	33																							
Medium/Large Commercial																										
V24	Valley	Commercial three phase 100A part of		980.0000			3.5800	3.5800																		
V28	Valley	> 200 Amp up to 299 kVA merged with		4,032.0000			3.5600	3.5600	2.9900																	
V40	Valley	Individual ICP prices																								
V60	Valley	Individual ICP prices																								
V601	Kinleith	Individual ICP prices																								
T22	Tauranga	Capacity 100 - 199kVA		968.0000			4.6900		2.1700	2.2600																
T24	Tauranga	Capacity 200 -299kVA		3,146.0000			4.3300		2.0000																	
T41	Tauranga	capacity 200 kVA unutilised		1,375.0000							2.7400	1.1600	3.4800	1.1200	7.3300	12.7400										
T43	Tauranga	capacity 300 kVA - 1,500 kVA unutilise				2.1800					2.7400	1.1600	3.4800	1.1200	7.3300	12.7400										
T50	Tauranga	Individual ICP prices																								
T60	Tauranga	Individual ICP prices																								

Eastern Network			Quantities FY16 (1 April 2015 to 31 March 2016)																	Individually Priced				
			ICP No.'s (Average)	ICP Days	ICP Months	kVA Installed	CT/VTs	kWh Uncontrolled	kWh All Inclusive	kWh Controlled	kWh Nite Only	kWh Summer Day	kWh Summer Night	kWh Winter Day	kWh Winter Night	kWh Winter AM Peak	kWh Winter PM Peak	kW Demand pa	kVA Demand pa	kVAr Demand pa	Asset Value / AMD	AMD	OPD	
									24UC	AICO	CTRL	NITE	TS/1	TS/2	TW/1/3/5	TW/6	TW/2	TW/4						
			Tariff Group	Network Group	ruff Description																			
Residential+Small Commercial																								
V05C	Valley	Low Usage - Controlled	16	25,336	9,328,207	-	-	78,098,287	8,187,046	32,755,756	531,864	-	-	-	-	-	-	-	-	-	-	-		
V05U	Valley	Low Usage - Uncontrolled	17	8,361	3,101,274	-	-	33,030,770	-	-	142,918	-	-	-	-	-	-	-	-	-	-	-		
V06C	Valley	Residential - Standard Cont	18	22,380	8,152,535	-	-	146,564,750	50,528,082	41,356,503	1,596,361	-	-	-	-	-	-	-	-	-	-	-		
V06U	Valley	Residential - Standard Unco	19	12,632	4,590,139	-	-	155,519,014	-	-	579,702	-	-	-	-	-	-	-	-	-	-	-		
T05C	Tauranga	Low Usage - Controlled	21	13,451	4,880,976	-	-	34,364,134	17,271,153	19,132,621	398,079	-	-	-	-	-	-	-	-	-	-	-		
T05U	Tauranga	Low Usage - Uncontrolled	22	6,134	2,234,006	-	-	23,409,218	-	-	2,975,769	-	-	-	-	-	-	-	-	-	-	-		
T06C	Tauranga	Standard Residential & Cor	23	39,746	14,602,824	-	-	177,546,347	62,667,697	80,726,001	1,208,862	-	-	-	-	-	-	-	-	-	-	-		
T06U	Tauranga	Standard Residential & Cor	24	19,555	6,804,683	-	-	175,572,743	-	-	7,845,029	-	-	-	-	-	-	-	-	-	-	-		
Unmetered Supply																								
V01	Valley	Unmetered/Streetlighting	27	191	-	-	-	662,892	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
V02	Valley	Unmetered/Streetlighting	28	5	4,260,255	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
V03	Valley	Unmetered/Streetlighting	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
T01	Tauranga	Unmetered/Streetlighting	31	216	-	-	-	2,408,793	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
T02	Tauranga	Unmetered/Streetlighting	32	5	4,679,019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
T03	Tauranga	Unmetered/Streetlighting	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Medium/Large Commercial																								
V24	Valley	Commercial three phase 100A part of V	424	154,270	-	-	-	12,160,790	46,518,385	-	-	-	-	-	-	-	-	-	-	-	-	-		
V28	Valley	> 200 Amp up to 299 kVA merged with	22	12,385	-	-	-	244,762	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
V40	Valley	Individual ICP prices	72	-	-	-	-	7,789,854	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
V60	Valley	Individual ICP prices	22	-	-	-	-	52,106,232	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
V601	Kinleith	Individual ICP prices	22	-	-	-	-	288,719,950	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
T22	Tauranga	Capacity 100 - 199kVA	478	175,251	-	-	-	46,224,627	332,678	363,675	-	-	-	-	-	-	-	-	-	-	-	-		
T24	Tauranga	Capacity 200 -299kVA	28	17,495	-	-	-	6,140,328	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
T41	Tauranga	capacity 200 kVA unutilised	92	34,116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
T43	Tauranga	capacity 300 kVA - 1,500 kVA unutilised	7	-	46,200	-	-	-	-	12,218,953	3,907,372	5,854,124	3,072,442	2,019,863	1,603,952	-	-	-	-	-	-	-		
T50	Tauranga	Individual ICP prices	193	-	-	-	-	178,832,851	-	-	863,381	241,596	607,638	286,023	249,840	137,453	-	-	-	-	-	-		
T60	Tauranga	Individual ICP prices	21	-	-	-	-	113,611,726	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Eastern Region Total			148,359		46,200		1,532,963,247	185,417,126	174,303,760	15,642,659	13,082,333	4,148,967	6,461,762	3,358,465	2,269,704	1,741,404	-	-	-	9,041,401	161,257	107,346		

Eastern Network				Distribution Revenue (FY18 Prices)					
				Fixed (Monthly)	Fixed (Daily)	Variable	Demand	Non-standard	Total
Tariff Group	Network Group	Triff Description							
Residential-Small Commercial									
V05C	Valley	Low Usage - Controlled	16	-	1,399,231	8,285,650	-	-	9,684,881
V05U	Valley	Low Usage - Uncontrolled	17	-	465,191	2,537,832	-	-	3,003,023
V06C	Valley	Residential - Standard Cont	18	-	7,081,292	11,804,505	-	-	18,885,797
V06U	Valley	Residential - Standard Unct	19	-	3,986,995	8,659,031	-	-	12,646,026
T05C	Tauranga	Low Usage - Controlled	21	-	732,146	4,486,805	-	-	5,218,952
T05U	Tauranga	Low Usage - Uncontrolled	22	-	335,101	1,777,276	-	-	2,112,377
T06C	Tauranga	Standard Residential & Cor	23	-	10,153,343	14,561,569	-	-	24,714,913
T06U	Tauranga	Standard Residential & Cor	24	-	4,731,296	9,206,742	-	-	13,938,038
Unmetered Supply									
V01	Valley	Unmetered/Streetlighting	27	-	-	49,916	-	-	49,916
V02	Valley	Unmetered/Streetlighting	28	-	449,457	-	-	-	449,457
V03	Valley	Unmetered/Streetlighting	29	-	-	-	-	-	-
T01	Tauranga	Unmetered/Streetlighting	31	-	-	171,747	-	-	171,747
T02	Tauranga	Unmetered/Streetlighting	32	-	497,848	-	-	-	497,848
T03	Tauranga	Unmetered/Streetlighting	33	-	-	-	-	-	-
Medium/Large Commercial									
V24	Valley	Commercial three phase 100A part of V25		-	1,511,846	2,100,714	-	-	3,612,560
V28	Valley	> 200 Amp up to 299 kVA merged with V27		-	499,363	286,032	786	-	786,182
V40	Valley	Individual ICP prices		-	-	-	128,684	2,124,683	2,253,367
V60	Valley	Individual ICP prices		-	-	-	218,294	3,758,056	3,976,350
V601	Kinleith			-	-	-	-	2,593,584	2,593,584
T22	Tauranga	Capacity 100 – 199kVA		-	1,696,430	2,183,378	-	-	3,879,807
T24	Tauranga	Capacity 200 -299kVA		-	550,393	265,876	485	-	816,754
T41	Tauranga	capacity 200 kVA unitised		-	469,095	970,659	95,719	-	1,535,473
T43	Tauranga	capacity 300 kVA - 1,500 kVA unitised (Cl		100,716	-	86,633	24,126	-	211,476
T50	Tauranga	Individual ICP prices		-	-	-	308,794	5,232,684	5,541,478
T60	Tauranga	Individual ICP prices		-	-	-	194,711	2,468,747	2,663,458
Eastern Region Total				100,716	34,559,027	67,434,367	971,599	16,177,754	119,243,462

9 Attachment B – Portion of Pass-through Prices and Distribution Prices

In the information below, pass-through prices are referred to as the “Transmission component”.

Western Network



Residential & small commercial (E1UC & E1C)

Pricing zone	Delivery charges effective: 1 April 2017					Estimated number of consumers	Previous delivery charges				
	Volume charges (c/kWh)		Total demand charge ³ \$/kWh/month	Transmission component ⁴ demand charge \$/kWh/month	ICP fixed charge (c/day)		Volume charges (c/kWh)		Total demand charge ³ \$/kWh/month	Transmission component ⁴ demand charge \$/kWh/month	ICP fixed charge (c/day)
	Day	Night					Day	Night			
A ¹	5.96	1.20	17.82	11.43	Controlled 0.00 Uncontrolled 15.00	117,283	5.94	1.20	16.99	10.62	Controlled 0.00 Uncontrolled 15.00
B ²	8.11	1.61	22.38	13.20	Controlled 0.00 Uncontrolled 15.00	52,124	8.08	1.60	21.41	12.26	Controlled 0.00 Uncontrolled 15.00

Commercial (E100) – Greater than 100kVA

Consumer's point of connection	Pricing zone	Delivery charges effective: 1 April 2017				Estimated number of consumers	Previous delivery charges			
		Network assets charge \$/ICP/month	Distribution demand charge ³ (c/kWh/day)	Transmission ⁴ demand charge (c/kWh/day)	Power factor charge ⁵ (\$/kVA/month)		Network assets charge \$/ICP/month	Distribution demand charge ³ (c/kWh/day)	Transmission ⁴ demand charge (c/kWh/day)	Power factor charge ⁵ (\$/kVA/month)
Carrington, New Plymouth, Stratford, & Huirangi	A		32.27	45.54	1.00	54		32.34	42.31	0.00
Hawera	B		65.27	62.92	1.00	9		65.42	58.46	0.00
Waverley	C		57.45	47.11	1.00	0		57.58	43.77	0.00
Opunake	D		58.91	85.33	1.00	1		59.05	79.28	0.00
Brunswick & Whanganui	E	291	37.81	38.29	1.00	19	291	37.90	35.58	0.00
Marlon	F		45.51	32.42	1.00	5		45.61	30.12	0.00
Mataroa & Ohakune	G		62.02	52.19	1.00	4		62.16	48.49	0.00
Masterton & Greytown	H		55.80	50.74	1.00	28		55.93	47.14	0.00
Bunnythorpe & Linton	I		34.15	37.66	1.00	98		34.23	34.99	0.00
Mangamaire	J		40.76	67.51	1.00	2		40.85	62.72	0.00

Large commercial (E300 & E300R) – Greater than 300kVA

Consumer's point of connection	Pricing zone	Delivery charges effective: 1 April 2017				Estimated number of consumers	Previous delivery charges			
		Network assets charge \$/kVA/month	Distribution demand charge ³ (c/kWh/day)	Transmission ⁴ demand charge (c/kWh/day)	Power factor charge ⁵ (\$/kVA/month)		Network assets charge \$/kVA/month	Distribution demand charge ³ (c/kWh/day)	Transmission ⁴ demand charge (c/kWh/day)	Power factor charge ⁵ (\$/kVA/month)
Carrington, New Plymouth, Stratford, & Huirangi	A		14.09	45.54	1.00	78		14.12	42.31	0.00
Hawera	B		26.45	62.92	1.00	9		26.51	58.46	0.00
Waverley	C		52.70	47.11	1.00	1		52.82	43.77	0.00
Opunake	D		29.75	85.33	1.00	2		29.82	79.28	0.00
Brunswick & Whanganui	E	1.85	14.99	38.29	1.00	32	1.85	15.02	35.58	0.00
Marlon	F		23.89	32.42	1.00	11		23.95	30.12	0.00
Mataroa & Ohakune	G		40.17	52.19	1.00	2		40.26	48.49	0.00
Masterton & Greytown	H		34.36	50.74	1.00	20		34.44	47.14	0.00
Bunnythorpe & Linton	I		23.57	37.66	1.00	81		23.62	34.99	0.00
Mangamaire	J		24.98	67.51	1.00	1		25.04	62.72	0.00

Large commercial and industrial – greater than 1,500 kVA

Consumer group	Distribution charges effective 1 April 2017			Transmission charges ⁶ effective 1 April 2017		Estimated number of consumers	Previous distribution charges			Previous transmission charges ⁶	
	Network asset and maintenance charge – \$/AMD (kW)	Network indirect demand charge – \$/OPD (kW)	Network indirect fixed charge – \$/annum	Anytime demand – \$/kW	On-peak demand – \$/kW		Network asset and maintenance charge – \$/AMD (kW)	Network indirect demand charge – \$/OPD (kW)	Network indirect fixed charge – \$/annum	Anytime demand – \$/kW	On-peak demand – \$/kW
SPECIAL ⁷ : Greater than 1,500 kVA*	49.76	10.26	11,138	22.27	127.91	18	48.15	10.21	11,700	22.00	118.31
SPECIAL ⁷ : Waingawa group	-	-	116,685	24.61	123.98	5	-	-	115,211	21.84	114.64

Tauranga Network

Points of Supply: Kaitimako, Mt Maunganui, Tauranga, Te Matai

Residential

Consumer Group	Delivery charges ¹ effective 1 April 2017					Estimated number of consumers	Transmission component ²				
	Fixed rate (c/day)	24 hour supply (c/kWh)	Single controllable supply (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)		Fixed rate (c/day)	24 hour supply (c/kWh)	Single controllable supply (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)
T05U/T05C: Low Fixed Charge Option	15.00	11.37	10.04	7.31	4.58	22,283	0.00	4.36	3.72	2.25	0.00
T06U/T06C: Standard Option	69.53	8.89	7.56	4.83	2.10	49,436	0.00	3.74	3.09	1.62	0.00
	Previous delivery charges						Previous transmission charges				
T05U/T05C: Low Fixed Charge Option	15.00	11.34	10.02	7.29	4.56	19,568	0.00	4.35	3.71	2.25	0.00
T06U/T06C: Standard Option	69.33	8.87	7.55	4.82	2.09	50,066	0.00	3.73	3.09	1.62	0.00
Time of Use (TOU) Trial ³	Delivery charges ¹ effective 1 April 2017					Estimated number of consumers	Transmission component ²				
	Fixed rate (c/day)	Peak (c/kWh)	Off Peak (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)		Fixed rate (c/day)	Peak (c/kWh)	Off Peak (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)
T05S: Low Fixed Charge Option	15.00	20.72	6.95	7.31	4.58	0.00	0.00	13.77	0.00	2.25	0.00
T06S: Standard Option	69.53	18.24	4.47	4.83	2.10	0.00	0.00	13.77	0.00	1.62	0.00

Commercial

Consumer Group	Delivery charges ¹ effective 1 April 2017					Estimated number of consumers	Transmission component ²				
	Fixed rate (c/day)	24 hour supply (c/kWh)	Single controllable supply (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)		Fixed rate (c/day)	24 hour supply (c/kWh)	Single controllable supply (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)
T01: Unmetered supply other than Streetlighting		11.60				220		4.47			
T02: Unmetered Streetlighting (per light)	17.30					8	6.66				
T06U/T06C: 1, 2 & 3 phase up to and including 60 amp	69.53	8.89	7.56	4.83	2.10	8,724	0.00	3.74	3.09	1.62	0.00
T22: Three phase 61 – 250 amp	968	7.23		3.34	2.26	511	0.00	2.54		1.17	0.00
T24: 200 – 299 kVA	3,146	6.68		3.08		53	0.00	2.35		1.08	
	Previous delivery charges						Previous transmission charges				
T01: Unmetered supply other than Streetlighting		11.57				222		4.46			
T02: Unmetered Streetlighting (per light)	17.26					5	6.65				
T06U/T06C: 1, 2 & 3 phases up to and including 60 amp	69.33	8.87	7.55	4.82	2.09	8,835	0.00	3.73	3.09	1.62	0.00
T22: Three phase 61 – 250 amp	965	7.22		3.33	2.25	488	0.00	2.54		1.17	0.00
T24: 200 – 299 kVA	3,137	6.67		3.07		48	0.00	2.35		1.08	

Commercial – T41 / T43 connections

Consumer Group	Fixed rate	Delivery charges ¹ effective 1 April 2017							Estimated number of consumers	Transmission component ²						
		Summer day 0700-2300 (c/kWh)	Summer night 2300-0700 (c/kWh)	Winter day 0700-2300 excl peak times (c/kWh)	Winter morning peak 0800-1100 (c/kWh)	Winter evening peak 1700-2000 (c/kWh)	Winter night 2300-0700 (c/kWh)	Fixed rate		Summer day 0700-2300 (c/kWh)	Summer night 2300-0700 (c/kWh)	Winter day 0700-2300 excl peak times (c/kWh)	Winter morning peak 0800-1100 (c/kWh)	Winter evening peak 1700-2000 (c/kWh)	Winter night 2300-0700 (c/kWh)	
T41: 200 – 299 kVA	\$13.75/day	4.33	1.16	5.50	11.58	20.13	1.12	92	0.00	1.59	0.00	2.02	4.25	7.39	0.00	
T43: 300 – 1,499 kVA	\$2.18/kVA/month	4.33	1.16	5.50	11.58	20.13	1.12	7	0.00	1.59	0.00	2.02	4.25	7.39	0.00	
	Previous delivery charges								Previous transmission charges							
T41: 200 – 299 kVA	\$13.71/day	3.69	1.02	6.49	13.71	23.63	1.35	194	0.00	1.30	0.00	2.29	4.82	8.32	0.00	
T43: 300 – 1,499 kVA	\$1.97/kVA/month	3.69	1.02	6.49	13.71	23.63	1.35	10	0.00	1.30	0.00	2.29	4.82	8.32	0.00	

Large commercial / Industrial

Consumer Group	Distribution charges effective 1 April 2017					Transmission charges effective 1 April 2017		Previous distribution charges			Previous transmission charges		
	Network asset and maintenance charge – \$/AMD (kW)	Network indirect network charges – \$/OPD (kW)	Network indirect fixed charge – \$/annum	Anytime demand – \$/AMD (kW)	On-peak demand – \$/OPD (kW)	Estimated number of consumers	Anytime demand – \$/AMD (kW)	On-peak demand – \$/OPD (kW)	Network asset and maintenance charge – \$/AMD (kW)	Network indirect network charges – \$/OPD (kW)	Network indirect fixed charge – \$/annum	Anytime demand – \$/AMD (kW)	On-peak demand – \$/OPD (kW)
T50 ⁴ : 300 – 1,499 kVA capacity	90.31	8.40	2,193	20.12	129.21	191	90.00	8.36	2,182	21.13	120.04		
T60 ⁴ : Greater than or equal to 1,500 kVA capacity	69.34	10.26	11,759	20.88	128.18	29	67.79	10.06	11,526	21.75	118.58		

Valley Network

Points of Supply: Hinuera, Kinleith, Kopu, Piako, Waihou, Waikino



Residential

Consumer Group	Delivery charges ¹ effective 1 April 2017					Estimated number of consumers	Transmission component ²				
	Fixed rate (c/day)	24 hour supply (c/kWh)	Single controllable supply (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)		Fixed rate (c/day)	24 hour supply (c/kWh)	Single controllable supply (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)
V05U/V05C: Low Fixed Charge Option	15.00	12.11	10.80	8.53	5.37	34,153	0.00	4.45	4.10	3.26	0.00
V06U/V06C: Standard Option	86.86	8.84	7.53	5.26	2.10	24,898	0.00	3.28	2.94	2.11	0.00
Previous delivery charges											
V05U/V05C: Low Fixed Charge Option	15.00	12.08	10.78	8.51	5.35	34,190	0.00	4.44	4.09	3.26	0.00
V06U/V06C: Standard Option	86.61	8.82	7.52	5.25	2.09	24,333	0.00	3.28	2.94	2.11	0.00
Previous transmission component											
Delivery charges ¹ effective 1 April 2017											
Time of Use (TOU) Trial ³	Fixed rate (c/day)	Peak (c/kWh)	Off peak (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)	Estimated number of consumers	Fixed rate (c/day)	Peak (c/kWh)	Off peak (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)
V05S: Low Fixed Charge Option	15.00	18.74	7.86	8.53	5.37	0.00	0.00	10.88	0.00	3.26	0.00
V06S: Standard Option	86.86	15.47	4.59	5.26	2.10	0.00	0.00	10.88	0.00	2.11	0.00

Commercial

Consumer Group	Delivery charges ¹ effective 1 April 2017					Estimated number of consumers	Transmission component ²				
	Fixed rate (c/day)	24 hour supply (c/kWh)	Single controllable supply (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)		Fixed rate (c/day)	24 hour supply (c/kWh)	Single controllable supply (c/kWh)	Controlled (c/kWh)	Night only supply (c/kWh)
V01: Unmetered Supply – other than streetlighting		12.00				186		4.47			
V02: Unmetered Streetlighting (per light)	16.81					5	6.26				
V06: 1, 2 & 3 phase up to and including 60 amp	86.86	8.84	7.53	5.26	2.10	10,671	0.00	3.28	2.94	2.11	0.00
V24: Three phase 61 – 250 amp	980	6.21	6.21			444	0.00	2.63	2.63		
V28: Greater than 250 amp up to and including 299 kVA	4,032	6.03	6.03	4.75		38	0.00	2.47	2.47	1.76	
Previous delivery charges											
V01: Unmetered Supply – other than streetlighting		11.97				191		4.46			
V02: Unmetered Streetlighting (per light)	16.77					5	6.25				
V06: 1, 2 & 3 phase up to and including 60 amp	86.61	8.82	7.52	5.25	2.09	10,429	0.00	3.28	2.94	2.11	0.00
V24: Three phase 61 – 250 amp	992	5.95	5.95			427	0.00	2.63	2.63		
V28: Greater than 250 amp up to and including 299 kVA	4,519	5.77	5.77	4.74		34	0.00	2.47	2.47	1.76	

Large commercial / Industrial

Consumer Group	Distribution charges effective 1 April 2017			Transmission charges effective 1 April 2017		Estimated number of consumers	Previous distribution charges			Previous transmission charges	
	Network asset and maintenance charge – \$/AMD (kW)	Network indirect network charges – \$/OPD (kW)	Network indirect fixed charge – \$/annum	Anytime demand – \$/AMD (kW)	On-peak demand – \$/OPD (kW)		Network asset and maintenance charge – \$/AMD (kW)	Network indirect network charges – \$/OPD (kW)	Network indirect fixed charge – \$/annum	Anytime demand – \$/AMD (kW)	On-peak demand – \$/OPD (kW)
V40 ⁴ : 300 – 1,499 kVA capacity	113.01	8.40	2,193	38.30	129.86	78	113.07	8.36	2,182	39.35	119.95
V60 ⁴ : Greater than or equal to 1,500 kVA capacity	50.57	10.26	11,759	38.30	127.06	29	50.63	10.06	11,526	35.91	117.52

10 Attachment C – Pass-through Prices and Quantities

Western Network				Pass Through Prices 2018 (Period 1 April 2017 to 31 March 2018)							
Tariff Group	GXP Group	GXP		Variable			Individually Priced				
				Demand Charge			ABP (\$/AMD, value)	Indirect Fixed (\$/ICP)	Indirect Variable (\$/OPD)	Connection charge (\$/AMD)	Interconnection charge (\$/OPD)
				\$/kW /Month	\$/kW /Month	\$/kVA /Month					
Residential+Small Commercial											
E1C	A	Brunswick BRK	14	11.4300							
E1UC	A	Brunswick BRK	15	11.4300							
E1C	A	Bunnythor BPE	16	11.4300							
E1UC	A	Bunnythor BPE	17	11.4300							
E1C	A	Carrington CST	18	11.4300							
E1UC	A	Carrington CST	19	11.4300							
E1C	A	Huirangi HUI	20	11.4300							
E1UC	A	Huirangi HUI	21	11.4300							
E1C	A	Linton LTN	22	11.4300							
E1UC	A	Linton LTN	23	11.4300							
E1C	A	Moturoa / INPL	24	11.4300							
E1UC	A	Moturoa / INPL	25	11.4300							
E1C	A	Stratford SFD	26	11.4300							
E1UC	A	Stratford SFD	27	11.4300							
E1C	A	Wanganui WGN	28	11.4300							
E1UC	A	Wanganui WGN	29	11.4300							
E1C	B	Greytown GYT	31	13.2000							
E1UC	B	Greytown GYT	32	13.2000							
E1C	B	Hawera HWA	33	13.2000							
E1UC	B	Hawera HWA	34	13.2000							
E1C	B	Mangamai MGM	35	13.2000							
E1UC	B	Mangamai MGM	36	13.2000							
E1C	B	Marton MTN	37	13.2000							
E1UC	B	Marton MTN	38	13.2000							
E1C	B	Masterton MST	39	13.2000							
E1UC	B	Masterton MST	40	13.2000							
E1C	B	Mataroa MTR	41	13.2000							
E1UC	B	Mataroa MTR	42	13.2000							
E1C	B	Ohakune OKN	43	13.2000							
E1UC	B	Ohakune OKN	44	13.2000							
E1C	B	Opunake OPK	45	13.2000							
E1UC	B	Opunake OPK	46	13.2000							
E1C	B	Waverley WVY	47	13.2000							
E1UC	B	Waverley WVY	48	13.2000							
Medium/Large Commercial											
E100	A	Carrington CST	51		0.4554						
E100	A	Huirangi HUI	52		0.4554						
E100	A	Moturoa / INPL	53		0.4554						
E100	A	Stratford SFD	54		0.4554						
E100	B	Hawera HWA	55		0.6292						
E100	C	Waverley WVY	56		0.4711						
E100	D	Opunake OPK	57		0.8533						
E100	E	Brunswick BRK	58		0.3829						
E100	E	Wanganui WGN	59		0.3829						
E100	F	Marton MTN	60		0.3242						
E100	G	Mataroa MTR	61		0.5219						
E100	G	Ohakune OKN	62		0.5219						
E100	H	Masterton MST	63		0.5074						
E100	H	Greytown GYT	64		0.5074						
E100	I	Bunnythor BPE	65		0.3766						
E100	I	Linton LTN	66		0.3766						
E100	J	Mangamai MGM	67		0.6751						
E300	A	Carrington CST	69		0.4554						
E300	A	Huirangi HUI	70		0.4554						
E300	A	Moturoa / INPL	71		0.4554						
E300	A	Stratford SFD	72		0.4554						
E300	B	Hawera HWA	73		0.6292						
E300	C	Waverley WVY	74		0.4711						
E300	D	Opunake OPK	75		0.8533						
E300	E	Brunswick BRK	76		0.3829						
E300	E	Wanganui WGN	77		0.3829						
E300	F	Marton MTN	78		0.3242						
E300	G	Mataroa MTR	79		0.5219						
E300	G	Ohakune OKN	80		0.5219						
E300	H	Masterton MST	81		0.5074						
E300	H	Greytown GYT	82		0.5074						
E300	I	Bunnythor BPE	83		0.3766						
E300	I	Linton LTN	84		0.3766						
E300	J	Mangamai MGM	85		0.6751						
SPECIAL		Asset Based									
SPECIAL		By Pass									
SPECIAL		BALANCE									
SPECIAL		SWIFT									
SPECIAL		Hau Nui Generation									
SPECIAL		Tararua Generation									
SPECIAL		Other Generation									

Western Network			Actual Quantities (1 April 2017 to 31 March 2018)					Actual Pass-Through Revenue - Western			
Tariff Group	GXP Group	GXP	ICP No.'s (Average)	icp Days / ICP Months	ICP Months	kW Demand (AMD for E100/E300)	OPD (kW)	\$/kVA /Month	Demand	Non-standard	Total
Residential+Small Commercial											
E1C	A	Brunswick BRK	14	2,410,322		113,841			1,301,203	-	1,301,203
E1UC	A	Brunswick BRK	15	1,981,141		105,449			1,205,282	-	1,205,282
E1C	A	Bunynthor/BPE	16	6,014,843		342,752			3,917,655	-	3,917,655
E1UC	A	Bunynthor/BPE	17	6,219,886		405,052			4,629,744	-	4,629,744
E1C	A	Carrington CST	18	3,149,925		148,870			1,701,584	-	1,701,584
E1UC	A	Carrington CST	19	4,488,583		231,936			2,651,028	-	2,651,028
E1C	A	Huirangi HUI	20	1,298,445		83,504			954,451	-	954,451
E1UC	A	Huirangi HUI	21	1,233,140		100,406			1,147,641	-	1,147,641
E1C	A	Linton LTN	22	2,836,035		159,231			1,820,010	-	1,820,010
E1UC	A	Linton LTN	23	3,203,552		203,576			2,326,874	-	2,326,874
E1C	A	Moturoa / INPL	24	1,545,597		71,038			811,964	-	811,964
E1UC	A	Moturoa / INPL	25	1,659,492		81,035			926,230	-	926,230
E1C	A	Stratford SFD	26	1,523,734		130,892			1,496,096	-	1,496,096
E1UC	A	Stratford SFD	27	1,491,328		147,013			1,680,359	-	1,680,359
E1C	A	Wanganui WGN	28	1,915,053		113,535			1,297,705	-	1,297,705
E1UC	A	Wanganui WGN	29	1,661,100		113,003			1,291,624	-	1,291,624
Medium/Large Commercial											
E1C	B	Greytown GYT	31	1,255,597		71,216			940,051	-	940,051
E1UC	B	Greytown GYT	32	1,203,054		76,481			1,009,549	-	1,009,549
E1C	B	Hawera HWA	33	1,230,338		67,980			897,336	-	897,336
E1UC	B	Hawera HWA	34	2,116,545		130,849			1,727,207	-	1,727,207
E1C	B	Mangamai MGM	35	744,778		38,229			504,583	-	504,583
E1UC	B	Mangamai MGM	36	819,694		48,196			636,187	-	636,187
E1C	B	Marion MTN	37	1,461,204		81,223			1,072,144	-	1,072,144
E1UC	B	Marion MTN	38	746,756		45,178			596,350	-	596,350
E1C	B	Masterton MST	39	3,833,513		193,345			2,552,154	-	2,552,154
E1UC	B	Masterton MST	40	2,487,659		144,332			1,905,182	-	1,905,182
E1C	B	Mataroa MTR	41	638,669		32,045			422,994	-	422,994
E1UC	B	Mataroa MTR	42	382,976		19,994			263,921	-	263,921
E1C	B	Ohakune OKN	43	233,612		11,060			145,992	-	145,992
E1UC	B	Ohakune OKN	44	201,618		10,378			136,990	-	136,990
E1C	B	Opunake OPK	45	442,536		38,172			503,870	-	503,870
E1UC	B	Opunake OPK	46	672,043		70,933			936,316	-	936,316
E1C	B	Waverley WVY	47	-		14			185	-	185
E1UC	B	Waverley WVY	48	491,342		36,347			479,780	-	479,780
E100	A	Carrington CST	51			1,644,464	766,249		348,950	-	348,950
E100	A	Huirangi HUI	52			473,770	133,955		61,003	-	61,003
E100	A	Moturoa / INPL	53			160,800	54,750		24,933	-	24,933
E100	A	Stratford SFD	54			451,870	187,245		85,271	-	85,271
E100	B	Hawera HWA	55			405,150	209,145		131,594	-	131,594
E100	C	Waverley WVY	56			-	-		-	-	-
E100	D	Opunake OPK	57			42,705	10,950		9,344	-	9,344
E100	E	Brunswick BRK	58			550,785	287,620		110,130	-	110,130
E100	E	Wanganui WGN	59			382,155	182,865		70,019	-	70,019
E100	F	Marion MTN	60			272,290	148,920		48,280	-	48,280
E100	G	Mataroa MTR	61			253,675	125,195		65,339	-	65,339
E100	G	Ohakune OKN	62			-	-		-	-	-
E100	H	Masterton MST	63			1,191,360	620,865		315,027	-	315,027
E100	H	Greytown GYT	64			255,596	122,639		62,227	-	62,227
E100	I	Bunynthor/BPE	65			3,278,767	1,594,860		600,624	-	600,624
E100	I	Linton LTN	66			1,665,155	699,895		263,580	-	263,580
E100	J	Mangamai MGM	67			113,880	37,960		25,627	-	25,627
E300	A	Carrington CST	69			4,954,084	2,298,509		1,046,741	-	1,046,741
E300	A	Huirangi HUI	70			5,759,710	3,170,426		1,443,812	-	1,443,812
E300	A	Moturoa / INPL	71			2,006,769	789,495		359,536	-	359,536
E300	A	Stratford SFD	72			2,620,710	1,037,820		472,623	-	472,623
E300	B	Hawera HWA	73			2,714,783	1,203,033		756,948	-	756,948
E300	C	Waverley WVY	74			421,940	284,700		134,122	-	134,122
E300	D	Opunake OPK	75			712,480	373,760		318,929	-	318,929
E300	E	Brunswick BRK	76			2,026,116	1,113,615		426,403	-	426,403
E300	E	Wanganui WGN	77			4,021,305	1,969,902		754,275	-	754,275
E300	F	Marion MTN	78			2,311,180	1,147,560		372,039	-	372,039
E300	G	Mataroa MTR	79			548,595	373,760		195,065	-	195,065
E300	G	Ohakune OKN	80			-	-		-	-	-
E300	H	Masterton MST	81			2,850,085	1,449,470		735,461	-	735,461
E300	H	Greytown GYT	82			226,958	69,575		35,302	-	35,302
E300	I	Bunynthor/BPE	83			11,381,420	5,531,085		2,083,007	-	2,083,007
E300	I	Linton LTN	84			5,003,785	2,694,795		1,014,860	-	1,014,860
E300	J	Mangamai MGM	85			185,420	36,500		24,641	-	24,641
SPECIAL	Asset Based		12							4,430,839	4,430,839
SPECIAL	By Pass		5								
SPECIAL	BALANCE		1								
SPECIAL	SWIFT		1								
SPECIAL	Hau Nui Generation		1								
SPECIAL	Tararua Generation		1								
SPECIAL	Other Generation		6								
			27	61,594,110	-	62,554,664	28,727,118	-	56,285,956	4,430,839	60,716,795

Eastern Network		Pass Through Prices 2018 (Period 1 April 2017 to 31 March 2018)																				ABP (\$/AMD, value)		Indirect Fixed (\$/ICP)		Indirect Variable (\$/OPD)		Connection charge (\$/AMD)		Interconnection charge (\$/OPD)					
		Fixed					Variable											Demand Charge														Individually Priced			
		Network Asset Charge					Volume Charge											Demand Charge																	
		ICP \$/Month	ICP cents/day	Transformer \$/day	Installed Capacity \$/kVA/Month	CT/VT Charge (\$/day)	Uncontrolled c/kWh	All Inclusive c/kWh	Controlled c/kWh	Night Only c/kWh	On Peak Controlled c/kWh	Off Peak Controlled c/kWh	Summer Day c/kWh	Summer Night c/kWh	Winter Day c/kWh	Winter Night c/kWh	Winter AM Peak c/kWh	Winter PM Peak c/kWh	\$/kW /Month	\$/kVA /Month	\$/kVAr /Month														
Tariff Group		Work		Griffin Description		24UC	AICO	CTRL	NITE	PEAK	OPFK	TS/1	TS/2	TW/1/3/5	TW/6	TW/2	TW/4																		
Residential+Small Commercial																																			
V05C	Valley	Low Usage - Controlle	13			4.4500	4.1000	3.2600																											
V05U	Valley	Low Usage - Uncontrc	14			4.4500																													
V05S	Valley	Low Usage - TOU	15			4.4500		3.2600		10.8800																									
V06C	Valley	Residential - Standar	16			3.2800	2.9400	2.1100																											
V06U	Valley	Residential - Standar	17			3.2800																													
V06S	Valley	Residential - TOU	18			3.2800		2.1100		10.8800																									
Tauranga																																			
T05C	Tauranga	Low Usage - Controlle	20			4.3600	3.7200	2.2500																											
T05U	Tauranga	Low Usage - Uncontrc	21			4.3600																													
T05S	Tauranga	Low Usage - TOU	22			4.3600		2.2500		13.7700																									
T06C	Tauranga	Standard Residential	23			3.7400	3.0900	1.6200																											
T06U	Tauranga	Standard Residential	24			3.7400																													
T06S	Tauranga	Standard Residential	25			3.7400		1.6200		13.7700																									
Unmetered Supply																																			
V01	Valley	Unmetered/Streetlight	28			4.4700																													
V02	Valley	Unmetered/Streetlight	29		6.2600																														
T01	Tauranga	Unmetered/Streetlight	32			4.4700																													
T02	Tauranga	Unmetered/Streetlight	33		6.6600																														
Medium/Large Commercial																																			
V24	Valley	Commercial three phase 100A part of V25 but with rebate				2.6300	2.6300																												
V28	Valley	> 200 Amp up to 299 kVA merged with V27 & V29				2.4700	2.4700	1.7600																											
V40	Valley	Individual ICP prices																																	
V60	Valley	Individual ICP prices																																	
V601	Kirieth	Individual ICP prices																																	
Tauranga																																			
T22	Tauranga	Capacity 100 - 199kVA				2.5400		1.1700																											
T24	Tauranga	Capacity 200 - 299kVA				2.3500		1.0800																											
T41	Tauranga	capacity 200 kVA utilised									1.5900	0.00	2.0200	0.00	4.2500	7.3900																			
T43	Tauranga	capacity 300 kVA - 1,500 kVA utilised (Closed to new connections)									1.5900		2.0200		4.2500	7.3900																			
T50	Tauranga	Individual ICP prices																																	
T60	Tauranga	Individual ICP prices																																	

Eastern Network

Tariff Group/work Groirif Description	Actual Quantities (1 April 2017 to 31 March 2018)																	
	ICP No.'s (Average)	ICP Days	ICP Months	kVA Installed	CT/VTs	kWh Uncontrolled	kWh All inclusive	kWh Controlled	kWh Nite Only	kWh On peak Controlled	kWh Off Peak Controlled	kWh Summer Day	kWh Summer Night	kWh Winter Day	kWh Winter Night	kWh Winter AM Peak	kWh Winter PM Peak	
						24UC	AICO	CTRL	NITE	PEAK	OFFPK	TS/1	TS/2	TW/1/3/5	TW/6	TW/2	TW/4	
Residential+Small Commercial																		
V05C Valley Low Usage - Controlle	13					79,881,568	7,485,058	33,927,722	376,089									
V05U Valley Low Usage - Uncontr	14					38,466,203			197,085									
V05S Valley Low Usage - TOU	15					1,295			28,984					18,525		48,721		
V06C Valley Residential - Standar	16					114,104,676	23,510,876	39,397,000	812,177									
V06U Valley Residential - Standar	17					223,517,490			1,048,094									
V06S Valley Residential - TOU	18					1,418		40,913						35,020		85,689		
T05C Tauranga Low Usage - Controlle	20					39,563,236	22,781,419	22,847,866	147,757									
T05U Tauranga Low Usage - Uncontr	21					29,354,577			3,651,498									
T05S Tauranga Low Usage - TOU	22					104		16,509						8,813		24,064		
T06C Tauranga Standard Residential	23					184,452,411	64,158,192	77,557,913	520,245									
T06U Tauranga Standard Residential	24					190,366,506			7,247,371									
T06S Tauranga Standard Residential	25							22,077						13,766		34,791		
Unmetered Supply																		
V01 Valley Unmetered/Streetlight	28					603,023												
V02 Valley Unmetered/Streetlight	29					4,288,655	4,747,166											
T01 Tauranga Unmetered/Streetlight	32					2,382,383												
T02 Tauranga Unmetered/Streetlight	33					4,919,201	6,665,843											
Medium/Large Commercial																		
V24 Valley Commercial three phase 100A part of V25 but with rebate						29,190,930	30,132,033											
V28 Valley > 200 Amp up to 299 kVA merged with V27 & V29						9,732,860	228,858											
V40 Valley Individual ICP prices						56,221,889												
V60 Valley Individual ICP prices						294,086,831												
V601 Kaitiaki Individual ICP prices						318,716,170												
T22 Tauranga Capacity 100 - 199kVA						51,623,059		332,624	404,787									
T24 Tauranga Capacity 200 - 299kVA						7,101,913												
T41 Tauranga capacity 300 kVA utilised												11,998,349	3,843,912	5,456,873	2,898,708	1,878,409	1,511,611	
T43 Tauranga capacity 300 kVA - 1,500 kVA utilised (Closed to new connections)												790,147	218,715	626,120	206,195	290,144	108,847	
T50 Tauranga Individual ICP prices						177,595,922												
T60 Tauranga Individual ICP prices						138,884,334												
TOTAL						1,978,313,887	148,296,436	173,871,598	14,405,103	75,924	191,255	12,778,395	4,062,628	5,931,999	3,104,906	2,168,553	1,617,458	

Eastern Network				Actual Pass-through Revenue - Eastern						
				Fixed (Monthly)	Fixed (Daily)	Variable	Demand	Non-standard	Total	
Tariff Group	Network Group	Tariff Description								
Residential+Small Commercial										
V05C	Valley	Low Usage - Controlled	13	-	-	4,967,661	-	-		4,967,661
V05U	Valley	Low Usage - Uncontrolled	14	-	-	1,711,746	-	-		1,711,746
V05S	Valley	Low Usage - TOU	15	-	-	2,996	-	-		2,996
V06C	Valley	Residential - Standard Contr	16	-	-	5,265,130	-	-		5,265,130
V06U	Valley	Residential - Standard Unco	17	-	-	7,331,374	-	-		7,331,374
V06S	Valley	Residential - TOU	18	-	-	4,720	-	-		4,720
Tauranga										
T05C	Tauranga	Low Usage - Controlled	20	-	-	3,079,753	-	-		3,079,753
T05U	Tauranga	Low Usage - Uncontrolled	21	-	-	1,279,860	-	-		1,279,860
T05S	Tauranga	Low Usage - TOU	22	-	-	1,590	-	-		1,590
T06C	Tauranga	Standard Residential & Com	23	-	-	9,389,446	-	-		9,389,446
T06U	Tauranga	Standard Residential & Com	24	-	-	7,119,707	-	-		7,119,707
T06S	Tauranga	Standard Residential & Com	25	-	-	2,253	-	-		2,253
Unmetered Supply										
V01	Valley	Unmetered/Streetlighting	28	-	-	26,955	-	-		26,955
V02	Valley	Unmetered/Streetlighting	29	-	268,470	-	-	-		268,470
T01	Tauranga	Unmetered/Streetlighting	32	-	-	106,493	-	-		106,493
T02	Tauranga	Unmetered/Streetlighting	33	-	327,619	-	-	-		327,619
Medium/Large Commercial										
V24	Valley	Commercial three phase 100A part of V25 but with rebate		-	-	1,560,194	-	-		1,560,194
V28	Valley	> 200 Amp up to 299 kVA merged with V27 & V29		-	-	247,289	-	-		247,289
V40	Valley	Individual ICP prices		-	-	-	-	1,675,168		1,675,168
V60	Valley	Individual ICP prices		-	-	-	-	6,087,999		6,087,999
V601	Kinleith	Individual ICP prices		-	-	-	-	5,136,080		5,136,080
T22	Tauranga	Capacity 100 – 199kVA		-	-	1,315,117	-	-		1,315,117
T24	Tauranga	Capacity 200 -299kVA		-	-	166,895	-	-		166,895
T41	Tauranga	capacity 200 kVA unitised		-	-	491,513	-	-		491,513
T43	Tauranga	capacity 300 kVA - 1,500 kVA unitised (Closed to new connections)		-	-	43,184	-	-		43,184
T50	Tauranga	Individual ICP prices		-	-	-	-	4,415,642		4,415,642
T60	Tauranga	Individual ICP prices		-	-	-	-	3,806,464		3,806,464
				-	596,089	44,113,875	-	21,121,353		65,831,316
Total Pass-through revenue										126,548,111

11 Attachment D – Transpower New Investment Contracts

The Determination requires Powerco to provide evidence of the amount of charge relating to any investment contract entered into in the Assessment Period consistent with clause 3.1.3(c) of the IM Determination.

Powerco has 18 New Investment Contracts in the 2018 Assessment Period as detailed in table 13 below.

Table 13: New Investment Contracts

Contract	2018 Assessment Period (\$000)	New or existing contract this period	Refer
Carrington St Substation supply upgrade	559	Existing	Transpower Appendix 4
Transpower RTU connection	17	Existing	Letter/invoice from Transpower
Mt Maunganui 110 kV Transformer upgrade	912	Existing	Transpower Appendix 4
Neutral Earthing Resistor Project	15	Existing	Transpower Appendix 4
Tauranga 33 kV Indoor conversion	561	Existing	Transpower Appendix 4
Te Matai 110/33 kV transformer	237	Existing	Transpower Appendix 4
Upgrade of supply capacity	195	Existing	Transpower Appendix 4
Kaitimako GXP	369	Existing	Transpower Appendix 4
Kopu 66kV distance feeder protection	45	Existing	Transpower invoice
Masterton 33kV feeder panels indoor protection	111	Existing	Transpower invoice
Piako grid connection	1,251	Existing	Transpower invoice
Tauranga T4 Supply Transformer	501	Existing	Transpower Invoice
Masterton 110kV supply transformer upgrade	542	Existing	Transpower Invoice
Bunnythorpe indoor conversion-3 additional feeders	46	Existing	Transpower Invoice
ICCP link at New Plymouth	30	Existing	Transpower Invoice
Huirangi Supply transformer upgrade and 33kV additional circuits	877	Existing	Transpower Invoice
Kopu additional 66kV feeder	118	Existing	Transpower Invoice
Piako 110kV Bus Split	186	Existing	Transpower Invoice
Total New Investment Contracts	6,572		

Appendix 4: Schedule of updates to your new investment charges

This appendix sets out updates to your charges under the Customer Investment Contracts (CIC) and New Investment Contracts (NIC) you hold with Transpower. The updated charges are effective from 1 April 2017.

As per your contract, we have updated CIC charges from provisional to final using the final project costs that have been closed out for the following CICs (and applying the RCP2 pre-tax WACC rate). These final charges are effective from 1 April 2017 and will be subject to the adjustments outlined in Schedule 3 of the CIC.

Piako 110 kV Bus Split

- Project budget cost¹: \$505,192.00
- Final project cost: \$598,997.81
- Change from \$11,159.00 to \$15,538.68 per month

Bunnythorpe Indoor Conversion - Three Additional Feeders

- Project budget cost²: \$590,486.00
- Final project cost: \$406,152.12
- Change from \$6,641.00 to \$3,866.85 per month

As per your contract, we have updated NIC charges based on our annual review of the applicable risk-free rate. With effect from 1 April 2017, the risk-free rate applied to NIC charges will be 2.76%³. The revised risk-free rate means that the pre-tax finance rate (equal to the risk-free rate plus the margin of 2.5%) will be 5.26%. This is a decrease of 0.66 percentage points from the year to 1 April 2017.

The total effect on your monthly charges under each of your NICs with Transpower is set out below.

Carrington St Substation Supply Upgrade

- Change from \$37,153.11 to \$36,044.01 per month

Kaitamako GXP

- Change from \$32,233.51 to \$30,734.84 per month

Neutral Earth Resistor Project at Linton

- Change from \$1,264.99 to \$1,251.51 per month

Mt Maunganui 110kV Transformer Upgrade

- Change from \$77,856.08 to \$75,963.88 per month

Tauranga 110/33 kV Supply Transformer (T4)

- Change from \$42,831.86 to \$41,771.42 per month

Upgrade of Supply Capacity at Tauranga

- Change from \$16,718.43 to \$16,263.04 per month

Te Matai 110/33 kV Transformer

- Change from \$20,735.84 to \$19,774.24 per month



TRANSPOWER

Bill Hooper
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*assigned 1/4/02
from UNL*

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25 October 2002

Mr John van Brink
UnitedNetworks Limited
44 Taharoto Road
Takapuna
Private Bag 1029777
North Shore Mail Centre
Auckland

Dear John

Connection to Transpower RTUs

We refer to the agreement between us (evidenced by the exchange of letters dated 9 and 29 July 1996) for the service of providing connection of your SCADA to our RTU and allowing you to read any existing inputs and by further agreement control any of the circuit breakers already connected to the RTU at a charge per site of \$3,500.00 per annum (the sites being at the Wellsford, Albany, Henderson, Hepburn Road, Waihou, Waikino, Kopu, Hineura, and Kinleith substations).

In view of the sale of certain assets to Powerco Limited and Hawke's Bay Network Limited, this letter records a new agreement in respect of these services but only in respect of sites and substations where Powerco will take over UNL's network should the sale proceed.

The service is to continue under this new agreement at \$3,500.00 (plus GST) per annum per site until reasonable notice of termination (of not less than 3 months) is provided by either party but only in respect of the sites at Waihou, Waikino, Kopu, Hineura and Kinleith substations. This new agreement can, subject to Transpower's consent (not to be unreasonably withheld), be assigned to Powerco.

Naturally, this new agreement is in addition to and independent of the other new agreement in respect of the sites at the Wellsford, Albany, Henderson, and Hepburn Road substations.

Could you please acknowledge your acceptance of this as set out below, and return a signed copy to me.

**TRANSPOWER***Keeping the energy flowing*

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Carolyn McArthur
Tel: 04 590 7147
carolyn.mcarthur@transpower.co.nz

7 January 2016

Mike Smith
Transmission Analyst
Powerco Limited
84 Liardet Street
New Plymouth 4310

Dear Mike

Commissioning of CIC for Kopu Additional 66 kV Feeder

The equipment relating to the additional 66 kV feeder at Kopu, provided under the Customer Investment Contract between Transpower and Powerco Limited dated 7 August 2014 (CIC) was commissioned (for connection charging purposes) on 2 December 2015. The Commissioning Certificate is attached.

The provisional monthly **New Investment Charge** of \$9,812.00 will commence from 1 April 2016 and will be subject to the adjustments outlined in Schedule 3 of the CIC.

The monthly **Connection Charges** for Kopu under your default Transmission Agreement with Transpower are revised from 2 December 2015. The Connection Charges for December were \$200,370.65 which includes one day at the pre-commissioning rate and 30 days at the revised rate. Your monthly charge from 1 January 2016 is \$200,407.42.

A revised Grid Charges Schedule is attached for inclusion in your default Transmission Agreement, effective from 2 December 2015.

Please contact me if you have any queries.

Yours sincerely

Carolyn McArthur
Contracts Specialist



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<p>Powerco Limited PRIVATE BAG 2061 NEW PLYMOUTH 4342</p>	<p>Tax Invoice 0001106616 GST No: 50-038-057 Invoice Date: 29/03/2018 Customer ID: POCO Account Manager: Matt Fanning Due Date: 20/04/2018 Page: 1</p>
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Reference	Description	Amount	
	Connection to Transpower RTUs for Mar 2018	1,458.33	
	Sub-Total		1,458.33
Bunnythorpe	CIC Charge for Bunnythorpe Indoor Conversion - Three Additional Feeders for Mar 2018	3,866.85	
	Sub-Total Bunnythorpe		3,866.85
Carrington St	Carrington St Substation Supply Upgrade for Mar 2018	10,514.00	
Carrington St	Carrington St Substation Supply Upgrade for Mar 2018	36,044.01	
	Sub-Total Carrington St		46,558.01
Hawera	Notional Embedding Contract for Mar 2018	20,938.00	
	Sub-Total Hawera		20,938.00
Huirangi	Provisional New Investment Charge for Huirangi Supply Transformer Upgrade and 33 kV Additional Circuits for Mar 2018	73,054.00	
	Sub-Total Huirangi		73,054.00
Kaitimako	New Investment Charge Kaitimako GXP for Mar 2018	30,734.84	
	Sub-Total Kaitimako		30,734.84
Kopu	New Investment Charges for Kopu 66 kV Distance Feeder Protection for Mar 2018	3,731.41	
Kopu	Provisional New Investment Charge for Kopu Additional 66 kV Feeder for Mar	9,812.00	

2018





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Reference	Description	Amount	
Tauranga	New Investment Charge for Tauranga T4 Supply Transformer for Mar 2018	41,771.42	
Tauranga	New Investment Charge for Tauranga 33kV Indoor Conversion for Mar 2018	46,714.00	
	Sub-Total Tauranga		104,748.46
Te Matai	New Investment Charge for Te Matai 110/33 kV Transformer for Mar 2018	19,774.24	
	Sub-Total Te Matai		19,774.24
		Net Total:	\$568,635.79
		GST:	\$85,295.37
		Total:	\$653,931.16





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Reference	Description	Amount	
	Sub-Total Kopu		13,543.41
Linton	New Investment charge for Neutral Earthing Resistor Project for Mar 2018	1,251.51	
	Sub-Total Linton		1,251.51
Masterton	Provisional New Investment Charges for Masterton 110kV Supply Transformer Upgrade for Mar 2018	45,190.00	
Masterton	New Investment Charges for Masterton 33kV Feeder Panels Indoor Conversion for Mar 2018	9,269.58	
	Sub-Total Masterton		54,459.58
Mt Maunganui	New Investment Charge for Mt Maunganui 110 kV Transformer Upgrade for Mar 2018	75,963.88	
	Sub-Total Mt Maunganui		75,963.88
New Plymouth	ICCP link at New Plymouth for Mar 2018	2,500.00	
	Sub-Total New Plymouth		2,500.00
Piako	New Investment Charge for Piako 110 kV Bus Split for Mar 2018	15,538.68	
Piako	New Investment Charges for Piako Grid Connection for Mar 2018	104,246.00	
	Sub-Total Piako		119,784.68
Tauranga	New Investment charge for Upgrade of Supply Capacity for Mar 2018	16,263.04	



12 Attachment E – Reliability limits and boundary values, caps, collars and targets

The reliability limits and unplanned boundary values for SAIDI and SAIFI listed below are from Schedule 4a of the Determination. The target, collar and cap for SAIDI and SAIFI listed below are from Schedule 5b of the Determination.

Table 14 Powerco’s Reliability limits, boundary values, target, collar and cap

	Limit	Unplanned Boundary Value	Target	Collar	Cap
SAIDI	210.6290	11.2140	188.8628	167.0966	210.6290
SAIFI	2.5197	0.0640	2.3406	2.1615	2.5197

There have been no recalculations of the SAIDI and SAIFI limits, unplanned boundary values, targets, caps or collars in this assessment period.

13 Attachment F – Reliability in the 2018 Assessment Period

This section provides detail on Powerco's reliability in the 2018 Assessment Period and comments on the cause of the Major Event Days in this period.

Powerco's SAIDI and SAIFI result is below the corresponding limits in this Assessment Period. However the regulatory target for SAIDI was exceeded.

As signalled in Powerco's 2017 Asset Management Plan¹¹, underlying reliability performance at specific locations across our networks is deteriorating due to a combination of declining asset condition and reducing security headroom. This is one of the drivers for our increasing investment in asset renewal and security upgrades described in the Asset Management Plan, and one of the reasons why Powerco submitted a CPP application in June 2017. Despite increasing expenditure across a number of areas, we expect at best, only marginal improvement in network performance (measured by the average level of unplanned interruptions) during the CPP period; but with increasing improvements over the longer term.

Powerco had three SAIDI major event days and four SAIFI major event days. Worsening of SAIDI and SAIFI in the last quarter of the year required significant management action to minimise the impact of outages on our customers.

These actions included:

- Powerco and Downer reviewing the response effectiveness of every HV fault
- Control Room escalation to Powerco senior management if HV faults were not acknowledged within 10 minutes
- A daily technical review of sub-transmission faults to identify and remedy underlying issues
- Weekly reports on progress to the CEO and Board.

The results continue to support Powerco's analysis in its CPP application of underlying deterioration in the network.

A careful balance was struck in continuing the capital work programme. Work continued, given the importance of maintaining safety and reliability and continuing to invest in the network and the benefits of this to consumers in the long run. Management however, continued to minimise SAIDI and SAIFI where possible by making strategic decisions on where to reduce work as appropriate, and safety and risk management were given a priority.

13.1 Commentary on Major Event Days

A major event day occurs when the Unplanned Boundary Value is exceeded.

During the Assessment Period Powerco experienced four major event days (MED). Three of these were MEDs for both SAIDI and SAIFI. On 2 August 2017 the Unplanned Boundary Value for SAIFI was exceeded but the Unplanned Boundary Value for SAIDI was not exceeded.

Severe weather event affected the Western regions - 13 July 2017

From the early hours of Thursday, 13 July 2017 a significant storm event affected the Western regions of Powerco's network. This storm event quickly escalated and affected 14,500 ICPs. The storm included severe weather fronts with heavy rain & flooding in the Wairarapa region; severe winds in lower Wanganui & Taranaki regions; and significant snow falls across upper Tararua & Central Plateau regions. These combined to cause serious damage to the distribution network across much of the Western footprint. At the

¹¹ Powerco's full Asset Management Plan is available from our website www.powerco.co.nz.

peak of the storm there were approximately 32,000 customers affected. The repairs to the network continued for three to four weeks with some lines affected by snow/ice damage having to be completely rebuilt.

33kV outage at Greerton - 2 August 2017

A 33kV outage at Greerton on 2 August 2017 cut supply to seven Zone Substations affecting 22,483 ICPs. This event exceeded the SAIFI MED threshold only.

Severe weather event - 5 January 2018

A storm event on 5 January 2018 brought significant rain and severe winds of up to 120km/hr. This affected all regions but particularly the Coromandel area where tidal surges cut off access to many areas and flooded low lying residential areas. The storm occurred when a large amount of staff (both Powerco employees and contractors) were on their Christmas breaks. The outages affected approximately 27,000 customers.

Ex Cyclone Gita - 20 February 2018

Powerco's western network was severely impact by Ex Cyclone Gita on 20 February 2018. Taranaki was particularly affected with faults across most of the region. Wind speeds exceeded 130km/hr. The majority of the outages began on the 20th but final repairs and restoration took many days. This storm affected just under 41,000 customers.

14 Attachment G – Compliance References

The following tables reference the Determination requirements and provide guidance on the section of this Statement that meets the specified requirements.

Table 15: Price Path Summary

Determination clause	Requirement	Section of this document
8.3	Notional Revenue in an assessment period must not exceed the Allowable Notional Revenue for the assessment period	2.1
8.6	Demonstrate the recovery of pass-through costs and recoverable costs by calculating the pass-through balance	2.5

Table 16: Quality Path Summary

Determination clause	Requirement	Section of this document
9.1(a)	Comply with the annual reliability assessment where assessed values for SAIDI and SAIFI for the Assessment Period must not exceed the reliability limits for SAIDI and SAIFI	3.1
9.1(b)	Comply with the annual reliability assessments for each of the two immediately preceding assessment periods	3.5

Table 17: Annual compliance statement

Determination clause	Requirement	Section of this document
An annual Compliance Statement must be provided to the Commission consisting of:		
11.2(a)	A statement regarding compliance with the price path and quality standards	1
11.2(b)	Information required to evidence price path compliance, being:	
11.4(a)	Any reasons for non-compliance with the price path	N/A
11.4(b)	Actions taken to mitigate any non-compliance and to prevent similar non-compliance in future periods	N/A
11.4(c)	The amount of allowable notional revenue, notional revenue, distribution prices, quantity, along with all numeric data, other	2.2, 2.3 and

Determination clause	Requirement	Section of this document
	relevant data, information and calculations	Attachment A
11.4(d)	In relation to each price during any part of the assessment period, the price and the portion of that price that are pass-through prices and the portion that are distribution prices	2.4 and Attachment B
11.4(e)	<p>The methodology used to calculate distribution and pass-through prices, along with information clearly identifying the portion of pass-through prices attributable to:</p> <ul style="list-style-type: none"> (i) pass-through costs and recoverable costs for the assessment period in question; and (ii) Any under or over-recovery of pass-through costs and recoverable costs from a prior assessment period, as reflected by the pass-through balance 	2.4
11.4(f)	The pass-through balance, pass-through prices, and quantities for the Assessment Period and the preceding Assessment Period, along with the units of measurement associated with all numeric data, and other relevant data, information and calculations	2.5 and Attachment C
11.4(g)	The amount of pass-through costs and recoverable costs included in the calculation of the pass-through balance for the Assessment Period and supporting data, information and calculations used to determine those amounts	2.4
11.4(h)	Evidence of the amount of charge relating to any investment contract entered into in the Assessment Period consistent with clause 3.1.3(c) of the IM Determination, which need not be disclosed under 11.1(c)	Attachment D
11.4(i)	The amount of any pass-through costs and recoverable Costs (actual or forecast) used to set pass-through prices for the Assessment Period	2.4
11.4(j)	An explanation as to the cause, or likely cause, of any differences between the amounts of pass-through or recoverable costs used to set prices and actual amounts of those pass-through costs and recoverable costs	2.4
11.4(k)	A reconciliation between the pass-through balance for the Assessment period with the pass-through balance for the preceding Assessment Period	2.2
11.2(c)	Information required to evidence compliance with the quality standards, being:	
11.5(a)	Any reasons for non-compliance with the annual reliability assessment	N/A
11.5(b)	Actions taken to mitigate any non-compliance and to prevent similar	N/A

Determination clause	Requirement	Section of this document
	non-compliance in future periods	
11.5(c)	SAIDI and SAIFI assessed values, limits, unplanned boundary values, caps, collars and targets for the assessment period and any supporting calculations (including those in schedule 4A) and the annual reliability assessments for the two previous assessment periods	3.1-3.4 and Attachment E
11.5(d)	Any recalculations of the SAIDI and SAIFI limits, unplanned boundary values, targets, caps and collars following a major transaction or transfer of transmission assets from Transpower that become system fixed assets, or a transfer of system fixed assets to Transpower including any supporting information, calculations, or data used to determine the historic SAIDI and SAIFI values of the newly acquired or transferred assets	N/A (refer 5,6 and Attachment E)
11.5(e)	A descriptions of the policies and procedures which Powerco has used for capturing and recording interruptions and for calculating SAIDI and SAIFI assessed values for the assessment period	3.5
11.5(f)	The cause of each Major Event Day within the assessment period	Attachment F
11.2(d)	State whether or not— <ul style="list-style-type: none"> (i) Powerco has undertaken a restructure of prices during the assessment period; (ii) Powerco has received a transfer of transmission assets from Transpower that become system fixed assets, or transferred system fixed assets to Transpower; (iii) Any amalgamation or merger has occurred in the assessment period; and (iv) Any major transaction has occurred in the period 	4-6
11.2(e)	If there has been an amalgamation, merger or major transaction, the annual compliance statement for the assessment period must— <ul style="list-style-type: none"> i) State whether Powerco has complied with clauses 10.1 to 10.4 of the Determination; and ii) Include any information or calculations required to be made under clauses 10.1 to 10.4 of the Determination 	NA
11.2(f)	If there has been a restructure of prices in the assessment period or the previous assessment period include any additional information in accordance with clauses 11.7 and 11.8 of the Determination as below	
11.7	If Powerco has undertaken a restructure of prices that first applied during the current or preceding assessment period, the annual compliance statement must state the nature of the restructure of the prices and identify the consumer groups impacted by the restructure of prices	2.6

Determination clause	Requirement	Section of this document
11.8	<p>If Powerco has undertaken a restructure of prices that first applied during the current or preceding assessment period, and Powerco has derived quantities for the purposes of calculating ANR or NR as provided for under clause 8.10 of the Determination (where quantities for the period two years prior are not available, the annual compliance statement must include—</p> <ul style="list-style-type: none"> i) The methodology used to determine the quantities that corresponds to each restructured price; ii) The forecast of the quantities corresponding to each restructured price prepared by Powerco for that assessment period and the actual quantities; and iii) An explanation for any differences between the actual and forecast quantities 	NA – quantities were available
11.2(g)	State the date on which the statement was certified	Cover
11.3(a)	Include a certificate in the form set out in Schedule 6 signed by at least one Director of Powerco	Page 3
11.3(b)	Include an assurance report, meeting the requirements specified in Schedule 7, in respect of all information contained in the annual compliance statement.	7