

# **Customised Price-Quality Path Annual Compliance Statement**

Powerco Electricity Distribution Services



Assessment Period: 01 April 2021 – 31 March 2022



### **Contents**

i. Summary	3
2. Assessment against the price path	4
2.1 Calculation of the revenue wash-up amount	4
2.2 Calculation of allowable revenue	5
2.3 Calculation of actual revenue	6
2.4 Calculation of revenue foregone	8
3. Assessment against the quality path	9
3.1 Planned interruptions	9
3.2 Unplanned interruptions	10
3.3 Unplanned SAIDI and SAIFI calculations	11
3.4 Reliability policies and procedures	13
4. Major transactions	15
5. Directors' certificate	16
6. Auditor's report	17
7. Appendices	19
Attachment A – Prices and actual quantities for the assessment period	20
Attachment B – Reliability limits and boundary values, caps, collars and targets	30
Attachment C – Commentary on major event days	31
Attachment D – Exceeding the unplanned interruptions limit	32
Reasons for non-compliance with the unplanned interruptions reliability assessment	32
Actions taken to mitigate non-compliance with the annual reliability assessment	32
Improvements in managing unplanned SAIDI	33
Attachment E – Compliance statement references	35



### 1. Summary

#### Powerco is required to annually report on compliance with its price-quality path

Powerco Limited's electricity distribution business ("Powerco") is subject to regulation under the Commerce Act 1986. The Commerce Commission ("Commission") has set a customised price-quality path (CPP) which applies to Powerco from 1 April 2018 to 31 March 2023. This 2022 assessment is the fourth assessment period under the CPP.

The CPP requirements are set out in the Powerco Limited Electricity Distribution Customised Price-Quality Path Determination 2018<sup>1</sup> ("Determination"). The Determination requires Powerco to provide an annual compliance statement ("Statement") to the Commission. In November 2020<sup>2</sup>, the disclosure date for the 2021, 2022, and 2023 assessments was amended to be within five months following the end of the disclosure year. This aligns with the requirements for other information disclosures, allowing a more efficient audit and production process. It differs from the original Determination which specifies a 50-day timeframe.

This Statement confirms that Powerco:

- complies with the requirement to calculate the wash-up amount for the assessment period (section 2)
- complies with the quality standards for the assessment period (section 3)
- has not entered into any agreement with another EDB or Transpower for an amalgamation, merger, major transaction or non-reopener transaction in the assessment period (section 4)

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

Powerco published this Statement on 31 August 2022. 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 (<a href="www.powerco.co.nz">www.powerco.co.nz</a>) and additional copies can be provided on request.

<sup>&</sup>lt;sup>1</sup> https://comcom.govt.nz/\_data/assets/pdf\_file/0026/216863/Powerco-Limited-electricity-distribution-customised-price-quality-path-determination-2018-consolidated-20-May-2020-20-May-2020.pdf

<sup>&</sup>lt;sup>2</sup> https://comcom.govt.nz/\_\_data/assets/pdf\_file/0024/227616/2020-NZCC-23-Powerco-Limited-electricity-distribution-customised-price-quality-path-annual-compliance-statement-due-date-amendment-determination-2020-4-November-2020.pdf



### 2. Assessment against the price path

Each year Powerco calculates an annual 'wash-up' of the difference between revenue received and allowable revenue adjusted for actual CPI, pass-through costs and recoverable costs. The purpose of the wash-up mechanism is to restore Powerco to the position it would have been in had the forecasted quantities, pass through and recoverable costs, and level of CPI been made with perfect foresight, taking account of the time value of money.

The wash-up amount for this year-ending 2022 assessment period will be included in the calculation of allowable revenue and price-setting for the year ending 2024. The two-year differential reflects the timing between the end of this assessment period (March), finalising actual revenues (around September) and setting prices for the following year (occurs around December).

For presentation purposes, the tables set out in this section are aggregates of the price and quantity information. While dollar balances are rounded to the nearest thousand dollars, the underlying compliance calculations apply the whole number and are reflected in the totals The rounding of each component may result in tables which look like they don't add up - this is just the rounding effect.

#### 2.1 Calculation of the revenue wash-up amount

The Determination requires the wash-up amount to be calculated as demonstrated by table 1. The three components of this calculation are described in more detail throughout section 3 of this Statement.

Table 1: Wash-up amount calculation

Calculation components	\$000
Actual allowable revenue	364,874
Less: Actual revenue	352,126
Less: Revenue forgone	-
Wash-up amount	12,748

Specified in Schedule 1.5 of the Determination

The positive wash-up amount indicates an under recovery of revenue. This will be recoverable in FY24 by adjusting for the time-value of money and adding it to allowable revenue.



#### 2.2 Calculation of allowable revenue

The first step is to calculate what should have been allowed for 2022: actual allowable revenue. The Determination defines actual allowable revenue as in table 2. The calculation of each component is explained in subsequent sections.

Table 2: Actual allowable revenue calculation

Calculation components	\$000
[a] Actual net allowable revenue	253,866
[b] Plus: Actual pass-through costs	4,002
[c] Plus: Actual recoverable costs	102,168
[d] Plus: Revenue wash-up draw down amount	4,838
Actual allowable revenue	364,874

Specified in Schedule 1.5 of the Determination

#### [a] Actual net allowable revenue

Actual net allowable revenue is the maximum revenue, excluding pass-through costs and recoverable costs and any wash-up draw down amount, that Powerco can earn in the assessment period.

#### [b][c] Actual pass-through and recoverable costs

Tables 3 and 4 contains actual pass-through and recoverable costs for 2022, with a comparison to forecast for reference.

Table 3: Actual and forecast pass-through costs

Pass-through costs	Actual \$000	Forecast \$000	Variance \$000
EA levies	1,036	998	(38)
Commerce Commission levies	630	769	139
UDL levies	208	200	(8)
Council rates	2,127	2,121	(6)
Total	4,002	4,088	86



Table 4: Actual and forecast recoverable costs

Recoverable costs	Actual \$000	Forecast \$000	Variance \$000
Opex IRIS incentive adjustment	(2,590)	(2,590)	0
Capex IRIS incentive adjustment	(663)	1,008	1,671
Transpower connection charges	16,053	16,020	(33)
Transpower interconnection charges	76,188	76,188	0
Transpower new investment charges	7,126	7,176	50
Avoided Costs of Transmission (ACOT)	4,980	4,981	1
Quality incentive adjustment	479	479	0
Capex wash-up adjustment	595	595	0
Total	102,168	103,857	1,689

For the 2022 assessment period actual costs were \$1.689m lower than forecast, largely driven by the difference between the actual and forecast capex IRIS incentive adjustment.

#### [d] Revenue wash-up draw down amount

The revenue wash-up draw-down amount represents any under or over recovery of revenue from two years prior (2020). It is calculated in accordance with schedules 1.5 and 1.6 of the Determination where:

- The 'revenue wash-up draw down amount' for the third assessment period (2022) is the 'opening wash-up account balance'
- which equals the 'closing wash-up account balance' of the second assessment period (2021); and
- is adjusted by (1 + 67th percentile estimate of post-tax WACC)<sup>2</sup>

The calculation of the 2022 revenue wash-up draw down amount is provided in table 5.

Table 5: 2022 revenue wash-up draw down amount

Calculation components	\$000
Opening wash-up account balance 2020	4,2113
Plus: adjustment for 67th percentile estimate of post-tax WACC	627
Revenue wash-up draw down amount 2021	4,838

#### 2.3 Calculation of actual revenue

Actual revenue is calculated in table 6 as:

actual revenue from prices is the sum of each price multiplied by each corresponding actual quantity and,

<sup>&</sup>lt;sup>3</sup> See table 1 of the 2020 Annual compliance statement https://www.powerco.co.nz/who-we-are/disclosures-and-submissions/electricity-disclosures



• other regulated income is income associated with the supply of electricity distribution services, other than through prices, investment related income, capital contributions, or vested assets. Notably, other regulatory income includes gains and losses on asset disposals.

Table 6: Actual revenue calculation

Calculation components	\$000
Actual revenue from prices	363,987
Plus: Other regulated income	(11,861)
Actual revenue	352,126

Specified in clause 4.2 of the Determination

Attachment A contains all schedules of prices and actual quantities used to calculate actual revenue from prices. These schedules total \$364.227m, \$240,000 higher than actual revenue from prices disclosed above. The difference relates to prior period revisions that are receipted in the current year. The actual revenue of \$363.987m reconciles to the general ledger.

Table 7 summarises the sources of regulated income.

Table 7: Other regulated income

Calculation components	\$000
Gains/losses on asset disposals	(13,660)
Other regulated income	1,798
Total other regulated income	(11,861)

The value of gains and losses on disposals is consistent with the value reported in the 2022 Information Disclosure. Schedule 15 in that disclosure includes a discussion about the underlying methodology used to calculate this figure.



#### 2.4 Calculation of revenue foregone

Revenue forgone for 2022 is zero due to the revenue reduction percentage for 2021 being -1.46%, which is below the 20% threshold (table 8).

Table 8: Revenue reduction percentage calculation

Calculation components	\$000
Actual revenue from prices	363,987
Forecast revenue from prices	358,763
Revenue reduction percentage	(1.46%)
Revenue forgone	Nil

The percentage is specified in clause 4.2 of the Determination as 1 - (actual revenue from prices) forecast revenue from prices)

The revenue forgone component of the wash-up calculation places a cap on the amount of revenue that may be recovered through the wash-up mechanism years. This can occur if there is a reduction in revenue from prices exceeding 20% of allowable revenue. This would most likely occur due to a significant reduction in demand.



### 3. Assessment against the quality path

Powerco's CPP quality path specifies separate planned and unplanned quality standards.

For presentation purposes, the tables set out in this section are aggregates of the SAIDI and SAIFI information. While results are rounded to three decimal places, the underlying calculations apply the whole number.

#### 3.1 Planned interruptions

Planned SAIDI and SAIFI comprises all planned Class B interruptions on Powerco's network for the assessment period. Clauses 9.1 and 9.5 of the Determination specify that compliance with the planned interruptions quality standard can be met by passing an annually or multi-year test.

- **Annual:** the assessed planned SAIDI and SAIFI values for the current assessment period do not exceed the reliability limits for the current assessment period; or
- **Multi-year:** the assessed planned SAIDI and SAIFI values for each of the two preceding assessment periods do not exceed the reliability limits for those preceding assessment periods.

The requirement to comply with the multi-year assessment only applies if Powerco exceeds the limit for the annual 2022 assessment. Powerco complies with the annual assessment but also provides multi-year assessment data for reference.

#### **Compliance with the annual assessment**

Table 9: 2022 Planned interruptions annual reliability assessment

CPP requirement	Results	Assessment
Assessed planned SAIDI ≤ Limit	95.740 ≤ 98.192	Complies
Assessed planned SAIFI ≤ Limit	0.398 ≤ 0.414	Complies

#### Compliance with the multi-year assessment

Table 10: Planned interruptions multi-year reliability assessment

CPP requirement	Assessed planned SAIDI		Assessed pla	nned SAIFI
2022	95.740	<b>~</b>	0.398	<b>✓</b>
2021	88.648	<b>~</b>	0.374	<b>✓</b>
2020	69.944	<b>~</b>	0.346	<b>✓</b>

Schedule 3.1 of the Determination specifies the planned reliability limits. These metrics are included in Attachment B of this document.



#### 3.2 Unplanned interruptions

Powerco complies with the unplanned interruptions quality assessment by complying with the multi-year assessment. Clauses 9.7 and 9.10 of the Determination specify that compliance with the unplanned interruptions quality standard can be met by passing an annually or multi-year test:

- **Annual assessment**: the assessed unplanned SAIDI and SAIFI values for the current assessment period does not exceed the reliability limits for the current assessment period; or
- **Multi-year assessment:** the assessed unplanned SAIDI and SAIFI values for each of the two preceding assessment periods does not exceed the reliability limits for those preceding assessment periods.

Although Powerco does not pass the annual unplanned SAIDI assessment (Table 11), compliance is achieved by passing the multi-year SAIDI assessment (Table 12). This is because annual unplanned SAIDI was compliant in FY21 and FY20 (the two years preceding FY22).

#### Compliance with the annual assessment

Table 11: 2022 Unplanned interruptions annual reliability assessment

CPP requirement	Results	Assessment
Assessed unplanned SAIDI ≤ Limit	201.078 ≤ 179.688	Exceed
Assessed unplanned SAIFI ≤ Limit	2.025 ≤ 2.216	Complies

#### Compliance with the multi-year assessment

Table 12: Unplanned interruptions multi-year reliability assessment

CPP requirement	Assessed unplant	ned SAIDI	Assessed unplanned SAIFI			
2022	201.078	×	2.025	<b>~</b>		
2021	168.962	<b>~</b>	1.836	<b>~</b>		
2020	181.010	<b>~</b>	1.922	<b>~</b>		

Schedules 3.2 and 4 of the Determination specify the unplanned reliability limits, unplanned boundary values, caps, collars and targets for the assessment period. These metrics are included in Attachment B of this Statement.



#### 3.3 Unplanned SAIDI and SAIFI calculations

#### **Unplanned SAIDI**

To calculate unplanned SAIDI, the assessment dataset is populated by listing all unplanned (Class C) interruptions on Powerco's network for the assessment period. Unplanned SAIDI is normalised for major event day ("MED").

A MED occurs when the daily SAIDI value for unplanned interruptions exceeds Powerco's SAIDI boundary value. The SAIDI boundary value for Powerco is specified in Schedule 3.2 of the Determination. For the current regulatory period the SAIDI boundary value is 11.710 minutes.

Table 13: Calculating Powerco's unplanned SAIDI assessment values

Calculation components	Result
Assessment dataset for SAIDI  Total unplanned SAIDI for the assessment period	201.078
Normalise assessment dataset (3 MEDs)  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.	35.130
SAIDI unplanned	201.078

#### Major event days in the assessment period

There were three SAIDI major event days in the assessment period:

Interruption date	Pre-normalised unplanned SAIDI	Normalised SAIDI (boundary value)	SAIDI adjustment for normalisation
13 February 2022	114.824	11.710	103.114
10 September 2021	15.459	11.710	3.749
17 July 2021	18.806	11.710	7.096

Further information on major event days is included in Attachment C - Commentary on major event days



#### **Unplanned SAIFI**

To calculate unplanned SAIFI, the assessment dataset is populated by listing all unplanned (Class C) interruptions on Powerco's network for the assessment period. Unplanned SAIFI is normalised for MEDs.

A MED occurs when the daily SAIFI value for unplanned interruptions exceeds Powerco's SAIFI Boundary Value of 0.064.

Table 14: Calculating Powerco's unplanned SAIFI assessment values

Calculation components	Result
Assessment dataset for SAIFI  Total unplanned SAIFI for the assessment period	2.025
Normalise assessment dataset (1 MED)  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.	0.064
SAIFI unplanned	2.025

#### Major event days in the assessment period

There was one SAIFI major event day in the assessment period.

Interruption date	Pre-normalised unplanned SAIFI	Normalised SAIFI (boundary value)	SAIFI adjustment for normalisation
13 February 2022	0.263	0.064	0.199



#### 3.4 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:

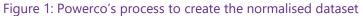
- The underlying reliability records are created and maintained by Powerco's Network Operations Team which initiate and manage all fault reports.
- The start of an interruption is recorded when there is a SCADA alarm for assets that have a real time link to Powerco's SCADA system. For other assets, which is the majority on our network, the interruption is recorded when Powerco is first notified of the fault by retailers or field staff.
- All fault reports contain switching sequences and where available 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") database. Information recorded includes the date, time and cause of the fault, voltage of the faulted circuit and the transformers affected.
  - Powerco notes the introduction of new systems to assist with the management of outages and interruptions during the 2015 assessment period. This OMS provides enhanced oversight and recording of outages, enhancing the robustness of recording processes.
- 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.
- When power is restored for less than one minute following an initial interruption the successive interruption is not counted as a new SAIFI event. The duration of the successive interruption is added to the duration of the initial interruption. This is consistent with prior year treatment.
- When power is restored for one minute or longer following an initial interruption the successive interruption is counted as a new SAIFI event. The duration of the successive interruption is assigned to the new SAIDI event. This is consistent with prior year treatment.

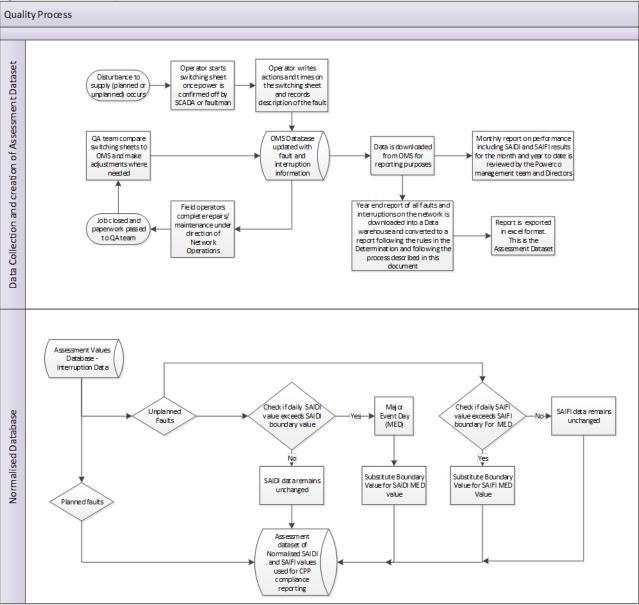
#### **Calculating SAIDI and SAIFI**

In utilising the input data noted above, Powerco applies processes to ensure compliance with Schedules 3.1 and 3.2 of the Determination, as shown diagrammatically in Figure 1. 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.
- Results are calculated using the outage / interruption records in OMS noting a range of global corrections and refinements are required as set out below.
- 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.









## 4. Major transactions

Powerco has not entered into any agreement with another EDB or Transpower for an amalgamation, merger, major transaction or non-reopener transaction in the assessment period.



Customised

### 5. Directors' certificate

Director's Certificate for the Customised Price-quality Path **Annual Compliance Statement** For the period 1 April 2021 - 31 March 2022

Powerco, and r	elated information, prep	nowledge and belie ared for the purpos	ef, the attached annuses of the <i>Powerco E</i>	certify that, having made all ual compliance statement of lectricity Distribution Customi all the relevant requirements.
Director				



### 6. Auditor's report

## Deloitte.

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

Report on Powerco Limited's Electricity Customised Price-Quality Path Annual Compliance Statement 2022

We have conducted a reasonable assurance engagement on Powerco Limited's ('the Company') compliance with the Powerco Limited Electricity Distribution Customised Price-Quality Path Determination 2018 (consolidated 20 May 2020) ('the Determination') in relation to the preparation of Sections 1, 2, 3, 4 and 5 of the Company's Annual Compliance Statement ('the Annual Compliance Statement') on pages 4 to 16 for the period 1 April 2021 to 31 March 2022.

#### Opinion

#### 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; and
- as far as appears from an examination of the records, the information used in the preparation of the Annual Compliance Statement has been properly extracted, in all material respects, from the Company's accounting and other records, sourced from its financial and non-financial systems.

#### **Basis for Opinion**

We conducted our engagement in accordance with the Standard on Assurance Engagements 3100 (Revised): Compliance Engagements ('SAE 3100 (Revised)') and the International Standard on Assurance Engagements (New Zealand) 3000 (Revised): Assurance Engagements Other than Audits or Reviews of Historical Financial Information ('ISAE (NZ) 3000 (Revised)'), both issued by the New Zealand Auditing and Assurance Standards Board.

We have obtained sufficient recorded evidence and all the explanations we required to provide a basis for our opinion.

#### Board of Directors' Responsibility

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 International Code of Ethics for Assurance Practitioners (including International Independence Standards) (New Zealand) ('PES-1') 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 financial statements, the audit of regulatory disclosure statements and greenhouse gas assurance, we have no relationship with or interests in the Company. These services have not impaired our independence as auditor of the Company as required by the Determination.

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 Responsibility

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) and ISAE (NZ) 3000 (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 preparing its 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



## Deloitte.

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.

In making those risk assessments, we consider internal control relevant to the Company's preparation of the Annual Compliance Statement in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. A reasonable assurance engagement also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates, as well as evaluating the overall presentation of the Annual Compliance Statement.

#### Our procedures included:

- examining, on a test basis, evidence relevant to the amounts and disclosures contained on pages 4 to 16 of the Annual Compliance Statement in relation to the Customised Price Path Compliance Information and Quality Compliance Information set out in Clauses 8 and 9 of the Determination respectively-
- assessing significant estimates and judgements, if any, made by the Company in the preparation of the Annual Compliance Statement;
- assessing whether the basis of preparation of the Annual Compliance Statement has been adequately disclosed; and
- ensuring that the information used in preparing the Annual Compliance Statement has been properly extracted from the Company's accounting and other records, sourced from its financial and non-financial systems.

These procedures have been undertaken to form an opinion as to whether the Company has complied, in all material respects. with the Determination in preparing the Annual Compliance Statement for the period 1 April 2021 to 31 March 2022.

#### Inherent Limitations

Because of the inherent limitations of an assurance engagement, together with the inherent limitations of any system of internal control, it is possible that fraud, error or non-compliance may occur and not be detected. As the procedures performed for this engagement are not performed continuously throughout 1 April 2021 to 31 March 2022 and the procedures performed in respect of the Company's compliance with the Determination are undertaken on a test basis, our assurance engagement cannot be relied on to detect all instances where the Company may not have complied with the Determination. We did not examine every transaction, adjustment or event underlying the Compliance Statement nor do we guarantee complete accuracy of the Annual Compliance Statement. We also did not evaluate the security and controls over the electronic publication of the Compliance Statement. The opinion expressed in this report has been formed on the above basis.

#### Use of Report

This report is provided solely for your use and solely for the purpose of Clause 11.5(e) of the Determination. However, we understand that a copy of this report has been requested by the Commerce Commission solely for the purpose of 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

Deloitte Limited Auckland, New Zealand 18 August 2022

Deloitte Limited



## 7. Appendices

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

Attachment reference	Information provided
A – Price and actual quantities for the assessment period	Details prices and corresponding actual quantities for each tariff group across Powerco's Eastern and Western networks. The product of prices and actual quantities is Powerco's actual revenue from prices for the assessment period in section 2 of this document.
B – 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.
C – Commentary on major event days	Provides further detail on reliability and major event days.
D – Exceeding the unplanned interruptions	Provides reasons for non-compliance and actions taken to mitigate.
E – Compliance statement references	Notes the compliance requirements from the Determination and where they are evidenced in this Statement.



# Attachment A – Prices and actual quantities for the assessment period

1						Distrib	ution Pri	ces FY22	(Period 1	April 20:	21 to 31 N	March 202	22)	
	Wester	n Network			Fi	xed				Variable			Individually Priced	
						sset Charge		Volume Charge Demand Charge					Pri	cea
Tariff Group	GXP Group	o GXP		ICP \$/Month	ICP cents/day	Installed Capacity \$/kVA/Month	CT/VT Charge (\$/day)	On Peak c/kWh	Off Peak c/kWh	Dist-\$/kW /Month	Trans-\$/kW /Month	\$/kVAr /Month	Indirect Fixed (\$/ICP)	Non-ICP Fixed (\$/day)
Residential+Small	Commercial													
E1C	Α	Brunswick	BRK		0.00			7.0400	5.4200					
E1UC	Α	Brunswick	BRK		15.00			7.0400	5.4200					
E1C	Α	Bunnythorpe	BPE		0.00 15.00			7.0400	5.4200					
E1UC E1C	A A	Bunnythorpe Carrington	BPE CST		0.00			7.0400 7.0400	5.4200 5.4200			<b></b>		
E1UC	A	Carrington	CST		15.00			7.0400	5.4200					
E1C	Α	Huirangi	HUI		0.00	)		7.0400						
E1UC	Α	Huirangi	HUI		15.00			7.0400	5.4200					
E1C E1UC	A	Linton	LTN		0.00			7.0400 7.0400	5.4200					
E1C	A A	Linton Moturoa / New Ply	LTN mouth NPI		15.00 0.00			7.0400	5.4200 5.4200					
E1UC	A	Moturoa / New Ply			15.00			7.0400	5.4200	·····				
E1C	A	Stratford	SFD		0.00			7.0400	5.4200					
E1UC	A	Stratford	SFD		15.00	)		7.0400	5.4200					
E1C	Α	Wanganui	WGN		0.00			7.0400	5.4200	ļ				
E1UC	A	Wanganui	WGN		15.00	J .		7.0400	5.4200					
E1C	В	Greytown	GYT		0.00			8.9100	7.2000					
E1UC	В	Greytown	GYT		15.00			8.9100	7.2000					
E1C	В	Hawera	HWA		0.00			8.9100	7.2000					
E1UC	В	Hawera	HWA		15.00	·		8.9100	7.2000					
E1C E1UC	B B	Mangamaire Mangamaire	MGM MGM		0.00			8.9100 8.9100	7.2000					
E1C	В	Marton	MTN		0.00	·		8.9100 8.9100	7.2000					
E1UC	В	Marton	MTN		15.00			8.9100	7.2000					
E1C	В	Masterton	MST		0.00			8.9100	7.2000					
E1UC	В	Masterton	MST		15.00			8.9100	7.2000					
E1C E1UC	B B	Mataroa Mataroa	MTR MTR		0.00 15.00			8.9100 8.9100	7.2000 7.2000		ļ			
E1C	В	Ohakune	OKN		0.00			8.9100	7.2000					
E1UC	В	Ohakune	OKN		15.00			8.9100	7.2000					
E1C	В	Opunake	OPK		0.00	)		8.9100	7.2000					
E1UC	В	Opunake	OPK		15.00			8.9100	7.2000					
E1C E1UC	B B	Waverley Waverley	WVY WVY		0.00 15.00			8.9100 8.9100	7.2000 7.2000					
	_	,												
Medium/Large Cor	mmercial													
E100	Α	Carrington	CST		990.0000					0.3036		7.0000		
E100	Α	Huirangi	HUI		990.0000					0.3036		7.0000		
E100 E100	A A	New Plymouth Stratford	NPL SFD		990.0000			ļ	ļ	0.3036 0.3036		7.0000 7.0000		
E100	В	Hawera	HWA		990.0000				·····	0.6025		7.0000		
E100	С	Waverley	WVY		990.0000					0.4673		7.0000		
E100	D	Opunake	OPK		990.0000					0.4758		7.0000		
E100	<u>E</u>	Brunswick	BRK		990.0000					0.3544		7.0000		
E100 E100	E F	Wanganui Marton	WGN MTN		990.0000			ļ		0.3544 0.4258		7.0000 7.0000		
E100	G	Mataroa	MTR		990.0000					0.5801		7.0000		
E100	G	Ohakune	OKN		990.0000	)				0.5801		7.0000		
E100	Н	Masterton	MST		990.0000					0.5224		7.0000		
E100 E100	H	Greytown	GYT BPE		990.0000					0.5224		7.0000		
E100	<u>¦</u>	Bunnythorpe Linton	BPE LTN		990.0000				ļ	0.3027 0.3027		7.0000		
E100	j	Mangamaire	MGM		990.0000					0.3817		7.0000		
	_	•												
E300	A	Carrington	CST							0.1205		7.0000		
E300	Α	Huirangi Now Blymouth	HUI		ļ			ļ	ļ	0.1205		7.0000		
E300 E300	A A	New Plymouth Stratford	NPL SFD							0.1205 0.1205		7.0000		
E300 E300	A B	Hawera	HWA		· · · · · · · · · · · · · · · · · · ·			<b>†</b>	İ	0.1205		7.0000		
E300	C	Waverley	WVY					<u> </u>		0.4515		7.0000		
E300	D	Opunake	OPK							0.2545		7.0000		
E300 E300	<u> </u>	Brunswick	BRK		ļ			ļ	ļ	0.1285		7.0000		
E300	E F	Wanganui Marton	WGN MTN							0.1285 0.2045		7.0000 7.0000		
E300	G G	Mataroa	MTR							0.2045		7.0000		
E300	G	Ohakune	OKN							0.3445		7.0000		
E300	Н	Masterton	MST							0.2945		7.0000		
E300	H	Greytown	GYT							0.2945		7.0000		
E300	<u> </u>	Bunnythorpe Linton	BPE LTN							0.2025 0.2025		7.0000		
I E JUU	J	Mangamaire	MGM		<b> </b>	-			<b> </b>	0.2025		7.0000		
E300			•											
							_				_			
SPECIAL		Asset Based									ļ	7.0000	143,760.1055	
SPECIAL SPECIAL		Hau Nui Generation	····									7.0000	114,319.7900	
SPECIAL			····									7.0000		
SPECIAL SPECIAL		Hau Nui Generation	····									7.0000	114,319.7900	



		1			Transm	ission Pi	rices FY2	2 (Period	1 April 2	021 to 31	March 20	)22)			
	Western	Network				Fi	xed			_ (	Variable			Indivi	
														Pri	ced
							sset Charge Installed	CT/VT		Charge		emand Char			
Tariff Group	GXP Group	GXP			ICP \$/Month	ICP cents/day	Capacity \$/kVA/Month	Charge (\$/day)	On Peak c/kWh	Off Peak c/kWh	Dist-\$/kW /Month	Trans-\$/kW /Month	\$/kVAr /Month	Indirect Fixed (\$/ICP)	Non-ICP Fixed (\$/day)
Residential+Small	Commercial			1											
E1C	A	Brunswick	BRK						5.4800	1.0000					
E1UC E1C	A A	Brunswick Bunnythorpe	BRK BPE	.					5.4800 5.4800	1.0000 1.0000					
E1UC	A	Bunnythorpe	BPE	<del> </del>			<b></b>		5.4800	1.0000					
E1C	A	Carrington	CST						5.4800	1.0000					
E1UC E1C	A A	Carrington Huirangi	CST HUI	.		ļ		ļ	5.4800 5.4800	1.0000 1.0000					
E1UC	A	Huirangi	HUI						5.4800	1.0000					
E1C	A	Linton	LTN	ļ					5.4800	1.0000					
E1UC E1C	A A	Linton Moturoa / New Plymouth	LTN			ļ		<b></b>	5.4800 5.4800	1.0000 1.0000					
E1UC	A	Moturoa / New Plymouth							5.4800	1.0000					
E1C	A	Stratford	SFD	<b> </b>		ļ	ļ		5.4800	1.0000					
E1UC E1C	A A	Stratford Wanganui	SFD WGN	-					5.4800 5.4800	1.0000 1.0000					
E1UC	A	Wanganui	WGN	]					5.4800	1.0000					
E1C	В	Greytown	GYT	1					5.0900	1.0000					
E1UC	В	Greytown	GYT	1					5.0900	1.0000					
E1C	B B	Hawera	HWA	ļ					5.0900	1.0000					
E1UC E1C	В	Hawera Mangamaire	HWA MGM	<del> </del>					5.0900 5.0900	1.0000 1.0000					
E1UC	В	Mangamaire	MGM						5.0900	1.0000					
E1C E1UC	B B	Marton Marton	MTN MTN	<b></b>					5.0900 5.0900	1.0000 1.0000					
E1C	В	Masterton	MST	<b></b>					5.0900	1.0000				<b></b>	
E1UC	В	Masterton	MST						5.0900	1.0000					
E1C E1UC	B B	Mataroa Mataroa	MTR MTR	ļ					5.0900 5.0900	1.0000 1.0000					
E1C	В	Ohakune	OKN	<b></b>					5.0900	1.0000					
E1UC	В	Ohakune	OKN						5.0900	1.0000					
E1C E1UC	B B	Opunake Opunake	OPK OPK	ļ					5.0900 5.0900	1.0000 1.0000					
E1C	В	Waverley	WVY	<del> </del>					5.0900	1.0000					
E1UC	В	Waverley	WVY	]					5.0900	1.0000					
Medium/Large Cor	mmercial			1											
E100	A	Carrington	CST	·								0.38650			
E100	A	Huirangi	HUI			ļ						0.38650			
E100 E100	A A	New Plymouth Stratford	NPL SFD	<del> </del>		ļ	ļ		ł	ļ		0.38650 0.38650			
E100	В	Hawera	HWA									0.40950			
E100 E100	C D	Waverley Opunake	WVY OPK									0.40950 0.40950			
E100	E	Brunswick	BRK									0.33250			
E100	E	Wanganui	WGN									0.33250			
E100 E100	F	Marton Mataroa	MTN MTR			ļ	ļ	ļ	ļ	ļ		0.31250 0.40950	}		
E100	G G	Ohakune	OKN	ļ				<u> </u>		l		0.40950			
E100	Н	Masterton	MST									0.42150			
E100 E100	H I	Greytown Bunnythorpe	GYT BPE	ļ								0.42150 0.32950			
E100	i	Linton	LTN									0.32950			
E100	J	Mangamaire	MGM	]								0.42150			
E300	A	Carrington	CST	1								0.39650			
E300	A	Huirangi	HUI									0.39650			
E300	A	New Plymouth	NPL	ļ		-			-	ļ	ļ	0.39650			
E300	A B	Stratford Hawera	SFD HWA									0.39650 0.40950			
E300	С	Waverley	WVY									0.40950			
E300	D	Opunake	OPK	ļ			-					0.40950			
E300 E300	E E	Brunswick Wanganui	BRK WGN	<del> </del>			<b> </b>		·			0.33250 0.33250			
E300	F	Marton	MTN									0.31250			
E300	G	Mataroa	MTR	ļ			-					0.40950			
E300 E300	G H	Ohakune Masterton	OKN MST	ł					·			0.40950 0.44150			
E300	Н	Greytown	GYT	1								0.44150			
E300	<u> </u>	Bunnythorpe	BPE	<b> </b>								0.32950 0.32950			
E300 E300	J	Linton Mangamaire	LTN MGM	<u> </u>			<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u></u>	0.32950			
				- 7											
SPECIAL SPECIAL		Asset Based Hau Nui Generation		ļ		<b></b>				ļ				156,427.4524	
SPECIAL		Tararua Generation		·	L	l	<u> </u>	t	<u> </u>	t	l	İ		İ	
				]											



	Wester	rn Network		1						Quantitie	s FY22 (1 April	2021 to 31 Mar	ch 2022)					
	Wester	III NOLWOLK			ICP No.'s	ICP Days	ICP Months	kVA	CT/VTs	kWh	kWh	kWh	kWh	kW Demand (AMD for	OPD (kW)	kVAr Demand	Base Power Units	Non-ICP Days
Tariff Group	GXP Group	GXP			(Average)	. ,		Installed		Day	Night	On peak	Off Peak	E100/E300)		pa	(Average)	, ,
Residential+Small				<b>.</b>														
E1C E1UC	A	Brunswick Brunswick	BRK BRK		5,833 6,722	2,128,865 2,453,670				20,360,803 24,069,902	10,592,814 12.522.493	13,542,801 16.009.874	30,953,617 36,592,395	127,754 151.026	ļ			
E1C	A	Bunnythorpe	BPE		14,642	5,344,405	-	-	-	63,621,954	32,178,528	41,686,265	95,800,482	330,252	-	-	-	-
E1UC	A	Bunnythorpe	BPE		19,528	7,127,723				88,882,814	44,954,892	58,237,642	133,837,706	461,378				
E1C E1UC	A	Carrington Carrington	CST		11,281 17,543	4,117,711 6,403,351				41,174,221 67,600,966	19,765,106 32,450,894	26,939,644 44,230,248	60,939,327 100,051,860	208,509 342,336				
E1C	Â	Huirangi	HUI		4,295	1,567,560	·····			18,446,591	9,494,718	11,981,287	27,941,309	95,279			······	······
E1UC	A	Huirangi	HUI		5,931	2,164,649	-	-	-	27,067,247	13,931,890	17,580,509	40,999,137	139,805	-	-	-	-
E1C	A	Linton	LTN		7,344	2,680,737	-		-	30,909,864	15,873,672	19,900,559	46,783,536	166,301		-		-
E1UC E1C	A	Linton New Plymouth	LTN NPI		10,932	3,990,048	······································			45,877,310	23,560,160	29,536,982	69,437,471	246,828				
E1UC	A	New Plymouth	NPL NPL															
E1C	A	Stratford	SFD		3,773	1,377,136				18,192,888	10,295,511	11,760,901	28,488,399	95,917			-	-
E1UC	A	Stratford	SFD		4,630	1,689,984				23,110,090	13,078,197	14,939,655	36,188,287	121,842				-
E1C	A	Wanganui	WGN WGN		4,512 5,409	1,646,951 1,974,457				16,201,309 21,924,902	7,847,991 10,620,526	10,369,635 14,033,016	24,049,300 32 545 429	104,507 141 427				
E1UC	Α	Wanganui				.,,				2.102.1002		.,,,						
E1C	В	Greytown	GYT		3,019	1,102,100		-	-	12,886,986	7,843,525	8,036,518	20,730,511	65,295				
E1UC	B B	Greytown	GYT HWA	ļ	4,343	1,585,210				21,134,904	12,863,531	13,180,044	33,998,435	107,085 55,615	ļ	ļ	ļ	
E1C E1UC	В	Hawera Hawera	HWA		2,765 6,561	1,009,230 2,394,620				10,970,611 31,172,079	6,391,402 18,160,638	7,018,468 19,942,393	17,362,013 49,332,717	158,026	·	<u> </u>		·
E1C	В	Mangamaire	MGM	t	1,910	697,047			-	8,134,757	4,396,301	5,286,598	12,531,058	40,142	l	l	t	
E1UC	В	Mangamaire	MGM	L	2,432	887,733				10,891,602	5,886,194	7,078,210	16,777,795	53,745		-		
E1C	В	Marton	MTN	ļ	3,775	1,377,958				16,299,607	8,934,479	10,282,384	25,234,086	81,240				
E1UC E1C	B B	Marton Masterton	MTN MST	ł	2,507 9,519	915,043 3,474,386				12,095,016 37,137,353	6,629,771 20,846,436	7,629,975 24,284,922	18,724,787 57,983,789	60,283 194,673	l	<del> </del>	t	<u> </u>
E1UC	В	Masterton	MST		9,256	3,378,529				39,629,381	22,245,295	25,914,514	61,874,677	207,736		·····		
E1C	В	Mataroa	MTR		1,654	603,627				6,445,334	3,558,363	4,127,185	10,003,698	33,921				-
E1UC	В	Mataroa	MTR	ļ	1,114	406,716				4,309,442	2,379,172	2,759,495	6,688,614	22,680				
E1C E1UC	В В	Ohakune Ohakune	OKN OKN		604 610	220,618 222,479				2,320,472 2,235,340	1,363,656 1,313,627	1,475,386 1,421,258	3,684,127 3,548,967	12,134 11,688				
E1C	В	Opunake	OPK		972	354,746				4,578,866	3,203,421	2,937,835	7,782,288	29,431				
E1UC	В	Opunake	OPK		2,094	764,263	-	-	-	13,948,464	9,758,486	8,949,440	23,706,950	89,654	-	-	-	-
E1C	В	Waverley	WVY															
E1UC	В	Waverley	WVY	ı	1,361	496,634				7,525,149	4,469,897	4,558,999	11,995,046	41,848				-
Medium/Large Co																		
E100 E100	A	Carrington	CST		42 12	15,425								1,712,356	817,986	3,121	<u> </u>	
E100	A	Huirangi New Plymouth	NPL NPL		. 12	4,276			1					470,165	115,401	2,901		
E100	A	Stratford	SFD		12	4,324		-	-			-		508,320	214,505	2,162		-
E100	В	Hawera	HWA		12	4,532		-	-					505,796	227,520	2,900		-
E100	C D	Waverley	WVY OPK		2	730 365								33,580 55.480	9,855 9,125	52 689		
E100	E	Opunake Brunswick	BRK		10	3,821								516,920	269,026	921	t	
E100	E	Wanganui	WGN		9	3,285		-	-	-	-	-		300,395	153,666	1,021		-
E100	F	Marton	MTN		7	2,555		· · · · · · · · · · · · · · · · · · ·	-					308,425	148,921	634	-	-
E100	G G	Mataroa	MTR		5	1,825						ļ		289,445	130,670	694	łi	
E100 E100	H H	Ohakune Masterton	OKN MST		27	10,006								1,220,987	551,652	3,597	·	
E100	Н	Greytown	GYT		6	2,080			-	- 1				267,465	148,565	1,633		-
E100		Bunnythorpe	BPE		64	23,501			1					2,842,938	1,475,030	6,108		
E100 E100	I	Linton Mangamaire	LTN MGM		38	13,819 859								1,475,983 119,530	675,538 38,910	4,679 847		
						809												
E300 E300	A A	Carrington	CST HUI	ļ	53 18			38,592	11					7,731,476	2,476,850	7,721		
E300	A	Huirangi New Plymouth	NPL		. 18			13,461					·····	3,312,911	1,444,438	3,501		·····
E300	Ä	Stratford	SFD		11			7,100						1,742,129	303,849	5,224		-
E300	В	Hawera	HWA		6	-		5,850	1					1,220,906	563,560	1,613		
E300	C D	Waverley	WVY OPK		1			1,500						442,294 564,091	259,150	360 2,858		
E300	E	Opunake Brunswick	BRK		2 14			3,000 9.503	2					1,940,079	218,635 927.658	2,858		·
E300	Ē	Wanganui	WGN	i	16			13,258	4					2,538,205	1,144,516	4,842	t	i
E300	F	Marton	MTN		9			7,450	1					1,394,485	510,271	5,477		
E300	<u>G</u>	Mataroa	MTR		3			3,333						648,196	416,078	986		
E300	G H	Ohakune Masterton	OKN MST		- 20			14.200						2.775.655	1,281,308	3,652		
E300	<del></del>	Greytown	GYT		3			1,631	-					267,051	1,281,306	1,638	·	
E300		Bunnythorpe	BPE		53			50,315	13					9,286,794	4,388,848	12,654		
E300 E300	I	Linton Mangamaire	LTN MGM		30			23,458 750	4					4,256,571 38,704	2,055,579 12,893	4,881 429		
E300	J	Mangamaire	MOM					750	1					38,704	12,893	429		
SPECIAL		Asset Based		<b>]</b>	33											21,717		
SPECIAL SPECIAL		Hau Nui Generation Tararua Generation		ļ											ļ			-
OF EGIPLE		raratua Generation		····											<u> </u>	·	<u> </u>	
Base Power		Non-ICP Based		1													11	4,015
ouse rower																		
	Western Regio	n Total			177,397	64,649,589		193,401	45	749,156,228	397,411,586	485,632,642	1,146,567,814	52,785,686	21,038,468	113,443	- 11	4,015



	Wes	stern Network			Dis	tribution Reve	nue (FY22 Pri	ces)	
				Fixed	Fixed (Daily)	Variable	Demand	Non-standard	Total
Tariff Group	GXP Gro			(Monthly)					
Residential+Sma E1C	A A	Brunswick	BRK			2,631,099			2,631,099
E1UC	A	Brunswick	BRK	<del>-</del>	368,051	3,110,403		-	3,478,453
E1C	Α	Bunnythorpe	BPE	-	-	8,127,099	-	-	8,127,099
E1UC	Α	Bunnythorpe	BPE	-	1,069,158	11,353,934	-	-	12,423,092
E1C	Α	Carrington	CST	-	-	5,199,462	-	-	5,199,462
E1UC	A A	Carrington	CST	-	960,503	8,536,620	-	-	9,497,123
E1C		Huirangi	HUI	-	-	2,357,902		-	2,357,902
E1UC	Α	Huirangi	HUI		324,697	3,459,821	<del>-</del>		3,784,518
E1C E1UC	A	Linton Linton	LTN LTN		- 	3,936,667			3,936,667 6,441,422
E1C	A A	New Plymouth	NPL		598,507	5,842,914	<u>-</u>		0,441,422
E1UC	Α Α	New Plymouth	NPL			<del>-</del>	······································		<del>-</del>
E1C	<u>/\.</u> A	Stratford	SFD	-		2,372,039	-	-	2,372,039
E1UC	A	Stratford	SFD	-	253,498	3,013,157	-	-	3,266,654
E1C	A	Wanganui	WGN	-	-	2,033,494	-	-	2,033,494
E1UC	Α	Wanganui	WGN	-	296,169	2,751,887	-	-	3,048,055
E1C	В	Greytown	GYT	-	-	2,208,651	-	-	2,208,651
E1UC	В	Greytown	GYT	-	237,782	3,622,229	-	-	3,860,011
E1C	В	Hawera	HWA	-	-	1,875,410		-	1,875,410
E1UC	В	Hawera	HWA		359,193	5,328,823	<del>-</del>	-	5,688,016
E1C E1UC	B B	Mangamaire Mangamaire	MGM MGM		122 160	1,373,272 1,838,670			1,373,272 1,971,830
E10C	В	Marton	MTN	<del>-</del>	133,160	2,733,015	<u>-</u>	<u>-</u>	2,733,015
E1UC	В	Marton	MTN		- 137,256	2,733,015	<del>-</del>		2,733,015
E1C	В	Masterton	MST		-	6,338,619			6,338,619
E1UC	В	Masterton	MST		506,779	6,763,960		- -	7,270,739
E1C		Mataroa	MTR	-		1,087,998	-	-	1,087,998
E1UC	B B	Mataroa	MTR	-	61,007	727,451		-	788,459
E1C	В	Ohakune	OKN	-	-	396,714	-	-	396,714
E1UC	B B	Ohakune	OKN	-	- 33,372	382,160	-	-	415,532
E1C	В	Opunake	OPK	-	-	822,086	-	-	822,086
E1UC	B	Opunake	OPK	-	114,639	2,504,296	·····-	-	2,618,935
E1C	B B	Waverley	WVY	-	-	-		-	-
E1UC	В	Waverley	WVY		74,495	1,269,850	-	-	1,344,345
Medium/Large C		Caminatan			450 700		F44 740		
E100 E100	A	Carrington Huirangi	CST HUI	·····	152,708 45,274		541,718 163,050		694,425 208,324
E100	<u>А</u> А	New Plymouth	NPL	-	45,274	<del></del>	103,030		200,324
E100	A	Stratford	SFD		42,808	<u>.</u>	169,463		212,270
E100	B	Hawera	HWA		44,867	-	325,040		369,906
E100	С	Waverley	WVY	-	7,227	-	16,058	-	23,285
E100	D	Opunake	OPK	-	3,614	-	31,218	-	34,832
E100	E	Brunswick	BRK	-	37,828	-	189,640	-	227,468
E100	E	Wanganui	WGN	-	32,522		113,606	-	146,128
E100	F	Marton	MTN	-	25,295	-	135,766	-	161,061
E100	G	Mataroa	MTR	-	18,068	-	172,767	-	190,834
E100	<u></u> G	Ohakune	OKN				<del></del>		<del>-</del>
E100	<u>H</u>	Masterton	MST		99,059	<del></del>	663,024		762,083
E100 E100	<u>H</u>	Greytown Bunnvthorpe	GYT BPE	<del>-</del>	20,592 235,602		151,152 903,314	<del>-</del>	171,744 1,138,916
E100	<u>'</u>	Linton	LTN	<del>-</del>	136,808	<del></del>	903,314 479,535	-	1,138,916
E100	<u> </u> J	Mangamaire	MGM	<u>-</u>	8,504	<del>-</del>	479,535 51,556	<u>-</u>	60,060
00	·	gamano			0,004		01,000		55,566
E300	Α	Carrington	CST	-	905,693	-	985,690	-	1,891,383
E300	A	Huirangi	HUI	-	313,447	-	423,712	-	737,159
E300	A	New Plymouth	NPL	-	-	-	-	-	
E300	Α	Stratford	SFD	-	160,673	-	246,492	-	407,165
E300	В	Hawera	HWA	-	135,327	_	287,823	-	423,151
E300	С	Waverley	WVY	-	33,945	-	202,219	-	236,164
E300	D	Opunake	OPK	-	73,774		163,570	-	237,344
E300	<u>_</u>	Brunswick	BRK		220,943		276,811	-	497,754
E300	E	Wanganui	WGN	<del>-</del>	311,801	-	360,050	-	671,851
E300	F	Marton	MTN	-	171,535		323,510	-	495,045
E300 E300	G G	Mataroa Ohakune	MTR OKN	-	75,423	<del></del>	230,209		305,632
E300	Н	Masterton	MST	<del></del>	324,288	<del></del>	 842,997	-	1,167,285
E300	Н	Greytown	GYT	<del>-</del>	36,906		90,115		1,167,265
E300	<del>  </del>	Bunnythorpe	BPE		1,176,862	<del></del>	1,969,154	-	3,146,016
E300	<del>i</del>	Linton	LTN		542,633		896,122	-	1,438,755
E300	J	Mangamaire	MGM	-	19,914	-	11,306	-	31,220
		<u>-</u>							
SPECIAL		Asset Based		-	-	-	152,021	4,768,044	4,920,064
SPECIAL		Hau Nui Generation		-	-	-	-	114,320	114,320
SPECIAL		Tararua Generation		-	-	-	-	253,648	253,648
D C		N 100 5						1	
Base Power		Non-ICP Based  Region Total		-	6,270 <b>10,948,475</b>	106,027,717	11,568,705	5,136,011	6,270 133,680,909



	Weste	rn Network			Т	Trans	rices)			
Tariff Group	GXP Group	GXP.			Fixed (Monthly)	Fixed (Daily)	Variable	Demand	Non-standard	Total
Residential+Smal		<u>GAE</u>		=						
E1C	A	Brunswick	BRK		-	-	1,051,682	-	-	1,051,682
E1UC	Α	Brunswick	BRK		-	-	1,243,265	-	-	1,243,26
E1C	Α	Bunnythorpe	BPE		-	<del>.</del>	3,242,412	<del>-</del>	-	3,242,41
E1UC	A	Bunnythorpe	BPE			<del></del>	4,529,800	<del>-</del>	<del>-</del>	4,529,80
E1C E1UC	A	Carrington	CST CST		<del>-</del>	<del></del>	2,085,686 3,424,336			2,085,680 3,424,330
E100	A A	Carrington Huirangi	HUI				935,988			935,98
E1UC	Α	Huirangi	HUI		-	-	1,373,403	-	-	1,373,40
E1C	A	Linton	LTN		-	-	1,558,386	-	-	1,558,38
E1UC	Α	Linton	LTN		-		2,313,001		-	2,313,00
E1C	A	New Plymouth	NPL		<del>-</del>					
E1UC	A	New Plymouth	NPL SFD			<del></del>				020.20
E1C E1UC	A A	Stratford Stratford	SFD			······································	929,381 1,180,576	<del>-</del>		929,38 <sup>-</sup> 1,180,57
E1C	Α	Wanganui	WGN		-	-	808,749	-	-	808,749
E1UC	Α	Wanganui	WGN		-	-	1,094,464	-	-	1,094,464
E1C	В	Greytown	GYT	=	_	_	616,364	_	-	616,36
E1UC	В	Greytown	GYT		-	-	1,010,849	-	-	1,010,849
E1C	В	Hawera	HWA		-	-	530,860	-	-	530,860
E1UC	В	Hawera	HWA		-		1,508,395	-	-	1,508,39
E1C	B	Mangamaire	MGM				394,398			394,398
E1UC E1C	B B	Mangamaire Marton	MGM MTN		-	<u> </u>	528,059 775,714	-		528,059 775,714
E1UC	В В	Marton	MTN		<del> </del>	<u> </u>	775,714 575,614		-	775,714 575,614
E1C	В	Masterton	MST		-		1,815,940		-	1,815,940
E1UC	В	Masterton	MST		-	-	1,937,796	-	-	1,937,796
E1C	В	Mataroa	MTR		-	-	310,111		-	310,111
E1UC	B	Mataroa	MTR			-	207,344	-	-	207,344
E1C	В	Ohakune	OKN		-		111,938			111,938 107,832
E1UC E1C	B B	Ohakune Opunake	OKN OPK		·	<del>-</del>	107,832 227,359	<del>-</del>		227,359
E1UC	В	Opunake	OPK		-	-	692,596	-	-	692,596
E1C	В	Waverley	WVY		-	-	-	-	-	-
E1UC	В	Waverley	WVY		-	-	352,004	-	-	352,004
Medium/Large Co	ommercial				-	-	-		-	
E100	Α	Carrington	CST		-	<del>-</del>	<del></del>	316,152	-	316,152
E100	A	Huirangi	HUI			<del>-</del>	<del></del>	44,602		44,602
E100 E100	A	New Plymouth Stratford	NPL SFD			<del>-</del>		82,906		82,906
E100	В	Hawera	HWA		<u>-</u>		<del>-</del>	93,169	-	93,169
E100	C	Waverley	WVY		-	-	-	4,036	-	4,036
E100	D	Opunake	OPK		-	-	-	3,737	-	3,737
E100	E	Brunswick	BRK		-	-		89,451	-	89,451
E100	E	Wanganui	WGN				<u>-</u>	51,094	-	51,094
E100 E100	F G	Marton	MTN MTR				<del></del>	46,538 53,509		46,538 53,509
E100	G	Mataroa Ohakune	OKN			<del>.</del>		55,509	<del>-</del>	33,305
E100	Н	Masterton	MST		† <u>-</u>			232,521		232,521
E100	Н	Greytown	GYT		-	<del></del>		62,620	-	62,620
E100	I	Bunnythorpe	BPE		-	-	-	486,022	-	486,022
E100	<u> </u>	Linton	LTN					222,590		222,590
E100	J	Mangamaire	MGM	4	-	-	-	16,401	-	16,40
E300	A	Carrington	CST		ļ		-	982,071		982,07
E300	A	Huirangi	HUI		-	-	-	572,720	-	572,720
E300 E300	A	New Plymouth Stratford	NPL SFD		· <del> </del>		- -	120,476		120,470
E300	A B	Hawera	HWA		† <u>-</u>		<del>-</del>	230,778	-	230,778
E300	C	Waverley	WVY		-	-	-	106,122	-	106,122
E300	D	Opunake	OPK		-		-	89,531	-	89,53
E300	E	Brunswick	BRK		-	-	-	308,446	-	308,446
E300	E	Wanganui	WGN		-	-	-	380,552	-	380,55
E300 E300	F G	Marton Mataroa	MTN MTR				- 	159,460 170,384		159,460 170,384
E300	G G	Ohakune	OKN		-			170,384	-	170,384
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Masterton	MST		-			565,697		565,69
E300	H H	Greytown	GYT		-	-	- -	21,397		21,397
E300	I	Bunnythorpe	BPE		-	-	-	1,446,126	-	1,446,120
E300	I	Linton	LTN		-	-	-	677,313	-	677,31
E300	J	Mangamaire	MGM	⊒	-	-	-	5,692	-	5,69
SPECIAL		Asset Based			<u> </u>				5,188,177	5,188,17
SPECIAL		Hau Nui Generation			-	<del></del>	<del></del>			-
SPECIAL		Tararua Generation			<del> </del>	<del>-</del>	<del></del>			
Rese Device		New ICD Days d		=	-				<u> </u>	
Base Power		Non-ICP Based			-	-	-	-	-	-
D400 . 0110.	Western Re			_			37,474,301	7,642,114	5,188,177	50,304,59



					Distr	ibution P	rices FY2	22 (Prices	1 April 2	021 to 31	March 2	022)			
		Eastern Network	Fix	xed					Vari	able					Individually Priced
			Network Asset Charge					V	olume Charg					Demand Charge	Indirect Fixed
Tariff Group	Network Group	Tarriff Description	ICP \$/Month	ICP cents/day	Uncontrolled c/kWh	All Inclusive c/kWh	Controlled c/kWh	Night Only c/kWh	Night Rate c/kWh	On Peak Uncontrolled c/kWh	Off Peak Uncontrolled c/kWh	On Peak All Inclusive c/kWh	Off Peak All Inclusive c/kWh	\$/kVAr /Month	(\$/ICP)
Residential+S	mall Commercial		•	•	24UC	AICO	CTRL	NITE	UNML	PEAK	OFPK	PKIN	OPIN		•
V05	Valley	Low Usage - Controlled		15.0000	7.5700	7.5400	5.7800	5.6000	7.1500						
V05S	Valley	Low Usage - TOU		15.0000	7.5700	7.5400	5.7800	5.6000	7.1500	7.5700	7.0700	7.8100	6.9600		
V06	Valley	Residential - Standard Controlled		85.0000	4.3800	4.3500	2.5900	2.4100	7.1500						
V06S	Valley	Residential - Standard TOU		85.0000	4.3800	4.3500	2.5900	2.4100	7.1500	4.3800	3.8800	4.6200	3.7700		
											ļ				
T05	Tauranga	Low Usage - Controlled		15.0000	6.6400	6.8600	5.4400	5.2200	6.9300			ļ			
T05S	Tauranga	Low Usage - TOU		15.0000	6.6400	6.8600	5.4400	5.2200	6.9300	6.6400	6.1400	7.0600	6.0500		
T06	Tauranga	Standard Residential & Commercial - Controlled		85.0000	3.4500	3.6700	2.2500	2.0300	6.9300						
T06S	Tauranga	Standard Residential & Commercial - TOU		85.0000	3.4500	3.6700	2.2500	2.0300	6.9300	3.4500	2.9500	3.8700	2.8600		
Unmetered Su	ıpply														
V01	Valley	Unmetered/Streetlighting			7.1500				7.1500						
V02	Valley	Unmetered/Streetlighting		9.7400											
T01	Tauranga	Unmetered/Streetlighting			6.9300				6.9300						
T02	Tauranga	Unmetered/Streetlighting		9.8200											
Medium Comr	mercial														
V22	Valley	Commercial three phase 100A		991.0000	3.7100	3.7100								7.000	o
V28	Valley	> 200 Amp up to 299 kVA		2,600.0000	3.0400									7.000	
T22	Tauranga	Capacity 100 – 199kVA		999.0000	4.3000		2.2400	2.3300						7.000	D
T28	Tauranga	Capacity 200 -299kVA		2,500.0000	3.1600									7.000	
T41	Tauranga	Capacity 200 kVA unitised													
Large Comme	rcial / Industrial														
V40	Valley	Individual ICP prices												7.000	27,334.0129
V60	Valley	Individual ICP prices		1										7.000	
V601	Kinleith			1										7.000	
<u></u>			•	1		·····					<b></b>			************	
T50	Tauranga	Individual ICP prices		1										7.000	26,118.6809
T60	Tauranga	Individual ICP prices	***************************************	1							1	·		7.000	~~~~~~~



					Trans	mission I	Prices FY	'22 (Price	s 1 April :	2021 to 3	1 March	2022)			
		Eastern Network	Fi	xed					Varia	able					Individually Priced
			Network Asset Charge		Volume Charge							Demand Charge			
Tariff Group	Network Group	Tarriff Description	ICP \$/Month	ICP cents/day	Uncontrolled c/kWh	All Inclusive c/kWh	Controlled c/kWh	Night Only c/kWh	Night Rate c/kWh	On Peak Uncontrolled c/kWh	Off Peak Uncontrolled c/kWh	On Peak All Inclusive c/kWh	Off Peak All Inclusive c/kWh	\$/kVAr /Month	(\$/ICP)
Residential+Si	mall Commercial				24UC	AICO	CTRL	NITE	UNML	PEAK	OFPK	PKIN	OPIN		
V05	Valley	Low Usage - Controlled			2.9000	2.6200	1.8700	0.5000	3.8600						
V05S	Valley	Low Usage - TOU			2.9000	2.6200	1.8700	0.5000	3.8600	9.1700	0.5000	8.4800	0.5000		
V06	Valley	Residential - Standard Controlled			2.9000	2.6200	1.8700	0.5000	3.8600						
V06S	Valley	Residential - Standard TOU			2.9000	2.6200	1.8700	0.5000	3.8600	9.1700	0.5000	8.4800	0.5000		
T05	Tauranga	Low Usage - Controlled		ļ	3.2600	2.6400	1.2500	0.5000	3.5700		ļ				
T05S	Tauranga	Low Usage - TOU			3.2600	2.6400	1.2500	0.5000		9.3300	0.5000	8.4500	0.5000		
T06	Tauranga	Standard Residential & Commercial - Controlled		ļ	3.2600	2.6400	1.2500	0.5000	3.5700		0.5000	0.4500	0.5000		
T06S	Tauranga	Standard Residential & Commercial - TOU			3.2600	2.6400	1.2500	0.5000	3.5700	9.3300	0.5000	8.4500	0.5000		
Unmetered Su	pply														
V01	Valley	Unmetered/Streetlighting			3.8600				3.8600						
V02	Valley	Unmetered/Streetlighting		5.5700	)										
				ļ											
T01	Tauranga	Unmetered/Streetlighting		ļ	3.5700				3.5700						ļ
T02	Tauranga	Unmetered/Streetlighting		5.4800	)										
Medium Comn	nercial														
V22	Valley	Commercial three phase 100A			2.3400	2.3400									
V28	Valley	> 200 Amp up to 299 kVA			1.7100										
T22	Tauranga	Capacity 100 – 199kVA		ļ	2.0800		1.2500	0.5000							
T28	Tauranga	Capacity 200 -299kVA			1.5000										
T41	Tauranga	Capacity 200 kVA unitised													
Large Comme	rcial / Industrial														
V40	Valley	Individual ICP prices													14,928.6925
V60	Valley	Individual ICP prices												***************************************	193,906.9117
V601	Kinleith														4,133,641.4340
T50	Tauranga	Individual ICP prices													15,379.0274
T60	Tauranga	Individual ICP prices													120,887.9528



	Fs	astern Network					C	Quantities FY22	(1 April 2021 to	o 31 March 2022	)				
Tariff Group		p Tarriff Description	ICP No.'s (Average)	ICP Days	kWh Uncontrolled	kWh All Inclusive	kWh Controlled	kWh Nite Only	kWh Night	kWh Uncontrolled On peak	kWh Uncontrolled Off Peak	kWh All Inclusive On Peak	kWh All Inclusive Off Peak	Distributed Generation	kVAr Demand pa
					24UC	AICO	CTRL	NITE	UNML	PEAK	OFPK	PKIN	OPIN	24DG	
	mall Commercia		-												
V05	Valley	Low Usage - Controlled	 	40 507 000		3,618,275		320,931	12,314		70 500 404	- 4 407 000	- 070 004	- 4400404	
V05S	Valley	Low Usage - TOU  Residential - Standard Controlled	 37,062	13,527,632	33,330,523		33,056,737		<b></b>	<del></del>	70,523,464	1,437,298	3,273,301	1,408,194	
V06	Valley		 - 05 700	40.055.000	152,085,820	- 40.040.000				59.040.941	- 440 400 040		- 0.74.500	1.060.254	
V06S	Valley	Residential - Standard TOU	 35,768	13,055,322	152,085,820	12,916,308	35,152,287	2,170,181	435	59,040,941	142,428,640	2,926,896	6,874,529	1,060,254	
T05	Tauranga	Low Usage - Controlled	 -			-					-				
T05S	Tauranga	Low Usage - TOU	 33,822	12,345,174	26,739,617	9,138,048	34,822,785	3,848,395	9	26,427,050	57,598,472	6,148,450	12,543,646	2,031,287	-
T06	Tauranga	Standard Residential & Commercial - Controlled	 -	-	-	-	-	-		-	-	-	-		-
T06S	Tauranga	Standard Residential & Commercial - TOU	 54.754	19,985,309	157.323.571	17,077,086	74.248.694	4,792,786	52.979	67,572,138	154,188,984	11,113,184	23,159,289	2,587,450	-
							, , , , ,	, , , , , , , , , , , , , , , , , , , ,			,,				
Unmetered Si	upply														
V01	Valley	Unmetered/Streetlighting	-	-	-	-	-	-	321,152	-	-	-	-	-	-
V02	Valley	Unmetered/Streetlighting	12,063	4,402,965	-	-	-	-	547,258	-	-	-	-	-	-
T01	Tauranga	Unmetered/Streetlighting	-	-	-	-	-	-	1,753,322	-	-	-	-	-	-
T02	Tauranga	Unmetered/Streetlighting	14,075	5,137,193	-	-	-	-	3,165,537	-	-	-	-	-	-
Medium Com	mercial														
V24	Valley	Commercial three phase 100A	523	191,077	48,015,618	16,942,518	-	-	-	-	-	-	-	101,629	-
V28	Valley	> 200 Amp up to 299 kVA	 45	16,355	10,701,234	-	-	-	-	-	-	-	-	-	965
T22	Tauranga	Capacity 100 – 199kVA	 662	241,758	58,446,472	-	168,406	150,170		-	-	-	-	42,080	-
T24	Tauranga	Capacity 200 -299kVA	 141	51,348	34,374,119	-	-	-	-	-	-	-	-	953	9,142
T41	Tauranga	capacity 200 kVA unitised	-	-	-	-	-	-	-	-	-	-	-	-	-
Large Comme	ercial / Industrial														
V40	Valley	Individual ICP prices	90	-	64,697,765	-	-	-	-	-	-	-	-	-	16,999
V60	Valley	Individual ICP prices	 24	-	299,885,804	-	-	-	-	-	-	-	-	-	46,573
V601	Kinleith		 1	-	295,289,385	-	-	-	-	-	-	-	-	-	-
T50	Tauranga	Individual ICP prices	 221		174,342,847					<del> </del>		ļ		ļ	37,498
			 34		207.063.161										37,498
T601	Tauranga	Individual ICP prices	34	-	207,063,161	-	-	-	-	-	-	-	-	-	30,613
Eastern Regio	n Total		189.285	68,954,132	1.562.295.935	59,692,236	177,448,909	11,282,464	5.853.007	184.698.319	424,739,560	21.625.827	45,850,765	7,231,847	141,791
Lastern Regio	ni iolai		105,205	00,504,132	1,002,230,333	03,032,230	111,440,303	11,202,404	0,000,007	104,050,315	424,133,300	21,020,021	40,000,765	1,231,041	141,731



	Eas	tern Network	1 1		Distrib	ution Reve	nue (FY22 F	Prices)	
Tariff Group		Tarriff Description		Fixed (Monthly)	Fixed (Daily)	Variable	Demand	Non-standard	Total
Residential+Si	mall Commercial								
V05	Valley	Low Usage - Controlled		-	_	-	-	-	-
V05S	Valley	Low Usage - TOU		-	2,029,145	12,448,079	-	-	14,477,224
V06	Valley	Residential - Standard Controlled		-	-	-	-	-	-
V06S	Valley	Residential - Standard TOU		-	11,097,024	16,692,612	-	-	27,789,636
T05	Tauranga	Low Usage - Controlled		-	-	-	-	-	-
T05S	Tauranga	Low Usage - TOU		-	1,851,776	10,981,901	-	-	12,833,677
T06	Tauranga	Standard Residential & Commercial - Controlled		-	-	-	-	-	-
T06S	Tauranga	Standard Residential & Commercial - TOU		-	16,987,513	15,798,203	-	-	32,785,715
Unmetered Su	pply								
V01	Valley	Unmetered/Streetlighting		-	-	22,962	-	-	22,962
V02	Valley	Unmetered/Streetlighting		-	428,849	-	-	-	428,849
T01	Tauranga	Unmetered/Streetlighting		-	-	121,505	-	-	121,505
T02	Tauranga	Unmetered/Streetlighting		-	504,472	-	-	-	504,472
Medium Comn	nercial								
V24	Valley	Commercial three phase 100A		-	1,893,573	2,409,947	-	-	4,303,520
V28	Valley	> 200 Amp up to 299 kVA		-	425,230	325,318	6,758	-	757,305
T22	Tauranga	Capacity 100 – 199kVA		-	2,415,162	2,520,470	-	-	4,935,632
T24	Tauranga	Capacity 200 -299kVA		-	1,283,700	1,086,222	63,996	-	2,433,918
T41	Tauranga	capacity 200 kVA unitised		-	-	-	-	-	-
Large Comme	rcial / Industrial								
V40	Valley	Individual ICP prices		-			118,993	2,450,950	2,569,942
V60	Valley	Individual ICP prices		-	-	-	326,013	3,279,276	3,605,289
V601	Kinleith			-	<del>-</del>	<u>-</u>	<u> </u>	3,665,702	3,665,702
T50	Tauranga	Individual ICP prices		-	-	-	262,484	5,776,582	6,039,066
T601	Tauranga	Individual ICP prices		-	-	-	214,292	4,601,883	4,816,175
Eastern Region	n Total		1	-	38,916,444	62,407,218	992,536	19,774,392	122,090,589



	Eas	stern Network			Transn	nission Rev	enue (FY22	Prices)	
Tariff Group		Tarriff Description		Fixed (Monthly)	Fixed (Daily)	Variable	Demand	Non-standard	Total
Residential+S	mall Commercial								
V05	Valley	Low Usage - Controlled		-	-	-	-	-	-
V05S	Valley	Low Usage - TOU		-	-	5,075,548	-	-	5,075,548
V06	Valley	Residential - Standard Controlled		-	-	-	-	-	-
V06S	Valley	Residential - Standard TOU		-	-	11,825,882	-	-	11,825,882
T05	Tauranga	Low Usage - Controlled		-	-	-	-	-	-
T05S	Tauranga	Low Usage - TOU		-	-	4,903,381	-	-	4,903,381
T06	Tauranga	Standard Residential & Commercial - Controlled		-	-	-	-	-	-
T06S	Tauranga	Standard Residential & Commercial - TOU		-	-	14,663,833	-	-	14,663,833
Unmetered Su	ıpply								
V01	Valley	Unmetered/Streetlighting		-	-	12,396	-	-	12,396
V02	Valley	Unmetered/Streetlighting		-	245,245	-	-	-	245,245
T01	Tauranga	Unmetered/Streetlighting		-	-	62,594	-	-	62,594
T02	Tauranga	Unmetered/Streetlighting		-	281,518	-	-	-	281,518
Medium Comr									
V24	Valley	Commercial three phase 100A		-	-	1,520,020	-	-	1,520,020
V28	Valley	> 200 Amp up to 299 kVA		-	-	182,991	-	-	182,991
T22	Tauranga	Capacity 100 – 199kVA		-	-	1,218,543	-	-	1,218,543
T24	Tauranga	Capacity 200 -299kVA		-	-	515,612	-	-	515,612
T41	Tauranga	capacity 200 kVA unitised		-	-	-	-	-	-
Large Comme	rcial / Industrial								
V40	Valley	Individual ICP prices		-		-	-	1,338,606	1,338,606
V60	Valley	Individual ICP prices	I	-	-	-	-	4,669,925	4,669,925
V601	Kinleith			-	-	-	-	4,133,641	4,133,641
T50	Tauranga	Individual ICP prices		-	-	-	-	3,401,328	3,401,328
T601	Tauranga	Individual ICP prices		-	-	-	-	4,100,116	4,100,116
Eastern Regio	n Total		1	_	526,763	39,980,801	-	17,643,617	58,151,181



# Attachment B – Reliability limits and boundary values, caps, collars and targets

The reliability limits and boundary values for planned and unplanned SAIDI and SAIFI listed below are from Schedule 3.1 and 3.2 of the Determination. The target, collar and cap for unplanned SAIDI and SAIFI listed below are from Schedule 4 of the Determination.

Table B1: 2022 assessment period - Planned reliability limits

·	Limit
Planned SAIDI	98.192
Planned SAIFI	0.414

Powerco is also subject to cumulative limits on planned SAIDI and SAIFI which apply in 2023 to the 5-year totals of the SAIDI/SAIFI limits. These are not applicable to the 2022 assessment period (or any assessment period other than 2023).

Table B2: 2022 assessment period - Unplanned reliability limits, boundary values, target, collar and cap

	Limit	Unplanned boundary value	Target	Collar	Сар
Unplanned SAIDI	179.688	11.710	159.144	138.600	179.688
Unplanned SAIFI	2.216	0.064	2.051	1.887	2.216

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



## **Attachment C – Commentary on major event days**

#### 13 February 2022 - Cyclone Dovi

Cyclone Dovi caused significant disruption across the entire Powerco network. This resulted in a Major Event Day (MED) on 13th Feb and storm conditions continued across the network from 13th – 17th February. The MED affected both SAIDI and SAIFI boundaries.

Interruption date	ption date Pre-normalised unplanned SAIDI		Customers affected (unique count)
13 February 2022	114.824	199	68,982

Interruption date	unplanned SAIFI		SAIFI adjustment for normalisation
13 February 2022	0.263	0.064	0.199

#### 10 September 2021 - Windstorm

Throughout September significant weather events resulted in a major event day (MED) and four separate storm events for the Western network.

Interruption date	Pre-normalised unplanned SAIDI	Job count	Customers affected (unique count)
10 September 2021	15.459	73	13,975

#### 17 July 2021 - Windstorm

A storm resulted in a major event day (MED).

Interruption date	Pre-normalised unplanned SAIDI	Job count	Customers affected (unique count)
17 July 2021	18.806	81	16,065

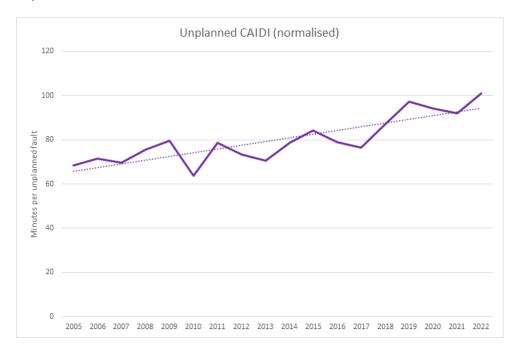


### **Attachment D – Exceeding the unplanned interruptions limit**

#### Reasons for non-compliance with the unplanned interruptions reliability assessment

This section provides detail on unplanned SAIDI for Powerco's network during the 2022 Assessment Period and discusses the contributing factors to the exceedance of the unplanned SAIDI limit. Powerco exceeded the annual unplanned SAIDI limit for the 2022 Assessment Period. Powerco is also exceeding the CPP period to date target by 6.4 minutes, therefore not currently compliant with the quality path.

In 2022 we exceeded our unplanned SAIDI limit by 21.4 minutes, or 11.9%. This included three MED days for unplanned SAIDI and SAIFI due to Cyclone Dovi and two windstorms. Our unplanned SAIFI in the same year however was below target. This indicates our unplanned fault restoration durations have not met our targets. Our unplanned CAIDI<sup>4</sup> trend is shown below.



We are working to fully understand the drivers of this worsening trend and the quantified impacts. Potential factors influencing this trend include:

- Average fault duration is steadily increasing on the network over the last four years.
- There were three MED days in FY22.
- Increased safety precautions and more steps in the fault process are assessed to have added extra time to every sustained fault.
- Working with our Service Providers to achieve a customer focused balance between HV and LV network restoration times

#### Actions taken to mitigate non-compliance with the annual reliability assessment

Our internal SAIDI governance groups continue to monitor and manage initiatives to improve our planned SAIDI and SAIFI performance. During 2022 the SAIDI Governance Group requested an investigation into possible root

<sup>&</sup>lt;sup>4</sup> Customer Average Interruption Duration Index - the average duration of an outage.



causes for Powerco's poor unplanned System Average Interruption Duration Index (SAIDI) performance in FY22 and a project group was created.

We are also currently evaluating 20 initiatives are proposed to reduce unplanned SAIDI. We recognise that exceeding our planned SAIDI limit in 2023 will lead to non-compliance with the planned interruption quality standard. Planned SAIDI needs to be managed within our five-year CPP limits. We are taking appropriate actions to ensure compliance with our planned interruption quality standard. Balancing competing drivers of cost, delivery and planned outages is a key focus for us and our programme management function.

#### **Unplanned SAIDI improvement initiatives**

Increased data collection to understand outages.	Prioritise faults likely to be high in SAIDI	Build knowledge base of contractor staff	Prioritisation of engineering options to reduce fault time
Analyse value stream of fault process for improvements	Improve quality of inspection patrols	Improve coordination of fault analysis with contractors.	Communicate to business importance of SAIDI and how teams can support.
Increase urgency for restoration of HV outages.	Implement on-call roster for traffic management and vegetation contractors	Update LFI strategy to decrease fault finding time.	Dedicated resource to project manage reactive work following faults to prevent faults recurring.
Increase number of fault people on-call.	Identify alternative vegetation contractors in each region.	Increase inspections on devices critical to restoring supply.	Improve data collection of failure mechanism to enable action by asset owners.
Create a wider data set for SAIDI data prior to CPP periods.	Focus on reducing reclose events where fault cause unknown.	Increase usage of fault data by planners and designers.	Provide easier ways to identify vegetation faults.

#### Improvements in managing unplanned SAIDI

We are also working to better understand the cause of the outages to reduce fault numbers and take action to avoid repeat failures.

We've set up a Fault Fast Track group to focus on what's causing our faults, and work with our Service Providers to address them.

They'll be looking at the data to try and understand what unknown cause and repeated recloser fault events are telling us. They'll be using LiDAR, pole-top photography and site visits (to be conducted by our Service Providers) to investigate areas of interest identified by the data with the goal of locating the core cause of repeated faults – such as vegetation, line clashing or cracked insulators.

Once the cause is identified the group will work with our Service Providers (vegetation and network) to fix the fault cause within eight weeks. If the issue is large, it will go to the Overhead Fleet team. The goal is to reduce



reoccurring faults or reduce their impact on the customers if we are unable to fix what is causing them straight away. The team is meeting once a week, and is made up of the Maintenance Engineering, Protection, Delivery Performance team and NOC.

We are also working to improve our fault response performance by:

- Using increased numbers of line fault indicators on the network, to support quicker fault finding.
- Working with our Service Providers to improve fault management processes (including the use of targeted KPIs).
- Increasing the use of remote visibility and operation of equipment on the network.

We are also continuing to focus on delivering against our CPP investment themes, which were designed over the long term to stabilise asset performance. This included:

- Increasing our levels of asset renewal on the network, in particular our overhead network assets.
- Managing our defect backlog levels to sustainable levels by the end of the CPP period.
- Further investments in network automation technology where economically justified.
- Moving to a cyclical vegetation strategy, including a significant volume increase in tree sites managed.
- Improved asset inspections, such as pole-top photography and Lidar, to improve the identification of defective equipment and vegetation issues, to target investment in highest risk network locations.



## **Attachment E – Compliance statement references**

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

Table D1: Wash-up amount calculation

Determination clause	Determination requirement	Compliance statement section
8.6	Powerco must calculate the wash-up amount for each assessment period using the methodology specified in Schedule 1.5 of the Determination	2

Table D2: Quality path summary

<b>Determination clause</b>	Determination requirement	Compliance statement section
9.1(a)	Comply with the annual planned interruptions 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 planned interruptions reliability assessment for each of the two immediately preceding assessment periods	
9.7(a)	Comply with the annual unplanned interruptions reliability assessment where assessed values for SAIDI and SAIFI for the assessment period must not exceed the reliability limits for SAIDI and SAIFI	3.2
9.7(b)	Comply with the annual unplanned interruptions reliability assessment for each of the two immediately preceding assessment periods	



Table D3: Annual compliance statement

<b>Determination</b> clause	Determination requirement	Compliance statement section		
An annual Compliance Statement must be provided to the Commission consisting of:				
11.5(a)(i)	A statement regarding compliance with the requirement to calculate the washup amount for the assessment period	1		
11.5(a)(ii)	A statement regarding compliance with the quality standards for the assessment period	1		
11.5(b)	The day on which the statement was published	1		
11.5(c)	A statement whether Powerco has entered into any agreement with another EDB or Transpower for an amalgamation, merger, major transaction or non-reopener transaction in the assessment period	1		
11.5(d)	A certificate in the form set out in Schedule 7 signed by at least one Director of Powerco	5		
11.5(e)	An assurance report meeting the requirements in Schedule 8, in respect of all information contained in the 'annual compliance statement'	6		
11.6(a)	Details of the wash-up amount calculation, together with supporting information for all components of the calculation	2 and Attachment A		
11.6(b)	Any reasons for non-compliance with the annual planned interruptions reliability assessment	N/a		
11.6(c)	Any reasons for non-compliance with the annual planned interruptions reliability assessment for the 5-year cap	N/a		
11.6(d-1)	Any reasons for non-compliance with the annual unplanned interruptions reliability assessment	Attachment D		
11.6(d-2)	Actions taken to mitigate any non-compliance and to prevent similar noncompliance in future assessment periods	Attachment D		
11.6(e)	For the annual planned interruptions reliability assessment, the SAIDI assessed value, SAIFI assessed value, SAIDI limit and SAIFI limit for the assessment period, and any supporting calculations (including those in Schedule 3.1) and where applicable, the annual planned interruptions reliability assessments for the two previous assessment periods	3.1 and Attachment B		



<b>Determination</b> clause	Determination requirement	Compliance statement section
11.6(f)	For the annual unplanned interruptions reliability assessment, the SAIDI assessed value, SAIFI assessed value, SAIDI limit, SAIFI limit, SAIDI unplanned boundary value, SAIFI unplanned boundary value, SAIDI cap, SAIFI cap, SAIDI collar, SAIFI collar, SAIDI target and SAIFI target for the assessment period, and any supporting calculations (including those in Schedule 3.2) and where applicable, the annual unplanned interruptions reliability assessments for the two previous assessment periods	3.2 and Attachment B
11.6(g)	A description of the policies and procedures which Powerco has used for capturing and recording Class B interruptions and Class C interruptions, and for calculating SAIDI assessed values and SAIFI assessed values for the assessment period	3.4
11.6(h)	The cause of each major event day within the assessment period	Attachment C

