

# 2023 Annual Price-Setting Compliance Statement

For the assessment period 1 April 2022 - 31 March 2023

3 March 2022

Pursuant to:

Electricity Distribution Services Default Price-Quality Path Determination 2020 (20 May 2020)



# **Table of contents**

1.	INTR	ODUCTION	3
	1.1	Background	3
	1.2	Statement of compliance	3
	1.3	Disclaimer	3
2.	PRIC	E PATH	4
	2.1	Price path compliance	4
	2.2	Forecast pass-through costs and recoverable costs	5
	2.3	Opening wash-up account balance	7
	2.4	Voluntary undercharging	7
Арр	endix 1	1: Forecast quantities	9
	Cons	sumer group quantity forecasts	9
	Price	category quantity forecasts	12
Арр	endix 2	2: 2023 Line charges and forecast quantities	13
App	endix 3	3: Directors' certification	16



### 1. INTRODUCTION

# 1.1 Background

The 2023 assessment period is the third assessment period of the Electricity Distribution Services Default Price-Quality Path Determination 2020 ("the Determination")<sup>1</sup> and covers the 12 months to 31 March 2023.

This annual price-setting compliance statement ("the Statement") is submitted to the Commerce Commission by Vector Limited ("Vector") before the start of the 2023 assessment period pursuant to clauses 11.1 to 11.3 of the Determination.

Under clause 8.4 of the Determination, Vector's forecast revenue from prices must not exceed the lesser of:

- the forecast allowable revenue for the 2023 assessment period; and
- the forecast revenue from prices for the 2022 assessment period multiplied by (1+ limit on annual percentage increase in forecast revenue from prices).

The Statement includes the calculations of Vector's forecast revenue from prices, forecast allowable revenue and supporting information for all components of their calculations.

The Statement was approved for issue on 24 February 2022 and published on 3 March 2022. In the Statement, references to Vector relate only to Vector's electricity distribution business.

# 1.2 Statement of compliance

As required by clause 11.2(a) of the Determination, the Statement confirms Vector's compliance with the price path in clause 8.4 set for Vector in respect of the 2023 assessment period.

#### 1.3 Disclaimer

The information contained in the Statement is accurate at the time of preparation, 15 December 2021.

The information contained in the Statement has been prepared for the express purpose of complying with the requirements of clauses 11.1 to 11.3 of the Determination. The Statement has not been prepared for any other purpose. Vector expressly disclaims any liability to any other party who may rely on the Statement for any other purpose.

For presentation purposes, some numbers in the Statement have been rounded. In most cases calculations are based on more detailed numbers. This may cause small discrepancies or rounding inconsistencies when aggregating some of the information presented in the Statement. These discrepancies do not affect the overall compliance calculations which are based on the more detailed information.

Vector's Electricity Default Price-Quality Path 2023 Annual Price-Setting Compliance Statement

Available at https://comcom.govt.nz/\_\_data/assets/pdf\_file/0025/216862/Electricity-distribution-services-default-price-quality-path-determination-2020-consolidated-20-May-2020-20-May-2020.pdf.



# 2. PRICE PATH

# 2.1 Price path compliance

As required by clause 8.4 of the Determination, in order to demonstrate compliance with the price path, Vector must demonstrate that its forecast revenue from prices does not exceed the lesser of:

- the forecast allowable revenue for the 2023 assessment period; and
- the forecast revenue from prices for the 2022 assessment period multiplied by (1+ limit on annual percentage increase in forecast revenue from prices).

Vector has defined that latter term as allowable forecast revenue from prices and the lesser of these two terms as the maximum forecast allowable revenue, therefore Vector's forecast revenue from prices must not exceed the maximum forecast allowable revenue for the 2023 assessment period.

As outlined in Table 1 below, Vector complies with the price path, in accordance with clause 8.4 of the Determination.

Table 1: Vector price path compliance 2023						
Formula: FRFP <sub>2023</sub> ≤ MFAR <sub>2023</sub>						
Component	Component Description Value (\$000)					
FRFP <sub>2023</sub>	Forecast revenue from prices 2023	625,305				
MFAR <sub>2023</sub>	663,278					
Result: \$625,305 ≤ \$663,278						

The method of calculation of forecast revenue from prices for the 2023 assessment period is set out in schedule 1.3 of the Determination and presented with Vector values in Table 2 below.

Table 2: Forecast revenue from prices 2023					
Formula: FRFP:	Formula: $FRFP_{2023} = \sum P_{i,2023} Q_{i,2023}$				
Component	Value (\$000)				
∑P <sub>i,2023</sub> Q <sub>i,2023</sub>	Prices 2023 x forecast quantities 2023 2	625,305			
FRFP <sub>2023:</sub>	625,305				

The method of calculation of maximum allowable revenue for the 2023 assessment period is set out under clause 8.4 of the Determination and presented with Vector values in Table 3 below.

Table 3: Maximum forecast allowable revenue 2023						
<b>Formula:</b> MFAR <sub>2023</sub> = min(FAR <sub>2023</sub> , AFRFP <sub>2023</sub> )						
Component	Component Description Value (\$000)					
FAR <sub>2023</sub>	Forecast allowable revenue 2023	676,948				
AFRFP <sub>2023</sub>	AFRFP <sub>2023</sub> Allowable forecast revenue from prices 2023					
MFAR <sub>2023</sub> Maximum forecast allowable revenue 2023 663,278						

<sup>&</sup>lt;sup>2</sup> An outline of how quantities are forecast is included in Appendix 1. Details of ∑P<sub>i,2023</sub> Q<sub>i,2023</sub> are included in Appendix 2.



The method of calculation of forecast allowable revenue for the 2023 assessment period is set out in Schedule 1.5 of the Determination and presented with Vector values in Table 4 below.

Table 4: Forecast allowable revenue 2023					
Formula: FAR <sub>2023</sub> = FNAR <sub>2023</sub> + FPRC <sub>2023</sub> + OWAB <sub>2023</sub> + PTBA <sub>2023</sub>					
Component Description Value (\$000)					
FNAR <sub>2023</sub>	Forecast net allowable revenue 2023 <sup>3</sup>	404,312			
FPRC <sub>2023</sub>	FPRC <sub>2023</sub> Forecast pass-through and recoverable costs 2023 <sup>4</sup>				
OWAB <sub>2023</sub>	OWAB <sub>2023</sub> Opening wash-up account balance 2023 <sup>5</sup>				
PTBA <sub>2023</sub>	Pass-through balance allowance 2023 <sup>6</sup>	-			
FAR <sub>2023:</sub>	676,948				

The method of calculation of allowable forecast revenue from prices for the 2023 assessment period is set out under clause 8.4 of the Determination and presented with Vector values in Table 5 below.

Table 5: Allowable forecast revenue from prices 2023						
Formula: AFRF	Formula: AFRFP <sub>2023</sub> = FRFP <sub>2022</sub> × (1+ limit)					
Component	Component Description Value (\$000)					
FRFP <sub>2022</sub>	Forecast revenue from prices 2022 8	602,980				
FRFP <sub>2022</sub> × limit	FRFP <sub>2022</sub> x limit Limit on annual percentage change (10%)					
AFRFP <sub>2023</sub>	663,278					

# 2.2 Forecast pass-through costs and recoverable costs

Forecast allowable revenue includes a forecast of pass-through and recoverable costs excluding any recoverable cost that is a revenue wash-up draw down amount.<sup>9</sup> These costs have been determined in accordance with Part 3.1.2-3 of the Electricity Distribution Services Input Methodologies Determination 2012 (consolidated 20 May 2020) ("Input Methodologies") which defines pass-through costs and recoverable costs.<sup>10</sup> Schedule 1.5 (3) of the Determination requires that all forecasts of pass-through

<sup>&</sup>lt;sup>3</sup> Forecast net allowable revenue is set out in schedule 1.4 of the Determination.

<sup>&</sup>lt;sup>4</sup> Details of forecast pass-through and recoverable costs are included in section 0.

<sup>&</sup>lt;sup>5</sup> Details of the opening wash-up account balance are included in section 0.

The pass-through balance allowance is nil for the third to fifth assessment periods, as set out in clause 4.2 of the Determination.

There is ambiguity in the Input Methodologies as to how certain inputs used to calculate incremental rolling incentive scheme ("IRIS") incentive adjustments are determined. In addition, the Commission has indicated to Vector that it disagrees with Vector's understanding of how the Input Methodologies apply to certain assets commissioned in the 2020 disclosure year. Vector and the Commission are working to resolve these questions of interpretation. The calculation of forecast allowable revenue 2023 in this statement is consistent with Vector's audited Information Disclosures and external advice. However, given the possible calculations of forecast allowable revenue 2023 are above the forecast revenue from prices, there is no impact on price path compliance.

Forecast revenue from prices for 31 March 2022 is from the 2022 Annual Price-Setting Compliance Statement (available at <a href="https://www.vector.co.nz/about-us/regulatory/disclosures-electricity/price-quality-path">https://www.vector.co.nz/about-us/regulatory/disclosures-electricity/price-quality-path</a>).

The revenue wash-up drawn down amount is the opening wash-up account balance as included in section 0.

Available at <a href="https://comcom.govt.nz/\_data/assets/pdf\_file/0017/60542/Electricity-distribution-services-input-methodologies-determination-2012-consolidated-20-May-2020-20-May-2020.pdf">https://comcom.govt.nz/\_data/assets/pdf\_file/0017/60542/Electricity-distribution-services-input-methodologies-determination-2012-consolidated-20-May-2020-20-May-2020.pdf</a>



costs and recoverable costs used to calculate 'forecast allowable revenue' must be demonstrably reasonable.

Table 6 summarises the forecast methods and the pass-through and recoverable costs used to set prices for the 2023 assessment period. All other pass-through and recoverable costs not included Table 6 are not applicable to Vector for the 2023 assessment period.

Table 6: Forecast pass-through and recoverable costs 2023					
Cost type	Description	Description Forecast method			
Pass-through costs	Local Authority rates	Historic base plus 5.4% (as publicly announced) plus \$10.5m targeted rate plus 2% 11	19,460		
	Commerce Act levy	Based on letter provided to Vector on the final review of Commission's Part 4 energy funding consultation paper <sup>12</sup> and historic trend of total industry levy with an increased portion attributable to Vector due to growth in Vector's Regulatory Asset Base	2,458		
ass-	Electricity Authority levy	From current trend and proposed EA appropriation	1,746		
<u>o</u>	Utility Disputes levy	Historic trend	393		
	Total pass-through cost	s	24,057		
	Incremental rolling incentive scheme ("IRIS") incentive adjustment	As per the Commission's financial model, with updated OPEX, commissioned asset value and weighted average asset life	8,926		
	Transpower electricity lines service charges	As notified by Transpower	174,034		
costs	Transpower new investment charges	As notified by Transpower	7,954		
Recoverable costs	Distributed generation allowance	Based on demand and Transpower's 2023 interconnection rates	1,035		
Reco.	Quality incentive allowance	Determined from the 2021 assessment period and adjusted for the time value of money	(71)		
	Fire and Emergency New Zealand levy	Historic plus 2.6% (proxy for forecast CPI)	594		
	CAPEX wash-up	As per the Commission's financial model, updated commissioned asset value	36,509		
	Total recoverable costs				
	Total forecast pass-through and recoverable costs excluding revenue wash-up drawn down amount				

Auckland Council has included a targeted vegetation management rate on Vector from 1 July 2021 of \$10.5m per year to fund enhanced maintenance of the Council's trees that present a risk to the electricity lines network.

<sup>&</sup>lt;sup>12</sup> Consultation paper available at <a href="https://comcom.govt.nz/">https://comcom.govt.nz/</a>\_data/assets/pdf\_file/0024/229830/Part-4-energy-levy-funding-consult ation-paper-10-Dec-2020.pdf.



# 2.3 Opening wash-up account balance

Forecast allowable revenue includes the recovery of the opening wash-up account balance which is defined in schedule 1.7 of the Determination. The opening wash-up account balance (which was nil for the first and second assessments periods) used to set prices for the 2023 assessment period is presented in Table 7 below.

Table 7: Opening wash-up account balance 2023					
Formula: OWAB <sub>2023</sub> = (WUA <sub>2021</sub> - VUAF <sub>2021</sub> ) × (1+ WACC) <sup>2</sup>					
Component Description Value (\$000)					
WUA <sub>2021</sub>	Wash-up amount 2021 13	18,039			
- VUAF <sub>2021</sub>	Voluntary undercharging amount foregone 2021 14	-			
(WUA <sub>2021</sub> - VUAF <sub>2021</sub> ) × WACC <sup>2</sup>	67th percentile estimate of post-tax WACC (4.23%) <sup>15</sup>	1,559			
OWAB <sub>2023:</sub>	19,598				

# 2.4 Voluntary undercharging

As specified in clause 4.2 of the Determination, the voluntary undercharging amount foregone is the voluntary undercharging floor less the forecast revenue in prices however if the forecast revenue from prices is greater voluntary undercharging revenue floor, then the amount foregone is nil. Tables 8 and 9 below detail the voluntary undercharging calculations for the 2021 and 2023 assessment periods respectively.

Table 8: Voluntary undercharging revenue floor and amount foregone 2021						
Formula: VURF <sub>2021</sub> = I	Formula: VURF <sub>2021</sub> = FAR <sub>2021</sub> x VUT					
VUAF <sub>2021</sub> = r	$VUAF_{2021} = max\{VURF_{2021} - FRFP_{2021}, 0\}$					
Component	Value (\$000)					
FAR <sub>2021</sub> x VUT	Forecast allowable revenue 2021 times the voluntary undercharging threshold (90%) <sup>16</sup>	509,042				
VURF <sub>2021</sub> :	Voluntary undercharging revenue floor 2021	509,042				
- FRFP <sub>2021</sub>	Forecast revenue from prices 2021 <sup>16</sup>	(565,552)				
VUAF <sub>2021:</sub>	Voluntary undercharging amount foregone 2021	-				

Wash-up account 2021 is from the 2021 Annual Compliance Statement (available at <a href="https://www.vector.co.nz/about-us/regulatory/disclosures-electricity/price-quality-path">https://www.vector.co.nz/about-us/regulatory/disclosures-electricity/price-quality-path</a>).

<sup>&</sup>lt;sup>14</sup> Details of the voluntary undercharging amount forgone are included in section 2.4.

<sup>&</sup>lt;sup>15</sup> 67th percentile estimate of post-tax WACC as defined in clause 4.2 of the Determination.

Forecast allowable revenue 2021 and forecast revenue from prices 2021 are from the 2021 Annual Price Setting Compliance Statement (available at <a href="https://www.vector.co.nz/about-us/regulatory/disclosures-electricity/price-quality-path">https://www.vector.co.nz/about-us/regulatory/disclosures-electricity/price-quality-path</a>).



# Table 9: Voluntary undercharging revenue floor and amount foregone 2023

Formula:  $VURF_{2023} = min\{FAR_{2023} \times VUT, AFRFP_{2023}\}$ 

 $VUAF_{2023} = max\{VURF_{2023} - FRFP_{2023}, 0\}$ 

Component	Description	Value (\$000)
FAR <sub>2023</sub> x VUT	Forecast allowable revenue 2023 times the voluntary undercharging threshold (90%) $^{\rm 17}$	609,253
AFRFP <sub>2023</sub>	Allowable forecast revenue from prices 2023 18	663,278
VURF <sub>2023:</sub>	Voluntary undercharging revenue floor 2023	609,253
- FRFP <sub>2023</sub>	RFP <sub>2023</sub> Forecast revenue from prices 2023 <sup>19</sup>	
VUAF <sub>2023:</sub>	Voluntary undercharging amount foregone 2023	-

Forecast allowable revenue 2023 is from Table 4.
 Allowable forecast revenue from prices 2023 is from Table 5.
 Forecast revenue from prices 2023 is from Table 2.



# **Appendix 1: Forecast quantities**

Schedule 1.3 of the Determination requires all forecast quantities used to calculate the forecast revenue from prices to be demonstrably reasonable.

# Consumer group quantity forecasts

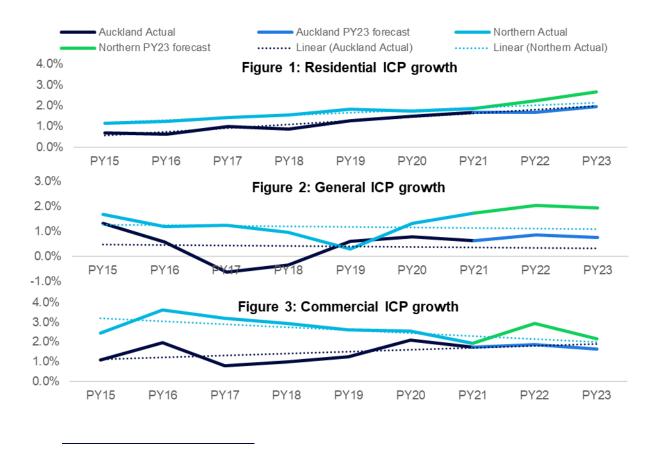
Vector produces network load forecasts as part of its Asset Management Plan (AMP). The same bottomup approach is used for price setting to forecast monthly connections (ICPs), energy volumes, capacity, demand and power factor by consumer groups (residential, general and commercial)<sup>20</sup> and by network (Auckland and Northern). The latest forecast was prepared in October 2021 and is based on actual billed data to June 2021.

#### **ICP** forecasts

The forecast monthly total connections are driven by three areas: namely prior months total connections, gross connections and movements

- Gross connections are based on the Auckland Forecasting Centre's household and employment forecasts<sup>21</sup> which are converted into ICPs (by using the historic ratios of ICPs to household numbers (for residential) or to employment numbers (for general and commercial)).
- Movements are the historic monthly average from July 2019 to August 2021 of disconnections, reconnections, decommissioned and transfers to embedded networks.

Figures 1-3 show ICP growth for the consumer groups which illustrate that the growth in the forecast ICPs are reasonable when compared with the historic trends and fluctuations. PY is pricing year



<sup>&</sup>lt;sup>20</sup> For further information on how consumer groups (and price categories) are defined, see our pricing methodology, available at <a href="https://www.vector.co.nz/about-us/regulatory/disclosures-electricity/pricing-methodology">www.vector.co.nz/about-us/regulatory/disclosures-electricity/pricing-methodology</a>.

<sup>21</sup> The Auckland Forecasting Centre's household/employment forecasts consider Statistics NZ forecasts and local knowledge of building developments, council plans and strategy.

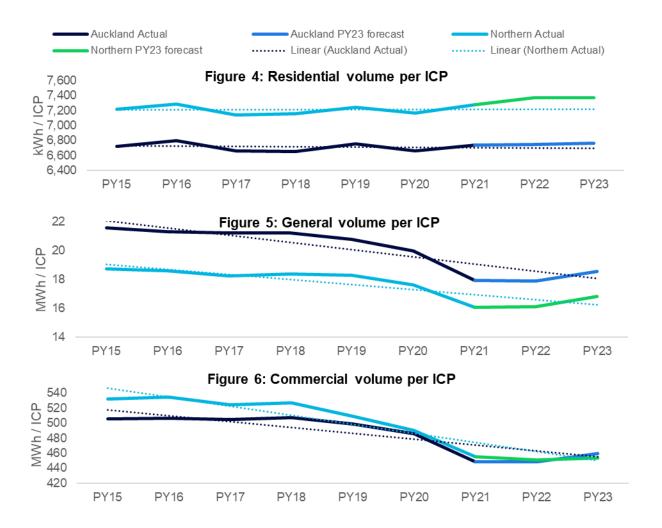


#### **Volume forecasts**

Volume forecasts by consumer group are determined by using a machine learning forecasting model. This model includes the ICP forecasts and provides monthly forecast volumes.

- Residential and general volume data are available from July 2006 June 2021, whereas commercial volume data are from July 2011 to June 2021 (as volumes cannot be split between standard and non-standard ICPs prior to July 2011).
- Previously, the volume forecasts were determined by multiplying the forecasted monthly volume per ICP by the forecast number of ICPs. Forecasted volumes per ICP are calculated using historic annual trend lines and the annual amounts are allocated to each month based on their historic contributions.
- The machine learning forecasting model gives a more appropriate forecast than the trend analysis used previously as there's a higher degree of confidence in its ability to see known and unknown trends and allows for a more scientific modelling of weather and Covid-19 implications.

Figures 4-6 show volumes per ICP for the consumer groups which illustrate that the use of the machine learning model's forecasts are reasonable for the volume forecasts with Covid-19's impact shown in PY21.



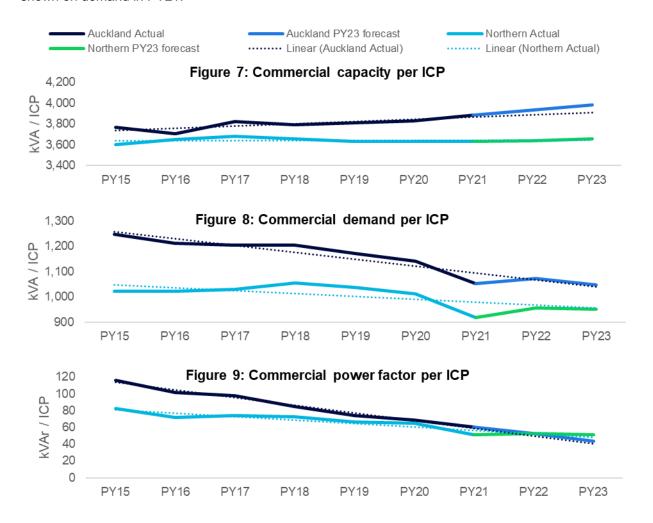


#### Capacity, demand and power factor forecasts

Commercial capacity, demand and power factor forecasts are determined by multiplying the forecasted monthly quantity per ICP by the forecast number of ICPs. Forecasted capacities per ICP are calculated using historic monthly trend lines. Forecasted demand (or power factor) per ICP are calculated using historic annual trend lines and the annual amounts are allocated to each month based on their historic contributions.

- Capacity, demand and power factor data are reliably available from July 2014 to June 2021.
- Capacity trends used are monthly from July 2018 to June 2021. Demand and power factor annual
  trends used are from April 2017 to March 2020. Vector chose to use short-term trends as it can
  provide a better indication of where these quantities per ICP are likely to be as Auckland recovers
  post Covid-19. PY2021 was not included for demand and power factor due to the impact of Covid19.
- The allocation of annual demand (or power factor) per ICP into monthly values is based on the average contribution to annual demand (or power factor) per ICP for that month using historic data (from PY2015 to PY2020).

Figures 7-9 show capacity, demand and power factor per ICP for the commercial consumer group which illustrate that the use of the historic trends are reasonable for the these forecasts with Covid-19's impact shown on demand in PY21.





# Price category quantity forecasts

For the 2023 assessment period, price category level quantities are required for all pricing components except injection volumes as these have a zero price so are not forecast.

The annual forecasts of connections, energy volumes, capacity, demand and power factor by consumer group are converted into the relevant billed quantities and apportioned into price category level quantities using the actual historic splits within the consumer groups.

Fixed quantities (number of days) is estimated using the average of year beginning and year end forecast ICPs for the 2023 assessment period multiplied by number of days in the year.

Volumetric quantities (kWh) is same as the annual energy volume forecast.

Capacity (kVA.days), demand (kVA.days) and power factor (kVAr.days) is estimated by using their annual forecasts multiplied the average days per month (365/12).

Actual price category level quantities for the 2022 assessment period were available from April 2021 to September 2021 when setting 2023 prices and these were used to apportion the relevant consumer group forecast quantities.

For residential and general consumers, modifications to ICP and volumes quantities were done to allow for a continued transition to the mandatory time of use (TOU) price categories for all ICPs except those with persistent metering issues. It is estimated that 97% and 86% of residential and general ICPs would be on TOU price categories based on October 2021 Electricity Authority metering statistics. No allowance was made for the expanded eligibility criteria for the residential controlled TOU price categories.<sup>22</sup>

For commercial consumers, new Zone Substation price categories have been created for high voltage consumers.<sup>23</sup> No quantities have been forecast for these price categories for the 2023 assessment period as it is anticipated that these categories will be primarily used by current non-standard priced consumers when their contracts end.

The 2023 forecast price categories level quantities can be found in Appendix 2.

<sup>22</sup> The eligibility criteria for the residential controlled TOU price categories now includes smart electric vehicle chargers with IP addresses that are capable of being connected to Vector Ltd.'s distributed energy resources management system (DERMS).

<sup>&</sup>lt;sup>23</sup> The Zone Substation price categories are for consumers that are connected directly from a Vector zone substation and/or have paid for their connection assets from Vector's high voltage (11kV or higher) network.



# Appendix 2: 2023 Line charges and forecast quantities

	Pi,2023 Qi,2023
Northern charges between 1 April 2022 to 31 March 2023	\$223,153,633
Auckland charges between 1 April 2022 to 31 March 2023	\$384,220,718
Non-standard charges between 1 April 2022 to 31 March 2023	\$17,930,764
Total charges between 1 April 2022 to 31 March 2023	\$625,305,115

# Northern line charges between 1 April 2022 to 31 March 2023

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Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	2023 Qi,2023
WRHL	WRHL-FIXD	Fixed	\$/day	0.3000	8,104,238	\$	2,431,271
WRHL	WRHL-OFPK	Volumetric, uncontrolled, off peak	\$/kWh	0.0603	76,988,659	\$	4,642,416
WRHL	WRHL-PEAK	Volumetric, uncontrolled, peak	\$/kWh	0.1579	36,271,236	\$	5,727,228
WRHLC	WRHLC-FIXD	Fixed	\$/day	0.3000	38,273,112	\$	11,481,933
WRHLC	WRHLC-OFPK	Volumetric, controlled, off peak	\$/kWh	0.0603	364,693,017	\$	21,990,989
WRHLC	WRHLC-PEAK	Volumetric, controlled, peak	\$/kWh	0.1378	170,188,703	\$	23,452,003
WRHS	WRHS-FIXD	Fixed	\$/day	1.1200	6,809,252	\$	7,626,362
WRHS	WRHS-OFPK	Volumetric, uncontrolled, off peak	\$/kWh	0.0229	136,432,335	\$	3,124,300
WRHS	WRHS-PEAK	Volumetric, uncontrolled, peak	\$/kWh	0.1205	62,776,049	\$	7,564,514
WRHSC	WRHSC-FIXD	Fixed	\$/day	1.1200	25,582,606	\$	28,652,519
WRHSC	WRHSC-OFPK	Volumetric, controlled, off peak	\$/kWh	0.0229	515,934,540	\$	11,814,901
WRHSC	WRHSC-PEAK	Volumetric, controlled, peak	\$/kWh	0.1004	232,498,561	\$	23,342,856

**Residential - extemption** 

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Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	023 Qi,2023
WRUL	WRUL-FIXD	Fixed	\$/day	0.3000	224,886	\$	67,466
WRUL	WRUL-24UC	Volumetric, uncontrolled	\$/kWh	0.0904	3,181,678	\$	287,624
WRCL	WRCL-FIXD	Fixed	\$/day	0.3000	1,062,049	\$	318,615
WRCL	WRCL-AICO	Volumetric, controlled	\$/kWh	0.0842	16,673,185	\$	1,403,882
WRUS	WRUS-FIXD	Fixed	\$/day	1.1200	188,951	\$	211,626
WRUS	WRUS-24UC	Volumetric, uncontrolled	\$/kWh	0.0530	3,705,892	\$	196,412
WRCS	WRCS-FIXD	Fixed	\$/day	1.1200	709,898	\$	795,085
WRCS	WRCS-AICO	Volumetric, controlled	\$/kWh	0.0468	19,297,412	\$	903,119

#### General

Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	2023 Qi,2023
WBSU	WBSU-FIXD	Fixed	\$/day/fitting	0.0813	17,290,568	\$	1,405,723
WBSU	WBSU-24UC	Volumetric	\$/kWh	0.0257	13,069,099	\$	335,876
WBSH	WBSH-FIXD	Fixed	\$/day	1.1200	7,448,167	\$	8,341,947
WBSH	WBSH-OFPK	Volumetric, uncontrolled, off peak	\$/kWh	0.0229	242,593,620	\$	5,555,394
WBSH	WBSH-PEAK	Volumetric, uncontrolled, peak	\$/kWh	0.1205	100,265,367	\$	12,081,977
WBSN	WBSN-FIXD	Fixed	\$/day	1.1200	1,192,398	\$	1,335,486
WBSN	WBSN-24UC	Volumetric	\$/kWh	0.0530	54,889,258	\$	2,909,131

Low voltage

Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	023 Qi,2023
WLVN	WLVN-FIXD	Fixed	\$/day	5.9200	350,051	\$	2,072,303
WLVN	WLVN-24UC	Volumetric	\$/kWh	0.0340	126,149,283	\$	4,289,076
WLVN	WLVN-CAPY	Capacity	\$/kVA/day	0.0396	51,931,004	\$	2,056,468
WLVN	WLVN-PWRF	Power Factor	\$/kVAr/day	0.2917	286,302	\$	83,514
WLVH	WLVH-FIXD	Fixed	\$/day	11.1500	96,072	\$	1,071,198
WLVH	WLVH-24UC	Volumetric	\$/kWh	0.0053	128,350,272	\$	680,256
WLVH	WLVH-CAPY	Capacity	\$/kVA/day	0.0396	25,895,022	\$	1,025,443
WLVH	WLVH-DAMD	Demand	\$/kVA/day	0.2924	10,562,444	\$	3,088,459
WLVH	WLVH-PWRF	Power Factor	\$/kVAr/day	0.2917	684,965	\$	199,804

# Transformer

Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	023 Qi,2023
WTXN	WTXN-FIXD	Fixed	\$/day	5.9200	51,196	\$	303,083
WTXN	WTXN-24UC	Volumetric	\$/kWh	0.0340	36,225,076	\$	1,231,653
WTXN	WTXN-CAPY	Capacity	\$/kVA/day	0.0380	12,639,838	\$	480,314
WTXN	WTXN-PWRF	Power Factor	\$/kVAr/day	0.2917	171,071	\$	49,901
WTXH	WTXH-FIXD	Fixed	\$/day	11.1500	107,588	\$	1,199,603
WTXH	WTXH-24UC	Volumetric	\$/kWh	0.0053	354,312,162	\$	1,877,854
WTXH	WTXH-CAPY	Capacity	\$/kVA/day	0.0380	80,742,943	\$	3,068,232
WTXH	WTXH-DAMD	Demand	\$/kVA/day	0.2807	29,566,799	\$	8,299,401
WTXH	WTXH-PWRF	Power Factor	\$/kVAr/day	0.2917	1,348,513	\$	393,361



Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi 2	2023 Qi,2023
	WHVN-FIXD	Fixed	\$/day	5.9200	Q1/2023 -	\$	- -
		Volumetric	\$/kWh	0.0340	-	\$	-
WHVN	WHVN-CAPY	Capacity	\$/kVA/day	0.0365	-	\$	-
WHVN	WHVN-PWRF	Power Factor	\$/kVAr/day	0.2917	1	\$	-
WHVH	WHVH-FIXD	Fixed	\$/day	11.1500	9,388	\$	104,677
WHVH	WHVH-24UC	Volumetric	\$/kWh	0.0053	118,757,271	\$	629,414
WHVH	WHVH-CAPY	Capacity	\$/kVA/day	0.0365	16,044,570	\$	585,627
WHVH	WHVH-DAMD	Demand	\$/kVA/day	0.2695	8,557,095	\$	2,306,137
WHVH	WHVH-DEXA	Excess demand	\$/kVA/day	0.8030	22,183	\$	17,813
WHVH	WHVH-PWRF	Power Factor	\$/kVAr/day	0.2917	135,028	\$	39,388

#### Zone substation

Zone Substati	OII						
Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2023 (	Qi,2023
WZSH	WZSH-FIXD	Fixed	\$/day	-	-	\$	-
WZSH	WZSH-24UC	Volumetric	\$/kWh	0.0058	ı	\$	-
WZSH	WZSH-CAPY	Capacity	\$/kVA/day	0.1228	ı	\$	-
WZSH	WZSH-DAMD	Demand	\$/kVA/day	0.1228	-	\$	-
WZSH	WZSH-DEXA	Excess demand	\$/kVA/day	0.8000	-	\$	-
WZSH	WZSH-PWRF	Power Factor	\$/kVAr/day	0.2917	-	\$	-

# Auckland line charges between 1 April 2022 to 31 March 2023

# Residential - time of use

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Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	2023 Qi,2023
ARHL	ARHL-FIXD	Fixed	\$/day	0.3000	12,027,618	\$	3,608,285
ARHL	ARHL-OFPK	Volumetric, off peak	\$/kWh	0.0603	102,274,416	\$	6,167,147
ARHL	ARHL-PEAK	Volumetric, peak	\$/kWh	0.1579	47,304,894	\$	7,469,443
ARHLC	ARHLC-FIXD	Fixed	\$/day	0.3000	58,716,920	\$	17,615,076
ARHLC	ARHLC-OFPK	Volumetric, off peak	\$/kWh	0.0603	500,092,495	\$	30,155,577
ARHLC	ARHLC-PEAK	Volumetric, peak	\$/kWh	0.1378	230,129,918	\$	31,711,903
ARHS	ARHS-FIXD	Fixed	\$/day	1.1200	7,162,309	\$	8,021,786
ARHS	ARHS-OFPK	Volumetric, off peak	\$/kWh	0.0229	143,263,827	\$	3,280,742
ARHS	ARHS-PEAK	Volumetric, peak	\$/kWh	0.1205	64,785,290	\$	7,806,627
ARHSC	ARHSC-FIXD	Fixed	\$/day	1.1200	33,590,748	\$	37,621,637
ARHSC	ARHSC-OFPK	Volumetric, off peak	\$/kWh	0.0229	675,222,583	\$	15,462,597
ARHSC	ARHSC-PEAK	Volumetric, peak	\$/kWh	0.1004	300,513,733	\$	30,171,579

Residential - exemption

Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	023 Qi,2023
ARUL	ARUL-FIXD	Fixed	\$/day	0.3000	333,757	\$	100,127
ARUL	ARUL-24UC	Volumetric, uncontrolled	\$/kWh	0.0904	3,759,860	\$	339,891
ARCL	ARCL-FIXD	Fixed	\$/day	0.3000	1,629,349	\$	488,805
ARCL	ARCL-AICO	Volumetric, controlled	\$/kWh	0.0842	27,839,295	\$	2,344,069
ARUS	ARUS-FIXD	Fixed	\$/day	1.1200	198,749	\$	222,598
ARUS	ARUS-24UC	Volumetric, uncontrolled	\$/kWh	0.0530	3,179,932	\$	168,536
ARCS	ARCS-FIXD	Fixed	\$/day	1.1200	932,117	\$	1,043,971
ARCS	ARCS-AICO	Volumetric, controlled	\$/kWh	0.0468	26,792,760	\$	1,253,901

#### General

Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	2023 Qi,2023
ABSU	ABSU-FIXD	Fixed	\$/day/fitting	0.0813	26,528,389	\$	2,156,758
ABSU	ABSU-24UC	Volumetric	\$/kWh	0.0257	20,603,618	\$	529,513
ABSH	ABSH-FIXD	Fixed	\$/day	1.1200	11,753,380	\$	13,163,786
ABSH	ABSH-OFPK	Volumetric, off peak	\$/kWh	0.0229	431,766,500	\$	9,887,453
ABSH	ABSH-PEAK	Volumetric, peak	\$/kWh	0.1205	174,689,276	\$	21,050,058
ABSN	ABSN-FIXD	Fixed	\$/day	1.1200	1,881,632	\$	2,107,427
ABSN	ABSN-24UC	Volumetric	\$/kWh	0.0530	97,089,208	\$	5,145,728

Low voltage

Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	2023 Qi,2023
ALVN	ALVN-FIXD	Fixed	\$/day	1.8300	886,215	\$	1,621,774
ALVN	ALVN-24UC	Volumetric	\$/kWh	0.0553	288,595,115	\$	15,959,310
ALVN	ALVN-CAPY	Capacity	\$/kVA/day	0.0469	152,373,124	\$	7,146,300
ALVN	ALVN-PWRF	Power Factor	\$/kVAr/day	0.2917	238,725	\$	69,636
ALVT	ALVT-FIXD	Fixed	\$/day	1	524,133	\$	-
ALVT	ALVT-24UC	Volumetric	\$/kWh	0.0123	520,347,798	\$	6,400,278
ALVT	ALVT-CAPY	Capacity	\$/kVA/day	0.0469	136,051,996	\$	6,380,839
ALVT	ALVT-DAMD	Demand	\$/kVA/day	0.3123	43,949,743	\$	13,725,505
ALVT	ALVT-PWRF	Power Factor	\$/kVAr/day	0.2917	2,686,397	\$	783,622



#### **Transformer**

Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	2023 Qi,2023
ATXN	ATXN-FIXD	Fixed	\$/day	1.8300	62,561	\$	114,486
ATXN	ATXN-24UC	Volumetric	\$/kWh	0.0553	26,593,128	\$	1,470,600
ATXN	ATXN-CAPY	Capacity	\$/kVA/day	0.0450	16,271,078	\$	732,198
ATXN	ATXN-PWRF	Power Factor	\$/kVAr/day	0.2917	10,841	\$	3,162
ATXT	ATXT-FIXD	Fixed	\$/day	ı	362,269	\$	-
ATXT	ATXT-24UC	Volumetric	\$/kWh	0.0123	1,123,685,255	\$	13,821,329
ATXT	ATXT-CAPY	Capacity	\$/kVA/day	0.0450	257,120,968	\$	11,570,444
ATXT	ATXT-DAMD	Demand	\$/kVA/day	0.2998	89,276,352	\$	26,765,050
ATXT	ATXT-PWRF	Power Factor	\$/kVAr/day	0.2917	2,776,871	\$	810,013

High voltage

Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2	023 Qi,2023
AHVN	AHVN-FIXD	Fixed	\$/day	1.8300	2,607	\$	4,770
AHVN	AHVN-24UC	Volumetric	\$/kWh	0.0553	641,155	\$	35,456
AHVN	AHVN-CAPY	Capacity	\$/kVA/day	0.0432	606,210	\$	26,188
AHVN	AHVN-PWRF	Power Factor	\$/kVAr/day	0.2917	3,876	\$	1,131
AHVT	AHVT-FIXD	Fixed	\$/day	-	54,741	\$	-
AHVT	AHVT-24UC	Volumetric	\$/kWh	0.0123	424,981,389	\$	5,227,271
AHVT	AHVT-CAPY	Capacity	\$/kVA/day	0.0432	66,902,476	\$	2,890,187
AHVT	AHVT-DAMD	Demand	\$/kVA/day	0.2878	31,989,045	\$	9,206,447
AHVT	AHVT-DEXA	Excess demand	\$/kVA/day	0.9504	41,875	\$	39,798
AHVT	AHVT-PWRF	Power Factor	\$/kVAr/day	0.2917	1,096,682	\$	319,902

#### Zone substation

Price category	Code	Description	Units	Pi,2023	Qi,2023	Pi,2023 Qi	,2023
AZST	AZST-FIXD	Fixed	\$/day	-	ı	\$	-
AZST	AZST-24UC	Volumetric	\$/kWh	0.0058	-	\$	-
AZST	AZST-CAPY	Capacity	\$/kVA/day	0.1228	-	\$	-
AZST	AZST-DAMD	Demand	\$/kVA/day	0.1228	ı	\$	-
AZST	AZST-DEXA	Excess demand	\$/kVA/day	0.8000	I	\$	-
AZST	AZST-PWRF	Power Factor	\$/kVAr/day	0.2917	-	\$	-

# Non-standard line charges between 1 April 2022 to 31 March 2023

Non-standard consumers have a quantity of one for price compliance. This is because they are charged an annual line charge, billed monthly, that covers their capital contribution, upstream distribution costs and transmission costs.

Price category	Code	Description	Units	Pi,2023	Qi,2023	<i>Pi,2</i>	023 Qi,2023
NS	WN23-1	Fixed	\$/year	\$ 491,164	1	\$	491,164
NS	WN23-2	Fixed	\$/year	\$ 676,569	1	\$	676,569
NS	WN23-3	Fixed	\$/year	\$ -	1	\$	· -
NS	AN23-1	Fixed	\$/year	\$ -	1	\$	-
NS	AN23-2	Fixed	\$/year	\$1,366,017	1	\$	1,366,017
NS	AN23-3	Fixed	\$/year	\$2,356,382	1	\$	2,356,382
NS	AN23-4	Fixed	\$/year	\$ -	1	\$	-
NS	AN23-5	Fixed	\$/year	\$1,142,488	1	\$	1,142,488
NS	AN23-6	Fixed	\$/year	\$ 867,823	1	\$	867,823
NS	AN23-7	Fixed	\$/year	\$ 873,378	1	\$	873,378
NS	AN23-8	Fixed	\$/year	\$1,161,711	1	\$	1,161,711
NS	AN23-9	Fixed	\$/year	\$ 303,374	1	\$	303,374
NS	AN23-10	Fixed	\$/year	\$ 802,340	1	\$	802,340
NS	AN23-11	Fixed	\$/year	\$1,388,274	1	\$	1,388,274
NS	AN23-12	Fixed	\$/year	\$ -	1	\$	-
NS	AN23-13	Fixed	\$/year	\$ 462,800	1	\$	462,800
NS	AN23-14	Fixed	\$/year	\$ 874,928	1	\$	874,928
NS	AN23-15	Fixed	\$/year	\$1,479,761	1	\$	1,479,761
NS	AN23-16	Fixed	\$/year	\$ 803,468	1	\$	803,468
NS	AN23-17	Fixed	\$/year	\$ 456,879	1	\$	456,879
NS	AN23-18	Fixed	\$/year	\$ 77,731	1	\$	77,731
NS	AN23-19	Fixed	\$/year	\$ 661,720	1	\$	661,720
NS	AN23-20	Fixed	\$/year	\$ 69,467	1	\$	69,467
NS	AN23-21	Fixed	\$/year	\$ -	1	\$	-
NS	AN23-22	Fixed	\$/year	\$ -	1	\$	-
NS	AN23-23	Fixed	\$/year	\$ -	1	\$	=
NS	AN23-24	Fixed	\$/year	\$ 719,071	1	\$	719,071
NS	AN23-25	Fixed	\$/year	\$ 376,590	1	\$	376,590
NS	AN23-26	Fixed	\$/year	\$ 271,721	1	\$	271,721
NS	AN23-27	Fixed	\$/year	\$ 247,107	1	\$	247,107



# **Appendix 3: Directors' certification**

# Schedule 6: Form of Director's Certificate for Annual Price-Setting Compliance Statement

Clause 11.2(c)
I,
<ol> <li>As noted in the attached statement, Vector and the Commerce Commission are working to resolve questions of interpretation of the Input Methodologies relating to the calculation of certain IRIS inputs and the treatment of certain commissioned assets.</li> </ol>
<ol><li>The calculation of forecast allowable revenue in the attached statement is consistent with Vector's audited Information Disclosures and external advice.</li></ol>
<ol> <li>Vector has set prices for the 2023 assessment period such that, regardless of the resolution of these issues, forecast revenue from prices will not exceed forecast allowable revenue.</li> </ol>
Anath P. Mas Director
24 February 2022
Date

Note: Section 103(2) of the Commerce Act 1986 provides that no person shall attempt to deceive or knowingly mislead the Commission in relation to any matter before it. It is an offence to contravene section 103(2) and any person who does so is liable on summary conviction to a fine not exceeding \$100,000 in the case of an individual or \$300,000 in the case of a body corporate.