



Electricity Distribution Services

2020 Annual Compliance Statement

For the assessment period
1 April 2019 - 31 March 2020

22 June 2020

Pursuant to:

Electricity Distribution Services Default Price-Quality Path
Determination 2015 (9 July 2015)

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1. INTRODUCTION

1.1 Background

The 2020 assessment period is the fifth assessment period of the Electricity Distribution Services Default Price-Quality Path Determination 2015 (“the Determination”)¹ and covers the 12 months to 31 March 2020.

This annual compliance statement (“the Statement”) by Vector Limited (“Vector”) is pursuant to clause 11 of the Determination and clause 13 of the Settlement Agreement between the Commerce Commission (“the Commission”) and Vector dated 7 July 2017 (“the Agreement”).

The Statement is submitted to the Commission within the extension period to 17 August 2020 granted by the Commission.²

The Agreement acknowledges that Vector inadvertently breached its price path for the 2014 and 2015 assessment periods. As a result, Vector must provide remediation in both the 2019 and 2020 assessment periods in the form of lowering notional revenue below allowable notional revenue.

Under clause 9 of the Agreement, Vector set its prices for the 2020 assessment period so that its notional revenue is less than or equal to allowable notional revenue minus the 2020 alternative value for the 2020 assessment period (as under clause 8 of the Agreement).

Clause 9 of the Agreement provides a stricter compliance position than under clause 8 of the Determination which requires that an electricity distribution business’s (“EDB’s”) notional revenue must not exceed the allowable notional revenue during the current assessment period.

Under clause 9 of the Determination an EDB’s assessed reliability values either; must not exceed the reliability limits for the 2020 assessment period; or must not have exceeded the reliability limit for either of the two immediately preceding assessment periods.

The Statement includes the calculations of Vector’s notional revenue, allowable notional revenue, pass-through balance, assessed reliability values and supporting information for all components of their calculations.

The data in the Statement is as at 21 April 2020, and the Statement has been approved for issue on 29 May 2020 and published on 22 June 2020. In the Statement, references to Vector relate only to Vector’s electricity distribution business.

¹ Available at https://comcom.govt.nz/_data/assets/pdf_file/0025/62728/Electricity-Distribution-Services-DPP-Determination-2015-consolidating-all-amendments-as-of-9-July-2015.pdf.

² Electricity Distribution Services Default Price-Quality Path (Compliance Statement Due Date and Auditor’s Report) Amendments Determination 2020, available at https://comcom.govt.nz/_data/assets/pdf_file/0021/214509/2020-NZCC-7-Electricity-distribution-services-default-price-quality-path-Compliance-statement-due-date-and-auditors-report-amendments-determination-2020-9-April-2020.pdf.

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 of the Determination and confirms Vector's non-compliance with the quality standards in clause 9 of the Determination set for Vector in respect of the 2020 assessment period.

As required by clause 13.1 of the Agreement, the Statement confirms Vector's compliance for the 2020 assessment period with the price path in clause 9 of the Agreement; Vector had elected to adopt a higher 2019 alternative value, therefore is required to adopt the 2020 alternative value of \$8.87m.

As required by clause 11.2(d)(i) of the Determination, the Statement confirms that Vector has not undertaken a restructure of prices during the 2019 and 2020 assessment periods.

As required by clause 11.2(d)(ii) of the Determination, the Statement confirms that no system fixed assets were transferred from Transpower to Vector, or from Vector to Transpower, during the 2020 assessment period.

As required by clause 11.2(d)(iii) - (iv) of the Determination, the Statement confirms that no amalgamation or merger has occurred in the 2020 assessment period and no major transaction has occurred in the 2020 assessment period.

As required under clause 11.4(h) of the Determination, the amount of charge during the 2020 assessment period relating to any new investment contract entered into with Transpower in the 2020 assessment period is zero.

1.3 Disclaimer

The information contained in the Statement is accurate at the time of preparation, 21 April 2020.

The information contained in the Statement has been prepared for the express purpose of complying with the requirements of clause 11 of the Determination and clause 13 of the Agreement. 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.

2. PRICE PATH

2.1 Distribution and pass-through prices

Vector's 2020 line charge prices have two elements: a distribution price and a pass-through price, these are set out in Table 14 in Appendix 1.

In each assessment period of the regulatory period, the distribution prices are capped by the allowable notional revenue, which is broadly derived as the previous assessment period's distribution prices times two years lagged quantities incorporating CPI inflation. For the 2020 assessment period, the distribution prices are capped by the allowable notional revenue 2020 minus the 2020 alternative value.

Pass-through prices through forecast quantities are set to recover forecast pass-through (e.g. council rates and statutory levies) and recoverable costs (e.g. transmission charges) attributable to the 2020 assessment period and any under or over-recovery from prior assessment periods.

2.2 Distribution price path compliance

As required by clause 9 of the Agreement, in order to demonstrate compliance with the price path, Vector must demonstrate that the notional revenue during the 2020 assessment period is less than allowable notional revenue for the 2020 assessment period minus the 2020 alternative value.

The method of calculation of the 2020 alternative value for the 2020 assessment period is set out in clause 9 of the Agreement and presented with Vector values in Table 1 below.

Table 1: 2020 alternative value	
Formula: 2020 alternative value = 2020 adjustment value + [(2019 adjustment value - 2019 alternative value) × 1.0643]	
Description	Value (\$000)
2020 adjustment value ³	9,282
(2019 adjustment value ⁴ - 2019 alternative value ⁵) × 1.0643	(410)
2020 alternative value	8,872

As outlined in Table 2 below, Vector complies with the price path, in accordance with clause 9 of the Agreement.

³ 2020 adjustment value is \$9,282,495 from clause 7 of the Agreement.

⁴ 2019 adjustment value is \$4,641,248 from clause 6 of the Agreement.

⁵ 2019 alternative value is \$5,026,928 from the 2019 Compliance Statement, <https://blob-static.vector.co.nz/blob/vector/media/vector-regulatory-disclosures/vector-electricity-distribution-compliance-statement-2019.pdf>.

Table 2: Vector price path compliance 2020

Formula: $NR_{2020} \leq ANR_{2020} - 2020 \text{ alternative value}$			
Component	Description	Value (\$000)	
NR ₂₀₂₀	Notional revenue 2020 ⁶		405,780
ANR ₂₀₂₀	Allowable notional revenue 2020 ⁷	414,652	
- 2020 alternative value	2020 alternative value ⁸	(8,872)	405,780
Result (\$000):	\$405,780 ≤ \$405,780		

The method of calculation of notional revenue for the 2020 assessment period is set out in clause 8.5 of the Determination and presented with Vector values in Table 3 below.

Table 3: Notional revenue 2020

Formula: $NR_{2020} = \sum DP_{i,2020} \times Q_{i,2018}$		
Component	Description	Value (\$000)
$\sum DP_{i,2020} \times Q_{i,2018}$	Distribution prices 2020 x lagged quantities 2018 ⁹	405,780
NR₂₀₂₀:	Notional revenue 2020	405,780

The method of calculation of allowable notional revenue for the 2020 assessment period is set out in 8.4 and Schedule 3B of the Determination and presented with Vector values in Table 4 below.

Table 4: Allowable notional revenue 2020

Formula: $ANR_{2020} = (\sum DP_{i,2019} \times Q_{i,2018} + (ANR_{2019} - NR_{2019}))(1 + \Delta CPI_{2020})(1 - X)$		
Component	Description	Value (\$000)
$\sum DP_{i,2019} \times Q_{i,2018}$	Distribution prices 2019 x lagged quantities 2018 ⁹	403,400
ANR ₂₀₁₉	Allowable notional revenue 2019 ¹⁰	403,477
- NR ₂₀₁₉	Notional revenue 2019 ¹⁰	(398,450)
ΔCPI_{2020}	Base inflated by consumer price index 2020 ($\Delta CPI_{2020} = 1.52\%$) ¹¹	6,225
X	Rate of change ($X = 0\%$) ¹²	-
ANR₂₀₂₀:	Allowable notional revenue 2020	414,652

⁶ Details of notional revenue 2020 are included in Table 3.

⁷ Details of allowable notional revenue 2020 are included in Table 4.

⁸ Details of 2020 alternative value are included in Table 1.

⁹ Details of distribution notional revenues are included in Appendix 2, tables 15, 17, 18 and 21.

¹⁰ Allowable notional revenue 2019 and notional revenue 2019 are from the 2019 Compliance Statement.

¹¹ Details of ΔCPI_{2020} are included in Table 5.

¹² X is set out in Schedule 2 of the Determination.

The method of calculation of the change in consumer price index (CPI) for the 2020 assessment period is set out in Schedule 3B of the Determination and presented with values sourced from Statistics NZ,¹³ in Table 5 below.

Table 5: ΔCPI_{2020}			
Formula: $\Delta\text{CPI}_{2020} = \left(\frac{\text{CPI}_{\text{Dec},2017} + \text{CPI}_{\text{Mar},2018} + \text{CPI}_{\text{Jun},2018} + \text{CPI}_{\text{Sep},2018}}{\text{CPI}_{\text{Dec},2016} + \text{CPI}_{\text{Mar},2017} + \text{CPI}_{\text{Jun},2017} + \text{CPI}_{\text{Sep},2017}} \right) - 1$			
$\text{CPI}_{\text{Dec},2017}$	1,006.0	$\text{CPI}_{\text{Dec},2016}$	990.2
$\text{CPI}_{\text{Mar},2018}$	1,011.0	$\text{CPI}_{\text{Mar},2017}$	1,000.0
$\text{CPI}_{\text{Jun},2018}$	1,015.0	$\text{CPI}_{\text{Jun},2017}$	1,000.0
$\text{CPI}_{\text{Sep},2018}$	1,024.0	$\text{CPI}_{\text{Sep},2017}$	1,004.9
Total	4,056.0	Total	3,995.1
ΔCPI_{2020}	$(4,056.0 / 3,995.1) - 1$		0.0152

2.3 Pass-through balance price path

The pass-through balance for Vector for the 2020 assessment period is set out in Table 5 below.

Table 5: Pass-through balance 2020		
Formula: $\text{PTB}_{2020} = \sum \text{PTP}_{i,2020} \times Q_{i,2020} - K_{2020} - V_{2020} + \text{PTB}_{2019} (1 + r)$		
Component	Description	Value (\$000)
$\sum \text{PTP}_{i,2020} \times Q_{i,2020}$	Pass-through revenue 2020 from pass-through prices 2020 ¹⁴	210,731
- K_{2020}	Pass-through costs 2020 ¹⁵	(11,188)
- V_{2020}	Recoverable costs 2020 ¹⁵	(200,823)
PTB_{2019}	Pass-through balance 2019 ¹⁶	9,437
$\text{PTB}_{2019} \times r$	Time value of money, cost of debt ($r = 6.09\%$) ¹⁷	575
PTB_{2020}:	Pass-through balance 2020	8,732

There is a positive pass-through balance for the 2020 assessment period, similar to the pass-through balance for the 2019 assessment period which was unknown at time of setting prices for the 2020 assessment period. The actual quantities and pass-through and recoverable costs for the 2020

¹³ Located under Economic Indicators / Consumers Price Index - CPI / CPI All Groups for New Zealand (Qrtly-Mar/Jun/Sep/Dec), <http://www.stats.govt.nz/infoshare/>.

¹⁴ Details of pass-through revenue 2020 are included in Appendix 2, tables 16,19, 20 and 21.

¹⁵ Details of pass-through and recoverable costs 2020 are included in section 2.4.

¹⁶ Details of pass-through balance 2019 are included in Tables 6 and 7.

¹⁷ Details on r are set to in Table 2 of the Cost of Capital Determination for electricity distribution businesses' default price-quality paths and Transpower's individual price-quality path 2014, https://comcom.govt.nz/_data/assets/pdf_file/0040/88699/2014-NZCC-28-Cost-of-capital-determination-31-October-2014.PDF.

assessment period are similar to that what was forecast (at the time of setting prices for the 2020 assessment period).

As required under clause 8.6(a) of the Determination, the pass-through balance for the 2019 assessment period has been recalculated for additional information available at the end of the 2020 assessment period, predominantly being quantity data, $Q_{i,2019}$. An updated pass-through balance for the 2019 assessment period for Vector has been calculated and is set out in Table 6 below.

Table 6: Pass-through balance 2019		
Formula: $PTB_{2019} = \sum PTP_{i,2019} \times Q_{i,2019} - K_{2019} - V_{2019} + PTB_{2018} (1 + r)$		
Component	Description	Value (\$000)
$\sum PTP_{i,2019} \times Q_{i,2019}$	Pass-through revenue 2019 from pass-through prices 2019 ¹⁸	222,959
- K_{2019}	Pass-through costs 2019 ¹⁹	(11,192)
- V_{2019}	Recoverable costs 2019 ¹⁹	(203,245)
PTB_{2018}	Pass-through balance 2018 ²⁰	862
$PTB_{2018} \times r$	Time value of money, cost of debt ($r = 6.09\%$)	53
PTB_{2019}:	Pass-through balance 2019	9,437

A reconciliation for the pass-through balance for the 2019 assessment period is shown in Table 7 below.

Table 7: Reconciliation for pass-through balance 2019		
Formula: Updated $PTB_{2019} = \text{Orig. } PTB_{2019} + \Delta \sum PTP_{i,2019} \times Q_{i,2019} - \Delta(K_{2019} + V_{2019}) + \Delta PTB_{2018} (1 + r)$		
Component	Description	Value (\$000)
Orig. PTB_{2019}	Pass-through balance 2019 at May 2019 ²¹	10,211
$\Delta \sum PTP_{i,2019} \times Q_{i,2019}$	Change in pass-through revenue 2019	(774)
- $\Delta(K_{2019} + V_{2019})$	Change in pass-through and recoverable costs 2019	-
$\Delta PTB_{2018} (1 + r)$	Change in pass-through balance 2018 and time value of money	-
Updated PTB_{2019}	Pass-through balance 2019 at April 2020	9,437

¹⁸ Details of pass-through revenue 2019 are included in Appendix 2, tables 16,19, 20 and 21.

¹⁹ Pass-through and recoverable costs 2019 are from the 2019 Compliance Statement.

²⁰ Pass-through balance 2018 is from the 2019 Compliance Statement.

²¹ Original pass-through balance 2019 is from the 2019 Compliance Statement.

2.4 Pass-through and recoverable costs

The pass-through and recoverable costs have been determined in accordance with the Electricity Distribution Services Input Methodologies Determination 2012, (“Input Methodologies”).²² Clause 8.6(b) of the Determination requires that pass-through prices include demonstrably reasonable forecasts of pass-through and recoverable costs. Table 8 summarises the forecast methods and the pass-through and recoverable costs used to set prices for the 2020 assessment period, all other pass-through and recoverable costs not included are not applicable to Vector.

Table 8: Pass-through and recoverable costs 2020					
Cost type	Description	Forecast method	Forecast (\$000s)	Actual (\$000s)	Variance (\$000s)
Pass-through costs	Local Authority rates	Historic plus 2.5% (based on Auckland Council estimate)	8,253	7,886	(367)
	Commerce Act levy	Historic plus CPI	1,328	1,464	136
	Electricity Authority levy	Historic plus CPI	1,758	1,482	(276)
	Utility Disputes levy	Historic plus CPI	342	356	14
	Total pass-through costs (K₂₀₂₀)			11,681	11,188	(493)
Recoverable costs	Transpower electricity lines service charges	As notified by Transpower	195,877	195,877	0
	Transpower new investment charges	As preliminarily notified by Transpower	11,124	11,204	80
	Distributed generation allowance	Based on estimated demand and Transpower’s 2020 interconnection rates	1,085	966	(119)
	Quality incentive allowance	2018 assessment period quality values and time value of money	(4,449)	(4,449)	-
	CAPEX wash-up	As notified by the Commission	(2,775)	(2,775)	-
	Total recoverable costs (V₂₀₂₀)			200,862	200,823	(39)
Total pass-through and recoverable costs			212,543	212,011	(532)

Variances between pass-through and recoverable costs used to set prices and the same costs measured at the end of the assessment period arise due to the need to forecast these costs ex-ante, with the actual costs being determined ex-post. The costs are not fully fixed and variances will naturally occur. The forecast pass-through costs for the 2020 assessment period were based on estimates of the pass-through costs for the preceding period. Overall the pass-through and recoverable cost forecasts are reasonably accurate with the net impact of these differences being minor at 0.3%.

²² Current version when preparing the Statement was consolidated 29 January 2020, available at <https://comcom.govt.nz/regulated-industries/input-methodologies/electricity-distribution-ims>, Appendix part 4, clauses 3.1.2 and 3.1.3.

2.5 Prioritised reductions

Vector has prioritised reductions in prices for residential consumers, as required under clause 15.1 of the Agreement, by keeping mass market distribution prices unchanged. For commercial consumers, there is an approximate CPI increase of 1.5% across most of the distribution prices.

At the time of setting prices, it was forecast that pass-through prices would need to decrease by a weighted average of approximately 5% to minimise the pass-through balance. A uniform price reduction of 5% (slight differences due to rounding) was applied to all pass-through prices. The uniform price change was used to easily illustrate that residential consumers had been prioritised with the reductions in prices.

The prices determined are checked to ensure they will deliver revenue consistent with our Cost of Service Model's allocation of target revenue for each consumer group. Interested parties may refer to Vector's 2020 Pricing Methodology where we have set out in detail our methodology used to calculate prices for the 2020 assessment period.²³

²³ 2020 Pricing Methodology is available at <https://blob-static.vector.co.nz/blob/vector/media/vector-regulatory-disclosures/pricing-methodology-2019-20-certified.pdf>.

3. QUALITY STANDARDS

3.1 Quality standards (clause 9 of the Determination)

As required by clause 9 of the Determination, to demonstrate compliance with the quality standards (per clause 9.1) in respect of each assessment period, EDB's must either:

- Comply with the annual reliability assessment specified in clause 9.2 for that assessment period; or
- Have complied with those annual reliability assessments for the two immediately preceding assessment periods.

Vector does not comply with either of the quality standards in clause 9.1. As outlined in the calculations below, Vector has exceeded the annual reliability assessment requirement for SAIDI and SAIFI specified in clause 9.2(a) of the Determination for the 2020 assessment period. Vector also exceeded the annual reliability assessment requirement for SAIDI and SAIFI for the two previous assessment periods.

3.2 Assessed values

SAIDI and SAIFI values were calculated for the 2020 assessment period, incorporating class B and class C interruption types (planned interruptions and unplanned interruptions originating within the system fixed assets) per connection point served during the period. Average connection point numbers for the year were used in the calculation.

Results of this assessment period and previous assessment periods (normalised) for Vector are summarised in the Table 9 below. An explanation of the reasons for exceeding the SAIDI and SAIFI limit for the 2020 assessment period is provided in section 3.4.

Table 9: Results of current and previous assessment periods						
Period	SAIDI _{assess}	SAIDI _{limit}	SAIDI outcome	SAIFI _{assess}	SAIFI _{limit}	SAIFI outcome
2018	226.196	104.173	Exceeded	2.142	1.395	Exceeded
2019	198.201	104.173	Exceeded	1.757	1.395	Exceeded
2020	167.495	104.173	Exceeded	1.575	1.395	Exceeded

Calculation of the SAIDI and SAIFI assessed values for the assessment period is set out in Schedule 4A of the Determination and presented with Vector values in Tables 10 and 11 below.

Table 10: SAIDI assessed value 2020

Table 10: SAIDI assessed value 2020		
Formula: $SAIDI_{\text{assess}} = (0.5 \times SAIDI_B) + SAIDI_C$		
Component:	Description:	Value:
(0.5 x SAIDI _B)	Sum of the daily SAIDI values for class B interruptions commencing within the assessment period	50.787
SAIDI _C	Sum of the daily SAIDI values for class C interruptions commencing within the assessment period, where any daily SAIDI value for class C interruptions greater than the SAIDI unplanned boundary value equals the SAIDI unplanned boundary value	116.708
SAIDI_{assess}	SAIDI assessed value	167.495

Table 11: SAIFI assessed value 2020

Table 11: SAIFI assessed value 2020		
Formula: $SAIFI_{\text{assess}} = (0.5 \times SAIFI_B) + SAIFI_C$		
Component:	Description:	Value:
(0.5 x SAIFI _B)	Sum of the daily SAIFI values for class B interruptions commencing within the assessment period	0.219
SAIFI _C	Sum of the daily SAIFI values for class C interruptions commencing within the assessment period, where any daily SAIFI value for class C interruptions greater than the SAIFI unplanned boundary value equals the SAIFI unplanned boundary value	1.356
SAIFI_{assess}	SAIFI Assessed value	1.575

Vector's SAIDI and SAIFI reliability limits and unplanned boundary values, are set out in Table 4A.1 in the Determination and presented in Table 12 below alongside Vector's target, collar and cap for SAIDI and SAIFI that are set out in Table 5B.1 and Table 5B.1 in the Determination respectively.

Table 12: Vector's quality measures

Measure	Limit	Unplanned boundary value	Target	Collar	Cap
SAIDI	104.173	3.374	96.036	87.900	104.173
SAIFI	1.395	0.039	1.291	1.187	1.395

3.3 Major event days within the assessment period

Vector confirms that there was one major event day (MED), counting for one SAIDI and one SAIFI major event day, in the 2020 assessment period. The result of the MED including its causes are summarised in Table 13 below. The SAIDI_C and SAIFI_C values shown in Table 10 and 11 respectively include MED adjustments where any daily SAIDI_C / SAIFI_C value that is greater than the SAIDI/SAIFI unplanned boundary value is set to the unplanned boundary value instead.

Table 13: Major Event Day

Date	SAIDI _c	SAIDI Unplanned Boundary Value	SAIFI _c	SAIFI Unplanned Boundary Value	MED Type
08/06/2019	6.371	3.374	0.040	0.039	SAIDI and SAIFI

On 8 June 2019, the Auckland area experienced a day of strong winds with sustained windspeeds approaching gale force for most of the day causing a significant rise in overhead asset faults. The main cause of this was from trees falling through lines and vegetation debris. At its peak, approximately 8,800 customers were impacted and around 25 circuits affected.

3.4 Explanation for not complying with the annual reliability assessment and actions to mitigate future non-compliance

For the 2020 assessment period, Vector exceeded its reliability limits and is non-compliant with the Determination. This was mainly due to operational health and safety changes, a greater volume of planned maintenance works, higher third-party damage and outages where vegetation was the cause.

Vector considers the matter of quality compliance of utmost importance. To improve our network reliability, we have invested significantly in network improvements and operational processes to improve network reliability. These initiatives were progressively rolled out through the 2020 assessment period and will have an enduring impact on reliability.

3.5 Policies and procedures for recording SAIDI and SAIFI

Vector’s Electricity Operations Centre (“EOC”) is responsible for managing the electricity network. Resolution of planned and unplanned events is under direction of the duty Electricity Operations Controller. The EOC also manages the network in accordance with Vector’s standard ESD003 - HV SPEC HV Event Data. This standard defines the end-to-end process for capturing and reporting reliability performance data.

Recording interruptions

Most medium voltage and high voltage interruptions are monitored and controlled in real-time by the EOC through Vector’s SCADA system. Where equipment is involved that is not SCADA enabled, it is operated by Vector’s service providers, with communication to the EOC by radio.

All planned and unplanned records are captured by the Electricity Operations Controller both in hard copy (electricity fault switching log) and electronically (HVSPEC database described below).

All interruptions are also logged and tracked separately in Vector’s Customer Management System by Vector’s customer services team.

Vector maintains a bespoke system for recording interruptions, HVSPEC. HVSPEC holds all the data in relation to customer numbers to each part of the HV network. The EOC controllers record details of all network interruptions, in accordance with the standard ESD003.

For each interruption, the event type, location, duration and number of customers affected is identified. Appendix 4 illustrates the HVSPEC data capture process and the quality assurance carried out on outage information.

SAIDI and SAIFI calculating

SAIDI and SAIFI are calculated in HVSPEC for each interruption, and the data retained in a database for reporting and analysis. At the end of each year the period's average network customer base is calculated using the Gentrack billing and revenue system (averaging customers at the start and end of the year). The following reliability metrics are extracted from the HVSPEC database for disclosure reporting:

- Interruption frequency and duration by class;
- Interruption frequency and duration by cause;
- Interruption frequency and duration by main equipment involved; and
- SAIDI/SAIFI (calculated using average customer count).

Appendix 1: 2020 Line charge prices

Table 14: Standard line charges between 1 April 2019 to 31 March 2020

Consumer group, price category, code and description				Auckland			Northern			
				Units	DPI,2020	PTPI,2020	Line charges	DPI,2020	PTPI,2020	Line charges
Residential	ARUL WRUL	...-FIXD	Fixed	\$/day	0.1500	-	0.1500	0.1500	-	0.1500
		...-24UC	Volumetric, uncontrolled	\$/kWh	0.0644	0.0356	0.1000	0.0644	0.0356	0.1000
		...-INJT	Injection	\$/kWh	-	-	-	-	-	-
	ARCL WRCL	...-FIXD	Fixed	\$/day	0.1500	-	0.1500	0.1500	-	0.1500
		...-AICO	Volumetric, controlled	\$/kWh	0.0644	0.0284	0.0928	0.0644	0.0284	0.0928
		...-INJT	Volumetric	\$/kWh	-	-	-	-	-	-
	ARGL WRGL	...-FIXD	Fixed	\$/day	0.1500	-	0.1500	0.1500	-	0.1500
		...-24UC	Volumetric, uncontrolled	\$/kWh	0.0644	0.0284	0.0928	0.0644	0.0284	0.0928
		...-INJT	Injection	\$/kWh	-	-	-	-	-	-
	ARHL WRHL	...-FIXD	Fixed	\$/day	0.1500	-	0.1500	0.1500	-	0.1500
		...-OFFPK	Volumetric, off peak	\$/kWh	0.0644	-	0.0644	0.0644	-	0.0644
		...-PEAK	Volumetric, peak	\$/kWh	0.0644	0.0907	0.1551	0.0644	0.0907	0.1551
	ARUS WRUS	...-FIXD	Fixed	\$/day	1.0100	-	1.0100	1.0100	-	1.0100
		...-24UC	Volumetric, uncontrolled	\$/kWh	0.0252	0.0356	0.0608	0.0252	0.0356	0.0608
		...-INJT	Injection	\$/kWh	-	-	-	-	-	-
	ARCS WRCS	...-FIXD	Fixed	\$/day	1.0100	-	1.0100	1.0100	-	1.0100
		...-AICO	Volumetric, controlled	\$/kWh	0.0252	0.0284	0.0536	0.0252	0.0284	0.0536
		...-INJT	Injection	\$/kWh	-	-	-	-	-	-
	ARGS WRGS	...-FIXD	Fixed	\$/day	1.0100	-	1.0100	1.0100	-	1.0100
		...-24UC	Volumetric, uncontrolled	\$/kWh	0.0252	0.0284	0.0536	0.0252	0.0284	0.0536
		...-INJT	Injection	\$/kWh	-	-	-	-	-	-
	ARHS WRHS	...-FIXD	Fixed	\$/day	1.0100	-	1.0100	1.0100	-	1.0100
		...-OFFPK	Volumetric, off peak	\$/kWh	0.0252	-	0.0252	0.0252	-	0.0252
		...-PEAK	Volumetric, peak	\$/kWh	0.0252	0.0907	0.1159	0.0252	0.0907	0.1159
	ABSU WBSU	...-FIXD	Fixed	\$/day/fitting	0.1500	-	0.1500	0.1500	-	0.1500
		...-24UC	Volumetric	\$/kWh	0.0324	0.0356	0.0680	0.0324	0.0356	0.0680
		...-INJT	Injection	\$/kWh	-	-	-	-	-	-
	ABSN WBSN	...-FIXD	Fixed	\$/day	1.0100	-	1.0100	1.0100	-	1.0100
		...-24UC	Volumetric	\$/kWh	0.0252	0.0356	0.0608	0.0252	0.0356	0.0608
		...-INJT	Injection	\$/kWh	-	-	-	-	-	-
ABSH WBSH	...-FIXD	Fixed	\$/day	1.0100	-	1.0100	1.0100	-	1.0100	
	...-OFFPK	Volumetric, off peak	\$/kWh	0.0252	-	0.0252	0.0252	-	0.0252	
	...-PEAK	Volumetric, peak	\$/kWh	0.0252	0.0907	0.1159	0.0252	0.0907	0.1159	
...-INJT	Injection	\$/kWh	-	-	-	-	-	-	-	
	ALVN WLVN	...-FIXD	Fixed	\$/day	1.7900	-	1.7900	6.2600	-	6.2600
		...-24UC	Volumetric	\$/kWh	0.0413	0.0219	0.0632	0.0211	0.0219	0.0430
...-CAPY		Capacity	\$/kVA/day	0.0421	-	0.0421	0.0339	-	0.0339	
...-PWRF		Power Factor	\$/kVA/day	0.2917	-	0.2917	0.2917	-	0.2917	
...-INJT		Injection	\$/kWh	-	-	-	-	-	-	
...-FIXD		Fixed	\$/day	N/A	N/A	N/A	11.7900	-	11.7900	
ALVT WLVT	...-24UC	Volumetric	\$/kWh	0.0139	-	0.0139	0.0059	-	0.0059	
	...-CAPY	Capacity	\$/kVA/day	0.0421	-	0.0421	0.0339	-	0.0339	
	...-DAMD	Demand	\$/kVA/day	0.0920	0.2285	0.3205	0.0623	0.2285	0.2908	
	...-PWRF	Power Factor	\$/kVA/day	0.2917	-	0.2917	0.2917	-	0.2917	
	...-INJT	Injection	\$/kWh	-	-	-	-	-	-	
	ATXN WTXN	...-FIXD	Fixed	\$/day	1.7400	-	1.7400	5.6300	-	5.6300
...-24UC		Volumetric	\$/kWh	0.0400	0.0219	0.0619	0.0164	0.0219	0.0383	
...-CAPY		Capacity	\$/kVA/day	0.0412	-	0.0412	0.0332	-	0.0332	
...-PWRF		Power Factor	\$/kVA/day	0.2917	-	0.2917	0.2917	-	0.2917	
...-INJT		Injection	\$/kWh	-	-	-	-	-	-	
...-FIXD		Fixed	\$/day	N/A	N/A	N/A	10.6100	-	10.6100	
ATXT WTXH	...-24UC	Volumetric	\$/kWh	0.0137	-	0.0137	0.0058	-	0.0058	
	...-CAPY	Capacity	\$/kVA/day	0.0412	-	0.0412	0.0332	-	0.0332	
	...-DAMD	Demand	\$/kVA/day	0.0847	0.2285	0.3132	0.0557	0.2285	0.2842	
	...-PWRF	Power Factor	\$/kVA/day	0.2917	-	0.2917	0.2917	-	0.2917	
	...-INJT	Injection	\$/kWh	-	-	-	-	-	-	
	AHVN WHVN	...-FIXD	Fixed	\$/day	1.6800	-	1.6800	5.4600	-	5.4600
...-24UC		Volumetric	\$/kWh	0.0380	0.0219	0.0599	0.0152	0.0219	0.0371	
...-CAPY		Capacity	\$/kVA/day	0.0399	-	0.0399	0.0322	-	0.0322	
...-PWRF		Power Factor	\$/kVA/day	0.2917	-	0.2917	0.2917	-	0.2917	
...-INJT		Injection	\$/kWh	-	-	-	-	-	-	
...-FIXD		Fixed	\$/day	N/A	N/A	N/A	10.3000	-	10.3000	
AHVT WHVH	...-24UC	Volumetric	\$/kWh	0.0132	-	0.0132	0.0056	-	0.0056	
	...-CAPY	Capacity	\$/kVA/day	0.0399	-	0.0399	0.0322	-	0.0322	
	...-DAMD	Demand	\$/kVA/day	0.0739	0.2285	0.3024	0.0460	0.2285	0.2745	
	...-DEXA	Excess demand	\$/kVA/day	0.8778	-	0.8778	0.7084	-	0.7084	
	...-PWRF	Power Factor	\$/kVA/day	0.2917	-	0.2917	0.2917	-	0.2917	
	...-INJT	Injection	\$/kWh	-	-	-	-	-	-	

Price categories beginning with A are for the Auckland network and W are for the Northern network

Appendix 2: Distribution notional revenue and pass-through revenue

Table 15: Summary of distribution notional line charge revenues

Consumer group	Auckland		Northern		Total	
	DPI,2020 × Qi,2018	DPI,2019 × Qi,2018	DPI,2020 × Qi,2018	DPI,2019 × Qi,2018	DPI,2020 × Qi,2018	DPI,2019 × Qi,2018
Residential	\$ 134,673,628	\$ 134,673,628	\$ 98,813,938	\$ 98,813,938	\$ 233,487,566	\$ 233,487,566
General	\$ 37,363,693	\$ 37,363,693	\$ 21,099,067	\$ 21,099,067	\$ 58,462,760	\$ 58,462,760
Low voltage	\$ 34,885,947	\$ 33,949,799	\$ 9,320,475	\$ 9,094,718	\$ 44,206,422	\$ 43,044,517
Transformer	\$ 36,365,389	\$ 35,394,543	\$ 9,210,894	\$ 9,001,149	\$ 45,576,283	\$ 44,395,692
High voltage	\$ 11,561,487	\$ 11,296,363	\$ 1,822,185	\$ 1,777,758	\$ 13,383,672	\$ 13,074,121
Non-standard	\$ 10,008,499	\$ 10,276,875	\$ 655,126	\$ 658,710	\$ 10,663,626	\$ 10,935,585
Total	\$ 264,858,643	\$ 262,954,902	\$ 140,921,686	\$ 140,445,339	\$ 405,780,328	\$ 403,400,241

Table 16: Summary of pass-through line charge revenues

Consumer group	Auckland		Northern		Total	
	PTPI,2020 × Qi,2020	PTPI,2019 × Qi,2019	PTPI,2020 × Qi,2020	PTPI,2019 × Qi,2019	PTPI,2020 × Qi,2020	PTPI,2019 × Qi,2019
Residential	\$ 58,138,767	\$ 61,035,780	\$ 43,767,263	\$ 45,708,501	\$ 101,906,030	\$ 106,744,282
General	\$ 27,173,126	\$ 29,418,323	\$ 14,464,237	\$ 15,545,950	\$ 41,637,363	\$ 44,964,273
Low voltage	\$ 15,985,009	\$ 16,748,362	\$ 4,915,918	\$ 5,114,983	\$ 20,900,927	\$ 21,863,345
Transformer	\$ 21,344,598	\$ 22,324,179	\$ 7,365,763	\$ 7,947,460	\$ 28,710,361	\$ 30,271,640
High voltage	\$ 7,436,693	\$ 8,195,258	\$ 1,993,937	\$ 2,187,656	\$ 9,430,630	\$ 10,382,915
Non-standard	\$ 7,694,623	\$ 8,247,926	\$ 451,428	\$ 484,103	\$ 8,146,051	\$ 8,732,028
Total	\$ 137,772,817	\$ 145,969,829	\$ 72,958,546	\$ 76,988,653	\$ 210,731,363	\$ 222,958,483

Table 17: Residential and general consumers' distribution notional line charge revenues

Consumer group, price category & code		DPI,2020	DPI,2019	Qi,2018	DPI,2020 × Qi,2018	DPI,2019 × Qi,2018	Qi,2018	DPI,2020 × Qi,2018	DPI,2019 × Qi,2018	
Residential	ARUL WRULFIXD	0.1500	0.1500	9,386,451	\$ 1,407,968	\$ 1,407,968	4,280,467	\$ 642,070	\$ 642,070
	....24UC	0.0644	0.0644	98,804,103	\$ 6,362,984	\$ 6,362,984	59,734,900	\$ 3,846,928	\$ 3,846,928
	....INJT	-	-	244,607	\$ -	\$ -	392,733	\$ -	\$ -
	ARCL WRCLFIXD	0.1500	0.1500	47,082,134	\$ 7,062,320	\$ 7,062,320	32,061,765	\$ 4,809,265	\$ 4,809,265
	....AICO	0.0644	0.0644	678,345,909	\$ 43,685,477	\$ 43,685,477	475,619,333	\$ 30,629,885	\$ 30,629,885
	....INJT	-	-	819,221	\$ -	\$ -	1,046,578	\$ -	\$ -
	ARGL WRGLFIXD	0.1500	0.1500	7,555,549	\$ 1,133,332	\$ 1,133,332	3,165,029	\$ 474,754	\$ 474,754
	....24UC	0.0644	0.0644	96,057,501	\$ 6,186,103	\$ 6,186,103	41,435,837	\$ 2,668,468	\$ 2,668,468
	....INJT	-	-	187,122	\$ -	\$ -	145,903	\$ -	\$ -
	ARHL WRHLFIXD	0.1500	0.1500	155,777	\$ 23,367	\$ 23,367	124,510	\$ 18,677	\$ 18,677
	....OFFPK	0.0644	0.0644	1,222,118	\$ 78,704	\$ 78,704	1,087,284	\$ 70,021	\$ 70,021
	....PEAK	0.0644	0.0644	479,921	\$ 30,907	\$ 30,907	422,563	\$ 27,213	\$ 27,213
	....INJT	-	-	5,016	\$ -	\$ -	2,633	\$ -	\$ -
	ARUS WRUSFIXD	1.0100	1.0100	5,760,473	\$ 5,818,078	\$ 5,818,078	5,410,889	\$ 5,464,998	\$ 5,464,998
	....24UC	0.0252	0.0252	115,160,148	\$ 2,902,036	\$ 2,902,036	116,186,385	\$ 2,927,897	\$ 2,927,897
	....INJT	-	-	351,254	\$ -	\$ -	584,513	\$ -	\$ -
	ARCS WRCSFIXD	1.0100	1.0100	31,583,928	\$ 31,899,767	\$ 31,899,767	26,016,770	\$ 26,276,938	\$ 26,276,938
	....AICO	0.0252	0.0252	825,376,650	\$ 20,799,492	\$ 20,799,492	690,171,937	\$ 17,392,333	\$ 17,392,333
	....INJT	-	-	789,222	\$ -	\$ -	974,861	\$ -	\$ -
	ARGS WRGSFIXD	1.0100	1.0100	4,318,081	\$ 4,361,262	\$ 4,361,262	2,125,055	\$ 2,146,306	\$ 2,146,306
	....24UC	0.0252	0.0252	111,352,457	\$ 2,806,082	\$ 2,806,082	50,349,789	\$ 1,268,815	\$ 1,268,815
	....INJT	-	-	146,145	\$ -	\$ -	112,336	\$ -	\$ -
	ARHS WRHSFIXD	1.0100	1.0100	72,758	\$ 73,486	\$ 73,486	92,232	\$ 93,154	\$ 93,154
	....OFFPK	0.0252	0.0252	1,200,335	\$ 30,248	\$ 30,248	1,610,662	\$ 40,589	\$ 40,589
....PEAK	0.0252	0.0252	476,822	\$ 12,016	\$ 12,016	620,209	\$ 15,629	\$ 15,629		
....INJT	-	-	5,488	\$ -	\$ -	5,490	\$ -	\$ -		
General	ABSU WBSUFIXD	0.1500	0.1500	24,619,624	\$ 3,692,944	\$ 3,692,944	14,954,104	\$ 2,243,116	\$ 2,243,116
	....24UC	0.0324	0.0324	33,915,535	\$ 1,098,863	\$ 1,098,863	20,685,996	\$ 670,226	\$ 670,226
	....FIXD	1.0100	1.0100	13,078,892	\$ 13,209,681	\$ 13,209,681	8,079,002	\$ 8,159,792	\$ 8,159,792
	....24UC	0.0252	0.0252	755,963,458	\$ 19,050,279	\$ 19,050,279	392,998,791	\$ 9,903,570	\$ 9,903,570
	....INJT	-	-	176,139	\$ -	\$ -	189,976	\$ -	\$ -
	....FIXD	1.0100	1.0100	40,123	\$ 40,524	\$ 40,524	18,419	\$ 18,603	\$ 18,603
	....OFFPK	0.0252	0.0252	7,840,968	\$ 197,592	\$ 197,592	2,945,388	\$ 74,224	\$ 74,224
	....PEAK	0.0252	0.0252	2,928,954	\$ 73,810	\$ 73,810	1,172,077	\$ 29,536	\$ 29,536
....INJT	-	-	1,655	\$ -	\$ -	-	\$ -	\$ -		

Table 18: Commercial consumers' distribution notional line charge revenues

Consumer group, price category & code		Auckland					Northern					
		DPI,2020	DPI,2019	Qi,2018	DPI,2020 × Qi,2018	DPI,2019 × Qi,2018	DPI,2020	DPI,2019	Qi,2018	DPI,2020 × Qi,2018	DPI,2019 × Qi,2018	
Low voltage	ALVN WLVN	...-FIXD	1.7900	1.7600	773,465	\$ 1,384,502	\$ 1,361,298	6.2600	6.1600	304,505	\$ 1,906,201	\$ 1,875,751
		...-24UC	0.0413	0.0398	231,441,156	\$ 9,558,520	\$ 9,211,358	0.0211	0.0203	123,651,822	\$ 2,609,053	\$ 2,510,132
		...-CAPY	0.0421	0.0414	113,671,270	\$ 4,785,560	\$ 4,705,991	0.0339	0.0333	44,200,026	\$ 1,498,381	\$ 1,471,861
		...-PWRF	0.2917	0.2917	412,162	\$ 120,228	\$ 120,228	0.2917	0.2917	379,626	\$ 110,737	\$ 110,737
		...-INJT	-	-	25,559	\$ -	\$ -	-	-	3,466	\$ -	\$ -
	ALVT WLVH	...-FIXD	#N/A	#N/A	-	#N/A	#N/A	11.7900	11.6100	84,308	\$ 993,991	\$ 978,816
		...-24UC	0.0139	0.0136	554,140,412	\$ 7,702,552	\$ 7,536,310	0.0059	0.0058	120,146,786	\$ 708,866	\$ 696,851
		...-CAPY	0.0421	0.0414	130,028,938	\$ 5,474,218	\$ 5,383,198	0.0339	0.0333	20,356,609	\$ 690,089	\$ 677,875
		...-DAMD	0.0920	0.0872	47,697,778	\$ 4,388,196	\$ 4,159,246	0.0623	0.0590	9,230,837	\$ 575,081	\$ 544,619
		...-PWRF	0.2917	0.2917	5,046,866	\$ 1,472,171	\$ 1,472,171	0.2917	0.2917	781,883	\$ 228,075	\$ 228,075
...-INJT	-	-	237,584	\$ -	\$ -	-	-	54	\$ -	\$ -		
Transformer	ATXN WTXN	...-FIXD	1.7400	1.7100	60,376	\$ 105,054	\$ 103,243	5.6300	5.5400	49,164	\$ 276,793	\$ 272,369
		...-24UC	0.0400	0.0385	23,631,795	\$ 945,272	\$ 909,824	0.0164	0.0158	39,098,050	\$ 641,208	\$ 617,749
		...-CAPY	0.0412	0.0405	13,757,453	\$ 566,807	\$ 557,177	0.0332	0.0327	11,970,709	\$ 397,428	\$ 391,442
		...-PWRF	0.2917	0.2917	46,750	\$ 13,637	\$ 13,637	0.2917	0.2917	220,848	\$ 64,421	\$ 64,421
		...-INJT	-	-	60	\$ -	\$ -	-	-	-	\$ -	\$ -
	ATXT WTXH	...-FIXD	#N/A	#N/A	-	#N/A	#N/A	10.6100	10.4500	98,859	\$ 1,048,894	\$ 1,033,077
		...-24UC	0.0137	0.0134	1,154,524,618	\$ 15,816,987	\$ 15,470,630	0.0058	0.0057	367,495,968	\$ 2,131,477	\$ 2,094,727
		...-CAPY	0.0412	0.0405	233,378,068	\$ 9,615,176	\$ 9,451,812	0.0332	0.0327	75,415,959	\$ 2,503,810	\$ 2,466,102
		...-DAMD	0.0847	0.0802	92,052,200	\$ 7,796,821	\$ 7,382,586	0.0557	0.0528	29,517,684	\$ 1,644,135	\$ 1,558,534
		...-PWRF	0.2917	0.2917	5,161,584	\$ 1,505,634	\$ 1,505,634	0.2917	0.2917	1,723,443	\$ 502,728	\$ 502,728
...-INJT	-	-	-	\$ -	\$ -	-	-	215,251	\$ -	\$ -		
High voltage	AHVN WHVN	...-FIXD	1.6800	1.6500	2,555	\$ 4,292	\$ 4,216	5.4600	5.3700	-	\$ -	\$ -
		...-24UC	0.0380	0.0366	669,869	\$ 25,455	\$ 24,517	0.0152	0.0146	-	\$ -	\$ -
		...-CAPY	0.0399	0.0393	492,750	\$ 19,661	\$ 19,365	0.0322	0.0317	-	\$ -	\$ -
		...-PWRF	0.2917	0.2917	-	\$ -	\$ -	0.2917	0.2917	-	\$ -	\$ -
		...-INJT	-	-	-	\$ -	\$ -	-	-	-	\$ -	\$ -
	AHVT WHVH	...-FIXD	#N/A	#N/A	-	#N/A	#N/A	10.3000	10.1400	7,775	\$ 80,083	\$ 78,839
		...-24UC	0.0132	0.0130	455,738,706	\$ 6,015,751	\$ 5,924,603	0.0056	0.0055	136,107,498	\$ 762,202	\$ 748,591
		...-CAPY	0.0399	0.0393	59,000,765	\$ 2,354,131	\$ 2,318,730	0.0322	0.0317	14,003,636	\$ 450,917	\$ 443,915
		...-DAMD	0.0739	0.0700	34,864,047	\$ 2,576,453	\$ 2,440,483	0.0460	0.0436	9,056,367	\$ 416,593	\$ 394,858
		...-DEXA	0.8778	0.8646	98,113	\$ 86,124	\$ 84,828	0.7084	0.6974	75,933	\$ 53,791	\$ 52,956
...-PWRF	0.2917	0.2917	1,644,225	\$ 479,620	\$ 479,620	0.2917	0.2917	200,889	\$ 58,599	\$ 58,599		
...-INJT	-	-	4,541,490	\$ -	\$ -	-	-	-	\$ -	\$ -		

Table 19: Residential and general consumers' pass-through line charge revenues

			Auckland				Northern					
Consumer group, price category & code		PTPi,2020	PTPi,2019	Qi,2020	Qi,2019	PTPi,2020 × Qi,2020	PTPi,2019 × Qi,2019	Qi,2020	Qi,2019	PTPi,2020 × Qi,2020	PTPi,2019 × Qi,2019	
Residential	ARUL WRUL	....-FIXD	-	-	10,905,140	10,242,319	\$ -	\$ -	5,921,483	5,157,029	\$ -	\$ -
		....-24UC	0.0356	0.0375	116,114,704	110,066,791	\$ 4,133,683	\$ 4,127,505	80,644,668	71,240,805	\$ 2,870,950	\$ 2,671,530
		....-INJT	-	-	457,779	353,427	\$ -	\$ -	782,054	608,558	\$ -	\$ -
	ARCL WRCL	....-FIXD	-	-	47,221,911	47,034,559	\$ -	\$ -	32,188,380	32,303,879	\$ -	\$ -
		....-AICO	0.0284	0.0299	687,175,675	693,335,187	\$ 19,515,789	\$ 20,730,722	479,538,407	486,874,794	\$ 13,618,891	\$ 14,557,556
		....-INJT	-	-	1,181,308	990,388	\$ -	\$ -	1,421,377	1,234,410	\$ -	\$ -
	ARGL WRGL	....-FIXD	-	-	10,268,737	9,446,664	\$ -	\$ -	5,107,256	4,044,322	\$ -	\$ -
		....-24UC	0.0284	0.0299	136,099,449	126,440,368	\$ 3,865,224	\$ 3,780,567	68,123,135	54,622,045	\$ 1,934,697	\$ 1,633,199
		....-INJT	-	-	409,174	300,137	\$ -	\$ -	252,660	174,972	\$ -	\$ -
	ARHL WRHL	....-FIXD	-	-	936,123	590,353	\$ -	\$ -	796,838	478,441	\$ -	\$ -
		....-OFFPK	-	-	9,027,738	5,610,070	\$ -	\$ -	8,676,041	5,089,823	\$ -	\$ -
		....-PEAK	0.0907	0.0955	3,873,838	2,356,996	\$ 351,357	\$ 225,093	3,605,634	2,112,234	\$ 327,031	\$ 201,718
	ARUS WRUS	....-INJT	-	-	150,637	52,108	\$ -	\$ -	259,271	90,159	\$ -	\$ -
		....-FIXD	-	-	6,622,112	5,925,085	\$ -	\$ -	6,116,044	5,772,347	\$ -	\$ -
		....-24UC	0.0356	0.0375	127,939,506	119,450,446	\$ 4,554,646	\$ 4,479,392	131,510,396	125,119,122	\$ 4,681,770	\$ 4,691,967
	ARCS WRCS	....-INJT	-	-	479,178	405,195	\$ -	\$ -	847,033	703,316	\$ -	\$ -
		....-FIXD	-	-	27,473,957	28,699,732	\$ -	\$ -	22,865,308	24,190,046	\$ -	\$ -
		....-AICO	0.0284	0.0299	742,997,873	776,465,773	\$ 21,101,140	\$ 23,216,327	631,846,285	664,050,347	\$ 17,944,434	\$ 19,855,105
	ARGS WRGS	....-INJT	-	-	874,540	1,046,948	\$ -	\$ -	1,056,066	987,250	\$ -	\$ -
		....-FIXD	-	-	5,284,705	5,084,634	\$ -	\$ -	2,544,829	2,379,585	\$ -	\$ -
....-24UC		0.0284	0.0299	150,864,827	142,689,447	\$ 4,284,561	\$ 4,266,414	68,126,278	61,043,769	\$ 1,934,786	\$ 1,825,209	
ARHS WRHS	....-INJT	-	-	257,258	221,884	\$ -	\$ -	174,050	129,725	\$ -	\$ -	
	....-FIXD	-	-	448,995	263,429	\$ -	\$ -	580,168	311,964	\$ -	\$ -	
	....-OFFPK	-	-	8,715,756	5,142,257	\$ -	\$ -	11,810,946	6,518,491	\$ -	\$ -	
	....-PEAK	0.0907	0.0955	3,664,452	2,196,448	\$ 332,366	\$ 209,761	5,013,265	2,850,431	\$ 454,703	\$ 272,216	
General	ABSU WBSU	....-INJT	-	-	67,308	18,742	\$ -	\$ -	65,201	24,936	\$ -	\$ -
		....-FIXD	-	-	25,790,084	25,208,738	\$ -	\$ -	16,004,177	15,516,645	\$ -	\$ -
	ABSU WBSU	....-24UC	0.0356	0.0375	29,323,906	30,686,394	\$ 1,043,931	\$ 1,150,740	17,481,178	18,993,769	\$ 622,330	\$ 712,266
		....-FIXD	-	-	13,179,981	13,099,585	\$ -	\$ -	8,090,408	7,993,015	\$ -	\$ -
	ABSU WBSU	....-24UC	0.0356	0.0375	711,356,935	737,392,567	\$ 25,324,307	\$ 27,652,221	375,656,552	385,706,238	\$ 13,373,373	\$ 14,463,984
		....-INJT	-	-	340,468	244,218	\$ -	\$ -	339,779	213,674	\$ -	\$ -
	ABSU WBSU	....-FIXD	-	-	170,743	114,214	\$ -	\$ -	94,196	63,833	\$ -	\$ -
		....-OFFPK	-	-	18,086,910	14,172,345	\$ -	\$ -	10,802,484	7,657,835	\$ -	\$ -
		....-PEAK	0.0907	0.0955	8,874,184	6,443,582	\$ 804,888	\$ 615,362	5,165,751	3,871,204	\$ 468,534	\$ 369,700
		....-INJT	-	-	12,142	9,904	\$ -	\$ -	1	2,116	\$ -	\$ -

Table 20: Commercial consumers' pass-through line charge revenues

			Auckland				Northern						
Consumer group, price category & code		PTPi,2020	PTPi,2019	Qi,2020	Qi,2019	PTPi,2020 × Qi,2020	PTPi,2019 × Qi,2019	Qi,2020	Qi,2019	PTPi,2020 × Qi,2020	PTPi,2019 × Qi,2019		
Low voltage	ALVN WLVN	...-FIXD	-	-	825,094	792,743	\$ -	\$ -	322,564	312,398	\$ -	\$ -	
		...-24UC	0.0219	0.0231	240,654,239	235,450,934	\$ 5,270,328	\$ 5,438,917	120,720,687	120,956,965	\$ 2,643,783	\$ 2,794,106	
		...-CAPY	-	-	122,818,665	117,137,573	\$ -	\$ -	47,336,885	45,611,177	\$ -	\$ -	
		...-PWRF	-	-	367,349	401,052	\$ -	\$ -	311,954	325,323	\$ -	\$ -	
		...-INJT	-	-	117,924	30,131	\$ -	\$ -	36,579	339	\$ -	\$ -	
		...-FIXD	-	-	-	-	\$ -	\$ -	94,548	90,421	\$ -	\$ -	
	ALVT WL VH	...-24UC	-	-	554,081,638	551,876,368	\$ -	\$ -	129,458,613	126,417,370	\$ -	\$ -	
		...-CAPY	-	-	137,950,271	132,783,784	\$ -	\$ -	24,330,497	22,126,969	\$ -	\$ -	
		...-DAMD	0.2285	0.2405	46,891,384	47,024,723	\$ 10,714,681	\$ 11,309,446	9,943,698	9,650,215	\$ 2,272,135	\$ 2,320,877	
		...-PWRF	-	-	4,048,147	4,413,256	\$ -	\$ -	671,772	712,603	\$ -	\$ -	
		...-INJT	-	-	403,756	544,390	\$ -	\$ -	2,214	3,082	\$ -	\$ -	
		...-FIXD	-	-	-	-	\$ -	\$ -	46,669	46,080	\$ -	\$ -	
Transformer	ATXN WTXN	...-24UC	0.0219	0.0231	22,274,731	22,503,211	\$ 487,817	\$ 519,824	35,672,069	37,072,148	\$ 781,218	\$ 856,367	
		...-CAPY	-	-	13,005,038	13,246,512	\$ -	\$ -	11,265,342	11,194,570	\$ -	\$ -	
		...-PWRF	-	-	30,391	31,070	\$ -	\$ -	164,971	179,524	\$ -	\$ -	
		...-INJT	-	-	65,523	144	\$ -	\$ -	-	-	\$ -	\$ -	
	ATXT WTXH	...-FIXD	-	-	-	-	\$ -	\$ -	101,768	100,468	\$ -	\$ -	
		...-24UC	-	-	1,144,642,133	1,144,709,408	\$ -	\$ -	361,832,981	365,493,325	\$ -	\$ -	
		...-CAPY	-	-	243,151,474	235,895,095	\$ -	\$ -	76,456,940	75,853,846	\$ -	\$ -	
		...-DAMD	0.2285	0.2405	91,276,944	90,662,599	\$ 20,856,782	\$ 21,804,355	28,816,387	29,484,798	\$ 6,584,545	\$ 7,091,094	
		...-PWRF	-	-	4,054,413	4,593,579	\$ -	\$ -	1,404,237	1,618,553	\$ -	\$ -	
		...-INJT	-	-	28,723	-	\$ -	\$ -	540,421	208,108	\$ -	\$ -	
	High voltage	AHVN WHVN	...-FIXD	-	-	2,768	2,786	\$ -	\$ -	31	-	\$ -	\$ -
			...-24UC	0.0219	0.0231	654,351	657,429	\$ 14,330	\$ 15,187	29	-	\$ 1	\$ -
...-CAPY			-	-	550,254	526,767	\$ -	\$ -	1,271	-	\$ -	\$ -	
...-PWRF			-	-	8,759	5,427	\$ -	\$ -	-	-	\$ -	\$ -	
...-INJT			-	-	-	-	\$ -	\$ -	-	-	\$ -	\$ -	
AHVT WHVH		...-FIXD	-	-	-	-	\$ -	\$ -	8,768	8,395	\$ -	\$ -	
		...-24UC	-	-	432,603,681	451,697,858	\$ -	\$ -	121,524,537	129,969,643	\$ -	\$ -	
		...-CAPY	-	-	58,292,666	59,177,846	\$ -	\$ -	14,501,498	14,288,020	\$ -	\$ -	
		...-DAMD	0.2285	0.2405	32,482,990	34,012,773	\$ 7,422,363	\$ 8,180,072	8,726,198	9,096,284	\$ 1,993,936	\$ 2,187,656	
		...-DEXA	-	-	130,041	166,144	\$ -	\$ -	113,288	103,603	\$ -	\$ -	
		...-PWRF	-	-	1,342,080	1,467,870	\$ -	\$ -	426,829	238,763	\$ -	\$ -	
		...-INJT	-	-	3,146,212	3,559,370	\$ -	\$ -	-	-	\$ -	\$ -	

Table 21: Non-standard ICPs' line charges, distribution notional revenues and pass-through revenues

Anonymised Code	Qi,2018, Qi,2019, & Qi,2020	Distribution notional revenue				Pass-through revenue				
		DPI,2020	DPI,2019	DPI,2020 × Qi,2018	DPI,2019 × Qi,2018	PTPI,2020	PTPI,2019	PTPI,2020 × Qi,2020	PTPI,2019 × Qi,2019	
Auckland	AN20-1	1	\$ 1,061,016	\$ 1,050,615	\$ 1,061,016	\$ 1,050,615	\$ 156,051	\$ 105,045	\$ 156,051	\$ 105,045
	AN20-2	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	AN20-3	1	\$ 992,405	\$ 983,949	\$ 992,405	\$ 983,949	\$ 1,811,501	\$ 1,880,608	\$ 1,811,501	\$ 1,880,608
	AN20-4	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	AN20-5	1	\$ 231,820	\$ 377,218	\$ 231,820	\$ 377,218	\$ -	\$ 126,056	\$ -	\$ 126,056
	AN20-6	1	\$ 586,800	\$ 578,105	\$ 586,800	\$ 578,105	\$ 553,857	\$ 555,633	\$ 553,857	\$ 555,633
	AN20-7	1	\$ 577,990	\$ 572,219	\$ 577,990	\$ 572,219	\$ 320,604	\$ 357,614	\$ 320,604	\$ 357,614
	AN20-8	1	\$ 230,468	\$ 227,001	\$ 230,468	\$ 227,001	\$ 140,991	\$ 146,354	\$ 140,991	\$ 146,354
	AN20-9	1	\$ 188,569	\$ 185,733	\$ 188,569	\$ 185,733	\$ 442,783	\$ 464,147	\$ 442,783	\$ 464,147
	AN20-10	1	\$ 1,260,189	\$ 1,236,931	\$ 1,260,189	\$ 1,236,931	\$ 456,939	\$ 444,905	\$ 456,939	\$ 444,905
	AN20-11	1	\$ -	\$ -	\$ -	\$ -	\$ 259,056	\$ 458,660	\$ 259,056	\$ 458,660
	AN20-12	1	\$ 1,062,499	\$ 1,074,895	\$ 1,062,499	\$ 1,074,895	\$ -	\$ -	\$ -	\$ -
	AN20-13	1	\$ 383,553	\$ 382,329	\$ 383,553	\$ 382,329	\$ 1,027,591	\$ 984,577	\$ 1,027,591	\$ 984,577
	AN20-14	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	AN20-15	1	\$ 255,636	\$ 264,828	\$ 255,636	\$ 264,828	\$ 134,669	\$ 123,036	\$ 134,669	\$ 123,036
	AN20-16	1	\$ 379,440	\$ 442,260	\$ 379,440	\$ 442,260	\$ 214,154	\$ 203,664	\$ 214,154	\$ 203,664
	AN20-17	1	\$ 481,581	\$ 474,339	\$ 481,581	\$ 474,339	\$ 360,967	\$ 410,893	\$ 360,967	\$ 410,893
	AN20-18	1	\$ 537,800	\$ 536,440	\$ 537,800	\$ 536,440	\$ 635,013	\$ 636,907	\$ 635,013	\$ 636,907
	AN20-19	1	\$ 724,423	\$ 710,994	\$ 724,423	\$ 710,994	\$ 147,768	\$ 126,335	\$ 147,768	\$ 126,335
	AN20-20	1	\$ 462,552	\$ 468,864	\$ 462,552	\$ 468,864	\$ 113,247	\$ 96,402	\$ 113,247	\$ 96,402
	AN20-21	1	\$ 61,463	\$ 60,368	\$ 61,463	\$ 60,368	\$ 13,879	\$ 24,760	\$ 13,879	\$ 24,760
	AN20-22	1	\$ 292,140	\$ 302,640	\$ 292,140	\$ 302,640	\$ 525,355	\$ 713,530	\$ 525,355	\$ 713,530
	AN20-23	1	\$ 96,072	\$ 97,236	\$ 96,072	\$ 97,236	\$ 93,970	\$ 96,485	\$ 93,970	\$ 96,485
	AN20-24	1	\$ 208,523	\$ 210,611	\$ 208,523	\$ 210,611	\$ 217,796	\$ 223,605	\$ 217,796	\$ 223,605
	AN20-25	1	\$ 39,985	\$ 39,299	\$ 39,985	\$ 39,299	\$ 15,651	\$ 68,707	\$ 15,651	\$ 68,707
	AN20-26	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	AN20-27	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	AN20-28	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	AN20-29	1	\$ -	\$ -	\$ -	\$ -	\$ 21,573	\$ -	\$ 21,573	\$ -
	AN20-30	1	\$ -	\$ -	\$ -	\$ -	\$ 31,208	\$ -	\$ 31,208	\$ -
	AP20-1	1	(\$ 106,425)	\$ -	(\$ 106,425)	\$ -	\$ -	\$ -	\$ -	\$ -
Northern	WN20-1	1	\$ 272,326	\$ 225,504	\$ 272,326	\$ 225,504	\$ 243,996	\$ 238,796	\$ 243,996	\$ 238,796
	WN20-2	1	\$ 441,375	\$ 433,206	\$ 441,375	\$ 433,206	\$ 207,432	\$ 245,307	\$ 207,432	\$ 245,307
	WN20-3	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	WN20-4	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	WP20-1	1	(\$ 58,575)	\$ -	(\$ 58,575)	\$ -	\$ -	\$ -	\$ -	\$ -

Non-standard ICPs 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. Some ICPs have a zero distribution and/or pass-through price, this is because these ICPs are billed with the consumer's other non-standard ICP(s).

Appendix 3: Calculation of the quality incentive adjustment

Table 22: SAIDI and SAIFI targets, caps, collars and assessed values

Quality measure	Target	Cap	Collar	2018 assess		2019 assess	
SAIDI	96.036	104.173	87.899	226 > than cap	104.173 (= cap)	198 > than cap	104.173 (= cap)
SAIFI	1.291	1.395	1.187	2.14 > than cap	1.395 (= cap)	1.76 > than cap	1.395 (= cap)

The assess values are from the assessment period two years prior to when the quality incentive adjustment is applied as a recoverable cost.

Table 23: Quality Incentive Adjustment

Table 23: Quality Incentive Adjustment								
Formula: $REV_{RISK} = 1\% \times \text{Maximum Allowable Revenue (MAR)}$								
MAR								\$395,245,000
REV _{RISK}								\$3,952,450
Formulae: $S_{SAIDI} = (0.5 \times REV_{RISK}) \times (SAIDI_{target} - SAIDI_{assess}) / (SAIDI_{cap} - SAIDI_{target})$ $S_{SAIFI} = (0.5 \times REV_{RISK}) \times (SAIFI_{target} - SAIFI_{assess}) / (SAIFI_{cap} - SAIFI_{target})$								
Component	SAIDI (2018)		SAIFI (2018)		SAIDI (2019)		SAIFI (2019)	
0.5 × REV _{RISK}		1,976,225		1,976,225		1,976,225		1,976,225
target - assess	(8.1368)		(0.1044)		(8.1368)		(0.1044)	
cap - target	8.1368		0.1044		8.1368		0.1044	
(target - assess) / (cap - target)		(100%)		(100%)		(100%)		(100%)
S_{SAIDI} and S_{SAIFI}		(1,976,225)		(1,976,225)		(1,976,225)		(1,976,225)
Formula: $\text{Quality incentive adjustment} = (S_{SAIDI} + S_{SAIFI}) \times (1 + r)^2$								
Component	2020 (\$000s)			2021 (\$000s)				
(S _{SAIDI} + S _{SAIFI})				(3,952)				(3,952)
Time value of money (r = 6.09%)				(497)				(497)
Quality Incentive Adjustment				(4,449)				(4,449)

Appendix 4: HVSPEC data capture and quality assurance

