



Gas Distribution Services 2020 Compliance Statement

For the assessment period
1 October 2019 - 30 September 2020

1 December 2020

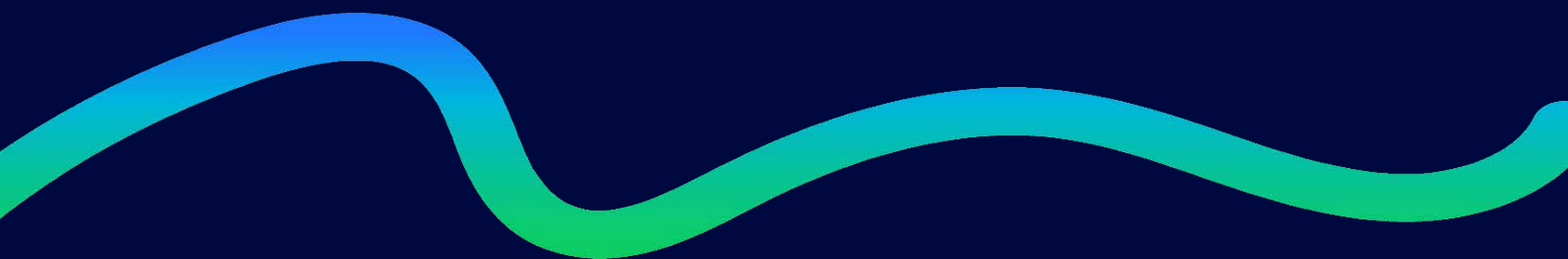


Table of contents

1.	INTRODUCTION.....	3
1.1	Background	3
1.2	Statement of compliance.....	3
1.3	Disclaimer	4
2.	PRICE PATH	5
2.1	Introduction	5
2.2	Price path compliance (clause 8 of the Determination)	5
2.3	Pass-through costs and recoverable costs	7
3.	QUALITY STANDARDS.....	9
3.1	Introduction	9
3.2	RTE results for the assessment period	9
3.3	Policies and procedures for recording the RTE statistics.....	10
	Appendix 1: Published charges and details of Pi,2019 Qi,2018 & Pi,2020 Qi,2018.....	12
	Appendix 2: RTE incident data	15

1. INTRODUCTION

1.1 Background

The 2020 assessment period is the third assessment period of the Gas Distribution Services Default Price-Quality Path Determination 2017 (“the Determination”) and covers the 12 months to 30 September 2020.

This Compliance Statement (“Statement”) is submitted by Vector Limited (“Vector”) pursuant to clause 11 of the Determination.

The Determination is issued pursuant to Part 4 of the Commerce Act 1986 and requires Gas Distribution Businesses (“GDBs”) to provide information to the Commerce Commission (“Commission”) relevant to the assessment of their performance against the price path and quality standards.

Under clause 8 of the Determination a GDB’s notional revenue must not exceed the allowable notional revenue for the 2020 assessment period.

Under clause 9 of the Determination a GDB must comply with the annual quality assessment formula for Response Time to Emergencies (“RTE”) over the 2020 assessment period.

The Statement was completed on 1 December 2020 and published on 10 December 2020.

1.2 Statement of compliance

As required by clause 11.2(a) of the Determination, this Statement confirms Vector’s compliance with the price path in clause 8 and the quality standards in clause 9 in respect of the 2020 assessment period.

With reference to clause 11.4 of the Determination, this Statement confirms that Vector has not undertaken a Restructure of Prices during the 2020 assessment period or the preceding assessment period.

With reference to clause 11.5 of the Determination, this Statement confirms that no Amalgamation, Merger, Transfer or Major Transaction has occurred in the 2020 assessment period.

1.3 Disclaimer

The information contained in this Statement has been prepared for the express purpose of complying with the requirements of clause 11 of the Determination. This 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 this 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 this Statement. These discrepancies do not affect the overall compliance calculations which are based on the more detailed information.

2. PRICE PATH

2.1 Introduction

In this section Vector demonstrates that it has complied with the price path requirements in clause 8 of the Determination and provides the information to support the statement of compliance.

Interested parties may refer to Vector's Pricing Methodology where we have set out in detail our methodology used to calculate our prices.¹

2.2 Price path compliance (clause 8 of the Determination)

As required by clause 8 of the Determination, in order to demonstrate compliance with the price path, Vector must demonstrate that the notional revenue is less than the allowable notional revenue for the 2020 assessment period.

As outlined in Table 1 below, Vector complies with the price path, in accordance with clause 8.3 of the Determination.

Table 1: Vector price path compliance 2020		
Formula: $NR_{2020} \leq ANR_{2020}$		
Component	Description	Value (\$000)
NR ₂₀₂₀	2020 notional revenue ²	45,723
ANR ₂₀₂₀	2020 allowable notional revenue ³	45,734
Result (\$000):		\$45,723 ≤ \$45,734

The method of calculation of notional revenue for the 2020 assessment period is set out in clause 8.4(a) of the Determination and presented with Vector values in Table 2 below.

¹ <https://www.vector.co.nz/about-us/regulatory/disclosures-gas/pricing-methodology>

² Details of NR₂₀₂₀ are included in Table 2.

³ Details of ANR₂₀₂₀ are included in Table 3.

Table 2: Notional revenue 2020

Formula: $NR_{2020} = \sum P_{i,2020} Q_{i,2018} - (K_{2020} + V_{2020})$		
Component	Description	Value (\$000)
$\sum P_{i,2020} Q_{i,2018}$	Prices 2020 x lagged quantities 2018 ⁴	47,218
- K_{2020}	Pass-through costs 2020 ⁵	(1,672)
- V_{2020}	Recoverable costs 2020 ⁵	177
NR₂₀₂₀:	Notional revenue 2020	45,723

The method of calculation of allowable notional revenue for the 2020 assessment period is set out in Schedule 4 (Equation 2) of the Determination and presented with Vector values in Table 3 below.

Table 3: Allowable notional revenue 2020

Formula: $ANR_{2020} = \{\sum P_{i,2019} Q_{i,2018} - (K_{2019} + V_{2019}) + (ANR_{2019} - NR_{2019})\}(1 + \Delta CPI_{2020})(1 - X)$		
Component	Description	Value (\$000)
$\sum P_{i,2019} Q_{i,2018}$	Prices 2019 x lagged quantities 2018 ⁶	46,711
- K_{2019}	Pass-through costs 2019 ⁷	(1,740)
- V_{2019}	Recoverable costs 2019 ⁷	-
ANR_{2019}	Allowable Notional Revenue 2019 ⁷	44,062
- NR_{2019}	Notional Revenue 2019 ⁷	(44,061)
ΔCPI_{2020}	2019 base inflated by CPI 2020 ($\Delta CPI_{2020} = 0.0169$) ⁸	762
X	Rate of change ($X = 0\%$) ⁹	-
ANR₂₀₂₀:	Allowable notional revenue 2020	45,734

⁴ Details of $\sum P_{i,2020} Q_{i,2018}$ are included in Appendix 1.

⁵ Details of K_{2020} and V_{2020} are included in Table 5.

⁶ Details of $\sum P_{i,2019} Q_{i,2018}$ are included in Appendix 1.

⁷ Details of K_{2019} , V_{2019} , ANR_{2019} and NR_{2019} are from the 2019 Compliance Statement available at <https://www.vector.co.nz/about-us/regulatory/disclosures-gas/price-quality>.

⁸ Details of the Consumer Price Index (CPI) are sourced from Statistics NZ, <http://www.stats.govt.nz/infoshare/>, ΔCPI_{2020} are included in Table 4.

⁹ X is set out in Schedule 2 of the Determination.

Table 4: ΔCPI_{2020}

Formula: $\Delta\text{CPI}_{2020} = \left(\frac{\text{CPI}_{\text{Jun},2018} + \text{CPI}_{\text{Sep},2018} + \text{CPI}_{\text{Dec},2018} + \text{CPI}_{\text{Mar},2019}}{\text{CPI}_{\text{Jun},2017} + \text{CPI}_{\text{Sep},2017} + \text{CPI}_{\text{Dec},2017} + \text{CPI}_{\text{Mar},2018}} \right) - 1$			
$\text{CPI}_{\text{Jun},2018}$	1,015	$\text{CPI}_{\text{Jun},2017}$	1,000.0
$\text{CPI}_{\text{Sep},2018}$	1,024	$\text{CPI}_{\text{Sep},2017}$	1,004.9
$\text{CPI}_{\text{Dec},2018}$	1,025	$\text{CPI}_{\text{Dec},2017}$	1,006.0
$\text{CPI}_{\text{Mar},2019}$	1,026	$\text{CPI}_{\text{Mar},2018}$	1,011.0
Total	4,090	Total	4,021.9
ΔCPI_{2020}	$(4,090 / 4,021.9) - 1$		0.0169

2.3 Pass-through costs and recoverable costs

Notional revenue includes the recovery of pass-through and recoverable costs paid during the 2019 and 2020 assessment periods. These costs have been determined in accordance with Schedule 5 of the Determination which sets out the process for determining the amount of pass-through costs and recoverable costs for an assessment period.

The pass-through and recoverable costs for Vector for the 2020 assessment period, along with the period they were paid and when they relate to, are presented in Table 5 below.

The CAPEX wash-up adjustment¹⁰ recoverable cost is now applicable for Vector as this only applies from the third assessment period onwards of the regulatory period for GDBs with a disclosure year ending 30 June. There were no other recoverable costs applicable to Vector therefore none were recovered in the 2020 assessment period.

All costs include the time value of money adjustments, which has been calculated in accordance with Clause 4.1 and Equation 3 in Schedule 5 of the Determination and uses a discount rate of 4.76%.

¹⁰ This is calculated using the formula from clause 3.1.3(1)(h) of Gas Distribution Services Input Methodologies Determination 2012, substituting into the Commission's Gas DPP reset - Financial model - 31 May 2017, the value of commissioned for the year beginning 2016 from our 2017 Gas Information Disclosure (available at <https://www.vector.co.nz/about-us/regulatory/disclosures-gas/gas-financial-and-network-information>) in place of the forecast value of commissioned assets for the year beginning 2016.

Table 5: Pass-through and recoverable costs 2020

Component (\$000s)	Paid in assessment period		Time value of money adjustment	Total
	2019	2020		
Local Authority Rates (y/e Jun-20)	364	1,092	17	1,473
Commerce Act Levy (y/e Jun-19)	296	-	14	310
Commerce Act Levy – wash-up refund (y/e Jun-18)	(62)	-	(3)	(65)
Commerce Act Levy – wash-up refund (y/e Jun-14)	(44)	-	(2)	(46)
Pass-through costs K₂₀₂₀	554	1,092	26	1,672
CAPEX wash-up adjustment (commissioned assets y/e Jun-17)		(158)	(19)	(177)
Recoverable costs V₂₀₂₀		(158)	(19)	(177)
Total pass-through and recoverable costs	554	934	7	1,495

3. QUALITY STANDARDS

3.1 Introduction

In this section Vector demonstrates that the quality standards in clause 9 of the Determination have been complied with. Vector has provided information to support the statement of compliance including: relevant incident data (Appendix 2) and calculations, a description of the policies and procedures used for recording 'response time to emergencies' ('RTE') statistics and a statement confirming that there were no excluded RTE values over the assessment period.

3.2 RTE results for the assessment period

To comply with the quality standards Vector must respond to at least 80% of emergencies within 60 minutes (RTE 60) and all emergencies within 180 minutes (RTE 180).

Emergencies are defined as an unplanned escape or ignition of gas that requires the active involvement of any emergency service such as fire service or ambulance; an unplanned disruption in the supply of gas that affects more than five ICP's; or an evacuation of premises as the result of escape or ignition of gas.

Emergencies may be excluded from the database if the Commission has granted an exclusion in writing. Vector has not requested any emergencies be excluded for the 2020 assessment period.

Vector has complied with the quality standards requirements for RTE 60 and RTE 180 for the 2020 assessment period and the results are presented in Tables 6 and 7 below.

Table 6: RTE ₆₀ results 2020		
Formula: $RTE_{2020} = RTE_{60} / RTE_t$		
Component	Description	Value
RTE ₆₀	Total number of emergencies in the assessment period where Vector's RTE was less than or equal to 60 minutes	101
RTE _t	Total number of emergencies in the assessment period	105
Result (2020):		RTE₂₀₂₀ = 96%

Table 7: RTE ₁₈₀ results 2020		
Formula: $RTE_{2020} = RTE_{180} / RTE_t$		
Component	Description	Value
RTE ₁₈₀	Total number of emergencies in the assessment period where Vector's RTE was less than or equal to 180 minutes	105
RTE _t	Total number of emergencies in the assessment period	105
Result (2020):		RTE₂₀₂₀ = 100%

3.3 Policies and procedures for recording the RTE statistics

Vector employs contracted service providers to undertake data capture activities on the gas distribution network. The service providers manage data in accordance with Vector's requirements as defined in the Vector standard GSD004 (standard for Gas Distribution Network Reliability, Integrity and Consumer Service).

Gas distribution network performance and consumer service data is captured by the service providers using three methods:

1. Remotely, entered into Vector's Customer Management System (CMS);
2. Electronically via hand-held tablets in the field. Data from the hand-held tablets is automatically uploaded into Vector's CMS; and
3. If the electronic data capture systems are not available, data is recorded on paper logs and reports, scanned and entered as an attachment into Vector's CMS.

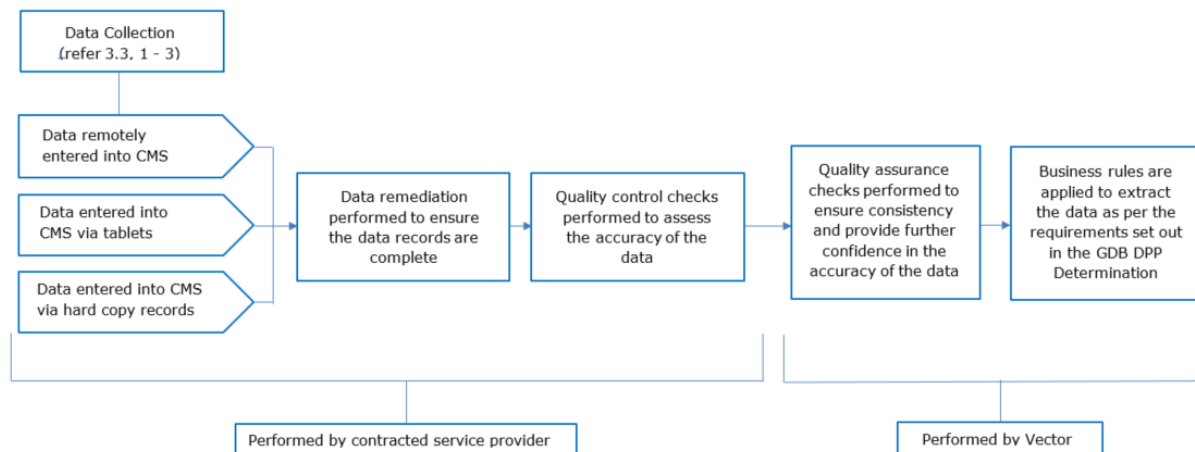
Data entered in Vector's CMS system by one of the above methods is quality checked by the service provider for accuracy, before undergoing additional quality assurance checks by Vector personnel.

RTE statistics are calculated (in line with the definition of RTE in the Determination) for each event and the data is retained in the database for ongoing reporting and analysis.

RTE performance is monitored monthly. All RTE events exceeding a 60 minutes response time are investigated with the service providers.

Figure 1 details the data collection, quality control / assurance and information development stages completed to generate the required information for disclosure.

Figure 1: Data collection and information development process for Vector



Appendix 1: Published charges and details of $P_{i,2019}$, $Q_{i,2018}$ & $P_{i,2020}$, $Q_{i,2018}$

Summary of $P_{i,2019}$, $Q_{i,2018}$ and $P_{i,2020}$, $Q_{i,2018}$ for the 2020 assessment period

Charges for the 2019 and 2020 assessment periods	$P_{i,2019}$, $Q_{i,2018}$	$P_{i,2020}$, $Q_{i,2018}$
Standard charges	\$ 43,705,789	\$ 44,575,683
Scaling charges	\$ 4,890	\$ 3,446
Non-standard charges	\$ 3,000,319	\$ 2,639,053
Total charges	\$ 46,710,999	\$ 47,218,181

Standard charges

There are six gas distribution price plans, one each for residential and general and two each for commercial and industrial consumers. The choice of price plan depends on the consumer's maximum flow rate of their connection (and their annual consumption for industrial consumers).

Each price category has two price components: a fixed daily price (\$/day) and a variable volumetric price (\$/kWh). The majority of consumers' meters are simple and record consumers' total use over monthly or two-monthly meter-reading cycles. These meters do not record the time of use or maximum demand. Having consumer consumption information limited to monthly intervals (at best) limits our pricing structures to simple daily and volume components.

Residential

Price plan	Code	Description	Units	$Q_{i,2018}$	$P_{i,2019}$	$P_{i,2020}$	$P_{i,2019}$, $Q_{i,2018}$	$P_{i,2020}$, $Q_{i,2018}$
GA0R	GA0R-FIXD	Fixed	\$/day	37,385,323	\$ 0.35	\$ 0.38	\$ 13,084,863	\$ 14,206,423
GA0R	GA0R-24UC	Variable	\$/kWh	671,127,858	\$ 0.0195	\$ 0.0186	\$ 13,086,993	\$ 12,482,978

General

Price plan	Code	Description	Units	$Q_{i,2018}$	$P_{i,2019}$	$P_{i,2020}$	$P_{i,2019}$, $Q_{i,2018}$	$P_{i,2020}$, $Q_{i,2018}$
GA01	GA01-FIXD	Fixed	\$/day	870,559	\$ 0.63	\$ 0.70	\$ 548,452	\$ 609,391
GA01	GA01-24UC	Variable	\$/kWh	77,366,854	\$ 0.0123	\$ 0.0119	\$ 951,612	\$ 920,666

Commercial

Price plan	Code	Description	Units	$Q_{i,2018}$	$P_{i,2019}$	$P_{i,2020}$	$P_{i,2019}$, $Q_{i,2018}$	$P_{i,2020}$, $Q_{i,2018}$
GA02	GA02-FIXD	Fixed	\$/day	1,031,616	\$ 1.12	\$ 1.17	\$ 1,155,410	\$ 1,206,991
GA02	GA02-24UC	Variable	\$/kWh	277,452,604	\$ 0.0100	\$ 0.0101	\$ 2,774,526	\$ 2,802,271
GA03	GA03-FIXD	Fixed	\$/day	349,090	\$ 4.79	\$ 5.14	\$ 1,672,141	\$ 1,794,323
GA03	GA03-24UC	Variable	\$/kWh	583,300,639	\$ 0.0077	\$ 0.0077	\$ 4,491,415	\$ 4,491,415

Industrial

Price plan	Code	Description	Units	$Q_{i,2018}$	$P_{i,2019}$	$P_{i,2020}$	$P_{i,2019}$, $Q_{i,2018}$	$P_{i,2020}$, $Q_{i,2018}$
GA04	GA04-FIXD	Fixed	\$/day	53,757	\$ 14.70	\$ 16.00	\$ 790,228	\$ 860,112
GA04	GA04-24UC	Variable	\$/kWh	517,922,513	\$ 0.0051	\$ 0.0051	\$ 2,641,405	\$ 2,641,405
GA05	GA05-FIXD	Fixed	\$/day	8,287	\$ 203.00	\$ 209.15	\$ 1,682,261	\$ 1,733,226
GA05	GA05-24UC	Variable	\$/kWh	751,347,595	\$ 0.0011	\$ 0.0011	\$ 826,482	\$ 826,482

Network scaling

Gas volumes are scaled to match the system's actual gas gate meter reads and those of the retailer provided ICP level data.

Price plan	Code	Description	Units	Qi,2018	Pi,2019	Pi,2020	Pi,2019 Qi,2018	Pi,2020 Qi,2018
GA0R	GA0R-24UC	Variable	\$/kWh	1,595,291	\$ 0.0195	\$ 0.0186	\$ 31,108	\$ 29,672
GA01	GA01-24UC	Variable	\$/kWh	(45,949)	\$ 0.0123	\$ 0.0119	\$ (565)	\$ (547)
GA02	GA02-24UC	Variable	\$/kWh	(270,474)	\$ 0.0100	\$ 0.0101	\$ (2,705)	\$ (2,732)
GA03	GA03-24UC	Variable	\$/kWh	(779,347)	\$ 0.0077	\$ 0.0077	\$ (6,001)	\$ (6,001)
GA04	GA04-24UC	Variable	\$/kWh	(2,463,774)	\$ 0.0051	\$ 0.0051	\$ (12,565)	\$ (12,565)
GA05	GA05-24UC	Variable	\$/kWh	(3,983,304)	\$ 0.0011	\$ 0.0011	\$ (4,382)	\$ (4,382)

Non-standard charges

Like the standard charges, each non-standard consumer has a fixed daily and variable volumetric price.

Code	Description	Units	Qi,2018	Pi,2019	Pi,2020	Pi,2019 Qi,2018	Pi,2020 Qi,2018
VTA20001	Fixed	\$/day	365	\$ 699.39	\$ 716.52	\$ 255,277	\$ 261,530
VTA20002	Fixed	\$/day	365	\$ 134.93	\$ 138.24	\$ 49,249	\$ 50,458
VTA20003	Fixed	\$/day	365	\$ 114.44	\$ 125.89	\$ 41,771	\$ 45,950
VTA20004	Fixed	\$/day	365	\$ 14.70	\$ 16.00	\$ 5,366	\$ 5,840
VTA20005	Fixed	\$/day	365	\$ 14.70	\$ 16.00	\$ 5,366	\$ 5,840
VTA20006	Fixed	\$/day	365	\$ 35.70	\$ 39.27	\$ 13,031	\$ 14,334
VTA20007	Fixed	\$/day	365	\$ 156.13	\$ 159.96	\$ 56,987	\$ 58,385
VTA20008	Fixed	\$/day	365	\$ 64.52	\$ 70.98	\$ 23,550	\$ 25,908
VTA20009	Fixed	\$/day	365	\$ 105.58	\$ 107.17	\$ 38,537	\$ 39,117
VTA20010	Fixed	\$/day	365	\$ 1,572.00	\$ 1,572.00	\$ 573,780	\$ 573,780
VTA20011	Fixed	\$/day	31	\$ -	\$ 1.17	\$ -	\$ 36
VTA20012	Fixed	\$/day	-	\$ 1.12	\$ 1.17	\$ -	\$ -
VTA20013	Fixed	\$/day	365	\$ 203.00	\$ 209.15	\$ 74,095	\$ 76,340
VTA20014	Fixed	\$/day	261	\$ -	\$ -	\$ -	\$ -
VTA20015	Fixed	\$/day	365	\$ 197.33	\$ 209.15	\$ 72,025	\$ 76,340
VTA20016	Fixed	\$/day	365	\$ 105.58	\$ 107.17	\$ 38,537	\$ 39,117
VTA20017	Fixed	\$/day	365	\$ 105.58	\$ 107.17	\$ 38,537	\$ 39,117
VTA20018	Fixed	\$/day	365	\$ 113.11	\$ 115.88	\$ 41,285	\$ 42,296
VTA20019	Fixed	\$/day	365	\$ 105.58	\$ 107.17	\$ 38,537	\$ 39,117
VTA20020	Fixed	\$/day	42	\$ 14.70	\$ 16.00	\$ 617	\$ 672
VTA20021	Fixed	\$/day	323	\$ 14.70	\$ 1.17	\$ 4,748	\$ 378
VTA20022	Fixed	\$/day	365	\$ 184.11	\$ 188.62	\$ 67,200	\$ 68,846
VTA20023	Fixed	\$/day	365	\$ 178.70	\$ 182.35	\$ 65,226	\$ 66,558
VTA20024	Fixed	\$/day	365	\$ -	\$ -	\$ -	\$ -
VTA20025	Fixed	\$/day	365	\$ 106.37	\$ 108.98	\$ 38,825	\$ 39,778
VTA20026	Fixed	\$/day	80	\$ 67.09	\$ 68.74	\$ 5,367	\$ 5,499
VTA20027	Fixed	\$/day	285	\$ 67.09	\$ -	\$ 19,121	\$ -
VTA20028	Fixed	\$/day	365	\$ 27.91	\$ 28.48	\$ 10,187	\$ 10,395
VTA20029	Fixed	\$/day	365	\$ 1,739.88	\$ 712.13	\$ 635,056	\$ 259,927
VTA20030	Fixed	\$/day	365	\$ 882.13	\$ 849.27	\$ 321,977	\$ 309,984
VTA20031	Fixed	\$/day	365	\$ 427.08	\$ 209.15	\$ 155,884	\$ 76,340
VTA20032	Fixed	\$/day	39,698,632	\$ -	\$ -	\$ -	\$ -

Code	Description	Units	Q1, 2018	P1, 2019	P1, 2020	P1, 2019 Q1, 2018	P1, 2020 Q1, 2018
VTA20001	Variable	\$/kWh	336,998,617	\$ 0.0002	\$ 0.0002	\$ 67,400	\$ 67,400
VTA20002	Variable	\$/kWh	27,072,137	\$ 0.0004	\$ 0.0004	\$ 10,829	\$ 10,829
VTA20003	Variable	\$/kWh	12,463,024	\$ 0.0010	\$ 0.0011	\$ 12,463	\$ 13,709
VTA20004	Variable	\$/kWh	6,308,721	\$ 0.0051	\$ 0.0051	\$ 32,174	\$ 32,174
VTA20005	Variable	\$/kWh	4,663,499	\$ 0.0051	\$ 0.0051	\$ 23,784	\$ 23,784
VTA20006	Variable	\$/kWh	4,983,489	\$ 0.0004	\$ 0.0004	\$ 1,993	\$ 1,993
VTA20007	Variable	\$/kWh	33,177,345	\$ 0.0004	\$ 0.0004	\$ 13,271	\$ 13,271
VTA20008	Variable	\$/kWh	5,372,874	\$ 0.0011	\$ 0.0012	\$ 5,910	\$ 6,447
VTA20009	Variable	\$/kWh	89,872	\$ 0.001026	\$0.001041	\$ 92	\$ 94
VTA20010	Variable	\$/kWh	145,544,490	\$ -	\$ -	\$ -	\$ -
VTA20011	Variable	\$/kWh	44,425	\$ -	\$ 0.0101	\$ -	\$ 449
VTA20012	Variable	\$/kWh	-	\$ 0.0100	\$ 0.0101	\$ -	\$ -
VTA20013	Variable	\$/kWh	22,566,031	\$ 0.0011	\$ 0.0011	\$ 24,823	\$ 24,823
VTA20014	Variable	\$/kWh	2,724,620	\$ -	\$ -	\$ -	\$ -
VTA20015	Variable	\$/kWh	17,715,250	\$ 0.0010	\$ 0.0011	\$ 17,715	\$ 19,487
VTA20016	Variable	\$/kWh	36,977,564	\$ 0.001026	\$0.001041	\$ 37,939	\$ 38,494
VTA20017	Variable	\$/kWh	14,184,734	\$ 0.001026	\$0.001041	\$ 14,554	\$ 14,766
VTA20018	Variable	\$/kWh	65,902,894	\$ 0.0002	\$ 0.0002	\$ 13,181	\$ 13,181
VTA20019	Variable	\$/kWh	14,376,467	\$ 0.001026	\$0.001041	\$ 14,750	\$ 14,966
VTA20020	Variable	\$/kWh	1,304	\$ 0.0051	\$ 0.0051	\$ 7	\$ 7
VTA20021	Variable	\$/kWh	32,791	\$ 0.0051	\$ 0.0101	\$ 167	\$ 331
VTA20022	Variable	\$/kWh	19,594,561	\$ 0.0010	\$ 0.0010	\$ 19,595	\$ 19,595
VTA20023	Variable	\$/kWh	15,398,522	\$ -	\$ -	\$ -	\$ -
VTA20024	Variable	\$/kWh	-	\$ -	\$ -	\$ -	\$ -
VTA20025	Variable	\$/kWh	32,926,969	\$ 0.0003	\$ 0.0003	\$ 9,878	\$ 9,878
VTA20026	Variable	\$/kWh	403,883	\$ 0.0008	\$ 0.0008	\$ 323	\$ 323
VTA20027	Variable	\$/kWh	5,417,754	\$ 0.0008	\$ -	\$ 4,334	\$ -
VTA20028	Variable	\$/kWh	13,143,140	\$ -	\$ -	\$ -	\$ -
VTA20029	Variable	\$/kWh	55,510,114	\$ -	\$ -	\$ -	\$ -
VTA20030	Variable	\$/kWh	129,047,711	\$ -	\$ -	\$ -	\$ -
VTA20031	Variable	\$/kWh	73,792,796	\$ -	\$ 0.0011	\$ -	\$ 81,172
VTA20032	Variable	\$/kWh	2,878,518,063	\$(0.0000052)	\$ -	\$ (15,000)	\$ -

Appendix 2: RTE incident data

Service Request Number	Service Request Opened Date	Emergency Services On-Site	Building Evacuated	Fault Found	Confirmed Escape	No Customers Affected	Emergency	Equipment Involved	Fault Detection	Response Time (minutes)	Responded to within 60 minutes
1-3704757423	2019-10-06 14:08:57	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	56	Y
1-3707020731	2019-10-08 08:09:45	Y	N	Y	Y	0	Y	Service Pipe	Third Party Contractor	33	Y
1-3725405221	2019-10-19 14:03:45	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	28	Y
1-3725641481	2019-10-19 10:56:40	Y	N	Y	Y	0	Y	Mains Pipe	Emergency Services	42	Y
1-3728142120	2019-10-22 12:29:44	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	20	Y
1-3733610325	2019-10-25 09:33:50	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	37	Y
1-3739445798	2019-10-29 18:06:53	N	Y	Y	Y	1	Y	Service Pipe	Third Party Contractor	46	Y
1-3743117933	2019-10-31 12:46:13	Y	N	Y	Y	0	Y	Service Pipe	Emergency Services	44	Y
1-3760455688	2019-11-13 08:02:56	Y	N	Y	Y	0	Y	Service Pipe	Third Party Contractor	48	Y
1-3765376305	2019-11-14 11:48:38	Y	N	Y	Y	8	Y	Mains Pipe	Customer/General Public	39	Y
1-3766936642	2019-11-16 11:00:21	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	26	Y
1-3770286951	2019-11-18 20:33:16	Y	N	Y	Y	1	Y	Riser Crimp	Emergency Services	30	Y
1-3771339452	2019-11-19 11:22:09	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	44	Y
1-3772213136	2019-11-19 16:29:56	Y	N	Y	Y	0	Y	Service Pipe	Customer/General Public	79	N
1-3787226903	2019-11-29 10:30:40	Y	N	Y	Y	0	Y	Service Pipe	Emergency Services	21	Y
1-3792134991	2019-12-02 08:28:05	Y	N	Y	Y	2	Y	Mains Fitting	Emergency Services	55	Y
1-3797158200	2019-12-06 12:39:33	Y	N	Y	Y	1	Y	Mains Pipe	Emergency Services	24	Y
1-3803898501	2019-12-10 12:31:20	Y	N	Y	Y	1	Y	Mains Pipe	Third Party Contractor	43	Y
1-3806168348	2019-12-12 09:20:32	Y	N	Y	Y	0	Y	Service Pipe	Third Party Contractor	60	Y
1-3815600695	2019-12-19 09:05:31	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	53	Y
1-3817703230	2019-12-20 16:44:06	Y	N	Y	Y	1	Y	Service Pipe	Customer/General Public	33	Y
1-3827346445	2020-01-03 14:19:31	Y	N	Y	Y	0	Y	Mains Pipe	Third Party Contractor	13	Y
1-3833088779	2020-01-06 09:38:28	Y	Y	Y	Y	0	Y	Riser Pipe	Emergency Services	18	Y
1-3837544041	2020-01-09 07:25:45	Y	N	Y	Y	1	Y	Service Pipe	Customer/General Public	47	Y
1-3847950861	2020-01-16 12:57:35	Y	N	Y	Y	1	Y	Riser Valve	Emergency Services	31	Y

Service Request Number	Service Request Opened Date	Emergency Services On-Site	Building Evacuated	Fault Found	Confirmed Escape	No Customers Affected	Emergency	Equipment Involved	Fault Detection	Response Time (minutes)	Responded to within 60 minutes
1-3849825011	2020-01-17 16:06:07	Y	N	Y	Y	0	Y	Service Pipe	Emergency Services	68	N
1-3851773241	2020-01-20 16:17:03	Y	N	Y	Y	1	Y	Riser Valve	Customer/General Public	108	N
1-3854019771	2020-01-22 08:40:03	Y	Y	Y	Y	0	Y	Service Pipe	Third Party Contractor	40	Y
1-3854867706	2020-01-22 11:55:32	Y	N	Y	Y	0	Y	Service Pipe	Customer/General Public	44	Y
1-3866362893	2020-01-30 11:02:30	Y	N	Y	Y	0	Y	Mains Pipe	Emergency Services	28	Y
1-3866460961	2020-01-30 11:19:50	Y	N	Y	Y	1	Y	Mains Pipe	Third Party Contractor	33	Y
1-3866461680	2020-01-30 15:45:18	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	74	N
1-3866669973	2020-01-30 18:21:02	Y	N	Y	Y	0	Y	Mains Pipe	Emergency Services	36	Y
1-3868902684	2020-01-31 14:16:14	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	24	Y
1-3869813481	2020-02-01 06:50:16	Y	N	Y	Y	0	Y	Mains Fitting	Emergency Services	38	Y
1-3872493498	2020-02-03 08:45:51	Y	N	Y	Y	2	Y	Mains Fitting	Third Party Contractor	48	Y
1-3872888621	2020-02-03 14:53:30	Y	N	Y	Y	1	Y	Mains Pipe	Third Party Contractor	28	Y
1-3877545117	2020-02-05 12:48:37	Y	N	Y	Y	0	Y	Service Valve	Emergency Services	36	Y
1-3880193161	2020-02-07 18:29:45	Y	N	Y	Y	0	Y	Service Pipe	Emergency Services	37	Y
1-3881413891	2020-02-10 16:20:39	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	50	Y
1-3882555624	2020-02-11 10:01:55	Y	N	Y	Y	1	Y	Service Pipe	Customer/General Public	42	Y
1-3888082271	2020-02-13 17:34:34	Y	N	Y	Y	0	Y	Mains Pipe	Customer/General Public	43	Y
1-3889912013	2020-02-14 18:18:44	Y	N	Y	Y	0	Y	Riser Pipe	Emergency Services	32	Y
1-3901788153	2020-02-25 11:16:23	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	24	Y
1-3902404951	2020-02-25 15:39:05	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	19	Y
1-3903489204	2020-02-26 11:31:17	Y	N	Y	Y	1	Y	Service Pipe	Customer/General Public	25	Y
1-3909401880	2020-02-29 09:39:01	Y	N	Y	Y	0	Y	Service Pipe	Emergency Services	30	Y
1-3917653650	2020-03-05 10:37:15	Y	N	Y	Y	1	Y	Riser Valve	On Site (Vector Contractor)	8	Y
1-3922178789	2020-03-09 11:10:50	N	Y	Y	Y	0	Y	Service Fitting	Third Party Contractor	23	Y
1-3926743777	2020-03-12 06:45:31	Y	N	Y	Y	1	Y	Riser Pipe	Customer/General Public	34	Y
1-3931054748	2020-03-16 08:57:19	Y	Y	Y	Y	0	Y	Service Pipe	Customer/General Public	15	Y
1-3931878898	2020-03-16 13:58:49	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	22	Y

Service Request Number	Service Request Opened Date	Emergency Services On-Site	Building Evacuated	Fault Found	Confirmed Escape	No Customers Affected	Emergency	Equipment Involved	Fault Detection	Response Time (minutes)	Responded to within 60 minutes
1-3933711246	2020-03-17 16:28:18	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	28	Y
1-3933711284	2020-03-17 16:31:22	Y	N	Y	Y	0	Y	Service Pipe	Emergency Services	53	Y
1-3936741081	2020-03-19 12:04:38	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	25	Y
1-3941111892	2020-03-23 15:31:07	Y	Y	Y	Y	1	Y	Riser Pipe	Emergency Services	33	Y
1-3943192063	2020-03-24 15:35:24	Y	Y	Y	Y	0	Y	Riser Valve	Emergency Services	10	Y
1-3943192078	2020-03-24 17:17:59	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	28	Y
1-3948291281	2020-03-29 09:50:49	Y	N	Y	Y	1	Y	Riser Valve	On Site (Vector Contractor)	33	Y
1-3975948640	2020-04-07 10:18:36	N	Y	Y	Y	0	Y	Service Fitting	Customer/General Public	52	Y
1-3985461433	2020-04-16 09:06:32	Y	N	Y	Y	0	Y	Riser Valve	Customer/General Public	27	Y
1-3990049451	2020-04-19 22:11:58	Y	N	Y	Y	0	Y	Service Valve	Emergency Services	45	Y
1-4005104531	2020-05-01 09:32:27	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	25	Y
1-4013449077	2020-05-05 09:20:56	Y	N	Y	Y	0	Y	Service Pipe	Third Party Contractor	26	Y
1-4021107741	2020-05-08 10:05:56	Y	N	Y	Y	0	Y	Service Pipe	Emergency Services	39	Y
1-4023530457	2020-05-11 09:15:25	Y	N	Y	Y	0	Y	Service Pipe	Customer/General Public	39	Y
1-4026649344	2020-05-12 19:24:09	Y	N	Y	Y	0	Y	Mains Pipe	Emergency Services	26	Y
1-4031993365	2020-05-16 10:51:07	Y	Y	Y	Y	1	Y	Riser Valve	Emergency Services	43	Y
1-4034037551	2020-05-18 18:28:29	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	39	Y
1-4036814540	2020-05-20 10:21:14	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	24	Y
1-4052146101	2020-05-29 09:43:43	N	Y	Y	Y	0	Y	Service Pipe	Customer/General Public	28	Y
1-4055964142	2020-05-30 13:15:11	N	Y	Y	Y	1	Y	Service Pipe	Customer/General Public	52	Y
1-4072339710	2020-06-10 06:31:12	Y	N	Y	Y	0	Y	Mains Valve	Emergency Services	43	Y
1-4076978569	2020-06-12 12:59:52	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	24	Y
1-4079780743	2020-06-15 13:52:26	Y	N	Y	Y	0	Y	Service Pipe	Emergency Services	27	Y
1-4089196589	2020-06-20 12:36:51	Y	N	Y	Y	3	Y	Service Pipe	Emergency Services	49	Y
1-4097699848	2020-06-25 10:45:20	Y	N	Y	Y	0	Y	Riser Pipe	Emergency Services	23	Y
1-4098877129	2020-06-26 08:07:57	Y	N	Y	Y	0	Y	Service Fitting	Emergency Services	34	Y
1-4115867639	2020-07-04 12:08:19	Y	N	Y	Y	1	Y	Riser Pipe	Emergency Services	37	Y

Service Request Number	Service Request Opened Date	Emergency Services On-Site	Building Evacuated	Fault Found	Confirmed Escape	No Customers Affected	Emergency	Equipment Involved	Fault Detection	Response Time (minutes)	Responded to within 60 minutes
1-4124228421	2020-07-09 11:22:14	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	43	Y
1-4132888171	2020-07-14 20:06:56	Y	N	Y	Y	1	Y	Service Fitting	Customer/General Public	0	Y
1-4141817650	2020-07-17 10:40:42	Y	N	Y	Y	22	Y	Mains Pipe	Customer/General Public	44	Y
1-4141917271	2020-07-17 10:23:45	N	Y	Y	Y	0	Y	Service Fitting	Third Party Contractor	34	Y
1-4142023785	2020-07-17 12:06:56	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	57	Y
1-4142287373	2020-07-17 13:43:11	Y	N	Y	Y	1	Y	Service Pipe	Customer/General Public	48	Y
1-4155252643	2020-07-25 09:49:25	Y	N	Y	Y	1	Y	Riser Pipe	Emergency Services	38	Y
1-4157713195	2020-07-27 19:30:48	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	52	Y
1-4162901601	2020-07-29 08:27:05	Y	N	Y	Y	0	Y	Service Pipe	Third Party Contractor	53	Y
1-4166285508	2020-07-30 17:37:52	Y	N	Y	Y	0	Y	Service Fitting	Emergency Services	28	Y
1-4167798062	2020-07-31 12:45:55	N	Y	Y	Y	1	Y	Riser Valve	Customer/General Public	38	Y
1-4174397013	2020-08-04 09:08:43	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	27	Y
1-4180024735	2020-08-06 15:27:40	Y	N	Y	Y	0	Y	Mains Pipe	Customer/General Public	46	Y
1-4205854372	2020-08-22 08:42:49	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	50	Y
1-4207905277	2020-08-24 15:47:36	Y	N	Y	Y	1	Y	Riser Pipe	Emergency Services	20	Y
1-4213248436	2020-08-26 23:20:55	Y	N	Y	Y	0	Y	Mains Pipe	Emergency Services	60	Y
1-4219234317	2020-08-29 14:17:39	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	34	Y
1-4227870723	2020-09-02 14:53:33	Y	N	Y	Y	1	Y	Riser Valve	Emergency Services	40	Y
1-4236700770	2020-09-08 09:03:00	Y	Y	Y	Y	3	Y	Mains Pipe	Customer/General Public	37	Y
1-4243932573	2020-09-14 10:10:15	Y	N	Y	Y	1	Y	Service Pipe	Third Party Contractor	32	Y
1-4244788940	2020-09-14 09:58:16	Y	Y	Y	Y	1	Y	Mains Pipe	Emergency Services	30	Y
1-4246835486	2020-09-15 13:36:49	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	32	Y
1-4249593369	2020-09-16 14:43:29	Y	N	Y	Y	0	Y	Mains Pipe	Emergency Services	38	Y
1-4260992144	2020-09-23 14:50:49	N	Y	Y	Y	1	Y	Service Pipe	Third Party Contractor	44	Y
1-4265434299	2020-09-28 09:35:12	Y	N	Y	Y	0	Y	Mains Pipe	Emergency Services	40	Y
1-4268505125	2020-09-28 14:10:40	Y	N	Y	Y	1	Y	Service Pipe	Emergency Services	29	Y