DEFAULT PRICE-QUALITY PATH

ANNUAL COMPLIANCE STATEMENT

Assessment Period: 1 April 2023 – 31 March 2024

30 August 2024

Pursuant to: Electricity Distribution Services Default Price-Quality Path Determination 2020 (May 2020)

CONTENTS

1. INTRODUCTION

Alpine Energy Limited (Alpine Energy) is subject to price-quality regulation under Part 4 of the Commerce Act 1986. The Commerce Commission has set a Default Price-Quality Path (DPP) that Alpine Energy is subject to for the five years, 1 April 2020 to 31 March 2025 (the DPP regulatory period).

This annual compliance statement is published per clause 11.4 of the Electricity Distribution Services Default Price-Quality Path Determination 2020 (the Determination). This statement applies to the fourth assessment period, commencing 1 April 2023 and ending 31 March 2024.

This statement confirms that Alpine Energy:

- complies with the requirement to calculate the wash-up amount for the assessment period (Section 3);
- complies with the quality standards for the assessment period (Section 4); and
- has not entered into any agreement with another electricity distribution business (EDB) or Transpower for an amalgamation, merger, major transaction, or non-reopener transaction in the assessment period (Section 5).

In November 2023, Alpine Energy restated information disclosures for the years 2014 – 2022. This was as a result of identifying a historic error affecting previously disclosed information.[1] This annual compliance statement does not reflect any impact of the restatements on the elements of the price-quality path it affects. Alpine Energy is working with the Commerce Commission as it investigates the error.

2. DATE PREPARED

This annual compliance statement was prepared on 30 August 2024. A copy is available at Alpine Energy's office at 24 Elginshire Street, Washdyke, Timaru. The annual compliance statement is published on Alpine Energy's website at www.alpineenergy.co.nz, and additional copies can be provided on request.

[1] https://www.alpineenergy.co.nz/corporate/disclosures/price-quality-regulation

3. WASH-UP AMOUNT

As required by clause 8.6 of the Determination, Alpine Energy must calculate a wash-up amount for each assessment period using the methodology specified in Schedule 1.6 of the Determination.

The wash-up amount calculated for this assessment period will be used in the opening wash-up account balance for DPP4.

As demonstrated in Table 1 below, and consistent with clause 8.6 of the Determination, Alpine Energy has **complied** with the requirement to calculate the wash-up amount for the fourth assessment period.

Wash-up amount		
Term	**Description**	**Value ($000)**
Actual allowable revenue (AAR)	Actual net allowable revenue + actual pass-through costs and actual recoverable costs + revenue wash-up drawdown amount	75,650
Actual revenue (AR)	Actual revenue from prices + other regulated income	65,765
Revenue foregone (RV)	Actual net allowable revenue x (RRP – 20%) when RRP is greater than 20%, otherwise nil	-
Wash-up amount	AAR - AR - RV	**9,885**

Table 1: Wash-up amount calculation

The main reasons for the wash-up of this assessment period are:

- The actual net allowable revenue ($50.5 million) exceeded the forecast net allowable revenue[2] ($45.3 million) by $5.2 million. This difference is driven by CPI remaining higher than forecast and used in the financial modelling for the current regulatory period. The revenue wash-up drawdown amount was positive $8.0 million, and in line with the prior year, increasing the actual allowable revenue.

[2] The forecast net allowable revenue has been disclosed in the Annual Price-Setting Compliance Statement for the assessment period starting 1 April 2023 and can be viewed on the Alpine Energy website: https://www.alpineenergy.co.nz/__data/assets/pdf_file/0031/18958/Alpine-Energy-Limited-Annual-Price-Setting-Compliance-Statement-RY24.pdf

- The actual revenue from prices ($65.7 million) was $2.6 million higher than the forecast revenue from prices ($63.1 million[3]). The alteration to a customer connection in May 2023, adding 5.5MW of demand, increased volumes to be above estimates. The consumption for the year was also boosted by an elevated irrigation load due to a prolonged dry summer in South Canterbury. This resulted in actual volumes and variable revenue being higher than forecast.

3.1 ACTUAL ALLOWABLE REVENUE

Actual allowable revenue includes actual pass-through and recoverable costs excluding any recoverable cost that is a revenue wash-up draw down amount.

Table 2 below shows the actual allowable revenue for the fourth assessment period is consistent with Schedule 1.6 of the Determination.

Actual allowable revenue		
Term	**Description**	**Value ($000)**
Actual net allowable revenue (ANAR)	Amount calculated in accordance with Schedule 1.6 of the Determination	50,542
Actual pass-through costs	Sum of all pass-through costs that were incurred or approved by the Commission in the assessment period	440
Actual recoverable costs	Sum of all recoverable costs that were incurred or approved by the Commission in the assessment period	16,632
Revenue wash-up drawn down amount	The 'revenue wash-up draw down amount' is the 'opening wash-up account balance' calculated in accordance with Schedule 1.7	8,036
Total actual allowable revenue (AAR)	Actual net allowable revenue + actual pass-through costs and actual recoverable costs	**75,650**

Table 2: Actual allowable revenue calculation

Further information supporting actual pass-through costs and actual recoverable costs are included in Appendix A.

[3] The forecast revenue from prices has been disclosed in the Annual Price-Setting Compliance Statement for the assessment period starting 1 April 2023 and can be viewed on the Alpine Energy website: https://www.alpineenergy.co.nz/__data/assets/pdf_file/0031/18958/Alpine-Energy-Limited-Annual-Price-Setting-Compliance-Statement-RY24.pdf

3.2 ACTUAL REVENUE

The Determination defines actual revenue as the sum of actual revenue from prices and other regulated income.

Table 3 below shows actual revenue for the assessment period consistent with clause 4.2 of the Determination.

Actual revenue		
Term	**Description**	**Value ($000)**
Actual revenue from prices	Actual prices between 1 April 2023 and 31 March 2024 multiplied by actual quantities for the assessment period	65,725
Other regulated income	Other income associated with supply of electricity distribution services	40
Total actual revenue (AR)	Sum of actual revenue from prices + other regulated income	**65,765**

Table 3: Actual revenue calculation

Further information supporting actual revenue from prices is included in Appendix B.

3.3 REVENUE FOREGONE

Per clause 4.2 of the Determination, revenue foregone is the actual net allowable revenue multiplied by the revenue reduction percentage – 20%. Where the revenue reduction percentage is not greater than 20%, the revenue forgone is nil.

Table 4 below shows that Alpine Energy's revenue foregone was not greater than 20% for the fourth assessment period and is nil.

Revenue foregone		
Term	**Description**	**Value ($000)**
Actual net allowable revenue (ANAR)	Actual net allowable revenue for the fourth assessment period	50,542
Revenue reduction percentage (RRP)	1 – (actual revenue from prices/forecast revenue from prices)	-4%
Revenue foregone (RV)	Actual net allowable revenue x (RRP – 20%) when RRP is greater than 20%, otherwise nil	**Nil**

Table 4: Revenue foregone calculation

4. QUALITY STANDARDS

Alpine Energy must comply with the quality standards specified in the Determination. This section of the Annual Compliance Statement demonstrates Alpine Energy's compliance with the quality standards.

4.1 STATEMENT OF COMPLIANCE WITH PLANNED INTERRUPTIONS QUALITY STANDARDS

Planned interruptions consist of all Class B interruptions on the Alpine Energy network measured as System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI).

Clause 9.2 of the Determination specifies that to comply with the planned interruptions reliability assessment cap, the sum of planned SAIDI and SAIFI values for all five assessment periods of the DPP regulatory period (i.e., the five years 1 April 2020 to 31 March 2025) must not exceed the planned accumulated SAIDI and SAIFI limits as specified in Schedule 3.1 of the Determination.

Table 5 and Table 6 below show the planned accumulated SAIDI and SAIFI limits for Alpine Energy for the DPP regulatory period and the planned SAIDI and SAIFI assessed values for the fourth assessment period and shows that Alpine Energy has **complied** with planned interruption quality standards.

Planned interruptions quality standard - SAIDI	
Planned accumulated SAIDI limit for the regulatory period	824.87
Planned SAIDI assessed value for the fourth assessment period	105.61
Planned accumulated SAIDI at the end of the fourth assessment period	340.91
Planned accumulated average SAIDI limit at the end of the fourth assessment period	659.90
Compliance result	**Compliant**

Table 5: Planned SAIDI for the assessment period

Planned interruptions quality standard - SAIFI	
Planned accumulated SAIFI limit for the regulatory period	3.4930
Planned SAIFI assessed value for the fourth assessment period	0.4057
Planned accumulated SAIFI at the end of the fourth assessment period	1.2306
Planned accumulated average SAIFI limit at the end of the fourth assessment period	2.7944
Compliance result	**Compliant**

Table 6: Planned SAIFI for the assessment period

Further information supporting planned SAIDI assessed values are included in Section 4.1.1.

4.1.1 Planned SAIDI assessed values

Alpine Energy has calculated the SAIDI assessed value in accordance with subclause 2 of Schedule 3.1.

Table 7 below shows the calculation of Alpine Energy's planned SAIDI assessed values for the assessment period.

Planned SAIDI assessed value		
Term	**Description**	**Value**
Class B non-notified interruptions	Class B interruptions excluding the Class B notified interruptions	57.50
Class B notified interruptions falling outside window	Class B notified interruptions occurred partially or wholly outside of their specified notified interruption window or alternate day	4.26
$SAIDI_B$	Sum of Class B non-notified interruptions	61.76
Class B notified interruptions falling inside window	The SAIDI values of any Class B notified interruptions where the SAIDI value is the greater of that calculated based on: (i) the duration of minutes accumulated for each ICP that the Class B notified interruption occurred for; and (ii) the period of the notified interruption window minus two hours	86.95
Class B intended interruptions cancelled without notice	The 'intended SAIDI values' of any intended interruption cancelled without notice is the greater of that calculated based on: (i) the duration of minutes accumulated for each ICP that the intended interruption occurred for, which will be nil; and (ii) the period of the notified interruption window minus two hours	0.74
Class B intended interruptions cancelled with notice	The 'intended SAIDI values' of any intended interruption cancelled with notice, where the 'intended SAIDI value' for each of those intended interruptions cancelled with notice is nil.	-
$SAIDI_N$	Sum of Class B notified interruptions	87.69
Planned SAIDI assessed value	$SAIDI_B + (SAIDI_N / 2)$	**105.61**

Table 7: Planned SAIDI assessed value calculation

4.2 STATEMENT OF COMPLIANCE WITH UNPLANNED INTERRUPTIONS QUALITY STANDARDS

Clause 9.8 of the Determination specifies that to comply with the annual unplanned interruptions reliability assessment, Alpine Energy's unplanned SAIDI and SAIFI assessed values must not exceed the SAIDI and SAIFI annual limits.

The unplanned SAIDI assessment value and the unplanned SAIFI assessment value are specified in Schedule 3.2 of the Determination.

Unplanned SAIDI is calculated by listing all unplanned Class C interruptions on the Alpine Energy network for the assessment period. Unplanned SAIDI is normalised for major event days (MEDs). A MED occurs when the daily SAIDI value for unplanned interruptions exceeds Alpine Energy's SAIDI boundary value of 9.17 SAIDI minutes, specified in Schedule 3.2 of the Determination.

Table 8 below shows that Alpine Energy has **complied** with the unplanned interruptions quality standard as Alpine Energy's unplanned SAIDI assessed value is less than its unplanned SAIDI limit for the assessment period.

Unplanned interruptions quality standard - SAIDI		
Unplanned SAIDI limit	Schedule 3.2 of the Determination	124.71
Unplanned SAIDI assessed value	Sum of the SAIDI values for Class C interruptions commencing within the assessment period, where the SAIDI value for each 30-minute period that starts on the hour or half past the hour within a SAIDI major event that exceeds 1/48th of the SAIDI unplanned boundary value for that assessment period is replaced with 1/48th of the SAIDI unplanned boundary value for that assessment period	86.40
Compliance result		**Compliant**

Table 8: Unplanned SAIDI for the assessment period

Unplanned SAIFI is calculated by summing all unplanned Class C interruptions on the Alpine Energy network for the assessment period. Unplanned SAIFI is normalised for major event days (MEDs). A MED occurs when the daily SAIFI value for unplanned interruptions exceeds Alpine Energy's SAIFI boundary value of 0.0671 SAIFI interruptions, specified in Schedule 3.2 of the Determination.

Table 9 below shows that Alpine Energy has **complied** with the unplanned interruptions quality standard as Alpine Energy's unplanned SAIFI assessed value is less than its unplanned SAIFI limit for the assessment period.

Unplanned interruptions quality standard - SAIFI		
Unplanned SAIFI limit	Schedule 3.2 of the Determination	1.1970
Unplanned SAIFI assessed value	Sum of the SAIFI values for Class C interruptions commencing within the assessment period, where the SAIFI value for each 30-minute period that starts on the hour or half past the hour within a SAIFI major event that exceeds 1/48th of the SAIFI unplanned boundary value for that assessment period is replaced with 1/48th of the SAIFI unplanned boundary value for that assessment period.	0.7935
Compliance result		**Compliant**

Table 9: Unplanned SAIFI for the assessment period

Information about policies, procedures and calculations for measuring planned and unplanned interruptions during the assessment period is included in Appendix C.

4.3 MAJOR EVENTS

Table 10 below shows that Alpine Energy had three unplanned SAIDI major events during the assessment period.

Unplanned SAIDI major events					
Start time	End time	Location(s)	Equipment involved	Pre-normalised unplanned SAIDI	Normalised unplanned SAIDI
1/10/2023 13:30	3/10/2023 15:00	Various (See Appendix D)	Distribution lines (excluding LV)	88.42	2.40
7/10/2023 4:30	9/10/2023 3:30	Various (See Appendix D)	Distribution other (excluding LV)	25.61	0.19
25/12/2023 13:00	27/12/2023 12:00	Various (See Appendix D)	Subtransmission lines	18.30	0.57

Table 10: Unplanned SAIDI major events for the assessment period

Table 11 below shows that Alpine Energy had two unplanned SAIFI major events during the assessment period.

Unplanned SAIFI major events					
Start time	End time	Location(s)	Equipment involved	Pre-normalised unplanned SAIFI	Normalised unplanned SAIFI
1/10/2023 15:00	3/10/2023 14:00	Various (See Appendix D)	Distribution lines (excluding LV)	0.1348	0.0148
25/12/2023 16:30	27/12/2023 15:30	Various (See Appendix D)	Subtransmission lines	0.1377	0.0042

Table 11: Unplanned SAIFI major events for the assessment period

Further information about major events is included in Appendix D.

4.4 STATEMENT OF COMPLIANCE WITH EXTREME EVENT STANDARD

Clause 9.10 of the Determination specifies that, to comply with the extreme event standards, Alpine Energy must not have an extreme event[4] in the assessment period. The calculation of the unplanned interruptions excludes any unplanned interruption that is the result of major external factors[5]. The extreme event standard limit is specified in paragraphs (1)(a) and (b) in Schedule 3.3 of the Determination.

Table 12 below shows that Alpine Energy has **complied** with the extreme event standard for the assessment period.

Extreme event standard	
Number of extreme events	Nil
Compliance result	**Compliant**

Table 12: Extreme event standard for the assessment period

[4] An extreme event occurs wherein 24 hours of an interruption starting the aggregate SAIDI value exceeds 120 minutes, or the total duration of customer interruption minutes resulting from all unplanned interruptions exceeds a total of six million customer interruption minutes.

[5] Major external factors include natural disaster, third-party interference, a fire that does not originate on Alpine Energy's network, or wildlife.

4.5 QUALITY INCENTIVE ADJUSTMENT

The quality incentive adjustment is intended to provide an incentive for Alpine Energy to maintain or improve its quality of supply over the DPP regulatory period.

The method to calculate the quality incentive adjustment is specified in Schedule 4 of the Determination.

Table 13 below shows Alpine Energy's quality incentive adjustment for the assessment period is a penalty of $170,000.

Quality Incentive Adjustment		
Term	**Description**	**Value ($000)**
SAIDI planned adjustment	(SAIDI $_{\text{planned, target}}$ – SAIDI $_{\text{planned, assessed}}$) x 0.5 x IR	(199)
SAIDI unplanned adjustment	(SAIDI $_{\text{unplanned, target}}$ – SAIDI $_{\text{unplanned, assessed}}$) x IR	43
Total adjustment	SAIDI planned adjustment + SAIDI unplanned adjustment	**(156)**
Revenue at risk	0.02* ANAR	1,011
Total penalty/reward		(156)
67th percentile estimate of post-tax WACC		4.23%
Quality incentive adjustment		**(170)**

Table 13: Quality incentive adjustment calculation

The quality incentive rate will be returned to customers as a reduction in recoverable cost applied to prices two years after this assessment period, i.e., prices effective 1 April 2025.

Table 14 below shows the inputs used to calculate Alpine Energy's quality incentive adjustment for the assessment period.

Quality Incentive Adjustment Inputs					
Raw Inputs					
Term	**Units**	**Value**	**Term**	**Units**	**Value**
SAIDI planned interruption cap	minutes	164.97	**SAIDI unplanned interruption cap**	minutes	124.71
SAIDI planned interruption collar	minutes	-	**SAIDI unplanned interruption collar**	minutes	-
SAIDI planned interruption target	minutes	54.99	**SAIDI unplanned interruption target**	minutes	91.88
Planned SAIDI assessed value	minutes	105.61	**Unplanned SAIDI assessed value**	minutes	86.40
Incentive rate		7,879			
Actual net allowable revenue (ANAR)	$000	50,542			
					Output Calculations
SAIDI planned interruption target	minutes	54.99	**SAIDI unplanned interruption target**	minutes	91.88
Minimum of the planned SAIDI cap and assessed value	minutes	105.61	**Minimum of the unplanned SAIDI cap and assessed value**	minutes	86.40
Planned SAIDI subject to incentive	minutes	(51)	**Unplanned SAIDI subject to incentive**	minutes	5
Adjustment (IR x 0.5)	$	3,940	**Adjustment (IR)**	$	7,879
SAIDI planned adjustment	$000	(199)	**SAIDI unplanned adjustment**	$000	43

Table 14: Quality incentive adjustment calculation

5. TRANSACTIONS

Alpine Energy has not entered into any agreements with another EDB or Transpower for an amalgamation, merger, major transaction, or transfer in the assessment period.

6. DIRECTOR'S CERTIFICATION

A Director's certificate in the form set out in Schedule 7 of the Determination is included in Appendix E.

7. ASSURANCE REPORT

An assurance report meeting the requirements of Schedule 8 of the Determination is included in Appendix F.

APPENDIX A – PASS-THROUGH AND RECOVERABLE COSTS

Pass-through costs

Table 15 below shows the actual pass-through cost for the fourth assessment period.

Actual pass-through costs	
Actual pass-through costs	**Actual ($000)**
Rates on system fixed assets	136
Commerce Act levies	135
Electricity Authority levies	148
Utilities Disputes levies	22
Total actual pass-through cost	**440**

Table 15: Pass-through costs for the assessment period

Recoverable costs

Table 16 below shows the actual recoverable costs for the fourth assessment period.

Actual recoverable costs	
Actual recoverable costs	**Actual ($000)**
IRIS incentive adjustment	2,609
Transmission charges	12,815
New investment contract charges	1,349
Avoided transmission costs	-
System operator services charges	12
Distributed generation allowance	-
Catastrophic event allowance	-
Extended reserve allowance	-
Quality incentive adjustment	(78)
Capex wash-up	(138)
Transmission asset wash-up adjustment	-
Reconsideration event allowance	-
Quality standard variation engineers' fee	-
Revenue wash-up draw down amount	-
Fire and Emergency NZ levies	63
Innovation project allowance	-
Urgent project allowance	-
Total actual recoverable costs	**16,632**

Table 16: Recoverable costs for the assessment period

APPENDIX B – PRICES AND QUANTITIES

Table 17 shows the actual prices and quantities for actual revenue from prices for the fourth assessment period.

Actual revenue from prices				
Price Category	**Unit**	**Unit Price**	**Actual Quantity**	**Actual Revenue ($000)**
LOWHCA Fixed	$/day	0.4500	2,292	377
LOWLCA Fixed	$/day	0.4500	10,899	1,795
LOWUHCA Fixed	$/day	0.4500	18	3
LOWULCA Fixed	$/day	0.4500	44	7
015HCA Fixed	$/day	2.7937	5,898	6,031
015LCA Fixed	$/day	2.5944	11,461	10,882
015UHCA Fixed	$/day	2.7763	37	38
015ULCA Fixed	$/day	2.5392	35	33
360HCA Fixed	$/day	9.3167	533	1,816
360LCA Fixed	$/day	8.0402	745	2,192
360UHCA Fixed	$/day	10.2945	14	53
360ULCA Fixed	$/day	7.7527	15	43
ASSHCA Fixed	$/day	9.8142	1,321	4,743
ASSLCA Fixed	$/day	7.0426	416	1,074
TOU400HCA Fixed	$/day	6.9953	36	92
TOU400LCA Fixed	$/day	6.3468	98	228
TOU11HCA Fixed	$/day	7.3245	5	13
TOU11LCA Fixed	$/day	6.3776	5	12
LOWHCA Variable Day	$/kWh	0.1041	10,380,264	1,081
LOWLCA Variable Day	$/kWh	0.0960	45,069,558	4,327
LOWUHCA Variable Day	$/kWh	0.1034	118,114	12
LOWULCA Variable Day	$/kWh	0.0938	235,679	22
015HCA Variable Day	$/kWh	0.0088	41,579,182	366

Price Category	Unit	Unit Price	Actual Quantity	Actual Revenue ($000)
015LCA Variable Day	$/kWh	0.0088	70,595,515	621
015UHCA Variable Day	$/kWh	0.0088	405,549	4
015ULCA Variable Day	$/kWh	0.0088	239,738	2
360HCA Variable Day	$/kWh	0.0088	8,726,699	77
360LCA Variable Day	$/kWh	0.0088	15,865,163	140
360UHCA Variable Day	$/kWh	0.0088	383,188	3
360ULCA Variable Day	$/kWh	0.0088	310,857	3
ASSHCA Variable Day	$/kWh	0.0088	111,107,810	978
ASSLCA Variable Day	$/kWh	0.0088	29,671,770	261
TOU400HCA Variable Day	$/kWh	0.0075	18,159,670	136
TOU400LCA Variable Day	$/kWh	0.0095	69,874,862	664
TOU11HCA Variable Day	$/kWh	0.0098	42,413,348	416
TOU11LCA Variable Day	$/kWh	0.0096	10,128,028	97
LOWHCA Variable Night	$/kWh	0.0993	4,448,685	442
LOWLCA Variable Night	$/kWh	0.0912	19,315,525	1,762
LOWUHCA Variable Night	$/kWh	0.0986	50,620	5
LOWULCA Variable Night	$/kWh	0.0890	101,005	9
015HCA Variable Night	$/kWh	0.0040	17,819,649	71
015LCA Variable Night	$/kWh	0.0040	30,255,221	121
015UHCA Variable Night	$/kWh	0.0040	173,807	1
015ULCA Variable Night	$/kWh	0.0040	102,745	0
360HCA Variable Night	$/kWh	0.0040	3,740,014	15
360LCA Variable Night	$/kWh	0.0040	6,799,355	27
360UHCA Variable Night	$/kWh	0.0040	164,223	1
360ULCA Variable Night	$/kWh	0.0040	133,225	1
ASSHCA Variable Night	$/kWh	0.0040	47,617,633	190
ASSLCA Variable Night	$/kWh	0.0040	12,716,473	51
TOU400HCA Variable Night	$/kWh	0.0033	7,772,930	26

Price Category	Unit	Unit Price	Actual Quantity	Actual Revenue ($000)
TOU400LCA Variable Night	$/kWh	0.0040	31,647,479	127
TOU11HCA Variable Night	$/kWh	0.0042	16,292,760	68
TOU11LCA Variable Night	$/kWh	0.0041	4,389,649	18
ASSHCA Demand	$/kWday	0.2057	114,558	8,625
ASSLCA Demand	$/kWday	0.1625	40,331	2,399
TOU400HCA Demand	$/kWday	0.5179	7,167	1,359
TOU400LCA Demand	$/kWday	0.4645	22,022	3,744
TOU11HCA Demand	$/kWday	0.4872	10,824	1,930
TOU11LCA Demand	$/kWday	0.5620	3,814	784
Direct Billed Customer 1	$/year			334
Direct Billed Customer 2	$/year			3,986
Direct Billed Customer 3	$/year			159
Direct Billed Customer 4	$/year			658
Direct Billed Customer 5	$/year			128
Direct Billed Customer 6	$/year			46
Total actual revenue from prices				**65,725**

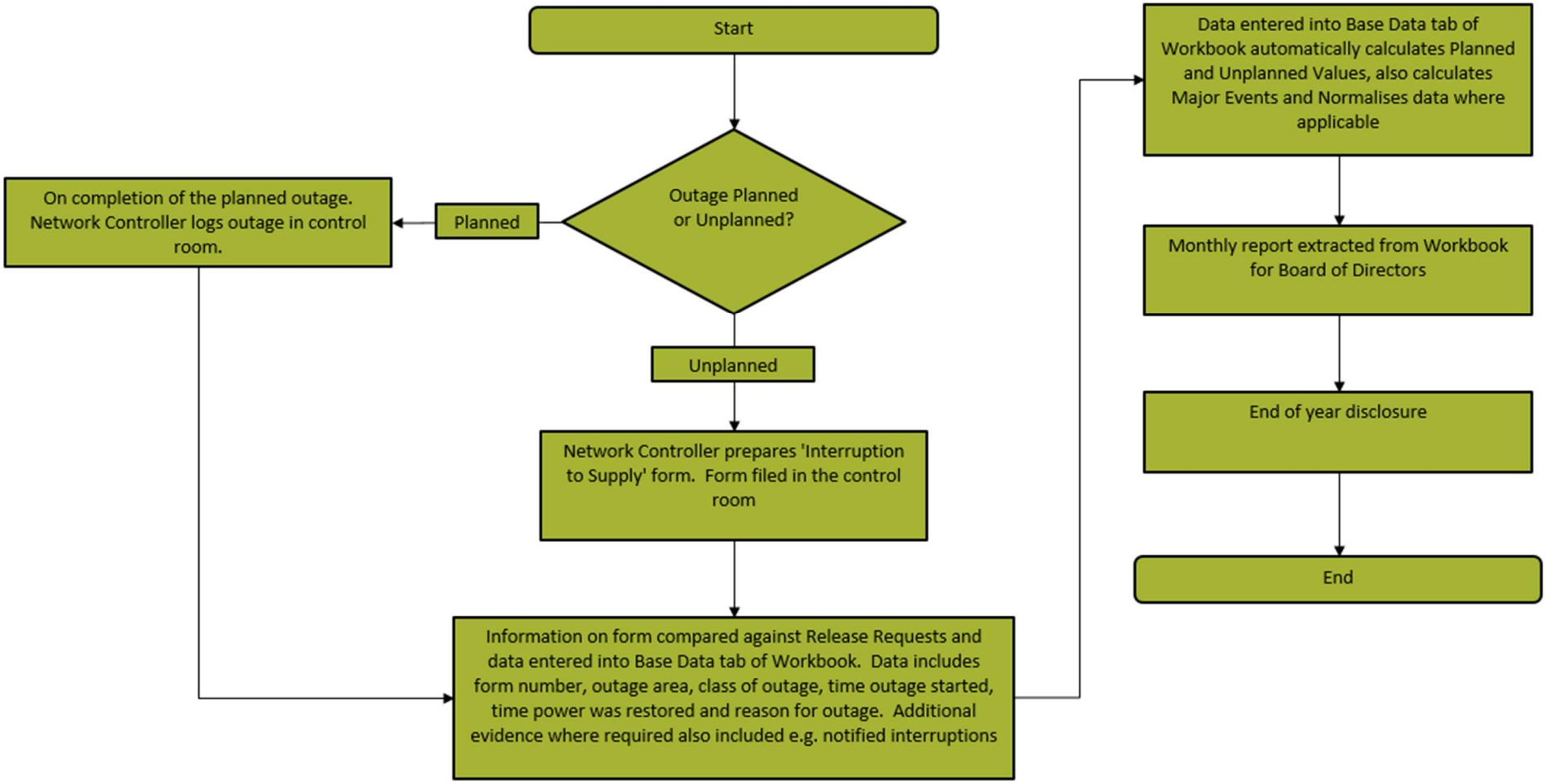
Table 17: Actual revenue from prices for the assessment period

Table 18 below shows the forecast revenue from prices for the fourth assessment period from the price setting compliance statement.

Forecast revenue from prices	
Total forecast revenue from prices	**63,149**

Table 18: Forecast revenue from prices for the assessment period

APPENDIX C – POLICIES AND PROCEDURES FOR MEASURING PLANNED AND UNPLANNED INTERRUPTIONS



APPENDIX D – SAIDI AND SAIFI MAJOR EVENTS

Table 19 to Table 23 below show the normalisation of the SAIDI and SAIFI major events during the assessment period. The approach to normalise unplanned SAIDI major events is specified in Schedule 3.2 of the Determination.

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 1								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
1/10/2023 13:30	0.00	0.39	18.03	9.17	0.19	0.00		
1/10/2023 14:00	0.00	0.39	36.37	9.17	0.19	0.00		
1/10/2023 14:30	0.00	0.39	38.60	9.17	0.19	0.00		
1/10/2023 15:00	0.00	0.39	41.93	9.17	0.19	0.00		
1/10/2023 15:30	0.00	0.39	47.06	9.17	0.19	0.00		
1/10/2023 16:00	0.00	0.39	83.45	9.17	0.19	0.00		
1/10/2023 16:30	0.00	0.39	83.45	9.17	0.19	0.00		
1/10/2023 17:00	0.00	0.39	83.60	9.17	0.19	0.00		
1/10/2023 17:30	0.00	0.39	83.60	9.17	0.19	0.00		
1/10/2023 18:00	0.00	0.39	83.60	9.17	0.19	0.00		
1/10/2023 18:30	0.00	0.39	83.71	9.17	0.19	0.00		
1/10/2023 19:00	0.00	0.39	83.73	9.17	0.19	0.00		
1/10/2023 19:30	0.00	0.39	84.39	9.17	0.19	0.00		
1/10/2023 20:00	0.00	0.39	84.39	9.17	0.19	0.00		
1/10/2023 20:30	0.00	0.39	84.39	9.17	0.19	0.00		
1/10/2023 21:00	0.00	0.39	84.46	9.17	0.19	0.00		
1/10/2023 21:30	0.00	0.39	84.46	9.17	0.19	0.00		
1/10/2023 22:00	0.00	0.39	84.46	9.17	0.19	0.00		
1/10/2023 22:30	0.00	0.39	84.46	9.17	0.19	0.00		
1/10/2023 23:00	0.00	0.39	84.46	9.17	0.19	0.00		
1/10/2023 23:30	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 0:00	0.00	0.39	84.46	9.17	0.19	0.00		

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 1								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
2/10/2023 0:30	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 1:00	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 1:30	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 2:00	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 2:30	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 3:00	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 3:30	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 4:00	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 4:30	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 5:00	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 5:30	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 6:00	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 6:30	0.00	0.39	84.46	9.17	0.19	0.00		
2/10/2023 7:00	0.00	0.30	84.46	9.17	0.19	0.00		
2/10/2023 7:30	0.00	0.30	84.56	9.17	0.19	0.00		
2/10/2023 8:00	0.00	0.30	84.56	9.17	0.19	0.00		
2/10/2023 8:30	0.00	0.30	84.56	9.17	0.19	0.00		
2/10/2023 9:00	0.00	0.30	84.56	9.17	0.19	0.00		
2/10/2023 9:30	0.00	0.30	84.56	9.17	0.19	0.00		
2/10/2023 10:00	0.00	0.30	88.11	9.17	0.19	0.00		
2/10/2023 10:30	0.00	0.00	88.11	9.17	0.19	0.00		
2/10/2023 11:00	0.00	0.00	88.11	9.17	0.19	0.00		
2/10/2023 11:30	3.41	3.41	88.11	9.17	0.19	0.19	Timaru	Hadlow
2/10/2023 12:00	0.00	3.41	88.11	9.17	0.19	0.00		
2/10/2023 12:30	0.00	3.41	88.11	9.17	0.19	0.00		
2/10/2023 13:00	14.62	18.03	88.11	9.17	0.19	0.19	Studholme	Glenavy
2/10/2023 13:30	18.33	36.37	88.11	9.17	0.19	0.19	Albury	Cave

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 1								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
2/10/2023 14:00	2.24	38.60	88.11	9.17	0.19	0.19	Temuka	Temuka East
2/10/2023 14:30	3.33	41.93	88.11	9.17	0.19	0.19	Fairlie	Fairlie Rural
2/10/2023 15:00	5.13	47.06	88.11	9.17	0.19	0.19	Bells Pond	Waihuna
2/10/2023 15:30	36.39	83.45	88.11	9.17	0.19	0.19	Geraldine	Woodbury
2/10/2023 16:00	0.00	83.45	88.11	9.17	0.19	0.00		
2/10/2023 16:30	0.14	83.60	88.11	9.17	0.19	0.14	Bells Pond	Tawai
2/10/2023 17:00	0.00	83.60	88.11	9.17	0.19	0.00		
2/10/2023 17:30	0.00	83.60	88.11	9.17	0.19	0.00		
2/10/2023 18:00	0.11	83.71	88.11	9.17	0.19	0.11	Timaru	Arowhenua
2/10/2023 18:30	0.02	83.73	88.11	9.17	0.19	0.02	Rangitata	Arundel
2/10/2023 19:00	0.66	84.39	88.11	9.17	0.19	0.19	Studholme	Glenavy
2/10/2023 19:30	0.00	84.39	88.11	9.17	0.19	0.00		
2/10/2023 20:00	0.00	84.39	88.11	9.17	0.19	0.00		
2/10/2023 20:30	0.07	84.46	88.11	9.17	0.19	0.07	Pareora	Holme Station
2/10/2023 21:00	0.00	84.46	88.11	9.17	0.19	0.00		
2/10/2023 21:30	0.00	84.46	88.11	9.17	0.19	0.00		
2/10/2023 22:00	0.00	84.46	88.11	9.17	0.19	0.00		
2/10/2023 22:30	0.00	84.46	88.11	9.17	0.19	0.00		
2/10/2023 23:00	0.00	84.46	88.11	9.17	0.19	0.00		
2/10/2023 23:30	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 0:00	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 0:30	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 1:00	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 1:30	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 2:00	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 2:30	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 3:00	0.00	84.46	88.11	9.17	0.19	0.00		

pwc

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 1								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
3/10/2023 3:30	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 4:00	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 4:30	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 5:00	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 5:30	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 6:00	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 6:30	0.00	84.46	88.11	9.17	0.19	0.00		
3/10/2023 7:00	0.11	84.56	88.11	9.17	0.19	0.11	Timaru	Hadlow
3/10/2023 7:30	0.00	84.56	88.11	9.17	0.19	0.00		
3/10/2023 8:00	0.00	84.56	88.11	9.17	0.19	0.00		
3/10/2023 8:30	0.00	84.56	88.11	9.17	0.19	0.00		
3/10/2023 9:00	0.00	84.56	88.11	9.17	0.19	0.00		
3/10/2023 9:30	3.55	88.11	88.11	9.17	0.19	0.19	Studholme	Mt Studholme
3/10/2023 10:00	0.00	88.11	88.11	9.17	0.19	0.00		
3/10/2023 10:30	0.00	88.11	88.11	9.17	0.19	0.00		
3/10/2023 11:00	0.00	88.11	88.11	9.17	0.19	0.00		
3/10/2023 11:30	0.00	84.70	84.97	9.17	0.19	0.00		
3/10/2023 12:00	0.00	84.70	84.97	9.17	0.19	0.00		
3/10/2023 12:30	0.27	84.97	84.97	9.17	0.19	0.19	Temuka	Rangitata
3/10/2023 13:00	0.00	70.35	70.35	9.17	0.19	0.00		
3/10/2023 13:30	0.00	52.02	52.02	9.17	0.19	0.00		
3/10/2023 14:00	0.00	49.78	49.78	9.17	0.19	0.00		
3/10/2023 14:30	0.00	46.45	46.45	9.17	0.19	0.00		
3/10/2023 15:00	0.04	41.36	41.36	9.17	0.19	0.04	Pareora	St Andrews
TOTAL	**88.42**					**2.40**		

Cause	Windstorm event: MetService declared a Strong Wind Warning Orange for the Canterbury Plains and Canterbury High Country areas. This event resulted in gale-force winds across South Canterbury causing multiple outages in the Alpine Energy network, while some of these outages included vegetation or failure of equipment, the main cause was wind.
How Alpine Energy responded	Upon receiving the warning from MetService, Alpine Energy began preparing for the event by monitoring the developing situation. The network emergency response team was alerted in anticipation of the event. Per our Emergency Response Standard, a network emergency was declared when the necessary threshold was reached. Appropriate resources were committed to respond to the event.
Any mitigating factors that could have prevented the event	This event could not have been prevented as it was a severe weather event that would have affected Alpine Energy's network and its performance. Alpine Energy could only monitor and respond to faults as and when they arose if conditions allowed safe access. The outages were spread across the Alpine Energy network with most occurring in the lower areas of the network from Rangitata to Glenavy and a smaller number further inland so fault response and repairs were prioritised based on our resources, the area affected, our ability to access it, the communities needs e.g. council water pumps. The main cause of the outages was wind resulting in outages where no other cause was found. The remaining outages were caused by wind-blown vegetation, fallen trees, broken crossarms, down wires, poles on a lean, and broken poles. Some of these were a follow-on effect e.g. A wind-blown tree within fall distance hitting lines, breaking the lines and poles. It should be noted that where Alpine Energy becomes aware of trees within fail distance of our lines a letter will be sent to the tree owner, but there is no legal requirement for the tree owner to take any action. Alpine Energy worked closely with field service providers as well as the South Canterbury community to ensure public safety while network restoration was carried out safely and promptly.
Steps to mitigate risk of future similar events	As per our Emergency Response Standard, we carried out post event debriefs, and lessons learnt to ensure continuous process improvement.

Table 19: Normalisation of unplanned SAIDI major events and additional required information for the assessment period

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 2								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
7/10/2023 4:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 5:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 5:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 6:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 6:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 7:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 7:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 8:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 8:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 9:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 9:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 10:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 10:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 11:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 11:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 12:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 12:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 13:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 13:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 14:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 14:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 15:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 15:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 16:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 16:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 17:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 17:30	0.00	0.00	25.61	9.17	0.19	0.00		

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 2								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
7/10/2023 18:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 18:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 19:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 19:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 20:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 20:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 21:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 21:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 22:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 22:30	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 23:00	0.00	0.00	25.61	9.17	0.19	0.00		
7/10/2023 23:30	0.00	0.00	25.61	9.17	0.19	0.00		
8/10/2023 0:00	0.00	0.00	25.61	9.17	0.19	0.00		
8/10/2023 0:30	0.00	0.00	25.61	9.17	0.19	0.00		
8/10/2023 1:00	0.00	0.00	25.61	9.17	0.19	0.00		
8/10/2023 1:30	0.00	0.00	25.61	9.17	0.19	0.00		
8/10/2023 2:00	0.00	0.00	25.61	9.17	0.19	0.00		
8/10/2023 2:30	0.00	0.00	25.61	9.17	0.19	0.00		
8/10/2023 3:00	0.00	0.00	25.61	9.17	0.19	0.00		
8/10/2023 3:30	0.00	0.00	25.61	9.17	0.19	0.00		
8/10/2023 4:00	25.61	25.61	25.61	9.17	0.19	0.19	Twizel	Twizel Rural
8/10/2023 4:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 5:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 5:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 6:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 6:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 7:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 7:30	0.00	25.61	25.61	9.17	0.19	0.00		

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 2								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
8/10/2023 8:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 8:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 9:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 9:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 10:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 10:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 11:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 11:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 12:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 12:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 13:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 13:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 14:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 14:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 15:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 15:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 16:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 16:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 17:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 17:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 18:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 18:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 19:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 19:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 20:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 20:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 21:00	0.00	25.61	25.61	9.17	0.19	0.00		

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 2								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
8/10/2023 21:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 22:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 22:30	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 23:00	0.00	25.61	25.61	9.17	0.19	0.00		
8/10/2023 23:30	0.00	25.61	25.61	9.17	0.19	0.00		
9/10/2023 0:00	0.00	25.61	25.61	9.17	0.19	0.00		
9/10/2023 0:30	0.00	25.61	25.61	9.17	0.19	0.00		
9/10/2023 1:00	0.00	25.61	25.61	9.17	0.19	0.00		
9/10/2023 1:30	0.00	25.61	25.61	9.17	0.19	0.00		
9/10/2023 2:00	0.00	25.61	25.61	9.17	0.19	0.00		
9/10/2023 2:30	0.00	25.61	25.61	9.17	0.19	0.00		
9/10/2023 3:00	0.00	25.61	25.61	9.17	0.19	0.00		
9/10/2023 3:30	0.00	25.61	25.61	9.17	0.19	0.00		
TOTAL	**25.61**					**0.19**		

Cause	Tripping of the sole transformer supply at the Twizel Village substation (TVS). According to the fault log the transformer tripped on Buchholz, indicating a likely transformer fault.
How Alpine Energy responded	Due to the nature of the fault, a technician was dispatched to diagnose the fault. The technician had to be dispatched from Timaru taking approximately 2 hours to arrive on site. To fully diagnose the fault, a series of tests were carried out. The test results came back indicating the transformer did not have an internal fault. The fault was later found to be a faulty cable on the second, normally open, connection to the substation. The area of the fault was able to be isolated to allow restoration of the power. The fault was left isolated, as there was already a capex project scheduled to rebuild the whole zone substation including the installation of a second supply transformer. The work was scheduled to begin two weeks after the fault. The project has since been completed.

Any mitigating factors that could have prevented the event	The equipment at TVS was old and was scheduled for replacement. The laid cable is not part of the inspection schedule, cable terminations are normally inspected. In this instance the cable faulted.
Steps to mitigate risk of future similar events	While not a result of this incident, Alpine Energy recently completed a major capex upgrade at the Twizel Village substation. This has eliminated the risk of the same fault occurring.

Table 20: Normalisation of unplanned SAIDI major events and additional required information for the assessment period

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 3								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
25/12/2023 13:00	0.00	0.00	11.15	9.17	0.19	0.00		
25/12/2023 13:30	0.00	0.00	11.15	9.17	0.19	0.00		
25/12/2023 14:00	0.00	0.00	11.15	9.17	0.19	0.00		
25/12/2023 14:30	0.00	0.00	11.15	9.17	0.19	0.00		
25/12/2023 15:00	0.00	0.00	11.15	9.17	0.19	0.00		
25/12/2023 15:30	0.00	0.00	11.15	9.17	0.19	0.00		
25/12/2023 16:00	0.00	0.00	11.15	9.17	0.19	0.00		
25/12/2023 16:30	0.00	0.00	14.44	9.17	0.19	0.00		
25/12/2023 17:00	0.00	0.00	14.44	9.17	0.19	0.00		
25/12/2023 17:30	0.00	0.00	14.44	9.17	0.19	0.00		
25/12/2023 18:00	0.00	0.00	14.44	9.17	0.19	0.00		
25/12/2023 18:30	0.00	0.00	14.44	9.17	0.19	0.00		
25/12/2023 19:00	0.00	0.00	14.44	9.17	0.19	0.00		
25/12/2023 19:30	0.00	0.00	18.30	9.17	0.19	0.00		
25/12/2023 20:00	0.00	0.00	18.30	9.17	0.19	0.00		
25/12/2023 20:30	0.00	0.00	18.30	9.17	0.19	0.00		
25/12/2023 21:00	0.00	0.00	18.30	9.17	0.19	0.00		
25/12/2023 21:30	0.00	0.00	18.30	9.17	0.19	0.00		
25/12/2023 22:00	0.00	0.00	18.30	9.17	0.19	0.00		
25/12/2023 22:30	0.00	0.00	18.30	9.17	0.19	0.00		
25/12/2023 23:00	0.00	0.00	18.30	9.17	0.19	0.00		
25/12/2023 23:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 0:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 0:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 1:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 1:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 2:00	0.00	0.00	18.30	9.17	0.19	0.00		

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 3								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
26/12/2023 2:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 3:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 3:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 4:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 4:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 5:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 5:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 6:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 6:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 7:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 7:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 8:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 8:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 9:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 9:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 10:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 10:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 11:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 11:30	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 12:00	0.00	0.00	18.30	9.17	0.19	0.00		
26/12/2023 12:30	11.15	11.15	18.30	9.17	0.19	0.19	Albury	Fairlie
26/12/2023 13:00	0.00	11.15	18.30	9.17	0.19	0.00		
26/12/2023 13:30	0.00	11.15	18.30	9.17	0.19	0.00		
26/12/2023 14:00	0.00	11.15	18.30	9.17	0.19	0.00		
26/12/2023 14:30	0.00	11.15	18.30	9.17	0.19	0.00		
26/12/2023 15:00	0.00	11.15	18.30	9.17	0.19	0.00		
26/12/2023 15:30	0.00	11.15	18.30	9.17	0.19	0.00		
26/12/2023 16:00	3.28	14.44	18.30	9.17	0.19	0.19	Albury	Fairlie

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 3								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
26/12/2023 16:30	0.00	14.44	18.30	9.17	0.19	0.00		
26/12/2023 17:00	0.00	14.44	18.30	9.17	0.19	0.00		
26/12/2023 17:30	0.00	14.44	18.30	9.17	0.19	0.00		
26/12/2023 18:00	0.00	14.44	18.30	9.17	0.19	0.00		
26/12/2023 18:30	0.00	14.44	18.30	9.17	0.19	0.00		
26/12/2023 19:00	3.86	18.30	18.30	9.17	0.19	0.19	Albury	Fairlie
26/12/2023 19:30	0.00	18.30	18.30	9.17	0.19	0.00		
26/12/2023 20:00	0.00	18.30	18.30	9.17	0.19	0.00		
26/12/2023 20:30	0.00	18.30	18.30	9.17	0.19	0.00		
26/12/2023 21:00	0.00	18.30	18.30	9.17	0.19	0.00		
26/12/2023 21:30	0.00	18.30	18.30	9.17	0.19	0.00		
26/12/2023 22:00	0.00	18.30	18.30	9.17	0.19	0.00		
26/12/2023 22:30	0.00	18.30	18.30	9.17	0.19	0.00		
26/12/2023 23:00	0.00	18.30	18.30	9.17	0.19	0.00		
26/12/2023 23:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 0:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 0:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 1:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 1:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 2:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 2:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 3:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 3:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 4:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 4:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 5:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 5:30	0.00	18.30	18.30	9.17	0.19	0.00		

Normalisation of unplanned SAIDI Major Events								
SAIDI Major Event 3								
Data and time (half-hour commencing)	Sum SAIDI (half-hour)	Sum SAIDI (previous 24-hour)	Max SAIDI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIDI Unplanned Assessed Value	Zone Substation	Feeder
27/12/2023 6:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 6:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 7:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 7:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 8:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 8:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 9:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 9:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 10:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 10:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 11:00	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 11:30	0.00	18.30	18.30	9.17	0.19	0.00		
27/12/2023 12:00	0.00	18.30	18.30	9.17	0.19	0.00		
TOTAL	**18.30**					**0.57**		

Cause	There were three successive trippings of the Transpower supply transformer supplying the Albury substation. As it was Transpower's equipment, we were informed that it could have been a fault upstream on Alpine Energy's network. According to our fault log, it appeared to be a fault on the Alpine Energy Cave feeder. It was later determined that the cause was, (i) a faulty insulator on the Cave feeder, and (ii) an incorrect protection setting at Transpower's Albury substation which resulted in a total loss of supply at the substation instead of just the Cave feeder.
How Alpine Energy responded	Due to the nature of the fault, Transpower had to dispatch a fault response team to Albury to diagnose the fault. Alpine Energy also dispatched fault persons to carry out a line patrol of the Cave feeder. The Transpower technician could not identify any issues on the day. Alpine Energy's line patrol also did not find any discernible issue. It was initially believed the fault was due to a faulty regulator. The regulator was bypassed on the day, power was restored, and testing as well as repairs were to be carried out after the Christmas holiday. On 5 January 2024, the Cave feeder tripped again twice. An Alpine Energy fault response team was dispatched

	and during the line patrol the fault persons found a cracked disc insulator. The location of the cracked insulator was downstream of the regulator. The suspected regulator was subsequently tested on 9 January 2024 and was found to be in working order and restored to service. Due to the Christmas holiday, it was not until after this period that Alpine Energy's engineering team had a chance to study the sequence of events and discuss with Transpower's engineering team. Transpower confirmed a protection setting error which resulted in the tripping of the Albury bus, instead of just tripping the Cave feeder when the fault occurred. This meant that for the right fault conditions this error would occur which is a measure put in place to avoid a cascading network failure. These conditions existed during the events in December 2023 but not during January 2024. Transpower has since resolved the setting error.
Any mitigating factors that could have prevented the event	Alpine Energy carries out routine overhead line inspections. For the insulators, it is not always easy to spot the defects unless there are obvious signs of distress. Hairline cracks could form in insulators which could take a considerable period to manifest into a fault to the point of complete failure. In these situations, the faults would occur during wet weather because of flashovers but would appear to be concealed until the next time or until the flashover is significant enough that insulators develop a complete crack and fail. This was the case for the above event.
Steps to mitigate risk of future similar events	We are reviewing our overhead line inspection strategy. However, it is still not possible to detect all hairline cracks as part of the inspection due to the reasons given above. We are also working with Transpower to see how we can ensure protection settings are fit for purpose.

Table 21: Normalisation of unplanned SAIDI major events and additional required information for the assessment period

Normalisation of unplanned SAIFI Major Events								
SAIFI Major Event 1								
Data and time (half-hour commencing)	Sum SAIFI (half-hour)	Sum SAIFI (previous 24-hour)	Max SAIFI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIFI Unplanned Assessed Value	Zone Substation	Feeder
1/10/2023 15:00	0.0000	0.0015	0.0883	0.0671	0.0014	0.0000		
1/10/2023 15:30	0.0000	0.0015	0.0938	0.0671	0.0014	0.0000		
1/10/2023 16:00	0.0000	0.0015	0.1256	0.0671	0.0014	0.0000		
1/10/2023 16:30	0.0000	0.0015	0.1256	0.0671	0.0014	0.0000		
1/10/2023 17:00	0.0000	0.0015	0.1270	0.0671	0.0014	0.0000		
1/10/2023 17:30	0.0000	0.0015	0.1270	0.0671	0.0014	0.0000		
1/10/2023 18:00	0.0000	0.0015	0.1270	0.0671	0.0014	0.0000		
1/10/2023 18:30	0.0000	0.0015	0.1271	0.0671	0.0014	0.0000		
1/10/2023 19:00	0.0000	0.0015	0.1271	0.0671	0.0014	0.0000		
1/10/2023 19:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
1/10/2023 20:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
1/10/2023 20:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
1/10/2023 21:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
1/10/2023 21:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
1/10/2023 22:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
1/10/2023 22:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
1/10/2023 23:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
1/10/2023 23:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 0:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 0:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 1:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 1:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 2:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 2:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 3:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 3:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		

Normalisation of unplanned SAIFI Major Events								
SAIFI Major Event 1								
Data and time (half-hour commencing)	Sum SAIFI (half-hour)	Sum SAIFI (previous 24-hour)	Max SAIFI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIFI Unplanned Assessed Value	Zone Substation	Feeder
2/10/2023 4:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 4:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 5:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 5:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 6:00	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 6:30	0.0000	0.0015	0.1277	0.0671	0.0014	0.0000		
2/10/2023 7:00	0.0000	0.0011	0.1277	0.0671	0.0014	0.0000		
2/10/2023 7:30	0.0000	0.0011	0.1279	0.0671	0.0014	0.0000		
2/10/2023 8:00	0.0000	0.0011	0.1279	0.0671	0.0014	0.0000		
2/10/2023 8:30	0.0000	0.0011	0.1279	0.0671	0.0014	0.0000		
2/10/2023 9:00	0.0000	0.0011	0.1279	0.0671	0.0014	0.0000		
2/10/2023 9:30	0.0000	0.0011	0.1279	0.0671	0.0014	0.0000		
2/10/2023 10:00	0.0000	0.0011	0.1302	0.0671	0.0014	0.0000		
2/10/2023 10:30	0.0000	0.0000	0.1302	0.0671	0.0014	0.0000		
2/10/2023 11:00	0.0000	0.0000	0.1302	0.0671	0.0014	0.0000		
2/10/2023 11:30	0.0113	0.0113	0.1302	0.0671	0.0014	0.0014	Timaru	Hadlow
2/10/2023 12:00	0.0000	0.0113	0.1302	0.0671	0.0014	0.0000		
2/10/2023 12:30	0.0000	0.0113	0.1302	0.0671	0.0014	0.0000		
2/10/2023 13:00	0.0320	0.0433	0.1302	0.0671	0.0014	0.0014	Studholme	Glenavy
2/10/2023 13:30	0.0169	0.0602	0.1302	0.0671	0.0014	0.0014	Albury	Cave
2/10/2023 14:00	0.0053	0.0655	0.1302	0.0671	0.0014	0.0014	Temuka	Temuka East
2/10/2023 14:30	0.0228	0.0883	0.1302	0.0671	0.0014	0.0014	Fairlie	Fairlie Rural
2/10/2023 15:00	0.0054	0.0938	0.1302	0.0671	0.0014	0.0014	Bells Pond	Waihuna
2/10/2023 15:30	0.0318	0.1256	0.1302	0.0671	0.0014	0.0014	Geraldine	Woodbury
2/10/2023 16:00	0.0000	0.1256	0.1302	0.0671	0.0014	0.0000		
2/10/2023 16:30	0.0013	0.1270	0.1302	0.0671	0.0014	0.0013	Bells Pond	Tawai

Normalisation of unplanned SAIFI Major Events								
SAIFI Major Event 1								
Data and time (half-hour commencing)	Sum SAIFI (half-hour)	Sum SAIFI (previous 24-hour)	Max SAIFI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIFI Unplanned Assessed Value	Zone Substation	Feeder
2/10/2023 17:00	0.0000	0.1270	0.1302	0.0671	0.0014	0.0000		
2/10/2023 17:30	0.0000	0.1270	0.1302	0.0671	0.0014	0.0000		
2/10/2023 18:00	0.0001	0.1271	0.1302	0.0671	0.0014	0.0001	Timaru	Arowhenua
2/10/2023 18:30	0.0001	0.1271	0.1302	0.0671	0.0014	0.0001	Rangitata	Arundel
2/10/2023 19:00	0.0006	0.1277	0.1302	0.0671	0.0014	0.0006	Studholme	Glenavy
2/10/2023 19:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
2/10/2023 20:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
2/10/2023 20:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
2/10/2023 21:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
2/10/2023 21:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
2/10/2023 22:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
2/10/2023 22:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
2/10/2023 23:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
2/10/2023 23:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 0:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 0:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 1:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 1:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 2:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 2:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 3:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 3:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 4:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 4:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 5:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 5:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		

Normalisation of unplanned SAIFI Major Events								
SAIFI Major Event 1								
Data and time (half-hour commencing)	Sum SAIFI (half-hour)	Sum SAIFI (previous 24-hour)	Max SAIFI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIFI Unplanned Assessed Value	Zone Substation	Feeder
3/10/2023 6:00	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 6:30	0.0000	0.1277	0.1302	0.0671	0.0014	0.0000		
3/10/2023 7:00	0.0001	0.1279	0.1302	0.0671	0.0014	0.0001	Timaru	Hadlow
3/10/2023 7:30	0.0000	0.1279	0.1302	0.0671	0.0014	0.0000		
3/10/2023 8:00	0.0000	0.1279	0.1302	0.0671	0.0014	0.0000		
3/10/2023 8:30	0.0000	0.1279	0.1302	0.0671	0.0014	0.0000		
3/10/2023 9:00	0.0000	0.1279	0.1302	0.0671	0.0014	0.0000		
3/10/2023 9:30	0.0023	0.1302	0.1302	0.0671	0.0014	0.0014	Studholme	Mt Studholme
3/10/2023 10:00	0.0000	0.1302	0.1302	0.0671	0.0014	0.0000		
3/10/2023 10:30	0.0000	0.1302	0.1302	0.0671	0.0014	0.0000		
3/10/2023 11:00	0.0000	0.1302	0.1302	0.0671	0.0014	0.0000		
3/10/2023 11:30	0.0000	0.1189	0.1235	0.0671	0.0014	0.0000		
3/10/2023 12:00	0.0000	0.1189	0.1235	0.0671	0.0014	0.0000		
3/10/2023 12:30	0.0046	0.1235	0.1235	0.0671	0.0014	0.0014	Temuka	Rangitata
3/10/2023 13:00	0.0000	0.0915	0.0915	0.0671	0.0014	0.0000		
3/10/2023 13:30	0.0000	0.0745	0.0745	0.0671	0.0014	0.0000		
3/10/2023 14:00	0.0000	0.0692	0.0692	0.0671	0.0014	0.0000		
TOTAL	**0.1348**					**0.0148**		

Cause	Windstorm event: MetService declared a Strong Wind Warning Orange for the Canterbury Plains and Canterbury High Country areas. This event resulted in gale-force winds across South Canterbury causing multiple outages in the Alpine Energy network, while some of these outages included vegetation or failure of equipment, the main cause was wind.
How Alpine Energy responded	Upon receiving the warning from MetService, Alpine Energy began preparing for the event by monitoring the developing situation. The network emergency response team was alerted in anticipation of the event. Per our

	Emergency Response Standard, a network emergency was declared when the necessary threshold was reached. Appropriate resources were committed to respond to the event.
Any mitigating factors that could have prevented the event	This event could not have been prevented as it was a severe weather event that would have affected Alpine Energy's network and its performance. Alpine Energy could only monitor and respond to faults as and when they arose if conditions allowed safe access. The outages were spread across the Alpine Energy network with most occurring in the lower areas of the network from Rangitata to Glenavy and a smaller number further inland so fault response and repairs were prioritised based on our resources, the area affected, our ability to access it, the communities needs e.g. council water pumps. The main cause of the outages was wind resulting in outages where no other cause was found. The remaining outages were caused by wind-blown vegetation, fallen trees, broken crossarms, down wires, poles on a lean, and broken poles. Some of these were a follow-on effect e.g. A wind-blown tree within fall distance hitting lines, breaking the lines and poles. It should be noted that where Alpine Energy becomes aware of trees within fail distance of our lines a letter will be sent to the tree owner, but there is no legal requirement for the tree owner to take any action. Alpine Energy worked closely with field service providers as well as the South Canterbury community to ensure public safety while network restoration was carried out safely and promptly.
Steps to mitigate risk of future similar events	As per our Emergency Response Standard, we carried out post event debriefs, and lessons learnt to ensure continuous process improvement.

Table 22: Normalisation of unplanned SAIFI major events and additional required information for the assessment period

Normalisation of unplanned SAIFI Major Events								
SAIFI Major Event 2								
Data and time (half-hour commencing)	Sum SAIFI (half-hour)	Sum SAIFI (previous 24-hour)	Max SAIFI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIFI Unplanned Assessed Value	Zone Substation	Feeder
25/12/2023 16:30	0.0000	0.0000	0.0933	0.0671	0.0014	0.0000		
25/12/2023 17:00	0.0000	0.0000	0.0933	0.0671	0.0014	0.0000		
25/12/2023 17:30	0.0000	0.0000	0.0933	0.0671	0.0014	0.0000		
25/12/2023 18:00	0.0000	0.0000	0.0933	0.0671	0.0014	0.0000		
25/12/2023 18:30	0.0000	0.0000	0.0933	0.0671	0.0014	0.0000		
25/12/2023 19:00	0.0000	0.0000	0.0933	0.0671	0.0014	0.0000		
25/12/2023 19:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
25/12/2023 20:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
25/12/2023 20:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
25/12/2023 21:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
25/12/2023 21:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
25/12/2023 22:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
25/12/2023 22:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
25/12/2023 23:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
25/12/2023 23:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 0:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 0:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 1:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 1:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 2:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 2:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 3:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 3:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 4:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 4:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 5:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 5:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		

Normalisation of unplanned SAIFI Major Events								
SAIFI Major Event 2								
Data and time (half-hour commencing)	Sum SAIFI (half-hour)	Sum SAIFI (previous 24-hour)	Max SAIFI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIFI Unplanned Assessed Value	Zone Substation	Feeder
26/12/2023 6:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 6:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 7:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 7:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 8:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 8:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 9:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 9:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 10:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 10:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 11:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 11:30	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 12:00	0.0000	0.0000	0.1377	0.0671	0.0014	0.0000		
26/12/2023 12:30	0.0513	0.0513	0.1377	0.0671	0.0014	0.0014	Albury	Fairlie
26/12/2023 13:00	0.0000	0.0513	0.1377	0.0671	0.0014	0.0000		
26/12/2023 13:30	0.0000	0.0513	0.1377	0.0671	0.0014	0.0000		
26/12/2023 14:00	0.0000	0.0513	0.1377	0.0671	0.0014	0.0000		
26/12/2023 14:30	0.0000	0.0513	0.1377	0.0671	0.0014	0.0000		
26/12/2023 15:00	0.0000	0.0513	0.1377	0.0671	0.0014	0.0000		
26/12/2023 15:30	0.0000	0.0513	0.1377	0.0671	0.0014	0.0000		
26/12/2023 16:00	0.0420	0.0933	0.1377	0.0671	0.0014	0.0014	Albury	Fairlie
26/12/2023 16:30	0.0000	0.0933	0.1377	0.0671	0.0014	0.0000		
26/12/2023 17:00	0.0000	0.0933	0.1377	0.0671	0.0014	0.0000		
26/12/2023 17:30	0.0000	0.0933	0.1377	0.0671	0.0014	0.0000		
26/12/2023 18:00	0.0000	0.0933	0.1377	0.0671	0.0014	0.0000		
26/12/2023 18:30	0.0000	0.0933	0.1377	0.0671	0.0014	0.0000		
26/12/2023 19:00	0.0444	0.1377	0.1377	0.0671	0.0014	0.0014	Albury	Fairlie
26/12/2023 19:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		

Normalisation of unplanned SAIFI Major Events								
SAIFI Major Event 2								
Data and time (half-hour commencing)	Sum SAIFI (half-hour)	Sum SAIFI (previous 24-hour)	Max SAIFI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIFI Unplanned Assessed Value	Zone Substation	Feeder
26/12/2023 20:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
26/12/2023 20:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
26/12/2023 21:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
26/12/2023 21:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
26/12/2023 22:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
26/12/2023 22:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
26/12/2023 23:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
26/12/2023 23:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 0:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 0:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 1:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 1:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 2:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 2:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 3:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 3:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 4:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 4:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 5:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 5:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 6:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 6:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 7:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 7:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 8:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 8:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 9:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		

Normalisation of unplanned SAIFI Major Events								
SAIFI Major Event 2								
Data and time (half-hour commencing)	Sum SAIFI (half-hour)	Sum SAIFI (previous 24-hour)	Max SAIFI (rolling 24-hour)	Boundary value	1/48th Boundary Value	SAIFI Unplanned Assessed Value	Zone Substation	Feeder
27/12/2023 9:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 10:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 10:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 11:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 11:30	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 12:00	0.0000	0.1377	0.1377	0.0671	0.0014	0.0000		
27/12/2023 12:30	0.0000	0.0864	0.0864	0.0671	0.0014	0.0000		
27/12/2023 13:00	0.0000	0.0864	0.0864	0.0671	0.0014	0.0000		
27/12/2023 13:30	0.0000	0.0864	0.0864	0.0671	0.0014	0.0000		
27/12/2023 14:00	0.0000	0.0864	0.0864	0.0671	0.0014	0.0000		
27/12/2023 14:30	0.0000	0.0864	0.0864	0.0671	0.0014	0.0000		
27/12/2023 15:00	0.0000	0.0864	0.0864	0.0671	0.0014	0.0000		
27/12/2023 15:30	0.0000	0.0864	0.0864	0.0671	0.0014	0.0000		
TOTAL	**0.1377**					**0.0042**		

Cause	There were three successive trippings of the Transpower supply transformer supplying the Albury substation. As it was Transpower's equipment, we were informed that it could have been a fault upstream on Alpine Energy's network. According to our fault log, it appeared to be a fault on the Alpine Energy Cave feeder. It was later determined that the cause was, (i) a faulty insulator on the Cave feeder, and (ii) an incorrect protection setting at Transpower's Albury substation which resulted in a total loss of supply at the substation instead of just the Cave feeder.
How Alpine Energy responded	Due to the nature of the fault, Transpower had to dispatch a fault response team to Albury to diagnose the fault. Alpine Energy also dispatched fault persons to carry out a line patrol of the Cave feeder. The Transpower technician could not identify any issues on the day. Alpine Energy's line patrol also did not find any discernible issue. It was initially believed the fault was due to a faulty regulator. The regulator was bypassed on the day, power was restored, and testing as well as repairs were to be carried out after the Christmas holiday. On 5 January 2024, the Cave feeder tripped again twice. An Alpine Energy fault response team was dispatched

	and during the line patrol the fault persons found a cracked disc insulator. The location of the cracked insulator was downstream of the regulator. The suspected regulator was subsequently tested on 9 January 2024 and was found to be in working order and restored to service. Due to the Christmas holiday, it was not until after this period that Alpine Energy's engineering team had a chance to study the sequence of events and discuss with Transpower's engineering team. Transpower confirmed a protection setting error which resulted in the tripping of the Albury bus, instead of just tripping the Cave feeder when the fault occurred. This meant that for the right fault conditions this error would occur which is a measure put in place to avoid a cascading network failure. These conditions existed during the events in December 2023 but not during January 2024. Transpower has since resolved the setting error.
Any mitigating factors that could have prevented the event	Alpine Energy carries out routine overhead line inspections. For the insulators, it is not always easy to spot the defects unless there are obvious signs of distress. Hairline cracks could form in insulators which could take a considerable period to manifest into a fault to the point of complete failure. In these situations, the faults would occur during wet weather because of flashovers but would appear to be concealed until the next time or until the flashover is significant enough that insulators develop a complete crack and fail. This was the case for the above event.
Steps to mitigate risk of future similar events	We are reviewing our overhead line inspection strategy. However, it is still not possible to detect all hairline cracks as part of the inspection due to the reasons given above. We are also working with Transpower to see how we can ensure protection settings are fit for purpose.

Table 23: Normalisation of unplanned SAIFI major events and additional required information for the assessment period

APPENDIX E – DIRECTORS' CERTIFICATE

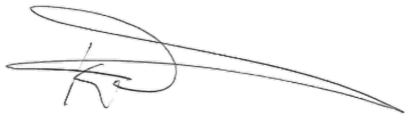
Schedule 7: Form of director's certificate for annual compliance statement

Clause 11.5 (d)

We, Melissa Clark-Reynolds and Kevin Winders, being directors of Alpine Energy Limited certify that, having made all reasonable enquiry, to the best of my/our knowledge and belief, the attached annual compliance statement of Alpine Energy Limited, and related information, prepared for the purposes of the Electricity Distribution Services Default Price-Quality Path Determination 2020 has been prepared in accordance with all the relevant requirements.

Melissa Clark-Reynolds

30 August 2024



Kevin Winders

30 August 2024

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.

APPENDIX F – ASSURANCE REPORT

Independent Assurance Report

To the Directors of Alpine Energy Limited and to the Commerce Commission on the Annual Compliance Statement for the assessment period ended 31 March 2024 as required by the Electricity Distribution Services Default Price-Quality Path Determination 2020 (consolidated 20 May 2020)

The Auditor-General is the auditor of Alpine Energy Limited (the Company). The Auditor-General has appointed me, Elizabeth Adriana (Adri) Smit, using the staff and resources of PricewaterhouseCoopers, to undertake a reasonable assurance engagement, on his behalf, on whether the Annual Compliance Statement on pages 4 to 46 for the assessment period ended on 31 March 2024 has been prepared, in all material respects, in compliance with the Electricity Distribution Services Default Price-Quality Path Determination 2020 (consolidated 20 May 2020) (the Determination).

Opinion

In our opinion, in all material respects:

- as far as appears from our examination, the information used in the preparation of the Annual Compliance Statement has been properly extracted from the Company's accounting and other records, sourced from its financial and non-financial systems; and
- the Company has complied with clauses 11.5 and 11.6 of the Determination in preparing the Annual Compliance Statement for the assessment period ended 31 March 2024.

Basis for opinion

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

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

Directors' responsibilities

The Directors of the Company are responsible for the:

- preparation of the Annual Compliance Statement under clause 11.4 and in accordance with the requirements in clauses 11.5 and 11.6 of the Determination; and
- identification of risks that may threaten compliance with the clauses identified above and controls which will mitigate those risks and monitor ongoing compliance.

Auditor's responsibilities

Our responsibilities in terms of clause 11.5(e) and schedule 8(1)(b)(vi) and 8(1)(c) of the Determination, are to express an opinion on whether:

- as far as appears from our examination, the information used in the preparation of the Annual Compliance Statement has been properly extracted from the Company's accounting and other records, sourced from its financial and non-financial systems; and
- the Annual Compliance Statement, for the assessment period ended 31 March 2024, has been prepared, in all material respects, in accordance with the requirements in clauses 11.5 and 11.6 of the Determination.

To meet these responsibilities, we planned and performed procedures in accordance with ISAE (NZ) 3000 (Revised) and SAE 3100 (Revised), to obtain reasonable assurance about whether the company has complied, in all material respects, with clauses 11.5 and 11.6 of the Determination.

In relation to the wash-up amount set out in clause 8.6 of the Determination, our procedures included recalculation of the wash-up amount in accordance with schedule 1.6 of the Determination and assessing it against the amounts and disclosures contained on pages 4 to 6 and 16 to 20 of the Annual Compliance Statement.

In relation to the quality standards in clause 9 of the Determination, our procedures included examination, on a test basis, of evidence relevant to the values and disclosures contained on pages 7 to 13 and 21 to 46 of the Annual Compliance Statement.

In relation to the quality incentive adjustment set out in Schedule 4 of the Determination, our procedures included recalculation of the quality incentive adjustment in accordance with Schedule 4 of the Determination and assessing it against the amounts and disclosures contained on pages 14 to 15 of the Annual Compliance Statement.

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

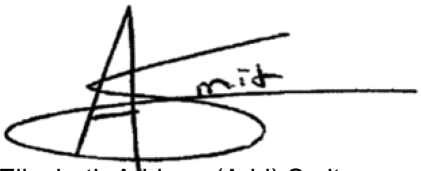
Inherent limitations
Because of the inherent limitations of an assurance engagement, together with the internal control structure, it is possible that fraud, error or non-compliance with clauses 11.5 and 11.6 of the Determination may occur and not be detected. A reasonable assurance engagement throughout the assessment period does not provide assurance on whether compliance with clauses 11.5 and 11.6 of the Determination will continue in the future.

Restricted use
This report has been prepared for use by the directors of the Company and the Commerce Commission in accordance with clause 11.5 (e) of the Determination and is provided solely for the purpose of establishing whether the compliance requirements have been met. We disclaim any assumption of responsibility for any reliance on this report to any person other than the directors of the Company and the Commerce Commission, or for any other purpose than that for which it was prepared.

Independence and quality control
We complied with the Auditor-General's independence and other ethical requirements, which incorporate the requirements of Professional and Ethical Standard 1 International Code of Ethics for Assurance Practitioners (including International Independence Standards) (New Zealand) (PES 1) issued by the New Zealand Auditing and Assurance Standards Board. PES 1 is founded on the fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

We have also complied with the Auditor-General's quality management requirements, which incorporate the requirements of Professional and Ethical Standard 3 Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements (PES 3) issued by the New Zealand Auditing and Assurance Standards Board. PES 3 requires our firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

The Auditor-General, and his employees, and PricewaterhouseCoopers and its partners and employees may deal with the Company on normal terms within the ordinary course of trading activities of the Company. Other than any dealings on normal terms within the ordinary course of trading activities of the Company, this engagement, the assurance engagement on the Information Disclosures, other regulatory requirements of the Commerce Act 1986, and the annual audit of the company's financial statements and performance information, we have no relationship with, or interests in, the company.



Elizabeth Adriana (Adri) Smit
PricewaterhouseCoopers
On behalf of the Auditor-General
Christchurch, New Zealand
30 August 2024