



Default Price-Quality Path Compliance Statement

For the Assessment Period ended 31 March 2020

4 June 2020

Pursuant to the requirements of clause 11.1 of the Electricity Distribution
Services Default Price-Quality Path Determination 2015

Contents

1. Summary of Compliance	1
2. Compliance with the Price Path.....	3
3. Compliance with the Quality Path	5
4. Restructure of prices.....	9
5. Transactions.....	10
6. Director Certification.....	11
7. Auditor's Report.....	12
Appendix A – Notional and Allowable Notional Revenue Calculations.....	15
Appendix B – Calculation of distribution and pass-through and recoverable revenues	16
Appendix C – Pass-through and Recoverable Costs	19
Appendix D - Portion of distribution and pass-through and recoverable costs.....	26
Appendix E – Methodology used to forecast prices.....	27
Appendix F – Quality Standard Compliance Calculations	30
Appendix G – Quality incentive scheme	32
Appendix H – Policies and Procedures for Recording SAIDI and SAIFI	33

1. Summary of Compliance

We have complied with the price path (clause 8) and the quality standards (clause 9) of the *Commerce Act (Electricity Distribution Default Price-Quality Path) Determination 2015* (“Determination”) for the Assessment Period ended 31 March 2020.

We submit the following information in our *Default Price-Quality Path Compliance Statement* pursuant to clause 11.1 of the Determination:

- Price path under clauses 11.4(c) to (k):
 - the amount of allowable notional revenue and notional revenue
 - prices and quantities
 - the amounts of Pass-through and Recoverable Costs and information used to determine these amounts
 - the methodology used to calculate Pass-through prices and Distribution prices
 - the amount of charge relating to New Investment Agreements
 - the variances between the forecast and actual amounts of Pass-through Costs and Recoverable Costs and explanatory notes of material variances.
 - a reconciliation between Pass through Balance for this period and last.
- Quality standards under clauses 11.5 (c), (e), and (f):
 - assessed values and reliability limits
 - SAIDI and SAIFI statistics and calculations
 - the annual reliability assessments for the two previous assessment periods
 - a description of how SAIDI and SAIFI statistics were recorded, including policies and procedures
 - the cause of each Major Event Day within the assessment period.
- Director certification under clause 11.3(a) as set out in Schedule 6.
- An assurance report under clause 11.3(b) as set out in Schedule 7.

Please note, under clauses 11.2(a) to (f), we have:

- complied with price path in clause 8 for the assessment period

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- complied with the quality standards in clause 9 for the assessment period
 - not restructured prices during the assessment period with the meaning of restructured prices set out under clause 4 (Interpretation) of the Determination
 - not received a transfer of transmission assets or transferred assets to Transpower New Zealand
 - not amalgamated or merged with another party or participated in a major transaction with the meaning set out in clause 4 of the Determination.

This compliance statement was certified by a director of the board on 3 June 2020.

In conjunction with this compliance statement, copies of our New Investment Agreements with Transpower New Zealand have been submitted to the Commerce Commission in soft copy format in accordance with clause 11.4(h).

2. Compliance with the Price Path

We have complied with the price path as specified by clause 8 of the Determination. Clause 8.3 'Compliance with allowable notional revenue' requires that:

The notional revenue of a Non-exempt EDB in an Assessment Period must not exceed the allowable notional revenue for the Assessment Period, such that—

$$NR \leq ANR$$

Our compliance with the price path is demonstrated in Table 1 below.

Table 1: Notional Revenue calculation

Test:	$NR_{2019/20} \leq ANR_{2019/20}$	
NR _{2019/20}	\$	50,781,383
ANR _{2019/20}	\$	52,154,975
Result		0.974 < 1
Result	<i>Price Path has not been breached</i>	

Table 1 above shows that our notional revenue, derived using posted prices as at 31 March 2020, was less than our allowable notional revenue. More details on the notional and allowable notional revenue calculations can be found at Appendix A, on page 13.

Pass-through balance for 2020

The pass-through balance for the Assessment Period ended 31 March 2020 is -\$2,304,818 and is shown in Table 2 below.

Table 2: Pass-through balance for 2020

<i>PTB</i> _{2019/20}	Pass-through balance for the Assessment Period ending 31 March 2020	(2,304,818)
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Pass-through balance for 2019

The pass through balance for the Assessment Period ended 31 March 2019 was -\$5,248,974 and is shown in Table 3 below.

Table 3: Pass-through balance for 2019

<i>PTB</i> _{2018/19}	Pass-through balance from previous Assessment Period	(5,248,974)
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Pass-through Balance Reconciliation

We recovered \$29 million via pass-through and transmission prices. The total pass-through and recoverable costs realised during the period were \$25.5 million making the pass-through balance -\$2.1 million (or -8%). The 2020 pass through balance reconciliation is shown in Table 4 below.

Table 4: Pass through balance reconciliation

Pass-through Balance Reconciliation 2019/20		
Term	Description	Value \$
<i>PTP_{2019/20} Q_{2019/20}</i>	Pass-through Prices during 2019/20 multiplied by 31 March 2020 Quantities	28,996,166
<i>Total Pass-through and Recoverable Costs</i>	Total Pass-through and Recoverable Costs for the year ending 31 March 2020	25,732,346
<i>PTB_{2019/20}</i>	Pass-through Balance for the Assessment Period ending 31 March 2019	(2,304,818)
<i>PTB_{2018/19}</i>	Pass-through Balance from previous Assessment Period	(5,248,974)
<i>Difference</i>	Reconciliation between Pass-through Balance for the Assessment Period with the Pass-through Balance for the preceding Assessment Period	2,944,157

When we set prices effective 1 April 2019 we forecast total pass-through and recoverable costs to be \$29,748,483 inclusive of the pass-through balance as of 31 March 2018. The resulting variance is \$752,317 (or 2.5%).

The material over recovery of pass-through and transmission costs shown above is mainly attributable to setting prices to recover 4 years of under-recovery. The pass through balance of -\$2,304,818 suggests we have under-recovered.

More information can be found in the Appendices

Information on the calculation of pass-through and recoverable revenue can be found at Appendix B, Table 14, on page 14.

Information on the method used to calculate pass-through and recoverable costs can be found at Appendix C on page 17.

The proportion of distribution and pass-through and recoverable costs to total delivery charge can be found at Appendix D on page 24.

The methodology used to forecast pass-through and recoverable prices can be found at Appendix E on page 25.

3. Compliance with the Quality Path

Our year end performance was 32.36 SAIDI minutes below the SAIDI limit and 0.67 SAIFI interruptions below the SAIFI limit. Accordingly, we have complied with the quality path as specified by clause 9.1(a) of the Determination.

Clause 9.1 'Compliance with the quality standards' requires that:

A Non-exempt EDB must, in respect of each Assessment Period, either:

- (a) Comply with the annual reliability assessment specified in clause 9.2 for that Assessment Period; or
- (b) Have complied with those annual reliability assessments for the two immediately preceding extant Assessment Periods.

Our compliance with the quality path, under clause 9.1(a), is shown in Table 5: Performance against the quality standards below.

Table 5: Performance against the quality standards

	SAIDI	SAIFI	Compliance
Compliance with 9.1(a)			
2019/20 Assessment Period	Does not exceed limit	Does not exceed limit	<i>Complies</i>
or			
Compliance with 9.1(b)			<i>Complies</i>
2018/19 Assessment Period	Does not exceed limit	Does not exceed limit	<i>Complies</i>
2017/18 Assessment Period	Does not exceed limit	Does not exceed limit	<i>Complies</i>
Clause 9.1 Result:	<i>Complies with Quality Standard</i>		

Supporting evidence is presented in Appendices F to H.

Quality incentive scheme

Table 6: Quality incentive adjustment below shows that under the quality incentive scheme we have gained a \$230,883 incentive for our performance against the quality standards, which can be recovered as pass through prices in the assessment period ending 31 March 2022.

Table 6: Quality incentive adjustment

Quality Incentive Adjustment		
Term	Description	Value \$
S_{SAIDI}	SAIDI incentive	78,520
S_{SAIFI}	SAIFI incentive	152,363
S_{TOTAL}	SAIDI incentive plus SAIFI incentive	230,883

A more detailed calculation of the incentive gained under the quality incentive scheme can be found at Appendix G on page 30.

There were two major event days

We experienced two major event days (MEDs) during the assessment period. The first MED was caused by the floods which hit the Rangitata River on 7 December 2019 resulting in a total of 12.891 SAIDI minutes and 0.033 SAIFI interruptions. The second MED was caused by high winds on 30 January 2020 which resulted in a total of 10.186 SAIDI minutes and 0.062 interruptions. The details on each MED are shown in Table 7 below.

Table 7: Causes of the major event days

Date	Cause	Total SAIDI minutes	No. of minutes SAIDI was reduced by	Total SAIFI interruptions	No. of interruptions SAIFI was reduced by
7 December 2019	Rangitata Floods	12.891	3.716	0.033	0
30 January 2020	High Winds	10.186	1.011	0.062	0

Assessed Values and Reliability Limits

Clause 9.2 'Annual reliability assessment' requires that:

A Non-Exempt EDB's Assessed Values for an Assessment Period must not exceed its Reliability Limits for that Assessment Period, such that:

$$\frac{SAIDI_{ASSESS,t}}{SAIDI_{LIMIT}} \leq 1 ; \text{ and}$$

$$\frac{SAIFI_{ASSESS,t}}{SAIFI_{LIMIT}} \leq 1$$

We have come in under both the allowable SAIDI and SAIFI limits. Our assessed SAIDI and SAIFI calculations are demonstrated in Table 8 and Table 9 below.

Table 8: Assessed SAIDI calculation

Test:	$SAIDI_{Assess\ 2019/20} \leq SAIDI_{Limit}$	
SAIDI _{Assess 2019/20}	121.80	
SAIDI _{Limit}	154.16	
	0.790	< 1
Clause 9.1(a) Result:	<i>Does not exceed limit</i>	

Table 9: Assessed SAIFI calculation

Test:	$SAIFI_{Assess\ 2019/20} \leq SAIFI_{Limit}$	
SAIFI _{Assess 2019/20}	0.84	
SAIFI _{Limit}	1.51	
	0.554	< 1
Clause 9.1(a) Result:	<i>Does not exceed limit</i>	

Prior period reliability assessment

Our performance at the prior two extant Assessment Periods is shown in Table 10 and Table 11 below.

Table 10: Assessed Prior Period SAIDI and SAIFI performance

SAIDI _{Assess 2018/19}	136.77	SAIFI _{Assess 2018/19}	0.99
SAIDI _{Limit 2018/19}	154.16	SAIFI _{Limit 2018/19}	1.51
0.887	< 1	0.659	< 1
<i>Does not exceed limit</i>		<i>Does not exceed limit</i>	

Table 11: Assessed Extant Period SAIDI and SAIFI performance

SAIDI _{Assess 2017/18}	115.29	SAIFI _{Assess 2017/18}	0.99
SAIDI _{Limit 2017/18}	154.16	SAIFI _{Limit 2017/18}	1.51
0.748	< 1	0.655	< 1
<i>Does not exceed limit</i>		<i>Does not exceed limit</i>	

More information can be found in the Appendices

Details on the quality standard compliance calculation can be found at Appendix F on page 28.

Our policies and procedures for recording SAIDI and SAIFI can be found at Appendix H on page 31.

4. Restructure of prices

We did not restructure our prices that applied during the assessment period.

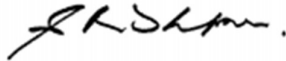
5. Transactions

During the assessment period we did not:

- receive a transfer of transmission assets from Transpower that become System Fixed Assets, or transferred System Fixed Assets to Transpower; or
- amalgamate or merger with another regulated service; or
- undertake any major transactions.

6. Director Certification

I, Stephen Richard Thompson, being a director of Alpine Energy Limited certify that, having made all reasonable enquiry, to the best of my knowledge and belief, the attached Annual Compliance Statement of Alpine Energy Limited, and related information, prepared for the purposes of the *Electricity Distribution Services Price-Quality Path Determination 2015* are true and accurate.



Stephen Richard Thompson
4 June 2020

7. Auditor's Report



INDEPENDENT ASSURANCE REPORT TO THE DIRECTORS OF ALPINE ENERGY LIMITED AND THE COMMERCE COMMISSION

The Auditor-General is the auditor of Alpine Energy Limited (the company). The Auditor-General has appointed me, Nathan Wylie, using the staff and resources of PricewaterhouseCoopers, to provide an opinion, on his behalf, on whether the Annual Compliance Statement for the year ended on 31 March 2020 on pages 1 to 10 and 15 to 32 has been prepared, in all material respects, in accordance with the Electricity Distribution Services Default Price-Quality Path Determination 2015 as amended by the *Electricity Distribution Services Default Price-Quality Path (Compliance Statement Due Date and Auditor's Report) Amendments Determination 2020*, issued by the Commerce Commission NZ on 9 April 2020 (the 'Determination as amended').

Opinion

In our opinion:

- as far as appears from an examination, the information used in the preparation of the Annual Compliance Statement has been properly extracted from the company's accounting and other records, and has been sourced, where appropriate, from its financial and non-financial systems; and
- the Annual Compliance Statement of the Company for the year ended on 31 March 2020, has been prepared, in all material respects, in accordance with the Determination, as amended.

In forming our opinion, we have obtained sufficient recorded evidence and all the information and explanations we have required.

Basis of 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* and the Standard on Assurance Engagements 3100 (Revised): *Assurance Engagements on Compliance* issued by the New Zealand Auditing and Assurance Standards Board. Copies of these standards are available on the External Reporting Board's website.

These standards require that we comply with ethical requirements and plan and perform our assurance engagement to provide reasonable assurance about whether the Annual Compliance Statement has been prepared in all material respects in accordance with the Determination, as amended.

We have performed procedures to obtain evidence about the amounts and disclosures in the Annual Compliance Statement. The procedures selected depend on our judgement, including the assessment of the risks of material misstatement of the Annual Compliance Statement, whether due to fraud or error or non-compliance with the Determination, as amended. In making those risk assessments, we considered internal control relevant to the company's preparation of the Annual Compliance Statement in order to design procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.

In assessing the disclosures about compliance with the price path in clause 8 of the Determination, as amended, for the assessment period ended on 31 March 2020, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 1 to 4, pages 9 to 10, and pages 13 to 27 of the Annual Compliance Statement.

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In assessing the disclosures about compliance with the quality standards in clause 9 of the Determination, as amended, for the assessment period ended on 31 March 2020, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 1 to 2, pages 5 to 8, and pages 28 to 32 of the Annual Compliance Statement.

Our assurance engagement also included assessment of the significant estimates and judgements, if any, made by the company in the preparation of the Annual Compliance Statement.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Scope and inherent limitations

Because of the inherent limitations of a reasonable assurance engagement, and the test basis of the procedures performed, it is possible that fraud, error or non-compliance may occur and not be detected.

We did not examine every transaction, adjustment or event underlying the Annual Compliance Statement nor do we guarantee complete accuracy of the Annual Compliance Statement. Also we did not evaluate the security and controls over the electronic publication of the Annual Compliance Statement.

The opinion expressed in this independent assurance report has been formed on the above basis.

Directors' responsibilities for the preparation of the Annual Compliance Statement

The directors of the company are responsible for the preparation of the Annual Compliance Statement in accordance with the Determination, as amended, and for such internal control as the directors determine is necessary to enable the preparation of an Annual Compliance Statement that is free from material misstatement.

Our responsibility for the Annual Compliance Statement

Our responsibility is to express an opinion on whether the Annual Compliance Statement has been prepared, in all material respects, in accordance with the Determination, as amended.

Independence and quality control

When carrying out the engagement, we complied with the Auditor-General's:


- independence and other ethical requirements, which incorporate the independence and ethical requirements of Professional and Ethical Standard 1 (Revised) issued by the New Zealand Auditing and Assurance Standards Board; and
- quality control requirements, which incorporate the quality control requirements of Professional and Ethical Standard 3 (Amended) issued by the New Zealand Auditing and Assurance Standards Board.

We also complied with the independent auditor requirements specified in the Determination, as amended.

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 business, this engagement, and the annual audit of the Company's financial statements, we have no relationship with or interests in the Company.

**Use of this report**

This independent assurance report has been prepared solely for the directors of the Company and for the Commerce Commission for the purpose of providing those parties with reasonable assurance about whether the Annual Compliance Statement has been prepared, in all material respects, in accordance with the Determination, as amended. We disclaim any assumption of responsibility for any reliance on this report to any person other than the directors of the company or the Commerce Commission, or for any other purpose than that for which it was prepared.



Nathan Wylie
PricewaterhouseCoopers
On behalf of the Auditor-General
Christchurch, New Zealand
4 June 2020

Appendix A – Notional and Allowable Notional Revenue Calculations

Our notional and allowable notional revenue for the assessment period is shown in Table 12 and Table 13 respectively below.

Table 12: Notional Revenue

Notional Revenue 2019/20		
Term	Description	Value \$
$\Sigma DP_{2019/20} * Q_{2017/18}$	Distribution Prices between 1 April 2019 and 31 March 2020 multiplied by Quantities for year ending 31 March 2018	50,781,383
$NR_{2019/20}$	Notional Revenue for the year ending 31 March 2020	50,781,383

Table 13: Allowable Notional Revenue Calculation

Allowable Notional Revenue 2019/20		
Term	Description	Value \$
$\Sigma DP_{2018/19} * Q_{2017/18}$	Distribution Prices between 1 April 2018 and 31 March 2019 multiplied by Quantities for year ending 31 March 2018	45,522,505
$ANR_{2018/19} - NR_{2018/19}$	Revenue differential for year ending 31 March 2019	757,309
$(I + \Delta CPI_{2019/20})$	Average change in Consumer Price Index	1.0153
X	X Factor, as specified in Schedule 1 of the DPP Determination	-11%
$ANR_{2019/20}$	Allowable Notional Revenue for the year ending 31 March 2020	52,154,975

Appendix B – Calculation of distribution and pass-through and recoverable revenues

Our distribution price and the lagged quantities used to calculate the notional revenue is shown in Table 14 below.

Table 14: Prices and Quantities for Notional Revenue

Load group		Distribution 31 March 2020				Quantities - 31 March 2018				Notional Revenue DP20 x Q18
		Fixed per annum	Variable Day per kWh	Variable Night per kWh	Demand per kW per	Day kWh	Night kWh	Demand Demand kW	Avg Number of ICPs	
LOWHCA	Low User (controlled) high cost area	\$50.13	\$0.0906	\$0.0577	\$0.00	6,498,819	2,785,208		1,515	\$825,641
LOWLCA	Low User (controlled) low cost area	\$50.13	\$0.0844	\$0.0515	\$0.00	35,269,883	15,115,664		8,696	\$4,192,647
LOWUHCA	Low User (uncontrolled) high cost area	\$50.13	\$0.0899	\$0.0570	\$0.00	67,400	28,886		14	\$8,409
LOWULCA	Low User (uncontrolled) low cost area	\$50.13	\$0.0840	\$0.0511	\$0.00	84,325	36,139		23	\$10,081
015HCA	Single Phase (controlled) high cost area	\$347.32	\$0.0576	\$0.0247	\$0.00	39,820,625	17,065,982		6,191	\$4,865,446
015LCA	Single Phase (controlled) low cost area	\$291.59	\$0.0576	\$0.0247	\$0.00	80,471,840	34,487,932		13,380	\$9,388,564
015UHCA	Single Phase (uncontrolled) high cost area	\$340.96	\$0.0576	\$0.0247	\$0.00	224,426	96,183		30	\$25,531
015ULCA	Single Phase (uncontrolled) low cost area	\$287.54	\$0.0576	\$0.0247	\$0.00	272,098	116,614		47	\$32,068
360HCA	Three Phase (controlled) high cost area	\$2,076.43	\$0.0576	\$0.0247	\$0.00	8,042,956	3,446,981		509	\$1,605,320
360LCA	Three Phase (controlled) low cost area	\$1,431.86	\$0.0576	\$0.0247	\$0.00	15,772,597	6,759,684		731	\$2,122,154
360UHCA	Three Phase (uncontrolled) high cost area	\$2,004.63	\$0.0576	\$0.0247	\$0.00	422,166	180,928		14	\$56,851
360ULCA	Three Phase (uncontrolled) low cost area	\$1,434.60	\$0.0576	\$0.0247	\$0.00	238,819	102,351		13	\$34,934
ASSHCA	Assessed demand high cost area	\$553.83	\$0.0576	\$0.0247	\$60.46	92,809,432	40,041,607	107,217	1,270	\$13,520,216
ASSLCA	Assessed demand low cost area	\$322.57	\$0.0576	\$0.0247	\$40.08	25,899,246	11,909,497	36,073	383	\$3,355,449
TOU400HCA	Time-of-Use metering at 400 V high cost area	\$338.56	\$0.0199	\$0.0085	\$144.88	16,450,066	7,006,839	8,473	38	\$1,627,370
TOU400LCA	Time-of-Use metering at 400 V low cost area	\$227.25	\$0.0161	\$0.0069	\$98.35	71,552,200	32,392,469	22,406	104	\$3,601,297
TOU11HCA	Time-of-Use metering at 11 kV high cost area	\$245.12	\$0.0294	\$0.0126	\$93.77	19,034,454	7,351,619	5,926	5	\$1,208,383
TOU11LCA	Time-of-Use metering at 11 kV low cost area	\$231.74	\$0.0195	\$0.0083	\$99.42	9,994,866	4,158,417	3,889	4	\$616,904
Individually Priced	Customer 1	\$156,715							1	\$156,715
	Customer 2	\$2,114,553							2	\$2,114,553
	Customer 3	\$176,659							1	\$176,659
	Customer 4	\$1,048,537							1	\$1,048,537
	Customer 5	\$146,223							4	\$146,223
	Customer 6	\$41,431							3	\$41,431
						422,926,217	183,082,999	183,984	32,979	\$50,781,383

Our distribution price and the lagged quantities used to calculate the allowable notional revenue is shown in Table 15 below.

Table 15: Prices and Quantities for Allowable Notional Revenue

Load group		Distribution prices for the assessment period 31 March 2019				Quantities - 31 March 2018				Allowable Notional Revenue DP19 x Q18
		Fixed per annum	Variable Day per kWh	Variable Night per kWh	Demand per kW per annum	Day kWh	Night kWh	Demand Demand kW	Avg Number of ICPs	
LOWHCA	Low User (controlled) high cost area	\$50.00	\$0.0802	\$0.0507	\$0.00	6,498,819	2,785,208		1,515	\$737,939
LOWLCA	Low User (controlled) low cost area	\$50.00	\$0.0748	\$0.0453	\$0.00	35,269,883	15,115,664		8,696	\$3,755,842
LOWUHCA	Low User (uncontrolled) high cost area	\$50.00	\$0.0793	\$0.0498	\$0.00	67,400	28,886		14	\$7,484
LOWULCA	Low User (uncontrolled) low cost area	\$50.00	\$0.0744	\$0.0449	\$0.00	84,325	36,139		23	\$9,043
015HCA	Single Phase (controlled) high cost area	\$306.98	\$0.0516	\$0.0221	\$0.00	39,820,625	17,065,982		6,191	\$4,333,692
015LCA	Single Phase (controlled) low cost area	\$258.26	\$0.0516	\$0.0221	\$0.00	80,471,840	34,487,932		13,380	\$8,372,692
015UHCA	Single Phase (uncontrolled) high cost area	\$299.16	\$0.0516	\$0.0221	\$0.00	224,426	96,183		30	\$22,688
015ULCA	Single Phase (uncontrolled) low cost area	\$254.70	\$0.0516	\$0.0221	\$0.00	272,098	116,614		47	\$28,597
360HCA	Three Phase (controlled) high cost area	\$1,801.77	\$0.0516	\$0.0221	\$0.00	8,042,956	3,446,981		509	\$1,408,555
360LCA	Three Phase (controlled) low cost area	\$1,253.01	\$0.0516	\$0.0221	\$0.00	15,772,597	6,759,684		731	\$1,879,713
360UHCA	Three Phase (uncontrolled) high cost area	\$1,753.91	\$0.0516	\$0.0221	\$0.00	422,166	180,928		14	\$50,351
360ULCA	Three Phase (uncontrolled) low cost area	\$1,253.01	\$0.0516	\$0.0221	\$0.00	238,819	102,351		13	\$30,882
ASSHCA	Assessed demand high cost area	\$489.48	\$0.0516	\$0.0221	\$53.18	92,809,432	40,041,607	107,217	1,270	\$12,000,777
ASSLCA	Assessed demand low cost area	\$283.54	\$0.0516	\$0.0221	\$35.16	25,899,246	11,909,497	36,073	383	\$2,977,542
TOU400HCA	Time-of-Use metering at 400 V high cost area	\$298.81	\$0.0174	\$0.0075	\$126.93	16,450,066	7,006,839	8,473	38	\$1,426,085
TOU400LCA	Time-of-Use metering at 400 V low cost area	\$200.52	\$0.0142	\$0.0061	\$86.78	71,552,200	32,392,469	22,406	104	\$3,181,017
TOU11HCA	Time-of-Use metering at 11 kV high cost area	\$212.56	\$0.0262	\$0.0112	\$82.62	19,034,454	7,351,619	5,926	5	\$1,071,724
TOU11LCA	Time-of-Use metering at 11 kV low cost area	\$200.52	\$0.0168	\$0.0072	\$83.32	9,994,866	4,158,417	3,889	4	\$523,150
Individually Priced	Customer 1	\$149,677							1	\$149,677
	Customer 2	\$2,162,872							2	\$2,162,872
	Customer 3	\$171,139							1	\$171,139
	Customer 4	\$1,038,416							1	\$1,038,416
	Customer 5	\$136,717							4	\$136,717
	Customer 6	\$45,911							3	\$45,911
						422,926,217	183,082,999	183,984	32,979	\$45,522,505

Revenue recovered for pass-through and recoverable costs is shown in Table 16 below.

Table 16: Pass-through and Recoverable prices and quantities for the year ended 31 March 2020

Load group		Pass-through and Recoverable Costs				Quantities - 31 March 2020				Pass-through and Recovery PTP20 x Q20
		Fixed per annum	Variable Day per kWh	Variable Night per kWh	Demand per kW per	Day kWh	Night kWh	Demand Demand kW	Avg Number of ICPs	
LOWHCA	Low User (controlled) high cost area	\$4.76	\$0.0605	\$0.0368	\$0.00	8,075,506	3,460,931		1,897	\$624,876
LOWLCA	Low User (controlled) low cost area	\$4.76	\$0.0610	\$0.0373	\$0.00	41,113,129	17,619,913		10,220	\$3,213,643
LOWUHCA	Low User (uncontrolled) high cost area	\$4.76	\$0.0874	\$0.0636	\$0.00	66,988	28,709		17	\$7,759
LOWULCA	Low User (uncontrolled) low cost area	\$4.76	\$0.0869	\$0.0631	\$0.00	149,383	64,021		38	\$17,200
015HCA	Single Phase (controlled) high cost area	\$175.37	\$0.0415	\$0.0178	\$0.00	39,060,031	16,740,013		6,003	\$2,973,634
015LCA	Single Phase (controlled) low cost area	\$179.92	\$0.0415	\$0.0178	\$0.00	71,621,130	30,694,770		12,050	\$5,690,304
015UHCA	Single Phase (uncontrolled) high cost area	\$417.02	\$0.0415	\$0.0178	\$0.00	302,693	129,726		35	\$29,274
015ULCA	Single Phase (uncontrolled) low cost area	\$412.77	\$0.0415	\$0.0178	\$0.00	258,183	110,650		41	\$29,621
360HCA	Three Phase (controlled) high cost area	\$144.59	\$0.0415	\$0.0178	\$0.00	8,439,066	3,616,742		523	\$490,580
360LCA	Three Phase (controlled) low cost area	\$170.90	\$0.0415	\$0.0178	\$0.00	15,687,360	6,723,154		740	\$897,974
360UHCA	Three Phase (uncontrolled) high cost area	\$409.87	\$0.0415	\$0.0178	\$0.00	448,401	192,172		14	\$27,791
360ULCA	Three Phase (uncontrolled) low cost area	\$404.93	\$0.0415	\$0.0178	\$0.00	258,887	110,951		16	\$19,008
ASSHCA	Assessed demand high cost area	\$170.95	\$0.0415	\$0.0178	\$16.06	96,562,493	41,562,897	110,981	1,295	\$6,755,738
ASSLCA	Assessed demand low cost area	\$171.89	\$0.0415	\$0.0178	\$16.56	26,272,645	11,474,891	38,679	399	\$2,005,218
TOU400HCA	Time-of-Use metering at 400 V high cost area	\$170.50	\$0.0095	\$0.0041	\$65.10	16,834,846	7,314,743	7,950	38	\$713,145
TOU400LCA	Time-of-Use metering at 400 V low cost area	\$173.99	\$0.0102	\$0.0044	\$66.14	70,037,487	31,387,601	23,090	102	\$2,395,601
TOU11HCA	Time-of-Use metering at 11 kV high cost area	\$174.88	\$0.0165	\$0.0071	\$52.13	19,193,704	7,460,572	6,528	6	\$711,195
TOU11LCA	Time-of-Use metering at 11 kV low cost area	\$174.88	\$0.0141	\$0.0060	\$67.14	9,940,203	4,349,340	3,819	4	\$423,363
Individually Priced	Customer 1	\$314,289							1	\$314,289
	Customer 2	\$1,592,904							2	\$1,592,904
	Customer 3	(\$314,184)							1	(\$314,184)
	Customer 4	\$290,241							1	\$290,241
	Customer 5	\$82,565							4	\$82,565
	Customer 6	\$4,427							3	\$4,427
						424,322,135	183,041,797	191,047	33,446	\$28,996,166

Appendix C – Pass-through and Recoverable Costs

Information and method used to calculate pass-through costs

Pass-through costs are made up of four parts:

- Rates on System Fixed Assets
- Commerce Act levies
- Electricity Authority levies
- Electricity and Gas Complaints Commission (EGCC) levies¹.

The pass-through costs are reported in Table 17 below.

Table 17: Reporting of pass-through costs

<i>K</i> _{2019/20}	Rates on system fixed assets for the year ending 31 March 2020	108,543
	Commerce Act levies for the year ending 31 March 2020	87,856
	Electricity Authority levies for the year ending 31 March 2020	141,859
	Utilities Disputes levies for the year ending 31 March 2020	18,341

Rates are sourced from rates notices payable from July to June each year. To calculate the rates applicable between April and March, we add 25% of the rates applicable to the prior year with 75% of the rates applicable to the current year. For example, Table 18 below shows that for the period 1 July 2018 to 30 June 2019 rates payable to the Timaru District Council (TDC) were \$27,272. Recalculated for the period April 2019 to March 2020 rates payable to TDC were \$31,938.

Table 18: Calculation of rates

Compliance year	Timaru District Council		Environment Canterbury		Mackenzie District Council		Waimate District Council		Total
	1 July to 30 June	1 April to 31 March	1 July to 30 June	1 April to 31 March	1 July to 30 June	1 April to 31 March	1 July to 30 June	1 April to 31 March	
2011/12	\$ 13,876		\$ 20,999		\$ 9,662		\$ 10,987		
2012/13	\$ 15,428	\$ 15,040	\$ 18,612	\$ 19,209	\$ 9,920	\$ 9,856	\$ 11,286	\$ 11,211	\$ 55,316
2013/14	\$ 18,990	\$ 18,100	\$ 18,885	\$ 18,817	\$ 10,137	\$ 10,083	\$ 11,633	\$ 11,546	\$ 58,545
2014/15	\$ 19,667	\$ 19,498	\$ 19,747	\$ 19,532	\$ 11,189	\$ 10,926	\$ 10,176	\$ 10,540	\$ 60,496
2015/16	\$ 23,817	\$ 22,780	\$ 18,915	\$ 19,123	\$ 11,209	\$ 11,204	\$ 9,616	\$ 9,756	\$ 62,863
2016/17	\$ 26,232	\$ 25,628	\$ 19,579	\$ 19,413	\$ 12,623	\$ 12,270	\$ 9,858	\$ 9,798	\$ 67,108
2017/18	\$ 28,818	\$ 28,171	\$ 21,614	\$ 21,105	\$ 13,072	\$ 12,959	\$ 15,648	\$ 14,200	\$ 76,436
2018/19	\$ 27,272	\$ 27,658	\$ 36,313	\$ 32,638	\$ 19,222	\$ 17,684	\$ 16,944	\$ 16,620	\$ 94,601
2019/20	\$ 33,520	\$ 31,958	\$ 39,963	\$ 39,050	\$ 20,005	\$ 19,809	\$ 17,987	\$ 17,726	\$ 108,543

Commerce Act levies are payable in accordance with the *Commerce (Levy on Suppliers of Regulated Goods and Services) Regulations 2009*. Suppliers are liable for the levy at the beginning of the regulatory year but, accounts are invoiced quarterly by MBIE as shown in Table 19 below.

¹ The EGCC was incorporated as a limited liability not-for-profit company and rebranded as Utilities Disputes Limited on 1 November 2016. The determination refers to this pass through cost as the EGCC for this regulatory period.

Table 19: Calculation of the Commerce Act levies

Compliance year	2019/20 Invoiced
July - Quarter 1	\$ 21,964
November - Quarter 2	\$ 21,964
January - Quarter 3	\$ 21,964
March - Quarter 4	\$ 21,964
Total	\$ 87,856

Electricity Authority levies are sourced from invoices received during the year. The invoices received each month between April 2019, and March 2020 are shown in Table 20 below.

Table 20: Calculation of Electricity Authority levies

2019/20	Subtotal
April	\$ 11,514.60
May	\$ 11,006.74
June	\$ 9,632.23
July	\$ 9,901.01
August	\$ 11,295.86
September	\$ 11,342.73
October	\$ 12,226.43
November	\$ 12,599.67
December	\$ 13,633.12
January	\$ 14,211.99
February	\$ 12,391.58
March	\$ 12,103.39
	\$ 141,859.35

Utilities Disputes (Formerly EGCC) **levies** are invoiced once a year at end year (i.e., March). Amounts invoiced each year for the last five years are shown in Table 21 below.

Table 21: Utilities Disputes Annual Levies

Compliance year	Amount
2015/16	\$ 14,217
2016/17	\$ 18,691
2017/18	\$ 17,164
2018/19	\$ 18,625
2019/20	\$ 18,341

Information and method used to calculate recoverable costs

Recoverable costs are made up of 13 components:

- Transmission charges
- New investment contract (NIC) charges
- System Operator services
- Avoided transmission charges resulting from the purchase of transmission asset from Transpower New Zealand
- Distributed generation allowance
- Claw-back
- NPV Wash-up allowance
- Energy efficiency and demand-side management incentive
- Catastrophic event allowance
- Extended reserves allowance
- Quality incentive adjustment
- Capex wash-up adjustment
- Reconsideration event allowance.

Table 22 below shows that in total we paid \$25.38 million in recoverable costs.

Table 22: Recoverable costs

V _{2019/20}	Actual (\$)
Transpower transmission charges	15,576,894
New investment contract charges	2,538,183
System operator services charges	9,600
Avoided transmission charges - purchases from Transpower	-
Distributed generation allowance	-
Claw-back	3,050,000
NPV wash-up allowance	3,263,000
Energy efficiency allowance	-
Catastrophic event allowance	-
Extended reserves allowance	-
Quality incentive adjustment	312,070
Capex wash-up adjustment	626,000
Reconsideration event allowance	-
Total Recoverable Costs	25,375,747

Transmission and **new investment** charges are sourced from monthly invoices received between April and March each assessment year. Over the period we paid \$15.6 million in transmission charges and \$2.5 million in new investment charges.

The calculation of total transmission charges is shown in Table 23 on page 20.

Table 23: Calculation of the transmission charges

Month	Monthly Connection Charge	Monthly Interconnection Charge	Monthly HVDC Charge	Total Transmission Charges	New Investment Charges
April	\$ 238,472	\$ 1,047,359	\$ 12,244	\$ 1,298,075	\$ 151,871
May	\$ 238,472	\$ 1,047,358	\$ 12,244	\$ 1,298,074	\$ 885,274
June	\$ 238,472	\$ 1,047,359	\$ 12,244	\$ 1,298,075	\$ 151,871
July	\$ 238,472	\$ 1,047,358	\$ 12,244	\$ 1,298,074	\$ 151,351
August	\$ 238,472	\$ 1,047,359	\$ 12,244	\$ 1,298,075	\$ 151,351
September	\$ 238,472	\$ 1,047,358	\$ 12,244	\$ 1,298,074	\$ 151,351
October	\$ 238,472	\$ 1,047,359	\$ 12,244	\$ 1,298,075	\$ 151,351
November	\$ 238,472	\$ 1,047,358	\$ 12,244	\$ 1,298,074	\$ 149,687
December	\$ 238,472	\$ 1,047,359	\$ 12,244	\$ 1,298,075	\$ 151,351
January	\$ 238,472	\$ 1,047,358	\$ 12,244	\$ 1,298,074	\$ 151,351
February	\$ 238,472	\$ 1,047,359	\$ 12,244	\$ 1,298,075	\$ 151,351
March	\$ 238,472	\$ 1,047,358	\$ 12,244	\$ 1,298,074	\$ 140,023
Total	\$ 2,861,664	\$ 12,568,302	\$ 146,928	\$ 15,576,894	\$ 2,538,183

Amount to be recovered for **claw-back** each year is specified in Schedule 5C of the DPP Determination; as per Extract 1 below.

Extract 1: Copy of Schedule 5C of the DPP Determination

**Table 5C.1: Claw-back amounts to be applied by specified
Non-exempt EDBs in each Assessment Period**

(All amounts in \$000)

Non-exempt EDB	Assessment Period				
	2015/16	2016/17	2017/18	2018/19	2019/20
Alpine Energy Limited	2,408	2,555	2,710	2,875	3,050
Centralines Limited	397	422	447	474	503
Top Energy Limited	1,554	1,649	1,749	1,855	1,968
Unison Networks Limited	2,009	2,132	2,262	2,399	2,545

The amount to be recovered for **Net present value (NPV) wash-up allowance** is specified in Schedule 5D of the DPP Determination; as Extract 2 below.

Extract 2: Copy of Schedule 5D of the DPP Determination

**Table 5D.1: 2013-15 NPV Wash-up Allowances to be applied
by specified Non-exempt EDBs in each Assessment Period**

(All amounts in \$'000)

Non-exempt EDB	Assessment Period				
	2015/16	2016/17	2017/18	2018/19	2019/20
Alpine Energy Limited	2,576	2,733	2,899	3,076	3,263
Centralines Limited	231	245	259	275	292
Top Energy Limited	578	614	651	691	733

The **Quality incentive adjustment** for the year ending 31 March 2018 of \$277,270 is adjusted for the time value of money to \$312,070 as shown in Extract 3 below and included as a recoverable cost for the assessment period ending 31 March 2020.

Extract 3: Quality incentive adjustment 2018

Quality Incentive Adjustment		
Term	Description	Value \$
$S_{SAIDI\ 2017/18}$	SAIDI incentive 2017/18	124,980
$S_{SAIFI\ 2017/18}$	SAIFI incentive 2017/18	152,290
$S_{TOTAL\ 2017/18}$	SAIDI incentive plus SAIFI incentive 2017/18	277,270
Recoverable cost 2019/20	$S_{TOTAL\ 2017/18}$ adjusted for the time value of money	312,070

The **Capex wash-up adjustment** for the year ending 31 March 2020 is \$626,000 as shown in Extract 4 on page 22.

Extract 4: Copy of Capex wash-up adjustment

Input

EDB name	Alpine Energy
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Reference: 2015-20 DPP financial model

Forecast value of commissioned assets, 2014/15	12,883
PV at 1 Apr 2015 of BBAR before tax over the regulatory period	163,099
Cost of debt	6.09%

Reference: 2014/15 information disclosure

Actual value of commissioned assets, 2014/15	18,705
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Calculation: using actual commissioned asset value

PV at 1 Apr 2015 of BBAR before tax over the regulatory period	165,019
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Outputs: capex wash-up adjustment recoverable costs

2017	525
2018	557
2019	590
2020	626

The amount was sourced from the Commerce Commission's model *EDB capex wash-up adjustment recoverable cost calculation sheet - 11 December 2015*², by selecting Alpine Energy in the EDB Name drop down box on the *Capex wash-up adjustment* tab.

Six of the 13 recoverable costs for the year ended 31 March 2020 is nil. The reasons for a nil value are provided in Table 24 on page 23.

² A copy of the Commission's Capex wash-up model can be found on its website at <http://www.comcom.govt.nz/regulated-industries/electricity/electricity-default-price-quality-path/default-price-quality-path-from-2015/>

Table 24: Recoverable costs with zero values explained

Recoverable cost	Explanation
Energy efficiency and demand-side management incentive allowance	No later than 70 WD following the end of the Assessment period, we must submit an application for approval of an allowance. If approved the amount is added to the pass-through balance in the next pricing year.
Distributed generation allowance	
Extended reserves allowance	
Avoided transmission charges resulting from the purchase of transmission asset from Transpower	We will not have a figure to report here unless we buy transmission assets. If we were to buy transmission assets, we would then calculate the avoided transmission costs for each Assessment Period and then recover that each year.
Catastrophic event allowance	Does not apply to us as we have not reported a catastrophic event this regulatory period.
Reconsideration event allowance	This does not currently apply to Alpine Energy.

Cost of debt

The cost of debt is 6.09% as shown in Table 25 below. The cost of debt is applied by the DPP Determination and is set by the commission through its Input Methodologies.

Table 25: Cost of debt

r	Cost of Debt	6.09%
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Appendix D – Portion of distribution and pass-through and recoverable costs

Table 26 shows the proportion of total delivery prices made up of distribution and pass through and recoverable costs.

Table 26: Distribution and Pass-through and Recoverable price components of total Delivery Charges

Load group		Distribution 31 March 2020				Pass-through and Recoverable Costs			
		Fixed per annum	Variable Day per kWh	Variable Night per kWh	Demand per kW per annum	Fixed per annum	Variable Day per kWh	Variable Night per kWh	Demand per kW per annum
LOWHCA	Low User (controlled) high cost area	91%	60%	61%	0%	9%	40%	39%	0%
LOWLCA	Low User (controlled) low cost area	91%	58%	58%	0%	9%	42%	42%	0%
LOWUHCA	Low User (uncontrolled) high cost area	91%	51%	47%	0%	9%	49%	53%	0%
LOWULCA	Low User (uncontrolled) low cost area	91%	49%	45%	0%	9%	51%	55%	0%
015HCA	Single Phase (controlled) high cost area	66%	58%	58%	0%	34%	42%	42%	0%
015LCA	Single Phase (controlled) low cost area	62%	58%	58%	0%	38%	42%	42%	0%
015UHCA	Single Phase (uncontrolled) high cost area	45%	58%	58%	0%	55%	42%	42%	0%
015ULCA	Single Phase (uncontrolled) low cost area	41%	58%	58%	0%	59%	42%	42%	0%
360HCA	Three Phase (controlled) high cost area	93%	58%	58%	0%	7%	42%	42%	0%
360LCA	Three Phase (controlled) low cost area	89%	58%	58%	0%	11%	42%	42%	0%
360UHCA	Three Phase (uncontrolled) high cost area	83%	58%	58%	0%	17%	42%	42%	0%
360ULCA	Three Phase (uncontrolled) low cost area	78%	58%	58%	0%	22%	42%	42%	0%
ASSHCA	Assessed demand high cost area	76%	58%	58%	79%	24%	42%	42%	21%
ASSLCA	Assessed demand low cost area	65%	58%	58%	71%	35%	42%	42%	29%
TOU400HCA	Time-of-Use metering at 400 V high cost area	67%	68%	68%	69%	33%	32%	32%	31%
TOU400LCA	Time-of-Use metering at 400 V low cost area	57%	61%	61%	60%	43%	39%	39%	40%
TOU11HCA	Time-of-Use metering at 11 kV high cost area	58%	64%	64%	64%	42%	36%	36%	36%
TOU11LCA	Time-of-Use metering at 11 kV low cost area	57%	58%	58%	60%	43%	42%	42%	40%

Appendix E – Methodology used to forecast prices

Distribution prices

We recover our costs to serve each load group (e.g., 015HCA) via our distribution prices. The cost to serve consumers that use low voltage assets is allocated to load groups based on after diversity maximum demand (ADMD). Costs to serve consumers that use high voltage assets are allocated to load groups based on coincident peak demand (CPD).

Pass-through costs

We base our forecast pass-through costs on the prior year rates and levies plus a growth factor. The growth factor for rates, Electricity Authority levies and Utility Disputes is based on the five year average. For example, the method used to forecast rates is shown in Table 27 below.

Table 27: Forecast 2019/20 Rates

Council	2017/18 1 July to 30 June	Growth	2019/20 1 July to 30 June	2019/20 1 April to 1 March
Timaru District Council	\$28,818	13.76%	\$37,294	\$36,165
Environment Canterbury	\$21,614	0.17%	\$21,687	\$21,678
Mackenzie District Council	\$13,072	3.79%	\$14,082	\$13,954
Waimate District Council	\$15,648	9.30%	\$16,858	\$16,704
Total	\$79,151		\$89,920	\$88,501

Rates are unique in that rates are 1 July to 30 June rather than 1 April to 31 March. To forecast rates, we first take the rates paid in 2017/18 between 1 July to 30 June and forecast what the rates payable will be between 1 July to 30 June 2018/19 and 2019/20. The 2018/19 rates forecast are based on the 2017/18 actual plus the average 5 year growth. The 2019/20 rates forecast are based on the 2018/19 forecast plus the average 5 year growth.³

We then calculate the forecast rates for 1 April 2019 to 31 March 2020 by adding the last quarter of the 2017/18 and the first three quarters of 2018/19. For example, TDC is $((\$28,818 \times 0.25\%) + ((\$28,818 + 13.76\%) \times 0.75\%))$ with a 13.76% growth factor applied = \$36,166.

Commerce Act levies are forecast by taking the prior year levies and raising it by the percentage increase in our regulatory asset base (RAB). Accordingly, the calculation for the 2019/20 forecast is $(\$98,828 \times (1 + 0.05\%)) = \$103,461$.

³ Please note that we use the 2017/18 actuals as the 2018/19 year had not ended when the 2019/20 prices are set and accordingly, 2017/18 are the most recent actuals available to us.

Recoverable costs

We receive notice of transmission charges from 1 April usually in mid- November of the prior year. We base our forecast transmission charges on the notices given. The commission sets both our claw-back and NPV wash-up allowance amounts in the DPP Determination we base our forecast claw-back and NPV wash-up allowance amounts on the published amounts.

More detail on the methodologies that we use to forecast pass-through and recoverable prices can be found in our *Pricing Methodology for Delivery Charges, effective as at 1 April 2019*. A copy of our Pricing Methodology is available at Reception and/or can be found on our website⁴.

Pass-through Cost reconciliation

Pass through variances are shown in Table 28 below.

Table 28: Pass-through Variances

Pass-through Costs for year ending March 2020				
K _{2019/20}	Actual (\$)	Forecast (\$)	Variance (\$)	Variance (%)
Rates on system fixed assets	108,543	88,501	20,042	22.6%
Commerce Act levies	87,856	103,461	(15,605)	(15.1%)
Electricity Authority levies	141,860	138,580	3,280	2.4%
Utilities Disputes levies	18,341	18,627	(286)	(1.5%)
Total Pass-through Costs	356,600	349,169	7,431	2.1%

Explanation of material variances

The Commission does not specify what 'material' is and so it is left up to EDBs to determine materiality. As a general rule, we assess anything with a variance of more than 5%. Materiality is then established based on the variance in whole dollars and as a percentage before a decision is made to determine a variance material and an explanation provided.

Rates on system fixed assets have a variance of \$20,042 or 22.6%. The variance is attributable to an unexpected 68% increase in rates from Environment Canterbury for the 2018/2019 year. When the prices were set the significant increase was not anticipated.

Commerce Act levies have a variance of -\$15,615 or -15.1%. There has been significant fluctuations with levies year on year, with a 47% increase in the 2018/19 year resulting in challenges when forecasting these levies.

The total pass-through costs variance is immaterial and requires no further explanation.

⁴ <http://www.alpineenergy.co.nz/disclosures>

Recoverable cost reconciliation

Recoverable cost variances are shown in Table 29 below.

Table 29: Recoverable Costs Variances

Recoverable Costs for year ending March 2020				
V _{2019/20}	Actual (\$)	Forecast (\$)	Variance (\$)	Variance (%)
Transpower transmission charges	15,576,894	15,888,432	(311,538)	(2.0%)
New investment contract charges	2,538,183	1,858,903	679,280	36.5%
System operator services charges	9,600	9,600	-	0.0%
Avoided transmission charges - purchases from Transpower	-	-	-	0.0%
Distributed generation allowance	-	-	-	0.0%
Claw-back	3,050,000	3,050,000	-	0.0%
NPV wash-up allowance	3,263,000	3,263,000	-	0.0%
Energy efficiency allowance	-	-	-	0.0%
Catastrophic event allowance	-	-	-	0.0%
Extended reserves allowance	-	-	-	0.0%
Quality incentive adjustment	312,070	75,737	236,333	312.0%
Capex wash-up adjustment	626,000	626,000	-	0.0%
Reconsideration event allowance	-	-	-	0.0%
Total Recoverable Costs	25,375,747	24,771,672	604,075	2.4%

The **New investment contract charges** were \$679,280 or 36.5% more than forecast. The forecast was based on the average of the first six months charges released by Transpower in November 2018. The charges were forecast to be \$154,909. This was attributable to a one off charge for an upgrade of switchboard and feeders in Timaru in May 19.

The **Quality incentive adjustment** was 312% higher than forecast. The forecast when setting prices was done by using the quality incentive adjustment from the 2016 Annual Compliance Statement as shown in Extract 5 below.

Extract 5: Quality Incentive adjustment 2016

Quality incentive adjustment	
Quality incentive adjustment 2016	-\$67,291
Cost of debt	6.09%
Quality incentive adjusted for time value of money	(75,737)

The forecast was made in error when in fact the 2018 Quality Incentive Adjustment number should have been used which would have matched the actual Quality Incentive Adjustment. An additional error was made when the number was made to be revenue gained rather than revenue lost as the above calculation suggested. Additional care will be taken in future to ensure the forecast for the Quality Incentive Adjustment is sound.

Appendix F – Quality Standard Compliance Calculations

Reliability Limits

Our reliability limits and boundary values are shown in Table 30 below.

Table 30: Reliability Limits and Boundary Values

SAIDI Limit <i>2015-2020 regulatory period</i>	154.155
SAIFI Limit <i>2015-2020 regulatory period</i>	1.507
SAIDI Unplanned Boundary Value <i>2015-2020 regulatory period</i>	9.175
SAIFI Unplanned Boundary Value <i>2015-2020 regulatory period</i>	0.072

Our year end SAIDI and SAIFI performance pre-normalisation (raw data) and post normalisation (adjusted data) is shown in Table 31 and Table 32 respectively below.

Table 31: SAIDI Assessed Values

SAIDI Assessed Values					
<i>Raw data</i>			<i>Adjusted data</i>		
SAIDI_B	Planned SAIDI	55.342	SAIDI_B	Planned SAIDI multiplied by 0.5	27.671
SAIDI_C	Unplanned SAIDI	98.858	SAIDI_C	Normalised unplanned SAIDI	94.132
SAIDI_{Assess (B+C)}					121.803

Table 32: SAIFI Assessed Values

SAIFI Assessed Values					
<i>Raw data</i>			<i>Adjusted data</i>		
SAIFI_B	Planned SAIFI	0.187	SAIFI_B	Planned SAIFI multiplied by 0.5	0.094
SAIFI_C	Unplanned SAIFI	0.742	SAIFI_C	Normalised unplanned SAIFI	0.742
SAIFI_{Assess (B+C)}					0.835

Major Event Days

There were two major event days (MEDs) during the assessment period. The first MED was caused by floods along the Rangitata River. The second MED was caused by high winds.

Table 33 below shows the pre-normalised SAIDI minutes, and Table 34 below shows the pre-normalised SAIFI interruption for the MED experienced.

Table 33: Event Days exceeding SAIDI Boundary Value

Date	Pre-Normalised unplanned SAIDI	Normalised unplanned SAIDI
7-Dec-19	12.891	9.175
30-Jan-20	10.186	9.175

Table 34: Event Days exceeding SAIFI Boundary Value

None

Prior period assesses values

Prior period assed values are shown in Table 35 below.

Table 35: Prior period assed values

Assessed SAIDI Value 2018/19		
SAIDI _{2018/19}	136.766	The sum of daily SAIDI Values in the 1 April 2018 - 31 March 2019 Normalised Assessment Dataset
Assessed SAIFI Value 2018/19		
SAIFI _{2018/19}	0.994	The sum of daily SAIFI Values in the 1 April 2018 - 31 March 2019 Normalised Assessment Dataset
Assessed SAIDI Value 2017/18		
SAIDI _{2017/18}	115.291	The sum of daily SAIDI Values in the 1 April 2017 - 31 March 2018 Normalised Assessment Dataset
Assessed SAIFI Value 2017/18		
SAIFI _{2017/18}	0.987	The sum of daily SAIFI Values in the 1 April 2017 - 31 March 2018 Normalised Assessment Dataset

Appendix G – Quality incentive scheme

This assessment period is the third period that the quality incentive scheme applies. Under the scheme, we have gained a \$230,883 incentive for our performance against the quality standards. The incentive may be collected from customers via pass-through prices effective as at 1 April 2021. Table 36 below details the SAIDI incentive calculation.

Table 36: SAIDI Incentive

SAIDI Incentive		
Term	Description	Value
<i>SAIDI Target</i>	SAIDI target specified in DPP Determination	132.8088
<i>SAIDI Collar</i>	SAIDI incentive range collar specified in DPP Determination	111.4627
<i>SAIDI Cap</i>	SAIDI incentive range cap specified in DPP Determination	154.1549
<i>Starting price MAR</i>	Maximum allowable revenue for the 2015/16 year	\$30,458,000
$0.5 * REV_{RISK}$	Revenue at risk relating to SAIDI target (equal to 0.5% of MAR)	\$152,290
$SAIDI_{IR}$	SAIDI incentive rate per unit (equal to revenue at risk divided by Cap minus Target)	\$7,134
$SAIDI_{ASSESS}$	Assessed SAIDI value for purpose of incentive	121.803
S_{SAIDI}	SAIDI incentive adjustment (equal to incentive rate multiplied by SAIDI target minus Assessed SAIDI value)	\$78,520

Table 37 below details the SAIFI incentive calculation.

Table 37: SAIFI Incentive

SAIFI Incentive		
Term	Description	Value
<i>SAIFI Target</i>	SAIFI target specified in DPP Determination	1.2973
<i>SAIFI Collar</i>	SAIFI incentive range collar specified in DPP Determination	1.0874
<i>SAIFI Cap</i>	SAIFI incentive range cap specified in DPP Determination	1.5071
<i>Starting price MAR</i>	Maximum allowable revenue for the 2015/16 year	\$30,458,000
$0.5 * REV_{RISK}$	Revenue at risk relating to SAIFI target (equal to 0.5% of MAR)	\$152,290
$SAIFI_{IR}$	SAIFI incentive rate per unit (equal to revenue at risk divided by Cap minus Target)	\$725,882
$SAIFI_{ASSESS}$	Assessed SAIFI value for purpose of incentive	1.087
S_{SAIFI}	SAIFI incentive adjustment (equal to incentive rate multiplied by SAIFI target minus Assessed SAIFI value)	\$152,363

Appendix H – Policies and Procedures for Recording SAIDI and SAIFI

We apply the following policies and procedures to record our SAIDI and SAIFI:

- all planned and unplanned outages 3.3kV and above are recorded
- outages less than 1 minute are reported but do not affect SAIDI and SAIFI
- outages are recorded on 'Interruption to Supply' forms by the Network Operator
- the ICP database is interrogated for consumer numbers in the outage area
- monthly reports are prepared for executive management and the Board.

Figure 1 on page 32 outlines our process for recording outages.

Figure 1: Process for recording outages