



Default Price-Quality Path Compliance Statement

For the Assessment Date 31 March 2017

13 June 2017

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

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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 date ended 31 March 2017.

We submit the following information in our *Default Price-Quality Path Compliance Statement* pursuant to the 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 clause 11.5(a), (b), (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 clause 11.2(a) to (f), we have:

- complied with price path in clause 8 for the assessment period
- 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
- 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 7 June 2017.

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 at Table 1 below.

Table 1: Notional Revenue calculation

Test:	$NR_{2016/17} \leq ANR_{2016/17}$	
NR _{2016/17}	\$	35,247,273
ANR _{2016/17}	\$	35,856,499
Result		0.9830 < 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 2017, was less than our allowable notional revenue. More details on the notional and allowable notional revenue calculations can be found at Appendix A at page 17. Our notional revenue calculation can be found at Appendix B, Table 15, on page 18.

Pass-through balance for 2017

The pass through balance for the assessment period ended 31 March 2017 is -\$1,938,431 and is shown Table 2 below.

Table 2: Pass through balance for 2017

<i>PTB</i> _{2016/17}	Pass-through Balance for the Assessment Period ending 31 March 2017	(1,938,431)
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Pass through balance for 2016

The pass through balance for the assessment period ended 31 March 2016 was \$542,444 and is shown in Table 3 below.

Table 3: Pass through balance for 2016

<i>PTB</i> _{2015/16}	Pass-through Balance from previous Assessment Period	542,444
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Please note that the pass the balance for the period ended 31 March 2016 provided in this annual compliance statement and in our 2016 annual compliance statement¹ are different. In the 2016 annual compliance statement the pass through balance was \$867,231 as shown in Table 4 below.

Table 4: Pass through balance in the 2016 annual compliance statement

<i>PTB</i> _{2015/16}	Pass-through Balance for the Assessment Period ending 31 March 2016	867,231
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Our 2016 pass through balance changed to reflect the timing of a wash-up² on delivery price paid by a direct billed customer—Customer 4. The regulatory impact of the wash-up to Customer 4 was to change the reported transmission price from \$465,929³ to \$141,142 as shown in Table 17 at page 20.

The change in 2016 price has a flow on impact to change the revenue collected via pass-through and recoverable costs (i.e., $PTB_{2015/16}Q_{2015/16}$) from \$21.8 million⁴ to \$21.5 million. In our 2016 annual compliance statement we reported that we had over recovered revenue via pass-through and recoverable costs and accordingly we returned \$867,231 to customers through our prices effective 1 April 2017. The change in pass through balance means that in effect we returned \$324,787 too much to customers.

The determination makes allowances for changes in price and accordingly the \$324,787 over return is provided for in the 2017 pass through balance and accordingly may be recovered by us through prices effective 1 April 2018.

Pass through Balance Reconciliation

We recovered \$19.7 million via pass-through and transmission prices. The total pass – through and recoverable costs realised during the period were \$22.2 million making the pass-through balance -\$2.5 million (or -11%). The 2016 pass through balance reconciliation is shown in Table 5 below.

¹ *Alpine Energy Limited DPP Annual Compliance Statement 2016*, 8 June 2016, Table 2, page 5. A copy of our 2016 annual compliance statement can be found on our website at <http://www.alpineenergy.co.nz/disclosures>

² We ‘wash-up’ price paid by direct billed customers the year following their connection. We do a wash-up because when we set their prices we have to use assumptions to set the first year price as several price inputs are not know at the time price is set e.g., what their 12 peaks during the regional coincident peak demand (RCPD) will be.

³ Supra n1, Table 12 at page 18.

⁴ Ibid n3, Table 4 at page 6.

Table 5: Pass through balance reconciliation

Pass-through Balance Reconciliation 2016/17		
Term	Description	Value \$
<i>PTP</i> 2016/17 x <i>Q</i> 2016/17	Pass-through Prices during 2016/2017 multiplied by 31 March 2017 Quantities	19,732,966
<i>Total Pass-through and Recoverable Costs</i>	Total Pass-through and Recoverable Costs for the year ending 31 March 2017	22,246,875
<i>PTB</i> 2016/17	Pass-through Balance for the Assessment Period ending 31 March 2017	(1,938,431)
<i>PTB</i> 2015/16	Pass-through Balance from previous Assessment Period	542,444
<i>Difference</i>	Reconciliation between Pass-through Balance for the Assessment Period with the Pass-through Balance for the preceding Assessment Period	(2,480,875)

When we set prices effective 1 April 2016 we forecast total pass-through and recoverable costs to be \$21.7 million our actual pass-through and recoverable costs were \$22.2 resulting in a small variation of \$524,272 (or +2%). However Table 5 above shows that our under recovery of pass-through and recoverable costs is material at \$2.5 million (or 11%).

The material under recovery of pass-through costs shown above is mainly attributable to quantities in the ASSHCA (predominately irrigation customers) being 18.9 GWh (or 27%) lower than forecast. Lower than forecast quantities resulted in us under recovering \$1.5 million from customers in the assessed load groups, which accounts for approximately 81% of the total under recovery.

Quantities in the ASSHCA load group were impacted by the unusually wet weather over the summer period reducing the expected irrigation load. This means that we sold fewer services than what we had set prices to recover resulting in us under recovering our pass-through and recoverable costs over the year.

More information can be found in the Appendixes

Information on the calculation of pass-through and recoverable revenue can be found at Appendix B, Table 17, on page 20.

Information on the method used to calculate pass-through and recoverable costs can be found at Appendix C on page 21.

The proportion of distribution and pass-through and recoverable costs to total delivery charge can be found at Appendix D on page 28.

The methodology used to forecast pass-through and recoverable prices can be found at Appendix E on page 29.

3. Compliance with the Quality Path

Our year end performance was 20.69 SAIDI minutes below the SAIDI limit and 0.44 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 at Table 6 below.

Table 6: Performance against the quality standards

	SAIDI	SAIFI	Compliance
Compliance with 9.1(a) 2016/17 Assessment Period	Does not exceed limit	Does not exceed limit	Complies
or			
Compliance with 9.1(b) 2015/16 Assessment Period	Exceeds limit	Does not exceed limit	Does not comply
2014/15 Assessment Period	Does not exceed limit	Does not exceed limit	Complies
Clause 9.1 Result:	Complies with Quality Standard		

Supporting evidence is presented in Appendices F to I.

Quality incentive scheme

Table 7 below shows that under the quality incentive scheme we have gained \$147,577 in revenue for our performance against the quality standards.

Table 7: Quality incentive adjustment

Quality Incentive Adjustment		
Term	Description	Value \$
S_{SAIDI}	SAIDI incentive	-4,713
S_{SAIFI}	SAIFI incentive	152,290
S_{TOTAL}	SAIDI incentive plus SAIFI incentive	147,577

More detailed calculation of revenue gained/lost under the quality incentive scheme can be found at Appendix G on page 34

There were two major event days

We experienced two major event days (MEDs) during the assessment period. The first MED was caused by tree debris being thrown into conductors during an extreme weather event on 8 December 2016. The second MED was caused by a rat climbing in behind the housing causing the transformer to trip on 27 March 2017. The details on each MED are shown in Table 8 below.

Table 8: 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
8 Dec	Tree fell across conductor during extreme wind storms.	8.00	0.00	0.162	0.090
27 Mar	Transformer tripped after a rat climbed into the housing.	10.33	1.16	0.092	0.020

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 under both the allowable SAIDI and SAIFI limits. Our assessed SAIDI and SAIFI calculations are demonstrated at Table 9 and Table 10 over page.

Table 9: Assessed SAIDI calculation

Test:	$SAIDI_{Assess\ 2016/17} \leq SAIDI_{Limit}$		
SAIDI _{Assess 2016/17}	133.47		
SAIDI _{Limit}	154.16		
	0.8658	< 1	
Clause 9.1(a) Result:	<i>Does not exceed limit</i>		

Table 10: Assessed SAIFI calculation

Test:	$SAIFI_{Assess\ 2016/17} \leq SAIFI_{Limit}$		
SAIFI _{Assess 2016/17}	1.07		
SAIFI _{Limit}	1.51		
	0.7068	< 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 11 and Table 12 below.

Table 11: Assessed Prior Period SAIDI and SAIFI performance

SAIDI _{Assess 2015/16}	155.29	SAIFI _{Assess 2015/16}	1.18
SAIDI _{Limit 2015/16}	154.16	SAIFI _{Limit 2015/16}	1.51
	1.0074		0.7830
	> 1		< 1
	<i>Exceeds limit</i>		<i>Does not exceed limit</i>

Table 12: Assessed extant period SAIDI and SAIFI performance

SAIDI _{Assess 2014/15}	140.28	SAIFI _{Assess 2014/15}	1.16
SAIDI _{Limit 2014/15}	164.22	SAIFI _{Limit 2014/15}	1.69
	0.8542		0.6829
	< 1		< 1
	<i>Does not exceed limit</i>		<i>Does not exceed limit</i>

More information can be found in the Appendixes

Details on the quality standard compliance calculation can be found at Appendix F on page 32.

Our policies and procedures for recording SAIDI and SAIFI can be found at Appendix H on page 35.

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, Alister John France, 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.

A handwritten signature in black ink, appearing to read 'Alister John France', written in a cursive style.

Alister John France

7 June 2017

7. Auditor's Report



INDEPENDENT ASSURANCE REPORT

TO THE DIRECTORS OF ALPINE ENERGY LIMITED AND TO THE COMMERCE COMMISSION

The Auditor-General is the auditor of Alpine Energy Limited. The Auditor-General has appointed me, Nathan Wylie, using the staff and resources of PricewaterhouseCoopers, to provide an opinion, on her behalf, on whether the Annual Compliance Statement for the year ended on 31 March 2017 on pages 2 to 12, 17 to 36 has been prepared, in all material respects, with the Electricity Distribution Services Default Price-Quality Path Determination 2015 (the Determination).

Directors' responsibilities for the Annual Compliance Statement

The directors of Alpine Energy Limited are responsible for the preparation of the Annual Compliance Statement in accordance with the Determination, 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.

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* issued by the External Reporting Board and the Standard on Assurance Engagements 3100: *Compliance Engagements* issued by the External Reporting 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.

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. 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 for the assessment period ended on 31 March 2017, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 2 to 6, 11 to 12, 17 to 31 of the Annual Compliance Statement.

PricewaterhouseCoopers
PwC Centre, Level 4, 60 Cashel Street, Christchurch Central, PO Box 13244, Christchurch 8141, New Zealand
T: +64 3 374 3000, F: +64 3 374 3001, pwc.co.nz



In assessing the disclosures about compliance with the quality standards in clause 9 of the Determination for the assessment period ended on 31 March 2017, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 7 to 10, 32 to 36 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.

Use of this report

This independent assurance report 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. 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.

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.

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.

The Auditor-General, and her 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. In addition to this engagement, we have also carried out assignments in the areas of compliance with the Electricity Distribution (Information Disclosure) Determination 2012, other regulatory requirements of the Commerce Act 1986, tax compliance services for an associate of the Group and other assurance services, which are compatible with those independence requirements. Other than any dealings on normal terms within the ordinary course of business and these engagements, we have no relationship with, or interests in, the company and its subsidiaries.

**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 Alpine Energy Limited for the year ended on 31 March 2017, has been prepared, in all material respects, in accordance with the Determination.

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

A handwritten signature in black ink, appearing to read 'Nathan Wyke', written over a faint, larger version of the signature.

Nathan Wyke
PricewaterhouseCoopers
On behalf of the Auditor-General
Christchurch, New Zealand
13 June 2017

Appendix A – Notional and Allowable Notional Revenue Calculations

Our notional and allowable notional revenue for the assessment period is shown in Table 13 and Table 14 respectively below.

Table 13: Notional Revenue

Notional Revenue 2016/17		
Term	Description	Value \$
$\Sigma DP_{2016/17} \times Q_{2014/15}$	Distribution Prices during 2016/17 multiplied by 31 March 2015 Quantities	35,247,273
$NR_{2016/17}$	Notional Revenue for the year ending 31 March 2017	35,247,273

Table 14: Allowable Notional Revenue Calculation

Allowable Notional Revenue 2016/17		
Term	Description	Value \$
$\Sigma DP_{2016} \times Q_{2015}$	Maximum Prices between 1 April 2015 and 31 March 2016 multiplied by 31 March 2015 Quantities	31,815,994
$ANR_{2015/16} - NR_{2015/16}$	Revenue differential for year ending 31 March 2016	338,979
$(1 + \Delta CPI_{2016/17})$	Average change in Consumer Price Index	1.00461
X	X Factor, as specified in Schedule 1 of the DPP Determination	-11.00%
$ANR_{2016/17}$	Allowable Notional Revenue for the period ended 31 March 2017	35,856,499

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 15 below.

Table 15: Prices and Quantities for Notional Revenue

Load group		Distribution as at 31 March 2017				Quantities as at 31 March 2015				Notional Revenue DP17 x Q15
		Fixed per annum	Variable Day per kWh	Variable Night per kWh	Demand per kW per	Day kWh	Night kWh	Demand Demand kW	Number of ICPs	
LOWHCA	Low User (controlled) high cost area	\$50.01	\$0.0551	\$0.0426	\$0.00	4,715,155	1,571,718		1,311	\$392,317
LOWLCA	Low User (controlled) low cost area	\$50.01	\$0.0507	\$0.0384	\$0.00	29,691,437	9,897,146		7,360	\$2,253,443
LOWUHCA	Low User (uncontrolled) high cost area	\$50.01	\$0.0551	\$0.0426	\$0.00	30,549	10,183		9	\$2,567
LOWULCA	Low User (uncontrolled) low cost area	\$50.01	\$0.0507	\$0.0384	\$0.00	56,017	18,672		23	\$4,707
015HCA	Single Phase (controlled) high cost area	\$250.76	\$0.0349	\$0.0150	\$0.00	45,896,439	15,298,813		5,984	\$3,331,786
015LCA	Single Phase (controlled) low cost area	\$212.61	\$0.0349	\$0.0150	\$0.00	95,273,758	31,757,919		14,047	\$6,787,991
015UHCA	Single Phase (uncontrolled) high cost area	\$252.54	\$0.0349	\$0.0150	\$0.00	341,517	113,839		35	\$22,466
015ULCA	Single Phase (uncontrolled) low cost area	\$212.61	\$0.0349	\$0.0150	\$0.00	348,175	116,058		46	\$23,672
360HCA	Three Phase (controlled) high cost area	\$1,501.90	\$0.0349	\$0.0150	\$0.00	8,679,055	2,893,018		453	\$1,026,656
360LCA	Three Phase (controlled) low cost area	\$1,094.09	\$0.0349	\$0.0150	\$0.00	17,539,597	5,846,532		696	\$1,461,315
360UHCA	Three Phase (uncontrolled) high cost area	\$1,501.90	\$0.0349	\$0.0150	\$0.00	332,843	110,948		13	\$32,805
360ULCA	Three Phase (uncontrolled) low cost area	\$1,094.09	\$0.0349	\$0.0150	\$0.00	131,020	43,673		8	\$13,980
ASSHCA	Assessed demand high cost area	\$442.05	\$0.0349	\$0.0150	\$50.30	111,479,943	37,159,981	93,306	1,180	\$9,662,682
ASSLCA	Assessed demand low cost area	\$250.86	\$0.0349	\$0.0150	\$30.44	28,170,523	9,390,174	33,549	354	\$2,234,075
TOU400HCA	Time-of-Use metering at 400 V high cost area	\$236.37	\$0.0133	\$0.0057	\$111.47	14,819,576	6,250,904	7,349	35	\$1,060,204
TOU400LCA	Time-of-Use metering at 400 V low cost area	\$168.01	\$0.0105	\$0.0045	\$76.98	65,209,532	29,289,567	22,257	103	\$2,547,119
TOU11HCA	Time-of-Use metering at 11 kV high cost area	\$232.72	\$0.0153	\$0.0066	\$94.10	16,864,189	6,375,484	5,920	6	\$858,551
TOU11LCA	Time-of-Use metering at 11 kV low cost area	\$195.82	\$0.0130	\$0.0056	\$77.16	10,944,513	4,713,467	4,050	4	\$481,959
Individually Priced	Customer 1	\$140,069							1	\$140,069
	Customer 2	\$1,642,635							2	\$1,642,635
	Customer 3	\$160,368							1	\$160,368
	Customer 4	\$1,105,906							1	\$1,105,906
	Customer 5 - was not connected 31 March 2015	\$0								\$0
	Customer 6 - was not connected 31 March 2015	\$0								\$0
						450,523,838	160,858,099	166,431	31,672	\$35,247,273

Our distribution price and the lagged quantities used to calculate the allowable notional revenue is shown in Table 16 above.

Table 16: Prices and Quantities for Allowable Notional Revenue

Load group		Distribution as at 31 March 2016				Quantities as at 31 March 2015				Allowable Notional Revenue DP16 x Q15
		Fixed <i>per annum</i>	Variable Day <i>per kWh</i>	Variable Night <i>per kWh</i>	Demand <i>per kW per</i>	Day <i>kWh</i>	Night <i>kWh</i>	Demand <i>Demand kW</i>	Number of <i>ICPs</i>	
LOWHCA	Low User (controlled) high cost area	\$44.96	\$0.0633	\$0.0367	\$0.00	4,715,155	1,571,718		1,311	\$414,974
LOWLCA	Low User (controlled) low cost area	\$44.96	\$0.0579	\$0.0313	\$0.00	29,691,437	9,897,146		7,360	\$2,358,756
LOWUHCA	Low User (uncontrolled) high cost area	\$44.96	\$0.0633	\$0.0367	\$0.00	30,549	10,183		9	\$2,711
LOWULCA	Low User (uncontrolled) low cost area	\$44.96	\$0.0579	\$0.0313	\$0.00	56,017	18,672		23	\$4,860
015HCA	Single Phase (controlled) high cost area	\$288.62	\$0.0360	\$0.0094	\$0.00	45,896,439	15,298,813		5,984	\$3,523,960
015LCA	Single Phase (controlled) low cost area	\$240.09	\$0.0360	\$0.0094	\$0.00	95,273,758	31,757,919		14,047	\$7,102,418
015UHCA	Single Phase (uncontrolled) high cost area	\$288.62	\$0.0360	\$0.0094	\$0.00	341,517	113,839		35	\$23,472
015ULCA	Single Phase (uncontrolled) low cost area	\$240.09	\$0.0360	\$0.0094	\$0.00	348,175	116,058		46	\$24,675
360HCA	Three Phase (controlled) high cost area	\$1,209.01	\$0.0360	\$0.0094	\$0.00	8,679,055	2,893,018		453	\$887,462
360LCA	Three Phase (controlled) low cost area	\$1,003.51	\$0.0360	\$0.0094	\$0.00	17,539,597	5,846,532		696	\$1,385,114
360UHCA	Three Phase (uncontrolled) high cost area	\$1,209.01	\$0.0360	\$0.0094	\$0.00	332,843	110,948		13	\$28,748
360ULCA	Three Phase (uncontrolled) low cost area	\$1,003.51	\$0.0360	\$0.0094	\$0.00	131,020	43,673		8	\$13,157
ASSHCA	Assessed demand high cost area	\$207.59	\$0.0360	\$0.0094	\$24.32	111,479,943	37,159,981	93,306	1,180	\$6,878,909
ASSLCA	Assessed demand low cost area	\$167.47	\$0.0360	\$0.0094	\$21.24	28,170,523	9,390,174	33,549	354	\$1,874,698
TOU400HCA	Time-of-Use metering at 400 V high cost area	\$125.14	\$0.0158	\$0.0028	\$70.37	14,819,576	6,250,904	7,349	35	\$773,275
TOU400LCA	Time-of-Use metering at 400 V low cost area	\$117.79	\$0.0158	\$0.0028	\$58.49	65,209,532	29,289,567	22,257	103	\$2,426,340
TOU11HCA	Time-of-Use metering at 11 kV high cost area	\$130.52	\$0.0158	\$0.0028	\$54.20	16,864,189	6,375,484	5,920	6	\$606,182
TOU11LCA	Time-of-Use metering at 11 kV low cost area	\$107.46	\$0.0158	\$0.0028	\$48.80	10,944,513	4,713,467	4,050	4	\$384,223
Individually Priced	Customer 1	\$141,557							1	\$141,557
	Customer 2	\$1,845,448							2	\$1,845,448
	Customer 3	\$159,903							1	\$159,903
	Customer 4	\$955,152							1	\$955,152
	Customer 5 - was not connected 31 March 2015	\$0								\$0
	Customer 6 - was not connected 31 March 2015	\$0								\$0
						450,523,838	160,858,099	166,431	31,672	\$31,815,994

Revenue recovered for of pass-through and recoverable costs is shown at Table 17 below.

Table 17: Pass-through and Recoverable prices and quantities for year ended 31 March 2017

Load group		Pass-through and Recoverable Costs				Quantities as at 31 March 2017				Pass-through and Recovery PTP17 x Q17
		Fixed per day	Variable Day per kWh	Variable Night per kWh	Demand per kW per	Day kWh	Night kWh	Demand Demand kW	Number of ICPs	
LOWHCA	Low User (controlled) high cost area	\$4.75	\$0.0450	\$0.0194	\$0.00	6,128,592	2,626,540		1,485	\$333,788
LOWLCA	Low User (controlled) low cost area	\$4.75	\$0.0451	\$0.0193	\$0.00	33,278,847	14,262,363		8,495	\$1,816,448
LOWUHCA	Low User (uncontrolled) high cost area	\$4.75	\$0.0714	\$0.0458	\$0.00	60,908	26,104		13	\$5,606
LOWULCA	Low User (uncontrolled) low cost area	\$4.75	\$0.0715	\$0.0457	\$0.00	77,604	33,259		22	\$7,173
015HCA	Single Phase (controlled) high cost area	\$103.92	\$0.0319	\$0.0137	\$0.00	40,059,347	17,168,292		6,157	\$2,152,907
015LCA	Single Phase (controlled) low cost area	\$103.92	\$0.0319	\$0.0137	\$0.00	82,016,946	35,150,120		13,523	\$4,503,147
015UHCA	Single Phase (uncontrolled) high cost area	\$343.17	\$0.0319	\$0.0137	\$0.00	233,636	100,130		31	\$19,463
015ULCA	Single Phase (uncontrolled) low cost area	\$343.17	\$0.0319	\$0.0137	\$0.00	288,181	123,506		46	\$26,671
360HCA	Three Phase (controlled) high cost area	\$103.92	\$0.0319	\$0.0137	\$0.00	7,355,406	3,152,317		506	\$330,405
360LCA	Three Phase (controlled) low cost area	\$103.92	\$0.0319	\$0.0137	\$0.00	17,015,221	7,292,238		728	\$718,340
360UHCA	Three Phase (uncontrolled) high cost area	\$343.17	\$0.0319	\$0.0137	\$0.00	339,486	145,494		14	\$17,627
360ULCA	Three Phase (uncontrolled) low cost area	\$343.17	\$0.0319	\$0.0137	\$0.00	158,897	68,099		10	\$9,433
ASSHCA	Assessed demand high cost area	\$103.92	\$0.0319	\$0.0137	\$8.43	69,306,953	30,090,129	104,451	1,261	\$3,634,843
ASSLCA	Assessed demand low cost area	\$103.92	\$0.0319	\$0.0137	\$11.13	24,473,647	11,388,850	34,866	376	\$1,363,955
TOU400HCA	Time-of-Use metering at 400 V high cost area	\$103.92	\$0.0068	\$0.0029	\$56.06	15,173,059	6,319,721	8,623	37	\$608,789
TOU400LCA	Time-of-Use metering at 400 V low cost area	\$103.92	\$0.0065	\$0.0028	\$47.49	66,738,655	30,173,460	24,019	105	\$1,669,776
TOU11HCA	Time-of-Use metering at 11 kV high cost area	\$103.92	\$0.0075	\$0.0032	\$46.17	16,716,430	6,442,851	6,159	4	\$430,782
TOU11LCA	Time-of-Use metering at 11 kV low cost area	\$103.92	\$0.0076	\$0.0032	\$44.97	8,650,287	3,754,365	3,841	4	\$250,894
Individually Priced	Customer 1	\$255,612							1	\$255,612
	Customer 2	\$1,277,983							2	\$1,277,983
	Customer 3	(\$43,047)							1	(\$43,047)
	Customer 4	\$220,280							1	\$220,280
	Customer 5 - was not connected 31 March 2015	\$91,145							4	\$91,145
	Customer 6 - was not connected 31 March 2015	\$30,946							3	\$30,946
						388,072,101	168,317,836	181,959	32,829	\$19,732,966

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) levies.

The pass-through costs are reported in Table 18 below.

Table 18: Reporting of pass-through costs

<i>K</i> 2016/17	Rates on system fixed assets for the year ending 31 March 2017	67,108
	Commerce Act levies for the year ending 31 March 2017	46,949
	Electricity Authority levies for the year ending 31 March 2017	135,541
	Utilities Disputes levies for the year ending 31 March 2017	18,691

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 19 below shows that for the period 1 July 2015 to 30 June 2016 rates payable to the Timaru District Council (TDC) were \$26,232. Recalculated for the period April 2016 to March 2017 rates payable to TDC were \$25,628.

Table 19: Calculation of rates

Compliance year	Timaru District Council	
	1 July to 30 June	1 April to 31 March
2011/12	\$ 13,876	
2012/13	\$ 15,428	\$ 15,040
2013/14	\$ 18,990	\$ 18,100
2014/15	\$ 19,667	\$ 19,498
2015/16	\$ 23,817	\$ 22,780
2016/17	\$ 26,232	\$ 25,628

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 at Table 20 below.

Table 20: Calculation of the Commerce Act levies

Compliance year	2016/17 Invoiced
July	\$ 11,847
November	\$ 11,716
January	\$ 11,693
March	\$ 11,693
Total	\$ 46,949

Electricity Authority levies are sourced from invoices received during the year. The invoices received each month between April 2016 and March 2017 is shown in Table 21 below.

Table 21: Calculation of Electricity Authority levies

2016/17	Subtotal
April	\$ 10,121.75
May	\$ 10,392.23
June	\$ 8,737.24
July	\$ 9,754.38
August	\$ 11,789.10
September	\$ 11,510.55
October	\$ 11,797.69
November	\$ 11,321.21
December	\$ 12,564.87
January	\$ 12,458.22
February	\$ 12,891.04
March	\$ 12,202.59
	\$ 135,540.86

Utility Disputes Limited **levies** are invoiced once a year at end year (i.e., March). Amounts invoiced each year for the last five years are shown at Table 22 below.

Table 22: EGCC annual levies

Compliance year	Amount
2012/13	\$ 15,322
2013/14	\$ 12,021
2014/15	\$ 11,576
2015/16	\$ 14,217
2016/17	\$ 18,691

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 purchase of transmission asset from Transpower
- 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 23 below shows that in total we paid \$22 million in recoverable costs.

Table 23: Recoverable costs

V _{2016/17}	Actual (\$)
Transpower transmission charges	14,390,941
New investment contract charges	1,774,645
System operator services charges	-
Avoided transmission charges - purchases from Transpower	-
Distributed generation allowance	-
Claw-back	2,555,000
NPV wash-up allowance	2,733,000
Energy efficiency allowance	-
Catastrophic event allowance	-
Extended reserves allowance	-
Quality incentive adjustment	-
Capex wash-up adjustment	525,000
Reconsideration event allowance	-
Total Recoverable Costs	21,978,586

Transmission and **new investment** charges are sourced from monthly invoices received between April and March each assessment year. Over the period we paid \$14.4 million in transmission charges and \$1.8 million in new investment charges.

We did not enter any new investment contracts during the assessment period.

The calculation of total transmission charges is shown Table 24 over the page.

Table 24: Calculation of the transmission charges

Month	Monthly Connection Charge	Monthly Interconnection Charge	Monthly HVDC Charge	Total Transmission Charges	New Investment Charges
April	\$ 228,894	\$ 946,124	\$ 24,108	\$ 1,199,126	\$ 141,982
May	\$ 228,894	\$ 946,124	\$ 24,108	\$ 1,199,126	\$ 154,194
June	\$ 230,600	\$ 946,124	\$ 24,108	\$ 1,200,832	\$ 148,088
July	\$ 228,894	\$ 946,124	\$ 24,108	\$ 1,199,126	\$ 147,820
August	\$ 228,894	\$ 946,124	\$ 24,108	\$ 1,199,126	\$ 147,820
September	\$ 228,894	\$ 946,124	\$ 24,108	\$ 1,199,126	\$ 147,820
October	\$ 228,894	\$ 946,124	\$ 24,108	\$ 1,199,126	\$ 147,820
November	\$ 228,894	\$ 946,124	\$ 24,108	\$ 1,199,126	\$ 147,820
December	\$ 228,894	\$ 946,124	\$ 24,108	\$ 1,199,126	\$ 147,820
January	\$ 228,894	\$ 946,124	\$ 24,108	\$ 1,199,126	\$ 147,820
February	\$ 228,894	\$ 946,124	\$ 24,108	\$ 1,199,126	\$ 147,820
March	\$ 228,618	\$ 946,124	\$ 24,108	\$ 1,198,850	\$ 147,820
Total	\$ 2,748,157	\$ 11,353,487	\$ 289,298	\$ 14,390,941	\$ 1,774,645

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 **Capex wash-up adjustment** for the year ending 31 March 2017 is \$525,000 as shown in Extract 3 below.

Extract 3: 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*⁵, by selecting Alpine Energy in the EDB Name drop down box on the *Capex wash-up adjustment* tab.

Eight of the 13 recoverable costs for the year ended 31 March 2017 are nil. The reasons for a nil value are provided at Table 25 below.

Table 25: Recoverable costs with zero values explained

Recoverable cost	Explanation
System operator services charged for the year	The Transpower system operator are accounted for in Transmission Charges and New Investment Charges. Therefore, system operator costs are nil for the period
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 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.
Quality incentive adjustment	<p>Calculated within 50 WD following the end of the Assessment period in accordance with S5B, paragraph 4. The amount is recoverable in the assessment period following that in which it was calculated.</p> <p>As the regulatory period started 1 April 2015 the first year we had to calculate the incentive adjustment was for the year ended 31 March 2016 (see Appendix H). The revenue lost was included in the 2017/18 prices and accordingly the quality incentive adjustment will appear in the 2018 annual compliance statement.</p>
Reconsideration event allowance	This does not currently apply to Alpine Energy.

⁵ 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/>

Cost of debt

The cost of debt is 6.09% as shown at Table 26 below. The cost of debt is applied by the DPP Determination and is set by the commission through its Input Methodologies.

Table 26: Cost of debt

<i>r</i>	Cost of Debt	6.09%
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Appendix D - Portion of distribution and pass-through and recoverable costs

Table 27 below shows the proportion of total delivery prices made up of distribution and pass through and recoverable costs.

Table 27: Distribution and Pass-through and Recoverable price components of total Delivery Charges

Load group		Distribution as at 31 March 2017				Pass-through and Recoverable Costs			
		Fixed <i>per annum</i>	Variable Day <i>per kWh</i>	Variable Night <i>per kWh</i>	Demand <i>per kW per annum</i>	Fixed <i>per annum</i>	Variable Day <i>per kWh</i>	Variable Night <i>per kWh</i>	Demand <i>per kW per annum</i>
LOWHCA	Low User (controlled) high cost area	91%	55%	69%	0%	9%	45%	31%	0%
LOWLCA	Low User (controlled) low cost area	91%	53%	67%	0%	9%	47%	33%	0%
LOWUHCA	Low User (uncontrolled) high cost area	91%	44%	48%	0%	9%	56%	52%	0%
LOWULCA	Low User (uncontrolled) low cost area	91%	41%	46%	0%	9%	59%	54%	0%
015HCA	Single Phase (controlled) high cost area	71%	52%	52%	0%	29%	48%	48%	0%
015LCA	Single Phase (controlled) low cost area	67%	52%	52%	0%	33%	48%	48%	0%
015UHCA	Single Phase (uncontrolled) high cost area	42%	52%	52%	0%	58%	48%	48%	0%
015ULCA	Single Phase (uncontrolled) low cost area	38%	52%	52%	0%	62%	48%	48%	0%
360HCA	Three Phase (controlled) high cost area	94%	52%	52%	0%	6%	48%	48%	0%
360LCA	Three Phase (controlled) low cost area	91%	52%	52%	0%	9%	48%	48%	0%
360UHCA	Three Phase (uncontrolled) high cost area	81%	52%	52%	0%	19%	48%	48%	0%
360ULCA	Three Phase (uncontrolled) low cost area	76%	52%	52%	0%	24%	48%	48%	0%
ASSHCA	Assessed demand high cost area	81%	52%	52%	86%	19%	48%	48%	14%
ASSLCA	Assessed demand low cost area	71%	52%	52%	73%	29%	48%	48%	27%
TOU400HCA	Time-of-Use metering at 400 V high cost area	69%	66%	66%	67%	31%	34%	34%	33%
TOU400LCA	Time-of-Use metering at 400 V low cost area	62%	62%	62%	62%	38%	38%	38%	38%
TOU11HCA	Time-of-Use metering at 11 kV high cost area	69%	67%	67%	67%	31%	33%	33%	33%
TOU11LCA	Time-of-Use metering at 11 kV low cost area	65%	63%	64%	63%	35%	37%	36%	37%

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. Cost to serve consumers that use low voltage assets are 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 Utilities Disputes is based on the five year average. For example, the method used to forecast rates is shown at Table 28 below.

Table 28: Forecast 2016/17 Rates

Council	2015/16 1 July to 30 June	Growth	2016/17 1 July to 30 June	2016/17 1 April to 1 March
Timaru District Council	\$23,506	19.52%	\$28,092	\$26,946
Environment Canterbury	\$19,644	-0.52%	\$19,542	\$19,567
Mackenzie District Council	\$11,349	1.43%	\$11,510	\$11,470
Waimate District Council	\$10,561	3.78%	\$10,860	\$10,860
Total	\$65,060		\$70,004	\$68,843

Rates are unique in that rates are paid 1 July to 30 June rather than 1 April to 31 March. To align the forecast rates to the regulatory period we first take the rates paid in 2015/16 between 1 July to 30 June and forecast what the rates payable between 1 July to 30 June 2016/17. We then calculate the forecast rates for 1 April to 31 March 2016/17 by adding the last quarter of the 2015/16 period and the first three quarters of the 2016/17 period. For example, TDC is $((\$23,506 \times 0.25\%) + (\$28,092 \times 0.75\%)) = \$26,946$.

Commerce Commission levies are forecast by taking the prior year levies and grow it by the percentage increase in our regulatory asset base (RAB). For example, the 2015/16 Commerce Commission levies were \$77,208 the percentage growth in the RAB was 0.06% accordingly, the calculation is $(\$77,208 \times 0.06\%) = \$77,252$.

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 2016*. A copy of our Pricing Methodology is available at Reception and/or can be found on our website⁶.

Pass-through Cost reconciliation

Pass through variances are shown in Table 29 below.

Table 29: Pass-through Variances

Pass-through Costs for year ending March 2017				
K _{2016/17}	Actual (\$)	Forecast (\$)	Variance (\$)	Variance (%)
Rates on system fixed assets	67,108	68,843	(1,734)	(2.5%)
Commerce Act levies	46,949	77,252	(30,303)	(39.2%)
Electricity Authority levies	135,541	160,010	(24,469)	(15.3%)
Utilities Disputes	18,691	10,953	7,738	70.7%
Total Pass-through Costs	268,290	317,058	(48,768)	(15.4%)

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 variance in whole dollars and as a percentage before a decision is made to determine a variance material and an explanation provided.

For example, Commerce Act levies have a variance of -\$30,303 or -39.2%. Comparing the dollar variance to the total pass-through costs we establish that this variance is material at 8%. And the Electricity Authority levies have a variance of -\$24,469 or -15.3%. Comparing the dollar variance to the total pass-through costs we establish that this variance is material at 13%. Whereas EGCC levies has a variance of \$7,728 or +70.7%. Comparing the dollar variance to the total pass-through costs we establish that this is a non-material variance at 3%. Accordingly, we will provide an explanation of the variance for Commerce Act levies but not for EGCC levies.

We forecast Commerce Commission levies by taking the average levies paid in 2014 and 2015 and inflating by the percentage increase in the 2015 RAB. Levies up to 31 March 2015 included an adjustment for underpaid levies from the regulatory period ended 31 March 2010; levies applicable this regulatory period do not include the adjustment. Because we had used an average of 2014 and 2015, which included the adjustment we overstated the base on which we derived the average. Therefore when we grew the base by the percentage increase in the RAB we overstated the forecast levies.

⁶ <http://www.alpineenergy.co.nz/disclosures>

We forecast the Electricity Authority levies based on the average change in levies over a five year period 1 April 2011 to 1 April 2015. The average change in levies over this period as 8.87%. Accordingly, the 2016/17 forecasts were based on 2015/16 actuals increased by 8.87%. Whereas the actual change in levies was a decrease of 0.05%.

Recoverable cost reconciliation

There are no material variances between forecast and actual recoverable costs for the year ended 31 March 2017. Recoverable cost variances are shown in Table 30 below.

Table 30: Recoverable Costs Variances

Recoverable Costs for year ending March 2017				
V _{2016/17}	Actual (\$)	Forecast (\$)	Variance (\$)	Variance (%)
Transpower transmission charges	14,390,941	14,389,511	1,430	0.0%
New investment contract charges	1,774,645	1,728,035	46,610	2.7%
System operator services charges	-	-	-	0.0%
Avoided transmission charges - purchases from Transpower	-	-	-	0.0%
Distributed generation allowance	-	-	-	0.0%
Claw-back	2,555,000	2,555,000	-	0.0%
NPV wash-up allowance	2,733,000	2,733,000	-	0.0%
Energy efficiency allowance	-	-	-	0.0%
Catastrophic event allowance	-	-	-	0.0%
Extended reserves allowance	-	-	-	0.0%
Quality incentive adjustment	-	-	-	0.0%
Capex wash-up adjustment	525,000	-	525,000	0.0%
Reconsideration event allowance	-	-	-	0.0%
Total Recoverable Costs	21,978,586	21,405,546	573,040	2.7%

Please note that we did not include a forecast for capex wash-up adjustment when we set prices effective 1 April 2016. This was an oversight that will be corrected when we set prices effective 1 April 2018.

Appendix F – Quality Standard Compliance Calculations

Reliability Limits

Our reliability limits and boundary values are shown in Table 31 below.

Table 31: Reliability Limits and Boundary Values

<i>SAIDI Limit</i> 2015-2020 regulatory period	154.155
<i>SAIFI Limit</i> 2015-2020 regulatory period	1.507
<i>SAIDI Unplanned Boundary Value</i> 2015-2020 regulatory period	9.175
<i>SAIFI Unplanned Boundary Value</i> 2015-2020 regulatory period	0.072
<i>SAIDI Limit</i> 2010-2015 regulatory period	164.221
<i>SAIFI Limit</i> 2010-2015 regulatory period	1.694

Our year end SAIDI and SAIFI performance pre-normalisation (raw data) and post normalisation (adjusted data) is shown at Table 32 and Table 33 respectively below.

Table 32: SAIDI Assessed Values

SAIDI Assessed Values						
<i>Raw data</i>			<i>Adjusted data</i>			
<i>SAIDI_B</i>	Planned SAIDI	69.611	<i>SAIDI_B</i>	Planned SAIDI multiplied by 0.5	34.805	
<i>SAIDI_C</i>	Pre-normalised unplanned SAIDI	99.821	<i>SAIDI_C</i>	Normalised unplanned SAIDI	98.664	
					<i>SAIDI_{Assess (B+C)}</i>	133.469

Table 33: SAIFI Assessed Values

SAIFI Assessed Values						
<i>Raw data</i>			<i>Adjusted data</i>			
<i>SAIFI_B</i>	Planned SAIFI	0.251	<i>SAIFI_B</i>	Planned SAIFI multiplied by 0.5	0.125	
<i>SAIFI_C</i>	Pre-normalised Unplanned SAIFI	1.050	<i>SAIFI_C</i>	Normalised unplanned SAIFI	0.940	
					<i>SAIFI_{Assess (B+C)}</i>	1.065

Reliability Limits

There were two MEDs during the assessment period. The first MED was caused by tree debris being thrown into conductors during an extreme weather event on 8 December 2016. The second MED was caused by a rat climbing in behind the housing causing the transformer to trip on 27 March 2017.

Table 34 below shows the pre-normalised SAIDI minutes and Table 35 below shows the pre-normalised SAIFI interruption for the MED experienced.

Table 34: Event Days exceeding SAIDI Boundary Value

Date	Pre-Normalised unplanned SAIDI	Normalised unplanned SAIDI
27-Mar-17	10.332	9.175

Table 35: Event Days exceeding SAIFI Boundary Value

Date	Pre-Normalised unplanned SAIFI	Normalised unplanned SAIFI
8-Dec-16	0.162	0.072
27-Mar-17	0.092	0.072

Prior period assessed values

Prior period assessed values are shown at Table 36 below.

Table 36: Prior period assessed values

Assessed SAIDI Value 2015/16		
SAIDI _{2015/16}	155.292	The sum of daily SAIDI Values in the 1 April 2015 to 31 March 2016 Normalised Assessment Dataset
Assessed SAIFI Value 2015/16		
SAIFI _{2015/16}	1.180	The sum of daily SAIFI Values in the 1 April 2015 to 31 March 2016 Normalised Assessment Dataset
Assessed SAIDI Value 2014/15		
SAIDI _{2014/15}	140.284	The sum of daily SAIDI Values in the 1 April 2014 to 31 March 2015 Normalised Assessment Dataset
Assessed SAIFI Value 2014/15		
SAIFI _{2014/15}	1.157	The sum of daily SAIFI Values in the 1 April 2014 to 31 March 2015 Normalised Assessment Dataset

Appendix G – Quality incentive scheme

This assessment period is the first period that the quality incentive scheme applies. Under the scheme we have gained \$147,577 in revenue for our performance against the quality standards. The gained revenue may be collected from customers via prices effective as at 1 April 2018. Table 37 below details the SAIDI incentive calculation.

Table 37: 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>MAR</i>	Maximum allowable revenue as per Schedule 1.1	\$30,458,000
$0.5 \times REV_{RISK}$	Revenue at risk relating to SAIDI target (equal to 0.5% of MAR)	\$152,290
<i>SAIDI_{IR}</i>	SAIDI incentive rate per unit (equal to revenue at risk divided by Cap minus Target)	\$7,134
<i>SAIDI_{ASSESS}</i>	Assessed SAIDI value for purpose of incentive	133.4694
S_{SAIDI}	SAIDI incentive adjustment (equal to incentive rate multiplied by SAIDI target minus Assessed SAIDI value)	(\$4,713)

Table 38 below details the SAIFI incentive calculation.

Table 38: 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>MAR</i>	Maximum allowable revenue as per Schedule 1.1	\$30,458,000
$0.5 \times REV_{RISK}$	Revenue at risk relating to SAIFI target (equal to 0.5% of MAR)	\$152,290
<i>SAIFI_{IR}</i>	SAIFI incentive rate per unit (equal to revenue at risk divided by Cap minus Target)	\$725,882
<i>SAIFI_{ASSESS}</i>	Assessed SAIFI value for purpose of incentive	1.0874
S_{SAIFI}	SAIFI incentive adjustment (equal to incentive rate multiplied by SAIFI target minus Assessed SAIFI value)	\$152,290

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 over page outlines our process for recording outages.

Appendix I

