Default Price-Quality Path Compliance Statement

For the Assessment Period ended 31 March 2019

12 June 2019

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

Contents

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 2019.

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 clause 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 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 12June 2019.

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:	$NR_{2018/19} \leq ANR_{2018/19}$	
$NR_{2018/19}$	$	43,681,621
$ANR_{2018/19}$	$	44,438,930
Result		0.983 < 1
Result	*Price Path has not been breached*	

Table 1 above shows that our notional revenue, derived using posted prices as at 31 March 2019, 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 15.

Pass-through balance for 2019

The pass through balance for the assessment period ended 31 March 2019 is -$5,248,974 and is shown in Table 2 below.

Table 2: Pass through balance for 2019

$PTB_{2018/19}$	Pass-through Balance for the Assessment Period ending 31 March 2019	(5,248,974)

Pass through balance for 2018

The pass through balance for the assessment period ended 31 March 2018 was -$4,371,046 and is shown in Table 3 below.

Table 3: Pass through balance for 2018

$PTB_{2017/18}$	Pass-through Balance from previous Assessment Period	(4,371,046)

Pass through Balance Reconciliation

We recovered $22.3 million via pass-through and transmission prices. The total pass – through and recoverable costs realised during the period were $22.9 million making the

pass-through balance -$5.2 million (or -24%). The 2019 pass through balance reconciliation is shown in Table 4 below.

Table 4: Pass through balance reconciliation

Pass-through Balance Reconciliation 2018/19		
Term	Description	Value $
$PTP_{2018/19}Q_{2018/19}$	Pass-through Prices during 2018/19 multiplied by 31 March 2019 Quantities	22,315,181
Total Pass-through and Recoverable Costs	Total Pass-through and Recoverable Costs for the year ending 31 March 2019	22,926,913
$PTB_{2018/19}$	Pass-through Balance for the Assessment Period ending 31 March 2019	(5,248,974)
$PTB_{2017/18}$	Pass-through Balance from previous Assessment Period	(4,371,046)
Difference	Reconciliation between Pass-through Balance for the Assessment Period with the Pass-through Balance for the preceding Assessment Period	(877,929)

The prices effective 1 April 2018 were set incorporating the forecast total pass-through and recoverable costs of $22.6M and the pass-through balance of $2.5M per the 2017 Compliance Statement. We were forecasting a closing 2018 pass-through balance of close to zero when we set the prices effective 1 April 2018. However, as outlined in the 2018 Compliance Statement, primarily due to quantities in the 015LCA being 71.6 GWh (or 14%) lower than forecast and an inadvertent error in our forecast capex wash-up, the actual closing 2018 pass through balance was an under recovery of $4.4M. The pass-through balance has increased to an under recovery of $5.2M for the period ending 31 March 2019 due to actual quantities being lower than forecast. The forecast pass through balance has been included in the prices effective 1 April 2019.

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 14, on page 16.

Information on the method used to calculate pass-through and recoverable costs can be found at Appendix C on page 19.

The proportion of distribution and pass-through and recoverable costs to total delivery charge can be found at Appendix D on page 26.

The methodology used to forecast pass-through and recoverable prices can be found at Appendix E on page 27.

3. Compliance with the Quality Path

Our year end performance was 17.39 SAIDI minutes below the SAIDI limit and 0.52 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) 2018/19 Assessment Period	Does not exceed limit	Does not exceed limit	***Complies***
or			
Compliance with 9.1(b)			***Complies***
2017/18 Assessment Period	Does not exceed limit	Does not exceed limit	*Complies*
2016/17 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 H.

Quality incentive scheme

Table 6: Quality incentive adjustment below shows that under the quality incentive scheme we have gained an $124,134 incentive for our performance against the quality standards, which can be recovered as pass through prices in the assessment period ending 31 March 2021.

Table 6: Quality incentive adjustment

Quality Incentive Adjustment		
Term	Description	Value $
S_{SAIDI}	SAIDI incentive	(28,229)
S_{SAIFI}	SAIFI incentive	152,363
S_{TOTAL}	SAIDI incentive plus SAIFI incentive	124,134

A more detailed calculation of the incentive gained/lost under the quality incentive scheme can be found at Appendix G on page 32.

There were three major event days

We experienced three major event days (MEDs) during the assessment period. The first MED was caused by a wind storm on 3 May causing an interruption of 10.163 SAIDI minutes and 0.0540 SAIFI interruptions. The second MED was caused by a broken binder on 8 May causing an interruption of 11.705 SAIDI minutes and 0.0346 SAIFI interruptions. The third MED was caused by a cable strike by a third party on 20 October causing an interruption of 15.375 SAIDI minutes and 0.0847 SAIFI 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
3 May	Wind Storm (Broken binder wire off Ins. Pole burnt)	10.163	0.988	0.0540	0.000
8 May	Broken binder, leading to pole burning	11.705	2.530	0.0346	0.000
20 October	Cable strike by 3rd party	15.375	6.200	0.0847	0.013

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:	$SAIDI_{Assess\ 2018/19} \leq SAIDI_{Limit}$
$SAIDI_{Assess\ 2018/19}$	136.77
$SAIDI_{Limit}$	154.16
	0.887 < 1
Clause 9.1(a) Result:	*Does not exceed limit*

Table 9: Assessed SAIFI calculation

Test:	$SAIFI_{Assess\ 2018/19} \leq SAIFI_{Limit}$
$SAIFI_{Assess\ 2018/19}$	0.99
$SAIFI_{Limit}$	1.51
	0.659 < 1
Clause 9.1(a) Result:	*Does not exceed limit*

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

$SAIDI_{Assess\ 2017/18}$	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
	Does not exceed limit		*Does not exceed limit*

Table 11: Assessed extant period SAIDI and SAIFI performance

$SAIDI_{Assess\ 2016/17}$	133.47	$SAIFI_{Assess\ 2016/17}$	1.07
$SAIDI_{Limit\ 2016/17}$	154.16	$SAIFI_{Limit\ 2016/17}$	1.51
0.866	< 1	0.707	< 1
	Does not exceed limit		*Does not exceed limit*

More information can be found in the Appendixes

Details on the quality standard compliance calculation can be found at Appendix F on page 31.

Our policies and procedures for recording SAIDI and SAIFI can be found at Appendix H on page 34.

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.

Alister John France,
12 June 2019,

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 2019 on pages 1 to 10 and 15 to 34 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 the company 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* and the Standard on Assurance Engagements 3100 (Revised): *Assurance Engagements on Compliance* 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 2019, 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 15 to 29 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 2019, 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 30 to 34 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 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. 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 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.

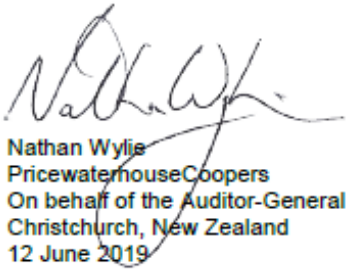
Other than any dealings on normal terms within the ordinary course of business, this engagement, the annual audit of the company's financial statements, Electricity Distribution (Information Disclosure) Determination 2012 and other regulatory requirements of the Commerce Act 1986, industry and submission and regulatory advisory services, we have no relationship with or interests in the company.

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 company for the year ended on 31 March 2019, 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.



Nathan Wylie
PricewaterhouseCoopers
On behalf of the Auditor-General
Christchurch, New Zealand
12 June 2019

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 2018/19		
Term	Description	Value $
$\Sigma DP_{2018/19} * Q_{2016/17}$	Distribution Prices between 1 April 2018 and 31 March 2019 multiplied by Quantities for year	43,681,621
$NR_{2018/19}$	Notional Revenue for the year ending 31 March 2019	43,681,621

Table 13: Allowable Notional Revenue Calculation

Allowable Notional Revenue 2018/19		
Term	Description	Value $
$\Sigma DP_{2017/18} * Q_{2016/17}$	Distribution Prices between 1 April 2017 and 31 March 2018 multiplied by Quantities for year ending 31 March 2017	38,496,622
$ANR_{2017/18} - NR_{2017/18}$	Revenue differential for year ending 31 March 2018	836,959
$(1 + \Delta CPI_{2018/19})$	Average change in Consumer Price Index	1.0178
X	X Factor, as specified in Schedule 1 of the DPP Determination	-11%
$ANR_{2018/19}$	Allowable Notional Revenue for the year ending 31 March 2019	44,438,930

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 2019				Quantities - 31 March 2017				Notional Revenue DP19 x Q17
		Fixed	Variable Day	Variable Night	Demand	Day	Night	Demand	Avg Number of	
		per annum	*per kWh*	*per kWh*	*per kW per annum*	*kWh*	*kWh*	*Demand kW*	*ICPs*	
LOWHCA	Low User (controlled) high cost area	$50.00	$0.0802	$0.0507	$0.00	6,128,592	2,626,540		1,485	$698,715
LOWLCA	Low User (controlled) low cost area	$50.00	$0.0748	$0.0453	$0.00	33,278,847	14,262,363		8,495	$3,558,314
LOWUHCA	Low User (uncontrolled) high cost area	$50.00	$0.0793	$0.0498	$0.00	60,908	26,104		13	$6,781
LOWULCA	Low User (uncontrolled) low cost area	$50.00	$0.0744	$0.0449	$0.00	77,604	33,259		22	$8,363
015HCA	Single Phase (controlled) high cost area	$306.98	$0.0516	$0.0221	$0.00	40,059,347	17,168,292		6,157	$4,337,842
015LCA	Single Phase (controlled) low cost area	$258.26	$0.0516	$0.0221	$0.00	82,016,946	35,150,120		13,523	$8,504,036
015UHCA	Single Phase (uncontrolled) high cost area	$299.16	$0.0516	$0.0221	$0.00	233,636	100,130		31	$23,550
015ULCA	Single Phase (uncontrolled) low cost area	$254.70	$0.0516	$0.0221	$0.00	288,181	123,506		46	$29,325
360HCA	Three Phase (controlled) high cost area	$1,801.77	$0.0516	$0.0221	$0.00	7,355,406	3,152,317		506	$1,361,138
360LCA	Three Phase (controlled) low cost area	$1,253.01	$0.0516	$0.0221	$0.00	17,015,221	7,292,238		728	$1,951,883
360UHCA	Three Phase (uncontrolled) high cost area	$1,753.91	$0.0516	$0.0221	$0.00	339,486	145,494		14	$45,299
360ULCA	Three Phase (uncontrolled) low cost area	$1,253.01	$0.0516	$0.0221	$0.00	158,897	68,099		10	$22,239
ASSHCA	Assessed demand high cost area	$489.48	$0.0516	$0.0221	$53.18	69,306,951	30,090,129	104,451	1,261	$10,415,854
ASSLCA	Assessed demand low cost area	$283.54	$0.0516	$0.0221	$35.16	24,473,647	11,388,850	34,866	376	$2,848,002
TOU400HCA	Time-of-Use metering at 400 V high cost area	$298.81	$0.0174	$0.0075	$126.93	15,173,059	6,319,721	8,623	37	$1,417,421
TOU400LCA	Time-of-Use metering at 400 V low cost area	$200.52	$0.0142	$0.0061	$86.78	66,738,655	30,173,460	24,019	105	$3,239,165
TOU11HCA	Time-of-Use metering at 11 kV high cost area	$212.56	$0.0262	$0.0112	$82.62	16,716,430	6,442,851	6,159	4	$1,019,850
TOU11LCA	Time-of-Use metering at 11 kV low cost area	$200.52	$0.0168	$0.0072	$83.32	8,650,287	3,754,365	3,841	4	$493,593
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	$41,431							3	$41,431
						388,072,101	**168,317,836**	**181,959**	**32,829**	**$43,681,621**

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 2018				Quantities - 31 March 2017				Allowable Notional Revenue DP18 x Q17
		Fixed	Variable Day	Variable Night	Demand	Day	Night	Demand	Avg Number of	
		per annum	*per kWh*	*per kWh*	*per kW per annum*	*kWh*	*kWh*	*Demand kW*	*ICPs*	
LOWHCA	Low User (controlled) high cost area	$50.00	$0.0693	$0.0470	$0.00	6,128,592	2,626,540		1,485	$622,757
LOWLCA	Low User (controlled) low cost area	$50.00	$0.0644	$0.0420	$0.00	33,278,847	14,262,363		8,495	$3,166,441
LOWUHCA	Low User (uncontrolled) high cost area	$50.00	$0.0693	$0.0470	$0.00	60,908	26,104		13	$6,101
LOWULCA	Low User (uncontrolled) low cost area	$50.00	$0.0644	$0.0420	$0.00	77,604	33,259		22	$7,493
015HCA	Single Phase (controlled) high cost area	$310.20	$0.0391	$0.0167	$0.00	40,059,347	17,168,292		6,157	$3,762,378
015LCA	Single Phase (controlled) low cost area	$269.36	$0.0391	$0.0167	$0.00	82,016,946	35,150,120		13,523	$7,435,242
015UHCA	Single Phase (uncontrolled) high cost area	$308.88	$0.0391	$0.0167	$0.00	233,636	100,130		31	$20,379
015ULCA	Single Phase (uncontrolled) low cost area	$269.36	$0.0391	$0.0167	$0.00	288,181	123,506		46	$25,717
360HCA	Three Phase (controlled) high cost area	$1,648.74	$0.0391	$0.0167	$0.00	7,355,406	3,152,317		506	$1,174,393
360LCA	Three Phase (controlled) low cost area	$1,213.49	$0.0391	$0.0167	$0.00	17,015,221	7,292,238		728	$1,670,251
360UHCA	Three Phase (uncontrolled) high cost area	$1,615.30	$0.0391	$0.0167	$0.00	339,486	145,494		14	$38,313
360ULCA	Three Phase (uncontrolled) low cost area	$1,202.29	$0.0391	$0.0167	$0.00	158,897	68,099		10	$19,371
ASSHCA	Assessed demand high cost area	$463.66	$0.0391	$0.0167	$51.51	69,306,953	30,090,129	104,451	1,261	$9,176,808
ASSLCA	Assessed demand low cost area	$263.57	$0.0391	$0.0167	$33.00	24,473,647	11,388,850	34,866	376	$2,396,336
TOU400HCA	Time-of-Use metering at 400 V high cost area	$257.91	$0.0153	$0.0066	$112.52	15,173,059	6,319,721	8,623	37	$1,253,249
TOU400LCA	Time-of-Use metering at 400 V low cost area	$183.69	$0.0115	$0.0049	$83.66	66,738,655	30,173,460	24,019	105	$2,947,037
TOU11HCA	Time-of-Use metering at 11 kV high cost area	$249.57	$0.0178	$0.0076	$96.73	16,716,430	6,442,851	6,159	4	$944,272
TOU11LCA	Time-of-Use metering at 11 kV low cost area	$198.07	$0.0167	$0.0071	$73.86	8,650,287	3,754,365	3,841	4	$455,618
Individually Priced	Customer 1	$143,317							1	$143,317
	Customer 2	$1,777,210							2	$1,777,210
	Customer 3	$164,158							1	$164,158
	Customer 4	$1,041,461							1	$1,041,461
	Customer 5	$145,040							4	$145,040
	Customer 6	$103,280							3	$103,280
						388,072,101	**168,317,836**	**181,959**	**32,829**	**$38,496,622**

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 2019

Load group		Pass-through and Recoverable Costs				Quantities - 31 March 2019				Pass-through and Recovery PTP19 x Q19
		Fixed	Variable Day	Variable Night	Demand	Day	Night	Demand	Avg Number of	
		per annum	*per kWh*	*per kWh*	*per kW per annum*	*kWh*	*kWh*	*Demand kW*	ICPs	
LOWHCA	Low User (controlled) high cost area	$4.75	$0.0471	$0.0288	$0.00	7,067,819	3,029,065		1,685	$428,101
LOWLCA	Low User (controlled) low cost area	$4.75	$0.0475	$0.0292	$0.00	37,772,893	16,188,383		9,464	$2,311,909
LOWUHCA	Low User (uncontrolled) high cost area	$4.75	$0.0738	$0.0555	$0.00	66,346	28,434		16	$6,552
LOWULCA	Low User (uncontrolled) low cost area	$4.75	$0.0735	$0.0552	$0.00	108,375	46,447		30	$10,663
015HCA	Single Phase (controlled) high cost area	$140.36	$0.0320	$0.0137	$0.00	39,262,617	16,826,836		6,120	$2,347,481
015LCA	Single Phase (controlled) low cost area	$143.99	$0.0320	$0.0137	$0.00	77,754,458	33,323,339		12,707	$4,777,573
015UHCA	Single Phase (uncontrolled) high cost area	$381.03	$0.0320	$0.0137	$0.00	237,553	101,809		32	$21,009
015ULCA	Single Phase (uncontrolled) low cost area	$377.63	$0.0320	$0.0137	$0.00	257,517	110,364		44	$26,379
360HCA	Three Phase (controlled) high cost area	$115.72	$0.0320	$0.0137	$0.00	7,503,627	3,215,840		515	$344,023
360LCA	Three Phase (controlled) low cost area	$136.78	$0.0320	$0.0137	$0.00	15,379,581	6,591,249		733	$683,348
360UHCA	Three Phase (uncontrolled) high cost area	$374.45	$0.0320	$0.0137	$0.00	441,338	189,145		14	$21,975
360ULCA	Three Phase (uncontrolled) low cost area	$370.84	$0.0320	$0.0137	$0.00	248,501	106,500		15	$14,984
ASSHCA	Assessed demand high cost area	$136.82	$0.0320	$0.0137	$14.65	76,132,465	32,856,585	109,659	1,286	$4,671,411
ASSLCA	Assessed demand low cost area	$137.57	$0.0320	$0.0137	$14.89	26,186,482	11,771,197	37,212	393	$1,608,427
TOU400HCA	Time-of-Use metering at 400 V high cost area	$136.46	$0.0085	$0.0036	$58.32	17,053,392	7,405,444	8,554	39	$676,037
TOU400LCA	Time-of-Use metering at 400 V low cost area	$139.25	$0.0089	$0.0038	$57.30	71,010,792	32,374,751	22,705	102	$2,072,130
TOU11HCA	Time-of-Use metering at 11 kV high cost area	$139.96	$0.0145	$0.0062	$47.36	19,369,534	7,358,522	6,110	6	$617,064
TOU11LCA	Time-of-Use metering at 11 kV low cost area	$139.96	$0.0125	$0.0053	$59.80	10,432,650	4,535,225	3,904	4	$388,442
Individually Priced	Customer 1	$297,231							1	$297,231
	Customer 2	$827,004							2	$827,004
	Customer 3	($189,825)							1	-$189,825
	Customer 4	$288,680							1	$288,680
	Customer 5	$60,156							4	$60,156
	Customer 6	$4,427							3	$4,427
						406,285,939	**176,059,134**	**188,144**	**33,212**	**$22,315,181**

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[1].

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

Table 17: Reporting of pass-through costs

$K_{2018/19}$	Rates on system fixed assets for the year ending 31 March 2019	94,601
	Commerce Act levies for the year ending 31 March 2019	98,828
	Electricity Authority levies for the year ending 31 March 2019	138,631
	Utilities Disputes levies for the year ending 31 March 2019	18,625

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 2017 to 30 June 2018 rates payable to the Timaru District Council (TDC) were $27,272. Recalculated for the period April 2018 to March 2019 rates payable to TDC were $27,658.

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

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.

Table 19: Calculation of the Commerce Act levies

[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 though cost as the EGCC for this regulatory period.

Compliance year	2018/19 Invoiced
July - Quarter 1	$ 24,707
November - Quarter 2	$ 24,707
January - Quarter 3	$ 24,707
March - Quarter 4	$ 24,707
Total	**$ 98,828**

Electricity Authority levies are sourced from invoices received during the year. The invoices received each month between April 2018, and March 2019 is shown in Table 20 below.

Table 20: Calculation of Electricity Authority levies

2018/19	Subtotal
April	$ 10,931
May	$ 11,060
June	$ 9,664
July	$ 9,917
August	$ 11,206
September	$ 11,378
October	$ 13,029
November	$ 11,443
December	$ 11,156
January	$ 12,892
February	$ 13,098
March	$ 12,857
	$ 138,631

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: 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
2017/18	$ 17,164
2018/19	$ 18,625

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

- 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 $22.6 million in recoverable costs.

Table 22: Recoverable costs

V 2018/19	Actual ($)
Transpower transmission charges	14,041,323
New investment contract charges	1,827,362
System operator services charges	-
Avoided transmission charges - purchases from Transpower	-
Distributed generation allowance	-
Claw-back	2,875,000
NPV wash-up allowance	3,076,000
Energy efficiency allowance	-
Catastrophic event allowance	-
Extended reserves allowance	-
Quality incentive adjustment	166,099
Capex wash-up adjustment	590,443
Reconsideration event allowance	-
Total Recoverable Costs	22,576,227

Transmission and **new investment** charges are sourced from monthly invoices received between April and March each assessment year. Over the period we paid $14 million in transmission charges and $1.8 million in new investment charges.

The calculation of total transmission charges is shown in Table 23 over the page.

Table 23: Calculation of the transmission charges

Month	Monthly Connection Charge	Monthly Interconnection Charge	Monthly HVDC Charge	Total Transmission Charges	New Investment Charges
April	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	$ 842,856
May	$ 246,460	$ 913,109	$ 15,208	$ 1,174,776	$ 152,430
June	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	-$ 537,996
July	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	$ 152,230
August	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	$ 152,230
September	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	$ 152,230
October	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	$ 152,230
November	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	$ 152,230
December	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	$ 152,230
January	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	$ 152,230
Febuary	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	$ 152,230
March	$ 241,370	$ 913,109	$ 15,208	$ 1,169,686	$ 152,230
Total	*$ 2,901,527*	*$ 10,957,303*	*$ 182,493*	**$ 14,041,323**	**$ 1,827,362**

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 2017 of $147,577 is adjusted for the time value of money to $166,099 as shown in Extract 3 below and included as a recoverable cost for the assessment period ending 31 March 2019.

Extract 3: Quality incentive adjustment 2018

Quality incentive adjustment

Quality incentive adjustment 2017	$147,577
Cost of debt	6.09%
Quality incentive adjusted for time value of money	166,099

The **Capex wash-up adjustment** for the year ending 31 March 2017 is $590,443 as shown in Extract 4 over the page.

Extract 4: Copy of Capex wash-up adjustment

Input

EDB name	Alpine Energy

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

Calculation: using actual commissioned asset value

PV at 1 Apr 2015 of BBAR before tax over the regulatory period	165,019

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.

Seven of the 13 recoverable costs for the year ended 31 March 2019 is nil. The reasons for a nil value are provided in Table 24 over the page.

[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
System operator services charged for the year	The Transpower system operator is 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 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%

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 2019				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%	63%	64%	0%	9%	37%	36%	0%
LOWLCA	Low User (controlled) low cost area	91%	61%	61%	0%	9%	39%	39%	0%
LOWUHCA	Low User (uncontrolled) high cost area	91%	52%	47%	0%	9%	48%	53%	0%
LOWULCA	Low User (uncontrolled) low cost area	91%	50%	45%	0%	9%	50%	55%	0%
015HCA	Single Phase (controlled) high cost area	69%	62%	62%	0%	31%	38%	38%	0%
015LCA	Single Phase (controlled) low cost area	64%	62%	62%	0%	36%	38%	38%	0%
015UHCA	Single Phase (uncontrolled) high cost area	44%	62%	62%	0%	56%	38%	38%	0%
015ULCA	Single Phase (uncontrolled) low cost area	40%	62%	62%	0%	60%	38%	38%	0%
360HCA	Three Phase (controlled) high cost area	94%	62%	62%	0%	6%	38%	38%	0%
360LCA	Three Phase (controlled) low cost area	90%	62%	62%	0%	10%	38%	38%	0%
360UHCA	Three Phase (uncontrolled) high cost area	82%	62%	62%	0%	18%	38%	38%	0%
360ULCA	Three Phase (uncontrolled) low cost area	77%	62%	62%	0%	23%	38%	38%	0%
ASSHCA	Assessed demand high cost area	78%	62%	62%	78%	22%	38%	38%	22%
ASSLCA	Assessed demand low cost area	67%	62%	62%	70%	33%	38%	38%	30%
TOU400HCA	Time-of-Use metering at 400 V high cost area	69%	67%	67%	69%	31%	33%	33%	31%
TOU400LCA	Time-of-Use metering at 400 V low cost area	59%	61%	61%	60%	41%	39%	39%	40%
TOU11HCA	Time-of-Use metering at 11 kV high cost area	60%	64%	64%	64%	40%	36%	36%	36%
TOU11LCA	Time-of-Use metering at 11 kV low cost area	59%	57%	57%	58%	41%	43%	43%	42%

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 2018/19 Rates

Council	2016/17 1 July to 30 June	Growth	2018/19 1 July to 30 June	2018/19 1 April to 31 March
Timaru District Council	$26,323	15.62%	$35,190	$32,973
Environment Canterbury	$19,579	0.38%	$19,729	$19,682
Mackenzie District Council	$12,623	4.58%	$13,804	$13,509
Waimate District Council	$ 9,858	-0.69%	$9,721	$9,756
Total	*$68,292*		*$78,445*	**$75,929**

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 2016/17 between 1 July to 30 June and forecast what the rates payable will between 1 July to 30 June 2017/18 and 2018/19. The 2017/18 rates forecast are based on the 2016/17 actual plus the average 5 year growth. The 2018/19 rates forecast are based on the 2017/18 forecast plus the average 5 year growth.[3]

We then calculate the forecast rates for 1 April to 31 March 2018/19 by adding the last quarter of the 2016/17 and the first three quarters of 2017/18. For example, TDC is (($26,323 x 0.25%) + ($35,190 x 0.75%)) = $32,973.

Commerce Act levies are forecast by taking the prior year levies and raising it by the percentage increase in our regulatory asset base (RAB). For example, the 2018/19 forecast Commerce Commission levies were based on the 0.04% growth in the RAB multiplied by the

[3] Please note that we use the 2016/17 actuals as the 2017/18 year had not ended when the 2018/19 prices are set and accordingly, 2016/17 are the most recent actuals available to us.

2016/17 actual levies of $47,021. Accordingly, the calculation for the 2018/19 forecast is ($48,371 x (1 +0.04%)) = $48,388.

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 2018*. A copy of our Pricing Methodology is available at Reception and/or can be found on our website[4].

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 2019				
K 2018/19	Actual ($)	Forecast ($)	Variance ($)	Variance (%)
Rates on system fixed assets	94,601	75,929	18,672	24.6%
Commerce Act levies	98,828	48,388	50,440	104.2%
Electricity Authority levies	138,631	160,506	(21,875)	(13.6%)
Utilities Disputes levies	18,625	15,835	2,790	17.6%
Total Pass-through Costs	350,685	300,658	50,027	16.6%

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.

It has been noted that in the year ending 31 March 2019, the pass-through variances were subject to some volatility. Most notably the **Commerce Act levies** for the year which was over double the forecasted costs (104.2%). The forecast costs for the Commerce Commission levies were a sound calculation. The Commerce Commission's estimated costs were significantly higher than previous years.

The other levies and rates combined had a minimal impact on the overall variance. The variance can be attributable to the Commerce Act levies having a $50,000 increase.

[4] http://www.alpineenergy.co.nz/disclosures

Rates on system fixed assets have a variance of $18,672 or 24.6%. Comparing the dollar variance to the total pass-through costs, we establish that this variance at 5%. The **Electricity Authority levies** have a variance of -$21,875 or -13.6%. Comparing the dollar variance to the total pass-through costs, we establish that this variance at -6%. Whereas **Electricity and Gas Complaints Commission (EGCC)** levies have a variance of $2,790 or 17.6%. Comparing the dollar variance to the total pass-through costs, we establish that this is an immaterial variance at less than 1%. These three levies added up total $413, establishing an immaterial variance in relation to the overall variance.

Recoverable cost reconciliation

Recoverable cost variances are shown in Table 29 below.

Table 29: Recoverable Costs Variances

Recoverable Costs for year ending March 2019				
$V_{2018/19}$	Actual ($)	Forecast ($)	Variance ($)	Variance (%)
Transpower transmission charges	14,041,323	14,053,131	(11,808)	(0.1%)
New investment contract charges	1,827,362	1,518,495	308,867	20.3%
System operator services charges	-	-	-	0.0%
Avoided transmission charges - purchases from Transpower	-	-	-	0.0%
Distributed generation allowance	-	-	-	0.0%
Claw-back	2,875,000	2,875,000	-	0.0%
NPV wash-up allowance	3,076,000	3,076,000	-	0.0%
Energy efficiency allowance	-	-	-	0.0%
Catastrophic event allowance	-	-	-	0.0%
Extended reserves allowance	-	-	-	0.0%
Quality incentive adjustment	166,099	156,564	9,535	6.1%
Capex wash-up adjustment	590,443	590,000	443	0.1%
Reconsideration event allowance	-	-	-	0.0%
Total Recoverable Costs	22,576,227	22,269,190	307,037	1.4%

The **New investment contract charges** were 308,667 (or 20.3%) more than forecast. The forecast was based on the average of the first six months' charges released by Transpower in November 2017. The charges were forecast to be $126,541, and the actual was $152,280 which resulted in a variance of $25,738 per month.

The **Quality incentive adjustment** is $166,099 (or 6.1%) higher than what we forecast. We forecast the Quality Incentive adjustment by using the quality incentive adjustment from the 2017 Annual Compliance Statement as shown in Extract 5 below.

Extract 5: Quality Incentive adjustment 2017

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

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 *2015-2020 regulatory period*	154.155
SAIFI Limit *2015-2020 regulatory period*	1.507
SAIDI Unplanned Boundary Value *2015-2020 regulatory period*	9.175
SAIFI Unplanned Boundary Value *2015-2020 regulatory period*	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

Raw data

$SAIDI_B$	Planned SAIDI	60.090
$SAIDI_C$	Unplanned SAIDI	116.438

Adjusted data

$SAIDI_B$	Planned SAIDI multiplied by 0.5	30.045
$SAIDI_C$	Normalised unplanned SAIDI	106.720
$SAIDI_{Assess\ (B+C)}$		136.766

Table 32: SAIFI Assessed Values

SAIFI Assessed Values

Raw data

$SAIFI_B$	Planned SAIFI	0.218
$SAIFI_C$	Unplanned SAIFI	0.898

Adjusted data

$SAIFI_B$	Planned SAIFI multiplied by 0.5	0.109
$SAIFI_C$	Normalised unplanned SAIFI	0.885
$SAIFI_{Assess\ (B+C)}$		0.994

Reliability Limits

We experienced three major event days (MEDs) during the assessment period. The first MED was caused by a wind storm on 3 May causing a broken binder off an insulator causing a burnt pole. The second MED was caused by another broken binder on 8 May. The third MED was caused by a cable strike by a third party on 20 October.

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
20-Oct-18	15.375	9.175
3-May-18	10.163	9.175
8-May-18	11.705	9.175

Table 34: Event Days exceeding SAIFI Boundary Value

Date	Pre-Normalised unplanned SAIFI	Normalised unplanned SAIFI
20-Oct-18	0.085	0.072

Prior period assesses values

Prior period assed values are shown in Table 35 below.

Table 35: Prior period assed values

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
Assessed SAIDI Value 2016/17		
$SAIDI_{2016/17}$	133.469	The sum of daily SAIDI Values in the 1 April 2016 - 31 March 2017 Normalised Assessment Dataset
Assessed SAIFI Value 2016/17		
$SAIFI_{2016/17}$	1.065	The sum of daily SAIFI Values in the 1 April 2016 - 31 March 2017 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 $124,134 incentive for our performance against the quality standards. The incentive may be collected from customers via pass-through prices effective as at 1 April 2020. Table 36 below details the SAIDI incentive calculation.

Table 36: SAIDI Incentive

SAIDI Incentive		
Term	Description	Value
SAIDI Target	SAIDI target specified in DPP Determination	132.8088
SAIDI Collar	SAIDI incentive range collar specified in DPP Determination	111.4627
SAIDI Cap	SAIDI incentive range cap specified in DPP Determination	154.1549
Starting price MAR	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	136.766
S_{SAIDI}	SAIDI incentive adjustment (equal to incentive rate multiplied by SAIDI target minus Assessed SAIDI value)	($28,229)

Table 37 below details the SAIFI incentive calculation.

Table 37: SAIFI Incentive

SAIFI Incentive		
Term	Description	Value
SAIFI Target	SAIFI target specified in DPP Determination	1.2973
SAIFI Collar	SAIFI incentive range collar specified in DPP Determination	1.0874
SAIFI Cap	SAIFI incentive range cap specified in DPP Determination	1.5071
Starting price MAR	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 over page outlines our process for recording outages.

Figure 1: Process for recording outages