For the CPP Assessment Period ending 31 March 2022

ANNUAL COMPLIANCE STATEMENT

Aurora ENERGY

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1. Introduction

1.1. Context

1. Aurora Energy is subject to price-quality regulation made under Part 4 of the Commerce Act 1986.

2. The Commerce Commission (Commission) regulates the maximum annual revenue Aurora Energy can earn from its customers and the minimum quality of service it must deliver.

3. For this CPP Assessment Period ending 31 March 2022, Aurora Energy is subject to the *Aurora Energy Limited Electricity Distribution Customised Price-Quality Path Determination 2021* (Determination).

4. Clause 11.4 of the Determination requires Aurora Energy to provide to the Commission an annual compliance statement in respect of the Wash-up Amount calculation, quality standards and quality incentives and transactions, no later than 5 months after the end of each CPP Assessment Period. This annual compliance statement (Statement) has been prepared pursuant to that clause for the CPP Assessment Period ending 31 March 2022.

1.2. Definitions

5. All capitalised terms used in this Statement have the meanings ascribed to them in the Determination or the *Electricity Distribution Services Input Methodology Determination 2021* (IMs). Accordingly, this Statement must be read in conjunction with the Determination and, where necessary, the IMs.

1.3. Content of Statement

6. The content of this Statement is specified in the Determination. A matrix showing the relationship between the requirements set out in the Determination and the contents of this Statement can be found in Appendix A.

1.4. Certification

7. This Statement was prepared and certified in accordance with clause 11.5 of the Determination on 29 August 2022. A copy of the Director's Certificate can be found in Appendix B.

1.5. Assurance Report

8. Audit NZ has prepared an assurance report that meets the requirements of schedule 8 of the Determination. A copy of that report can be found in Appendix C.

2. Wash-up Amount Calculation

2.1. Statement of Compliance

9. As demonstrated in section 2.2, Aurora Energy has complied with the requirements to calculate the Wash-up Amount in clause 8.6 of the Determination for the CPP Assessment Period ending 31 March 2022.

2.2. Calculation of the Wash-up Amount

10. Clause 8.6 of the Determination requires that Aurora Energy must calculate the Wash-up Amount for each CPP Assessment Period using the methodology specified in Schedule 1.5 of the Determination.

11. Table 1 demonstrates the calculation of the Wash-up Amount in accordance with the formula set out in Schedule 1.5 of the Determination. The three components of this calculation are described in more detail in sections 2.3 to 2.5 of this Statement.

Table 1: Wash-up amount calculation

Wash-up Amount for the **2022 CPP Assessment Period**		
Term	**Description**	**Value ($000)**
Actual Allowable Revenue (AAR)	Actual Net Allowable Revenue *plus* Actual Pass-through Costs and Recoverable Costs.	117,826
Actual Revenue (AR)	Sum of Actual Revenue From Prices plus Other Regulated Income.	104,409
Revenue Foregone (RV)	Actual Net Allowable Revenue x (Revenue Reduction Percentage - 20%) when Revenue Reduction Percentage is greater than 20%, otherwise nil.	Nil
Wash-up Amount	AAR – AR – RV	**13,417**

2.3. Calculation of Actual Allowable Revenue

12. Schedule 1.5 of the Determination defines Actual Allowable Revenue for the first CPP Assessment Period, as the amount calculated in accordance with the formula in Table 2.

Table 2: Actual Allowable Revenue for the 2022 CPP Assessment Period

Actual Allowable Revenue for the 2022 CPP Assessment Period		
Term	Description	Value ($000)
Actual Net Allowable Revenue (ANAR)	Amount specified as Forecast Net Allowable Revenue for the first CPP Assessment Period.	103,663
Actual Pass-through Costs	Sum of all Pass-through Costs that were incurred or approved by the Commission in the CPP Assessment Period.	1,657
Actual Recoverable Costs	Sum of all Recoverable Costs that were incurred or approved by the Commission in the CPP Assessment Period.	12,506
Total Actual Allowable Revenue (AAR)	Actual Net Allowable Revenue + Actual Pass-through Costs And Recoverable Costs	117,826

13. Aurora Energy's Actual Net Allowable Revenue is specified in Schedule 1.3 of the Determination. For the CPP Assessment Period ending 31 March 2022 the Actual Net Allowable Revenue $103,663,000.

14. Further information supporting Actual Pass-through costs And Recoverable Costs is included in Appendix D.

2.4. Actual Revenue

15. Section 4.2 of the Determination defines Actual Revenue as the amount calculated in accordance with the formula in Table 3.

Table 3: Actual Revenue for the 2022 CPP Assessment Period

Actual Revenue for the 2022 CPP Assessment Period		
Term	Description	Value ($000)
Actual Revenue from Prices	Actual prices for the CPP Assessment Period multiplied by actual quantities for the CPP Assessment Period.	105,829
Other Regulated Income	Other income associated with supply of Electricity Lines Services.	(1,420)
Total Actual Revenue (AR)	Sum of Actual Revenue From Prices plus Other Regulated Income	104,409

16. Further information supporting Actual Revenue From Prices is included in Appendix E.

2.5. Revenue Foregone

17. Section 4.2 of the CPP Determination defines Revenue Foregone as the amount calculated in accordance with the formula in Table 4**Error! Reference source not found.**.

Table 4: Revenue foregone for the 2022 CPP Assessment Period

Revenue Foregone for the 2022 CPP Assessment Period		
Term	Description	Value ($000)
Actual Net Allowable Revenue (ANAR)	Amount specified as Forecast Net Allowable Revenue for the first CPP Assessment Period.	103,663
Actual Revenue From Prices	Actual prices for the CPP Assessment Period multiplied by actual Quantities for the CPP Assessment Period	105,829
Forecast Revenue From Prices	Actual prices for the CPP Assessment Period multiplied by Forecast Quantities for the CPP Assessment Period	107,112
Revenue Reduction Percentage (RRP)	1 - (Actual Revenue From Prices / Forecast Revenue From Prices)	1.2%
Revenue Foregone (RV)	Actual Net Allowable Revenue x (RRP- 20%) when RRP is greater than 20%, otherwise nil	Nil

3. Quality Path

3.1. Planned interruptions quality standard

18. Clause 9.1 of the Determination requires that Aurora Energy must comply with the planned interruptions reliability assessment cap specified in clause 9.2 of the Determination for the CPP Regulatory Period. Compliance with the quality standard will be assessed at the end of the CPP Regulatory Period.

19. For the purposes of this Statement, Table 5 and Table 6 demonstrate Aurora Energy's Planned SAIDI Assessed Value and Planned SAIFI Assessed Value and the relevant limits.

Table 5: Planned interruptions quality standard compliance for the 2022 CPP Assessment Period - SAIDI

Planned interruptions quality standard for the 2022 CPP Assessment Period - SAIDI	
Sum of Planned SAIDI Assessed Values ≤ Planned Accumulated SAIDI Limit	
Planned Accumulated SAIDI Limit	979.80
Planned SAIDI Assessed Value for the 2022 CPP Assessment Period	124.50

Table 6: Planned interruptions quality standard compliance for the 2022 CPP Assessment Period - SAIFI

Planned interruptions quality standard for the 2022 CPP Assessment Period - SAIFI	
Sum of Planned SAIFI Assessed Values ≤ Planned Accumulated SAIFI Limit	
Planned Accumulated SAIFI Limit	5.5385
Planned SAIFI Assessed Value for the 2022 CPP Assessment Period	0.8271

20. Further information supporting Planned SAIDI and SAIFI Assessed Values is included in section3.4.

3.2. Unplanned interruptions quality standard

21. Aurora Energy has complied with the unplanned interruptions quality standard specified in clause 9.3 of the CPP Determination for the CPP Assessment Period ending 31 March 2022.

22. Clause 9.3 of the Determination requires that Aurora Energy must, in respect of each CPP Assessment Period, comply with the annual unplanned interruptions reliability assessment cap specified in clause 9.4, for that CPP Assessment Period.

23. Aurora Energy complies with the unplanned interruption quality standard as demonstrated in Table 7 and Table 8.

Table 7: Unplanned interruptions quality standard compliance for the 2022 CPP Assessment Period - SAIDI

Unplanned interruptions quality standard for the 2022 CPP Assessment Period - SAIDI	
Sum of Unplanned SAIDI Assessed Values ≤ Unplanned SAIDI Limit	
Unplanned SAIDI Limit	124.94
Unplanned SAIDI Assessed Value	98.45
Compliance result	Compliant

Table 8: Unplanned interruptions quality standard compliance for the 2022 CPP Assessment Period - SAIFI

Unplanned interruptions quality standard for the 2022 CPP Assessment Period - SAIFI	
Sum of Unplanned SAIFI Assessed Values ≤ Unplanned SAIFI Limit	
Unplanned SAIFI limit	2.0710
Unplanned SAIFI assessed value	1.4960
Compliance result	Compliant

24. Further information supporting Unplanned SAIDI and SAIFI Assessed Values is included in section 3.5 and Appendix F.

3.3. Extreme event standard

25. Aurora Energy has complied with the extreme event quality standard specified in clause 9.5 of the Determination for the CPP Assessment Period ending 31 March 2022.

26. Clause 9.5 of the Determination requires that Aurora Energy must, in respect of each CPP Assessment Period, comply with the extreme event standard specified in clause 9.6 for that CPP Assessment Period.

27. Compliance is established in Table 9.

Table 9: Extreme Event quality standard compliance for the 2022 CPP Assessment Period - SAIDI

Extreme Event quality standard for the 2022 CPP Assessment Period – SAIDI	
Unplanned SAIDI value > 120 minutes, and customer interruption minutes > six million during any 24-hour period, excluding unplanned interruptions from major external factors	
Number of extreme events	Compliance result
0	Compliant

3.4. Planned SAIDI and SAIFI Assessed Values

28. Table 10 and Table 11 demonstrate Aurora Energy's planned SAIDI and SAIFI Assessed Values for the CPP Assessment Period.

Table 10: Planned SAIDI Assessed Value for the 2022 CPP Assessment Period

Planned SAIDI Assessed Value for the 2022 CPP Assessment Period		
Term	Description	Value
Class B non-notified interruptions		9.10
Class B Notified Interruptions falling outside the Notified Interruption Window		13.13
$SAIDI_B$	Sum of Class B non-notified interruptions	22.23
Class B Notified Interruptions falling inside the Notified Interruption Window		178.29
Class B Intended Interruptions Cancelled Without Notice		26.26
Class B Intended Interruptions Cancelled With Notice		0.00
$SAIDI_N$	Sum of Class B Notified Interruptions	204.55
Planned SAIDI Assessed Value	$SAIDI_B + (SAIDI_N / 2)$	124.50

Table 11: Planned SAIFI Assessed Value for the 2022 CPP Assessment Period

Planned SAIFI Assessed Value for the 2022 CPP Assessment Period		
Term	Description	Value
Planned SAIFI Assessed Value	Sum of SAIFI Values for Class B Interruptions commencing within the CPP Assessment Period	0.8271

3.5. MAJOR EVENTS

3.5.1. SAIDI and SAIFI boundary values

Aurora Energy's SAIDI Unplanned Boundary Value and SAIFI Unplanned Boundary Value are set out in Table 12 below.

Table 12: SAIDI Unplanned Boundary Value and SAIFI Unplanned Boundary Value

Aurora Energy's SAIDI Unplanned Boundary Value and SAIFI Unplanned Boundary Value	
Term	Value
SAIDI Unplanned Boundary Value	5.69
SAIFI Unplanned Boundary Value	0.0737

3.5.2. SAIDI Major Events

29. Aurora Energy experienced four SAIDI Major Events on its network during the CPP Assessment Period. Table 13, below, sets out the start and end dates and times of those Major Events and the SAIDI values attributed to each.

30. Further information about each SAIDI Major Event is included in Appendix F.

Table 13: Unplanned SAIDI major events during the 2022 CPP Assessment Period

Unplanned SAIDI Major Events during the 2022 CPP Assessment Period			
Start	End	Pre-normalised unplanned SAIDI value	Normalised SAIDI value
05/07/2021 11:00 AM	07/07/2021 09:30 AM	7.06	0.48
22/07/2021 09:00 AM	24/07/2021 08:00 AM	6.24	0.15
10/03/2022 07:30 PM	12/03/2022 08:30 AM	8.01	0.84
13/03/2022 11:00 AM	14/03/2022 08:30 PM	5.76	0.38

3.5.3. SAIFI Major Events

31. Aurora Energy experienced three SAIFI Major Events on its network during the CPP Assessment Period. Table 14, below, sets out the start and end dates and times of those Major Events and the SAIFI values attributed to those Major Events.

32. Further information about each SAIFI Major Event is included in Appendix F.

Table 14: Unplanned SAIFI major events during the 2022 CPP Assessment Period

Unplanned SAIFI Major Events during the 2022 CPP Assessment Period			
Start	**End**	**Pre-normalised unplanned SAIFI value**	**Normalised SAIFI value**
24/01/2022 10:00 AM	25/01/2022 06:30 PM	0.0810	0.0078
31/01/2022 05:30 PM	02/02/2022 04:30 PM	0.1617	0.0101
06/02/2022 05:00 PM	08/02/2022 04:00 PM	0.1303	0.0062

3.6. Measuring planned and unplanned interruptions

33. Information about policies, procedures and calculations for measuring planned and unplanned interruptions during the CPP Assessment Period is set out in Appendix G.

3.7. Details of interruptions

34. Details of each:

- Class B Interruption during the CPP Regulatory Period; and
- Class C Interruption during the CPP Assessment Period

can be found alongside this Annual Compliance Statement at https://www.auroraenergy.co.nz/disclosures/.

4. Quality Incentive Adjustment

35. Table 15, below, demonstrates the calculation of Aurora Energy's Quality Incentive Adjustment for the CPP Assessment Period in accordance with the Determination.

Table 15: Quality Incentive Adjustment calculation for the 2022 CPP Assessment Period

Quality Incentive Adjustment calculation for the 2022 CPP Assessment Period		
Term	Description	Value ($)
SAIDI planned adjustment	$(SAIDI_{planned,\ target} - SAIDI_{planned,\ assessed}) \times 0.5 \times IR$	(373,694)
SAIDI unplanned adjustment	$(SAIDI_{unplanned,\ target} - SAIDI_{unplanned,\ assessed}) \times IR$	(148,053)
Total adjustment	SAIDI planned adjustment + SAIDI unplanned adjustment	(521,747)
Revenue at risk	0.02 * ANAR	2,073,260
Total penalty/reward		(521,747)
67th Percentile Estimate of Post-tax WACC		4.23%
Quality Incentive Adjustment		(566,820)

36. Table 16, below, sets out the inputs to the Quality Incentive Adjustment calculation.

Table 16: Quality Incentive Adjustment inputs for the 2022 CPP Assessment Period

Quality Incentive Adjustment inputs for the 2022 CPP Assessment Period		
Term	Units	Value
Planned interruptions		
SAIDI Planned Interruption Cap	minutes	195.96
SAIDI Planned Interruption Collar	minutes	0.00
SAIDI Planned Interruption Target	minutes	72.16
Planned SAIDI Assessed Value	minutes	124.50
Incentive Rate	$	14,279
Actual Net Allowable Revenue (ANAR)	$	103,663,000

Minimum of the Planned SAIDI Cap and assessed value	minutes	124.50
Planned SAIDI subject to incentive	minutes	(52.34)
Adjustment (IR x 0.5)	$	7,140
SAIDI planned adjustment	$	(373,694)

Unplanned interruptions		
SAIDI Unplanned Interruption Cap	minutes	124.94
SAIDI Unplanned Interruption Collar	minutes	0.00
SAIDI Unplanned Interruption Target	minutes	88.08
Unplanned SAIDI Assessed Value	minutes	98.45

Minimum of the Unplanned SAIDI Cap and assessed value	minutes	98.45
Unplanned SAIDI subject to incentive	minutes	(10.37)
Adjustment (IR)	$	14,279
SAIDI unplanned adjustment	$	(148,053)

5. MISCELLANEOUS STATEMENTS

Clause 11.5(c) of the Determination requires Aurora Energy to include in this Statement copies of notifications made in accordance with clause 10.1 of the Determination. Aurora Energy has not notified the Commission that it has entered into an Amalgamation, Merger, Major Transaction, or Transfer in the CPP Assessment Period ending 31 March 2022.

Appendix A. Compliance Matrix

This schedule demonstrates how this Statement complies with the Determination.

Determination Requirement	Determination Reference	Statement Reference
The annual compliance statement must:	Clause 11.5	
state whether Aurora has—	Clause 11.5(a)	
complied with the requirements to calculate the Wash-up Amount under clause 8.6 for the CPP Assessment Period; and	Clause 11.5(a)(i)	Section 2.1
complied with the quality standards in clause 9 for the CPP Assessment Period;	Clause 11.5(a)(ii)	Sections 3.1, 3.2, and 3.3
state the day on which the statement was prepared;	Clause 11.5(b)	Section 1.4
include copies of notifications made in accordance with clause 10.1;	Clause 11.5(c)	Section 5
include a certificate in the form set out in Schedule 7, signed by at least one Director of Aurora; and	Clause 11.5(d)	Appendix B
be accompanied by an assurance report meeting the requirements in Schedule 8, in respect of all information contained in the 'annual compliance statement'; and	Clause 11.5(e)	Appendix C
include any information reasonably necessary to demonstrate whether Aurora has complied with clause 8.6, clause 9, clauses 10.1-10.14, and Schedule 4, including:	Clause 11.5(f)	
Wash-up Amount calculation (clause 8.6)		
details of the Wash-up Amount calculation as specified in clause 8.6, together with supporting information for all components of the calculation;	Clause 11.5(f)(i)	Section 2, Appendix D and Appendix E
Compliance with quality standards (clause 9) and quality incentive adjustment (Schedule 4)		

Determination Requirement		Determination Reference	Statement Reference
	actions taken to mitigate any non-compliance with clause 9 and Schedules 3.1-3.2 and to prevent similar non-compliance in future CPP Assessment Periods;	Clause 11.5(f)(ii)	N/A
	the Planned SAIDI Assessed Value and Planned SAIFI Assessed Value for the CPP Assessment Period, and any supporting calculations (including those in Schedule 3.1);	Clause 11.5(f)(iii)	Sections 3.1 and 3.4
	for the annual unplanned interruptions reliability assessment specified in clause 9.4, the Unplanned SAIDI Assessed Value, Unplanned SAIFI Assessed Value, Unplanned SAIDI Limit, Unplanned SAIFI Limit, SAIDI Unplanned Boundary Value, and SAIFI Unplanned Boundary Value for the CPP Assessment Period, and any supporting calculations (including those in Schedule 3.2);	Clause 11.5(f)(iv)	Sections 3.2, 3.5 and Appendix F
	for the Quality Incentive Adjustment, SAIDI Planned Interruption Cap, SAIDI Unplanned Interruption Cap, SAIDI Planned Interruption Collar, SAIDI Unplanned Interruption Collar, SAIDI Planned Interruption Target, SAIDI Unplanned Interruption Target and Incentive Rate for the CPP Assessment Period, and any supporting calculations (including those in Schedule 4);	Clause 11.5(f)(v)	Section 4
	a description of the policies and procedures which Aurora has used for capturing data and recording Class B Interruptions and Class C Interruptions, and for calculating Planned SAIDI Assessed Values, Unplanned SAIDI Assessed Values, Planned SAIFI Assessed Values, and Unplanned SAIFI Assessed Values for the CPP Assessment Period; and	Clause 11.5(f)(vi)	Appendix G
	information relating to each SAIDI Major Event within the assessment period, including:	Clause 11.5(f)(vii)	Appendix F
	the Cause of the SAIDI Major Event;	Clause 11.5(f)(vii)(A)	
	the start date (dd/mm/yyyy) of the SAIDI Major Event;	Clause 11.5(f)(vii)(B)	
	the start time (hh:mm am/pm) of the SAIDI Major Event;	Clause 11.5(f)(vii)(C)	
	the end date (dd/mm/yyyy) of the SAIDI Major Event;	Clause 11.5(f)(vii)(D)	
	the end time (hh:mm am/pm) of the SAIDI Major Event;	Clause 11.5(f)(vii)(E)	

Determination Requirement	Determination Reference	Statement Reference
the SAIDI Value of the SAIDI Major Event before any replacements under paragraph (2) of Schedule 3.2 occurred;	Clause 11.5(f)(vii)(F)	
the replaced SAIDI Value of the SAIDI Major Event in accordance with paragraph (2) of Schedule 3.2;	Clause 11.5(f)(vii)(G)	
the location of the SAIDI Major Event;	Clause 11.5(f)(vii)(H)	
the Main Equipment involved in the SAIDI Major Event;	Clause 11.5(f)(vii)(I)	
how Aurora responded to the SAIDI Major Event;	Clause 11.5(f)(vii)(J)	
any mitigating factors that may have prevented or minimised the SAIDI Major Event; and	Clause 11.5(f)(vii)(K)	
a description of any steps Aurora proposes to take to mitigate the risk of future similar SAIDI Major Events; and	Clause 11.5(f)(vii)(L)	
information relating to each SAIFI Major Event within the assessment period, including:	Clause 11.5(f)(viii)	
the Cause of the SAIFI Major Event;	Clause 11.5(f)(viii)(A)	
the start date (dd/mm/yyyy) of the SAIFI Major Event;	Clause 11.5(f)(viii)(B)	
the start time (hh:mm am/pm) of the SAIFI Major Event;	Clause 11.5(f)(viii)(C)	
the end date (dd/mm/yyyy) of the SAIFI Major Event;	Clause 11.5(f)(viii)(D)	Appendix F
the end time (hh:mm am/pm) of the SAIFI Major Event;	Clause 11.5(f)(viii)(E)	
the SAIFI Value of the SAIFI Major Event before any replacements under paragraph (3) of Schedule 3.2 occurred;	Clause 11.5(f)(viii)(F)	
the replaced SAIFI Value of the SAIFI Major Event in accordance with paragraph (3) of Schedule 3.2;	Clause 11.5(f)(viii)(G)	

Determination Requirement	Determination Reference	Statement Reference
the location of the SAIFI Major Event;	Clause 11.5(f)(viii)(H)	
the Main Equipment involved in the SAIFI Major Event;	Clause 11.5(f)(viii)(I)	
how Aurora responded to the SAIFI Major Event;	Clause 11.5(f)(viii)(J)	
any mitigating factors that may have prevented or minimised the SAIFI Major Event;	Clause 11.5(f)(viii)(K)	
a description of any steps Aurora proposes to take to mitigate the risk of future similar SAIFI Major Events; and	Clause 11.5(f)(viii)(L)	
for each Class B Interruption during the CPP Regulatory Period:	Clause 11.5(f)(ix)	
the start date (dd/mm/yyyy) of the Class B Interruption;	Clause 11.5(f)(ix)(A)	
the start time (hh:mm am/pm) of the Class B interruption;	Clause 11.5(f)(ix)(B)	
the end date (dd/mm/yyyy) of the Class B Interruption;	Clause 11.5(f)(ix)(C)	Section 3.7
the end time (hh:mm am/pm) of the Class B interruption;	Clause 11.5(f)(ix)(D)	
SAIDI Value of the Class B Interruption; and	Clause 11.5(f)(ix)(E)	
SAIFI Value of the Class B Interruption;	Clause 11.5(f)(ix)(F)	
for each Class C Interruption during the CPP Assessment Period:	Clause 11.5(f)(x)	
the start date (dd/mm/yyyy) of the Class C Interruption;	Clause 11.5(f)(x)(A)	
the start time (hh:mm am/pm) of the Class C interruption;	Clause 11.5(f)(x)(B)	Section 3.7
the end date (dd/mm/yyyy) of the Class C Interruption;	Clause 11.5(f)(x)(C)	
the end time (hh:mm am/pm) of the Class C interruption;	Clause 11.5(f)(x)(D)	

Determination Requirement	Determination Reference	Statement Reference
SAIDI Value of the Class C Interruption;	Clause 11.5(f)(x)(E)	
SAIFI Value of the Class C Interruption; and	Clause 11.5(f)(x)(F)	
the Cause;	Clause 11.5(f)(x)(G)	
Transactions		
all information and calculations required to be made under clauses 10.2- 10.14, including:	Clause 11.5(f)(xi)	
all adjusted measures made in accordance with clauses 10.2-10.14;	Clause 11.5(f)(xi)(A)	
any supporting information and calculations used to determine the adjusted measures made in accordance with clauses 10.2-10.14;	Clause 11.5(f)(xi)(B)	N/A
details of the Wash-up Amount calculation for the period for the CPP Assessment Period commencing 1 April and ending on the day where a Transfer, Major Transaction, Amalgamation, or Merger has occurred, and any supporting information for all components of the calculation;	Clause 11.5(f)(xi)(C)	
the sum of the SAIDI Values for Class B Interruptions for the period in a CPP Assessment Period commencing 1 April and ending on the day where a Transfer, Major Transaction, Amalgamation, or Merger has occurred, and any supporting calculations;	Clause 11.5(f)(xi)(D)	
the sum of the SAIDI Values for Class C Interruptions for the period in a CPP Assessment Period commencing 1 April and ending on the day where a Transfer, Major Transaction, Amalgamation, or Merger has occurred, and any supporting calculations;	Clause 11.5(f)(xi)(E)	N/A
the sum of the SAIFI Values for Class B Interruptions for the period in a CPP Assessment Period commencing 1 April and ending on the day where a Transfer, Major Transaction, Amalgamation, or Merger has occurred, and any supporting calculations; and	Clause 11.5(f)(xi)(F)	

Determination Requirement		Determination Reference	Statement Reference
	the sum of the SAIFI Values for Class C Interruptions for the period in a CPP Assessment Period commencing 1 April and ending on the day where a Transfer, Major Transaction, Amalgamation, or Merger has occurred, and any supporting calculations.	Clause 11.5(f)(xi)(G)	

Appendix B. DIRECTOR'S CERTIFICATE

Clause 11.5(d)

We, Stephen Richard Thompson and Janice Evelyn Fredric, being directors of Aurora Energy Limited certify that, having made all reasonable enquiry, to the best of our knowledge and belief, the attached annual compliance statement of Aurora Energy Limited, and related information, prepared for the purposes of the *Aurora Energy Limited Electricity Distribution Customised Price-Quality Path Determination 2021* has been prepared in accordance with all the relevant requirements.

Stephen Richard Thompson

Janice Evelyn Fredric

29 August 2022

Appendix C. ASSURANCE REPORT

AUDIT NEW ZEALAND
Mana Arotake Aotearoa

Independent Assurance Report

To the directors of Aurora Energy Limited and to the Commerce Commission on the Annual Compliance Statement for the assessment period ended 31 March 2022 as required by the Aurora Energy Limited Electricity Distribution Customised Price-Quality Path Determination 2021

The Auditor-General is the auditor of Aurora Energy Limited (the company). The Auditor-General has appointed me, Julian Tan, using the staff and resources of Audit New Zealand, to undertake a reasonable assurance engagement, on his behalf, on whether the Annual Compliance Statement on pages 3 to 20 and 25 to 58 for the assessment period ended on 31 March 2022 has been prepared, , in all material respects, in compliance with the Aurora Energy Limited Electricity Distribution Customised Price-Quality Path Determination 2021 (the Determination).

Opinion

In our opinion, in all material respects:

- as far as appears from our examination, the information used in the preparation of the Annual Compliance Statement has been properly extracted from the company's accounting and other records, sourced from its financial and non-financial systems; and
- the company has complied with clauses 11.5 and 11.6 of the Determination in preparing the Annual Compliance Statement for the assessment period ended 31 March 2022.

Basis for opinion

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

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

Directors' responsibilities

The directors of the company are responsible:

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

Auditor's responsibilities

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

- as far as appears from our examination, the information used in the preparation of the Annual Compliance Statement has been properly extracted from the company's accounting and other records, sourced from its financial and non-financial systems; and
- the Annual Compliance Statement, for the assessment period ended 31 March 2022, has been prepared, in all material respects, in accordance with the requirements in clauses 11.5 and 11.6 of the Determination.

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

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

In relation to the quality standards in clause 9 of the Determination, our procedures included examination, on a test basis, of evidence relevant to the values and disclosures contained on pages 7 to 11 of the Annual Compliance Statement.

In relation to the quality incentive adjustment set out in schedule 4 of the Determination, our procedures included recalculation of the quality incentive adjustment in accordance with schedule 4 of the Determination and assessing it against the amounts and disclosures contained on pages 12 to 13 of the Annual Compliance Statement.

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

Inherent limitations

Because of the inherent limitations of an assurance engagement, together with the internal control structure, it is possible that fraud, error or non-compliance with clauses 11.5 and 11.6 of the Determination may occur and not be detected. A reasonable assurance engagement throughout the

assessment period does not provide assurance on whether compliance with clauses 11.5 and 11.6 of the Determination will continue in the future.

Restricted use

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

Independence and quality control

We complied with the Auditor-General's:

- independence and other ethical requirements, which incorporate the independence and ethical requirements of Professional and Ethical Standard 1 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.

The Auditor-General, and his employees, and Audit New Zealand and its employees may deal with the company on normal terms within the ordinary course of trading activities of the company. Other than any dealings on normal terms within the ordinary course of trading activities of the company, this engagement, the assurance engagements on the company's Information Disclosures and Annual Delivery Report, the annual audit of the company's financial statements and statement of service performance, we have no relationship with or interests in the company.

Julian Tan
Audit New Zealand
On behalf of the Auditor-General
Dunedin, New Zealand
30 August 2022

Appendix D. Actual Pass-through and Recoverable Costs and Pass-through Balance

Pass-through Costs

Table 17: Actual and forecast pass-through costs for the 2022 CPP Assessment Period

Actual and forecast Pass-through Costs for the 2022 CPP Assessment Period				
Actual Pass-through Costs	Actual ($000)	Forecast ($000)	Forecast variance ($000)	Explanation for variances
Local Authority rates	1,031	995	36	Council rates increases higher than forecast.
Commerce Act levies	280	370	(90)	Forecast included an uplift for the Commerce Commission's review of the IMs which has yet to commence.
Electricity Authority levies	275	291	(15)	Levy rate increase lower than forecast.
Utilities Disputes levies	71	62	9	Case related levies in RY22 were higher than prior years.
Total actual pass-through costs	1,657	1,717	(60)	

Recoverable Costs

Table 18: Actual and forecast recoverable costs for the 2022 CPP Assessment Period

Actual and forecast recoverable costs for the 2022 CPP Assessment Period				
Actual recoverable costs	**Actual ($000)**	**Forecast ($000)**	**Forecast variance ($000)**	**Explanation for variances**
Opex Incentive Amount	(15,363)	(15,363)	0	In line with forecast.
Capex Incentive Amount	(1,451)	(1,451)	0	In line with forecast.
Incremental Adjustment Term	-	-	-	-
Transpower connection and interconnection costs - Dunedin	12,656	12,656	0	In line with forecast.
Transpower connection and interconnection costs - Central	9,192	9,192	(0)	In line with forecast.

Transpower new investment contract - Dunedin	45	45	0	In line with forecast.
Transpower new investment contract - Central	378	378	0	In line with forecast.
Avoided transmission costs	-	-	-	-
System operator services	-	-	-	-
Distributed generation allowance	5,074	5,074	0	In line with forecast.
Claw-back	-	-	-	-
Standard application fee for a CPP proposal	20	20	0	In line with forecast.
Commerce Commission assessment fee for a CPP proposal	1,506	1,500	6	Actual costs invoiced by Commerce Commission $6k more than initially indicated.
Verifier fee under a CPP proposal	678	678	0	In line with forecast.
Auditor's fee associated with a CPP proposal	351	351	0	In line with forecast.
Audit and assurance report for a CPP proposal	-	-	-	-
Catastrophic event allowance	-	-	-	-
Extended reserves allowance	-	-	-	-
Quality incentive adjustment	(614)	(614)	0	In line with forecast.
Capex wash-up	-	-	-	-
Transmission asset wash-up adjustment	-	-	-	-
2013-15 NPV wash-up allowance	-	-	-	-
Reconsideration event allowance	-	-	-	-
Engineer fee associated with a proposal of quality standard variation	-	-	-	-
Revenue wash-up draw down amount	-	-	-	-
Fire and Emergency New Zealand (FENZ) levies	34	39	(4)	Levy increases lower than expected.
Innovation project allowance	-	-	-	-
Total actual recoverable costs	12,506	12,505	2	

Appendix E. ACTUAL REVENUE FROM PRICES

37. Aurora Energy's Forecast Revenue From Prices for the first CPP Assessment Period disclosed in Aurora Energy's Price-Setting Compliance Statement for the period 1 April 2021 to 31 March 2022 was $107,111,798.

38. Table 19, shows the actual Prices and Quantities for Actual Revenue From Prices for the 2022 CPP Assessment Period and includes ($67,074) of revenue from wash-up billing of prior period Quantities. Those prior period Quantities were invoiced at the price applicable at the time of consumption.

Table 19: Composition of Actual Revenue From Prices for the 2022 CPP Assessment Period

Load Group	Charge Type	Charge Applied	Actual Quantities as at 31 March 2022	Distribution Price	Pass-through and Recoverable Price	Distribution Actual Revenue	Pass-through and Recoverable Actual Revenue	Total Actual Revenue for the year ending 31 March 2022
Fixed charges - Dunedin								
Residential 15	Number	Daily	17,774,844	$ 0.1500	$ -	$ 2,666,227		**$ 2,666,227**
Residential 8	Number	Daily	195,760	$ 0.0410	$ -	$ 8,023		**$ 8,023**
Unmetered Supply	Number	Daily	761	$ 0.0612	$ -	$ 47		**$ 47**
L0	Number	Daily	37,671	$ 0.4983	$ 0.0724	$ 18,774	$ 2,724	**$ 21,497**
L0A	Number	Daily	62,180	$ 1.0346	$ 0.1952	$ 64,324	$ 12,138	**$ 76,462**
Load Group 1A	Number	Daily	150,359	$ 0.0461	$ -	$ 6,929		**$ 6,929**
Load Group 1A	Total Capacity kV	Daily	1,202,720	$ 0.0635	-$ 0.0099	$ 76,353	-$ 11,900	**$ 64,453**
Load Group 1A	Total CPD kW	Daily	139,596	$ 0.3773	$ 0.2817	$ 52,672	-$ 12	**$ 52,659**
Load Group 1	Number	Daily	1,039,743	$ 0.0461	$ -	$ 47,916		**$ 47,916**
Load Group 1	Total Capacity kV	Daily	15,590,235	$ 0.0567	-$ 0.0070	$ 883,796	-$ 109,036	**$ 774,759**
Load Group 1	Total CPD kW	Daily	2,392,028	$ 0.3773	$ 0.2817	$ 902,523	$ 673,824	**$ 1,576,347**
Load Group 2	Number	Daily	1,142,295	$ 0.0952	$ -	$ 108,785		**$ 108,785**
Load Group 2	Total Capacity kV	Daily	58,304,302	$ 0.0692	-$ 0.0181	$ 4,028,735	-$ 1,055,229	**$ 2,973,506**
Load Group 2	Total CPD kW	Daily	8,383,585	$ 0.3773	$ 0.2817	$ 3,163,135	$ 2,361,654	**$ 5,524,789**
Load Group 3	Number	Daily	37,847	$ 1.7170	$ -	$ 64,986		**$ 64,986**
Load Group 3	Total Capacity kV	Daily	7,407,070	$ 0.1161	-$ 0.0322	$ 859,965	-$ 238,509	**$ 621,456**
Load Group 3	Total KVA-KM	Daily	41,770,924	$ 0.0011	$ -	$ 45,948		**$ 45,948**
Load Group 3	Total CPD kW	Daily	1,907,318	$ 0.2550	$ 0.2795	$ 486,366	$ 533,096	**$ 1,019,462**
Load Group 3A	Number	Daily	33,090	$ 1.7170	$ -	$ 56,818		**$ 56,818**
Load Group 3A	Total Capacity kV	Daily	10,093,930	$ 0.1045	-$ 0.0322	$ 1,054,813	-$ 325,022	**$ 729,791**
Load Group 3A	Total KVA-KM	Daily	54,326,316	$ 0.0011	$ -	$ 59,759		**$ 59,759**
Load Group 3A	Total CPD kW	Daily	3,170,878	$ 0.2550	$ 0.2795	$ 808,573	$ 886,260	**$ 1,694,834**
Load Group 4	Number	Daily	27,135	$ 4.4835	$ -	$ 121,659		**$ 121,659**
Load Group 4	Total Capacity kV	Daily	19,298,000	$ 0.0569	-$ 0.0070	$ 1,099,986	-$ 135,086	**$ 964,900**
Load Group 4	Total KVA-KM	Daily	108,242,101	$ 0.0011	$ -	$ 119,066		**$ 119,066**
Load Group 4	Total CPD kW	Daily	5,387,544	$ 0.2186	$ 0.2795	$ 1,177,717	$ 1,505,818	**$ 2,683,535**
Load Group 5	Number	Daily	2,190	$ 4.4835	$ -	$ 9,819		**$ 9,819**
Load Group 5	Total Capacity kV	Daily	6,862,000	$ 0.0382	-$ 0.0087	$ 262,128	-$ 59,699	**$ 202,429**
Load Group 5	Total KVA-KM	Daily	47,680,315	$ 0.0011	$ -	$ 52,448		**$ 52,448**
Load Group 5	Total CPD kW	Daily	2,186,937	$ 0.1403	$ 0.2795	$ 306,827	$ 611,249	**$ 918,076**
Other Charges	Other Charge ($)	Annual	156,096	$ 1.0000	$ -	$ 23,447		**$ 23,447**
Transformer Charges	Other Charge ($)	Annual	650,000	$ 1.0000	$ -	$ 455,000		**$ 455,000**
Street Lighting	Fixed	Daily	365	$ 407.20	$ 69.65	$ 148,628	$ 25,422	**$ 174,050**
Street Lighting	Fixed	Daily	365	$ 800.37	$ 53.84	$ 292,135	$ 19,652	**$ 311,787**
Non-Standard	Fixed	Annual	-	$ 132,649	$ -	$ 132,649		**$ 132,649**
Variable charges - Dunedin								
Residential DN	kWh	Volume	19,293,879	$ 0.0954	$ 0.0046	$ 1,838,712	$ 88,751	**$ 1,927,463**
Residential DN	kWh	Volume	23,741,113	$ 0.1088	$ 0.0437	$ 2,583,031	$ 1,037,487	**$ 3,620,517**
Residential DN	kWh	Volume	2,143,615	$ 0.0872	$ 0.0015	$ 186,923	$ 3,216	**$ 190,138**
Residential DN	kWh	Volume	1,615,405	$ 0.0926	$ 0.0409	$ 149,587	$ 66,070	**$ 215,657**
Residential DN	kWh	Volume	1,533,568	$ 0.0065	$ -	$ 9,968		**$ 9,968**
Residential DN	kWh	Volume	160,012,794	$ 0.0470	$ 0.0129	$ 7,520,615	$ 2,064,171	**$ 9,584,786**
Residential DN	kWh	Volume	187,052,831	$ 0.0697	$ 0.0187	$ 13,037,583	$ 3,497,887	**$ 16,535,471**
Residential DN	kWh	Volume	1,500,629	$ 0.0244	$ 0.0066	$ 36,611	$ 9,907	**$ 46,519**
Residential DN	kWh	Volume	2,455,496	$ 0.0065	$ -	$ 15,967		**$ 15,967**
Unmetered Supply DN	kWh	Volume	3,614	$ 0.0218	$ 0.0059	$ 79	$ 21	**$ 100**
Residential DN	kWh	Volume	2,132,958	$ 0.0300	$ 0.0080	$ 63,989	$ 17,064	**$ 81,053**
					Total Dunedin	**$ 45,110,039**	**$ 11,481,917**	**$ 56,591,955**

Load Group	Charge Type	Charge Applied	Actual Quantities as at 31 March 2022	Distribution Price	Pass-through and Recoverable Price	Distribution Actual Revenue	Pass-through and Recoverable Actual Revenue	Total Actual Revenue for the year ending 31 March 2022
Fixed charges - Clyde/Cromwell								
Residential 15	Number	Daily	6,404,399	$ 0.1500	$ -	$ 960,660		**$ 960,660**
Residential 8	Number	Daily	30,147	$ 0.0410	$ -	$ 1,236		**$ 1,236**
L0	Number	Daily	39,374	$ 0.6750	-$ 0.0850	$ 26,574	-$ 3,343	**$ 23,231**
L0A	Number	Daily	142,601	$ 1.2872	-$ 0.1738	$ 183,538	-$ 24,785	**$ 158,753**
Load Group 1A	Number	Daily	118,179	$ 0.0475	$ -	$ 5,602		**$ 5,602**
Load Group 1A	Total Capacity kV	Daily	945,199	$ 0.0872	-$ 0.0143	$ 82,320	-$ 13,521	**$ 68,799**
Load Group 1A	Total CPD kW	Daily	113,299	$ 0.6007	$ 0.2734	$ 68,047	$ 30,976	**$ 99,023**
Load Group 1	Number	Daily	644,732	$ 0.0475	$ -	$ 30,561		**$ 30,561**
Load Group 1	Total Capacity kV	Daily	9,670,980	$ 0.0669	-$ 0.0210	$ 646,923	-$ 203,030	**$ 443,894**
Load Group 1	Total CPD kW	Daily	1,374,288	$ 0.6006	$ 0.2734	$ 825,394	$ 375,730	**$ 1,201,124**
Load Group 2	Number	Daily	735,140	$ 0.0990	$ -	$ 72,789		**$ 72,789**
Load Group 2	Total Capacity kV	Daily	37,514,372	$ 0.0857	-$ 0.0195	$ 3,214,976	-$ 731,515	**$ 2,483,461**
Load Group 2	Total CPD kW	Daily	4,063,148	$ 0.5237	$ 0.2013	$ 2,127,867	$ 817,594	**$ 2,945,461**
Load Group 3	Number	Daily	32,816	$ 1.8995	$ -	$ 62,330		**$ 62,330**
Load Group 3	Total Capacity kV	Daily	6,103,343	$ 0.0866	-$ 0.0250	$ 528,549	-$ 152,583	**$ 375,966**
Load Group 3	Total KVA-KM	Daily	189,015,193	$ 0.0013	$ -	$ 245,720		**$ 245,720**
Load Group 3	Total CPD kW	Daily	837,403	$ 0.5560	$ 0.1732	$ 465,596	$ 145,038	**$ 610,635**
Load Group 3A	Number	Daily	19,553	$ 1.8995	$ -	$ 37,138		**$ 37,138**
Load Group 3A	Total Capacity kV	Daily	5,805,122	$ 0.0862	-$ 0.0250	$ 500,402	-$ 145,128	**$ 355,274**
Load Group 3A	Total KVA-KM	Daily	176,102,521	$ 0.0013	$ -	$ 228,933		**$ 228,933**
Load Group 3A	Total CPD kW	Daily	854,540	$ 0.5560	$ 0.1732	$ 475,124	$ 148,006	**$ 623,131**
Load Group 4	Number	Daily	14,212	$ 4.9848	$ -	$ 70,844		**$ 70,844**
Load Group 4	Total Capacity kV	Daily	10,266,000	$ 0.0927	-$ 0.0246	$ 951,658	-$ 252,544	**$ 699,114**
Load Group 4	Total KVA-KM	Daily	379,622,042	$ 0.0013	$ -	$ 493,509		**$ 493,509**
Load Group 4	Total CPD kW	Daily	1,608,346	$ 0.4962	$ 0.1732	$ 798,061	$ 278,566	**$ 1,076,627**
Load Group 5	Number	Daily	365	$ 4.9848	$ -	$ 1,819		**$ 1,819**
Load Group 5	Total Capacity kV	Daily	912,500	$ 0.0620	-$ 0.0257	$ 56,484	-$ 23,451	**$ 33,033**
Load Group 5	Total KVA-KM	Daily	60,133,750	$ 0.0013	$ -	$ 78,174		**$ 78,174**
Load Group 5	Total CPD kW	Daily	35,956	$ 0.4962	$ 0.1732	$ 17,841	$ 6,228	**$ 24,069**
Other Charges	Other Charge ($)	Annual	- 9,891	$ 1.0000	$ -	-$ 9,891		**-$ 9,891**
Transformer Charges	Other Charge ($)	Annual	269,250	$ 1.0000	$ -	$ 188,475		**$ 188,475**
Non-Standard	Number	Annual	1	$ 440,383	$ -	$ 440,383		**$ 440,383**
Non-Standard	Number	Annual	1	$ 27,997	$ -	$ 27,997		**$ 27,997**
Variable charges - Clyde/Cromwell								
Residential CYD/CML	kWh	Volume	41,922,801	$ 0.1297	-$ 0.0069	$ 5,437,389	-$ 284,211	**$ 5,153,177**
Residential CYD/CML	kWh	Volume	51,411,158	$ 0.1793	-$ 0.0046	$ 9,218,016	-$ 236,490	**$ 8,981,526**
Residential CYD/CML	kWh	Volume	628,749	$ 0.0770	-$ 0.0027	$ 48,412	-$ 1,698	**$ 46,714**
Residential CYD/CML	kWh	Volume	1,793,520	$ 0.0630	-$ 0.0022	$ 112,990	-$ 3,945	**$ 109,045**
Residential CYD/CML	kWh	Volume	24,191,838	$ 0.0685	-$ 0.0021	$ 1,657,140	-$ 50,801	**$ 1,606,339**
Residential CYD/CML	kWh	Volume	1,333,495	$ 0.0539	$ -	$ 71,875		**$ 71,875**
Residential CYD/CML	kWh	Volume	196,360	$ 0.0946	-$ 0.0033	$ 18,576	-$ 648	**$ 17,928**
Street Lighting kWh CYD/CML	kWh	Volume	918,966	$ 0.0514	$ 0.0010	$ 47,235	$ 919	**$ 48,154**
Street Lighting Lamps CYD/CML	#lamps	Daily	1,604,846	$ 0.0376	$ -	$ 60,342		**$ 60,342**
					Total Clyde/Cromwell	**$ 30,577,606**	**-$ 324,635**	**$ 30,252,971**

Load Group	Charge Type	Charge Applied	Actual Quantities as at 31 March 2022	Distribution Price	Pass-through and Recoverable Price	Distribution Actual Revenue	Pass-through and Recoverable Actual Revenue	Total Actual Revenue for the year ending 31 March 2022
Fixed charges - Queenstown								
Residential 15	Number	Daily	3,520,546	$ 0.1500	$ -	$ 528,082		**$ 528,082**
Residential 8	Number	Daily	39,827	$ 0.0410	$ -	$ 1,632		**$ 1,632**
Load Group 0	Number	Daily	34,675	$ 0.4441	$ 0.2010	$ 15,400	$ 6,969	**$ 22,369**
Load Group 0A	Number	Daily	77,884	$ 0.8045	$ 0.4776	$ 62,655	$ 37,198	**$ 99,853**
Load Group 1A	Number	Daily	59,698	$ 0.0419	$ -	$ 2,504		**$ 2,504**
Load Group 1A	Total Capacity kV	Daily	477,584	$ 0.0556	-$ 0.0131	$ 26,552	-$ 6,254	**$ 20,297**
Load Group 1A	Total CPD kW	Daily	60,690	$ 0.2630	$ 0.2468	$ 15,963	$ 14,977	**$ 30,941**
Load Group 1	Number	Daily	308,424	$ 0.0419	$ -	$ 12,937		**$ 12,937**
Load Group 1	Total Capacity kV	Daily	4,626,360	$ 0.0520	-$ 0.0131	$ 241,036	$ 79	**$ 241,115**
Load Group 1	Total CPD kW	Daily	898,176	$ 0.2630	$ 0.2468	$ 236,228	$ 221,665	**$ 457,893**
Load Group 2	Number	Daily	571,067	$ 0.0654	$ -	$ 37,362		**$ 37,362**
Load Group 2	Total Capacity kV	Daily	26,210,328	$ 0.0627	-$ 0.0141	$ 1,643,362	-$ 369,547	**$ 1,273,815**
Load Group 2	Total CPD kW	Daily	4,130,704	$ 0.3128	$ 0.2686	$ 1,292,501	$ 1,109,509	**$ 2,402,011**
Load Group 3	Number	Daily	9,629	$ 1.5170	$ -	$ 14,608		**$ 14,608**
Load Group 3	Total Capacity kV	Daily	1,825,379	$ 0.1478	-$ 0.0133	$ 269,792	-$ 24,278	**$ 245,513**
Load Group 3	Total KVA-KM	Daily	27,009,185	$ 0.0011	$ -	$ 29,710		**$ 29,710**
Load Group 3	Total CPD kW	Daily	445,438	$ 0.2012	$ 0.1691	$ 89,622	$ 75,323	**$ 164,945**
Load Group 3A	Number	Daily	10,429	$ 1.5170	$ -	$ 15,822		**$ 15,822**
Load Group 3A	Total Capacity kV	Daily	3,051,820	$ 0.1351	-$ 0.0133	$ 412,299	-$ 40,588	**$ 371,711**
Load Group 3A	Total KVA-KM	Daily	46,122,972	$ 0.0011	$ -	$ 50,735		**$ 50,735**
Load Group 3A	Total CPD kW	Daily	698,922	$ 0.2012	$ 0.1691	$ 140,623	$ 118,187	**$ 258,811**
Load Group 4	Number	Daily	7,439	$ 3.9873	$ -	$ 29,662		**$ 29,662**
Load Group 4	Total Capacity kV	Daily	5,589,750	$ 0.0734	-$ 0.0003	$ 410,288	-$ 1,683	**$ 408,605**
Load Group 4	Total KVA-KM	Daily	64,553,051	$ 0.0011	$ -	$ 71,008		**$ 71,008**
Load Group 4	Total CPD kW	Daily	1,498,972	$ 0.2320	$ 0.1691	$ 347,911	$ 254,364	**$ 602,275**
Load Group 5	Number	Daily	-	$ 3.9873	$ -			**$ -**
Load Group 5	Total Capacity kV	Daily	-	$ 0.0175	-$ 0.0013			**$ -**
Load Group 5	Total KVA-KM	Daily	-	$ 0.0011	$ -			**$ -**
Load Group 5	Total CPD kW	Daily	-	$ 0.1594	$ 0.1691			**$ -**
Other Charges	Other Charge ($)	Annual	- 1,512	$ 1.0000	$ -	-$ 1,512		**-$ 1,512**
Transformer Charges	Other Charge ($)	Annual	183,500	$ 1.0000	$ -	$ 128,450		**$ 128,450**
Non-Standard	Number	Annual	1	$ 27,452.00	$ -	$ 27,452		**$ 27,452**
Non-Standard	Number		1	$ 89,650.85	$ 115,531.84	$ 89,651	$ 115,532	**$ 205,183**
Variable charges - Queenstown								
Residential FKN	kWh	Volume	25,754,830	$ 0.0880	$ 0.0034	$ 2,266,428	$ 87,563	**$ 2,353,991**
Residential FKN	kWh	Volume	38,468,118	$ 0.1071	$ 0.0364	$ 4,119,936	$ 1,400,240	**$ 5,520,177**
Residential FKN	kWh	Volume	1,400,159	$ 0.0331	$ 0.0075	$ 46,344	$ 10,501	**$ 56,846**
Residential FKN	kWh	Volume	912,152	$ 0.0202	$ 0.0047	$ 18,425	$ 4,286	**$ 22,711**
Residential FKN	kWh	Volume	17,536,229	$ 0.0225	$ 0.0052	$ 394,561	$ 91,194	**$ 485,754**
Residential FKN	kWh	Volume	858,643	$ 0.0144	$ -	$ 12,365		**$ 12,365**
Residential FKN	kWh	Volume	243,408	$ 0.0507	$ 0.0115	$ 12,316	$ 2,799	**$ 15,116**
Street Lighting kWh FKN	kWh	Volume	818,931	$ 0.0139	$ 0.0033	$ 11,383	$ 2,702	**$ 14,086**
Street Lighting Lamps FKN	#lamps	Daily	1,075,033	$ 0.0394	$ -	$ 42,356		**$ 42,356**

Load Group	Charge Type	Charge Applied	Actual Quantities as at 31 March 2022	Distribution Price	Pass-through and Recoverable Price	Distribution Actual Revenue	Pass-through and Recoverable Actual Revenue	Total Actual Revenue for the year ending 31 March 2022
Fixed charges - Queenstown Sub								
Residential 15	Number	Daily	488,158	$ 0.1500	$ -	$ 73,224		**$ 73,224**
Residential 8	Number	Daily	858	$ 0.0410	$ -	$ 35		**$ 35**
Load Group 0	Number	Daily	5,475	$ 0.4441	$ 0.2010	$ 2,432	$ 1,100	**$ 3,532**
Load Group 0A	Number	Daily	3,657	$ 0.8045	$ 0.4776	$ 2,942	$ 1,747	**$ 4,689**
Load Group 1A	Number	Daily	6,530	$ 0.0419	$ -	$ 274		**$ 274**
Load Group 1A	Total Capacity kV	Daily	52,240	$ 0.0556	-$ 0.0131	$ 2,904	-$ 684	**$ 2,220**
Load Group 1A	Total CPD kW	Daily	7,577	$ 0.2630	$ 0.2468	$ 1,993	$ 1,870	**$ 3,863**
Load Group 1	Number	Daily	76,340	$ 0.0419	$ -	$ 3,202		**$ 3,202**
Load Group 1	Total Capacity kV	Daily	1,145,100	$ 0.0521	-$ 0.0131	$ 59,660	-$ 14,994	**$ 44,666**
Load Group 1	Total CPD kW	Daily	234,518	$ 0.2630	$ 0.2468	$ 61,680	$ 57,878	**$ 119,558**
Load Group 2	Number	Daily	75,799	$ 0.0596	$ -	$ 4,523		**$ 4,523**
Load Group 2	Total Capacity kV	Daily	3,633,643	$ 0.0572	-$ 0.0141	$ 207,841	-$ 51,232	**$ 156,609**
Load Group 2	Total CPD kW	Daily	582,540	$ 0.2851	$ 0.2686	$ 166,082	$ 156,470	**$ 322,552**
Load Group 3	Number	Daily	3,216	$ 1.2383	$ -	$ 3,983		**$ 3,983**
Load Group 3	Total Capacity kV	Daily	628,482	$ 0.1207	-$ 0.0133	$ 75,858	-$ 8,359	**$ 67,499**
Load Group 3	Total KVA-KM	Daily	2,157,987	$ 0.0011	$ -	$ 2,374		**$ 2,374**
Load Group 3	Total CPD kW	Daily	201,294	$ 0.1643	$ 0.1691	$ 33,073	$ 34,039	**$ 67,111**
Load Group 3A	Number	Daily	2,920	$ 1.2383	$ -	$ 3,616		**$ 3,616**
Load Group 3A	Total Capacity kV	Daily	931,480	$ 0.1104	-$ 0.0133	$ 102,835	-$ 12,389	**$ 90,447**
Load Group 3A	Total KVA-KM	Daily	3,612,098	$ 0.0011	$ -	$ 3,973		**$ 3,973**
Load Group 3A	Total CPD kW	Daily	233,098	$ 0.1643	$ 0.1691	$ 38,298	$ 39,417	**$ 77,715**
Load Group 4	Number	Daily	3,285	$ 3.0552	$ -	$ 10,036		**$ 10,036**
Load Group 4	Total Capacity kV	Daily	1,916,250	$ 0.0564	-$ 0.0003	$ 108,076	-$ 575	**$ 107,502**
Load Group 4	Total KVA-KM	Daily	3,809,691	$ 0.0011	$ -	$ 4,191		**$ 4,191**
Load Group 4	Total CPD kW	Daily	742,417	$ 0.1781	$ 0.1691	$ 132,225	$ 125,543	**$ 257,767**
Load Group 5	Number	Daily	365	$ 3.0552	$ -	$ 1,115		**$ 1,115**
Load Group 5	Total Capacity kV	Daily	912,500	$ 0.0118	-$ 0.0013	$ 10,768	-$ 1,186	**$ 9,581**
Load Group 5	Total KVA-KM	Daily	1,095,000	$ 0.0011	$ -	$ 1,205		**$ 1,205**
Load Group 5	Total CPD kW	Daily	193,450	$ 0.1224	$ 0.1691	$ 23,678	$ 32,712	**$ 56,391**
Other Charges	Other Charge ($)	Annual	-	$ 1.0000	$ -			**$ -**
Transformer Charges	Other Charge ($)	Annual	93,000	$ 1.0000	$ -	$ 65,100		**$ 65,100**
Non-Standard	Number	Annual	1	$ 76,702.12	$ 54,541.85	$ 76,702	$ 54,542	**$ 131,244**
Variable charges - Queenstown Sub								
Residential FKN Sub	kWh	Volume	2,802,363	$ 0.0880	$ 0.0034	$ 246,608	$ 9,528	**$ 256,136**
Residential FKN Sub	kWh	Volume	4,301,386	$ 0.1071	$ 0.0364	$ 460,679	$ 156,571	**$ 617,249**
Residential FKN Sub	kWh	Volume	506,391	$ 0.0331	$ 0.0075	$ 16,761	$ 3,798	**$ 20,559**
Residential FKN Sub	kWh	Volume	177,549	$ 0.0202	$ 0.0047	$ 3,587	$ 834	**$ 4,421**
Residential FKN Sub	kWh	Volume	2,336,825	$ 0.0225	$ 0.0052	$ 52,579	$ 12,152	**$ 64,730**
Residential FKN Sub	kWh	Volume	90,825	$ 0.0144	$ -	$ 1,308		**$ 1,308**
Residential FKN Sub	kWh	Volume	62,785	$ 0.0507	$ 0.0115	$ 3,177	$ 722	**$ 3,899**
					Total Queenstown	**$ 15,235,044**	**$ 3,710,244**	**$ 18,945,289**

Load Group	Charge Type	Charge Applied	Actual Quantities as at 31 March 2022	Distribution Price	Pass-through and Recoverable Price	Distribution Actual Revenue	Pass-through and Recoverable Actual Revenue	Total Actual Revenue for the year ending 31 March 2022
Fixed charges - Te Anau								
Residential 15	Number	Daily	47,047	$ 0.1500	$ -	$ 7,057		**$ 7,057**
Residential 8	Number	Daily	1,095	$ 0.0410	$ -	$ 45		**$ 45**
Load Group 0	Number	Daily	-	$ 0.6339	$ -			**$ -**
Load Group 0A	Number	Daily	863	$ 1.3092	$ -	$ 1,130	$ -	**$ 1,130**
Load Group 1A	Number	Daily	365	$ 0.0317	$ -	$ 12		**$ 12**
Load Group 1A	Total Capacity kV	Daily	2,920	$ 0.0741	$ -	$ 216	$ -	**$ 216**
Load Group 1A	Total CPD kW	Daily	365	$ 0.6947	$ -	$ 254	$ -	**$ 254**
Load Group 1	Number	Daily	-	$ 0.0317	$ -			**$ -**
Load Group 1	Total Capacity kV	Daily	-	$ 0.0712	$ -			**$ -**
Load Group 1	Total CPD kW	Daily	-	$ 0.6947	$ -			**$ -**
Load Group 2	Number	Daily	1,460	$ 0.0668	$ -	$ 97		**$ 97**
Load Group 2	Total Capacity kV	Daily	40,515	$ 0.0622	$ -	$ 2,520	$ -	**$ 2,520**
Load Group 2	Total CPD kW	Daily	3,356	$ 0.6713	$ -	$ 2,253	$ -	**$ 2,253**
Variable charges - Te Anau								
Residential Heritage	kWh	Volume	289,399	$ 0.1115	$ -	$ 32,268	$ -	**$ 32,268**
Residential Heritage	kWh	Volume	307,880	$ 0.1676	$ -	$ 51,601	$ -	**$ 51,601**
Residential Heritage	kWh	Volume	-	$ 0.0461	$ -			**$ -**
Residential Heritage	kWh	Volume	127,254	$ 0.0521	$ -	$ 6,630	$ -	**$ 6,630**
Residential Heritage	kWh	Volume	19,903	$ 0.0307	$ -	$ 611		**$ 611**
Street Lighting kWh	kWh	Volume	7,137	$ 0.0720	$ -	$ 514	$ -	**$ 514**
Street Lighting Lamps	#lamps	Daily	29,565	$ 0.0377	$ -	$ 1,115		**$ 1,115**
					Total Te Anau	**$ 106,322**	**$ -**	**$ 106,322**
Total Network					Total Network	$ 91,029,011	$ 14,867,525	$ 105,896,536
					Prior Year Wash-ups	-$ 46,870	-$ 20,204	**-$ 67,074**
Total Revenue					Total Revenue	$ 90,982,141	$ 14,847,321	$ 105,829,463

Appendix F. Major Events

Details of the four SAIDI Major Events and three SAIFI Major Events that Aurora Energy experienced on its network during the CPP Assessment Period are set out below, together with details of the normalisation of the SAIDI and SAIFI values associated with the Major Events.

5 July 2021 SAIDI Major Event

Table 20: Details of 5 July 2021 SAIDI Major Event

Details of 5 July 2021 SAIDI Major Event	
Cause	Ten outage events, caused by Adverse Weather, contributed to the SAIDI Major Event.
Start date	5 July 2021
Start time	11:00 am
End date	7 July 2021
End time	9.30 am
Raw SAIDI Value	7.06 minutes
Replaced SAIDI Value	0.48 minutes
Location of the Major Event	Outage event 1: Arrowtown, Central Otago Outage event 2: Omakau, Central Otago Outage event 3 to 6: Roxburgh, Central Otago Outage event 7 to 9: Ettrick, Central Otago Outage event 10: Earnscleugh, Central Otago
Main Equipment involved in the Major Event	The main equipment involved for the ten outage events was Distribution Lines (Excluding LV).
How Aurora Energy responded to the Major Event	On this day an extremely high wind event was experienced throughout the Central Otago region and all the contributing outages are as a result of this. Field response was initiated to patrol the feeders to determine if there was a legitimate cause for trip and/or safe to liven. For the majority of the contributing outages either vegetation was found on or entangled in the overhead lines while still up in the air or in some cases wires broke and made contact with the ground. Supplies were restored for all outages, some immediately but for the majority only after remedial works were performed.
Any mitigating factors that may have prevented or minimised the Major Event	We do not believe that there were any factors, other than that discussed below, that may have prevented or minimised the Major Event.
Description of any steps Aurora Energy proposes to take to mitigate the risk of future similar Major Events	Aurora Energy will continue to review, with an aim to improving, its fault response times, so that customers are impacted by unplanned outage events for no longer than necessary.

	Aurora Energy is also undertaking a significant asset replacement and renewal programme, with an aim to improving the safety and reliability of supply to consumers in future years.

22 July 2021 SAIDI Major Event

Table 21: Details of 22 July 2021 SAIDI Major Event

Details of 22 July 2021 SAIDI Major Event	
Cause	Five outage events contributed to the SAIDI Major Event: – Outage event 1 to 4: Defective Equipment; and – Outage event 5: Third-party interference.
Start date	22 July 2021
Start time	9:00 am
End date	24 July 2021
End time	8.00 am
Raw SAIDI Value	6.24 minutes
Replaced SAIDI Value	0.15 minutes
Location of the Major Event	Outage event 1 to 3: Shotover, Queenstown Outage event 4: Earnscleugh, Central Otago Outage event 5: Wanaka, Central Otago
Main Equipment involved in the Major Event	Outage event 1: Distribution Lines (Excluding LV); Outage event 2: Subtransmission Lines; Outage event 3: Subtransmission Lines; Outage event 4: Distribution Other (Excluding LV); and Outage event 5: Distribution Cables (Excluding LV).
How Aurora Energy responded to the Major Event	Outage event 1 to 3: Field crews responded to the outage event and replaced the damaged equipment. The load on the feeder was managed until the replacement was completed. Outage event 4: Field crews responded to the outage event and repaired the defective equipment. Outage event 5: Field crews responded to the outage event and repaired the cable.
Any mitigating factors that may have prevented or minimised the Major Event	This Major Event was a combination of unrelated, unplanned outage events on Aurora Energy's network during a rolling 24-hour period. As such, we do not believe that there were any mitigating factors in this instance that may have prevented or minimised the Major Event.
Description of any steps Aurora Energy proposes to take to mitigate the risk of future similar Major Events	To mitigate the risk of future, similar Major Events, Aurora Energy proposes to: – complete the development of a conductor size verification methodology and incorporate that methodology into our preventative inspection program;

	– as part of the broader workplan to determine and incorporate assets capability information, develop a process for reporting and communicating changes in asset capability to business stakeholders; – prioritise root cause analysis of conductor down events within the broader project of fault analysis; and – define the post fault line patrol requirements.

10 March 2022 SAIDI Major Event

Table 22: Details of 10 March 2022 SAIDI Major Event

Details of 10 March 2022 SAIDI Major Event	
Cause	Nine outage events contributed to the SAIDI Major Event: – Outage event 1: Defective Equipment; – Outage event 2: Defective Equipment; – Outage event 3: Defective Equipment; – Outage event 4: Vegetation; – Outage event 5: Vegetation; – Outage event 6: Defective Equipment; – Outage event 7: Unknow Cause; – Outage event 8: Vegetation; and – Outage event 9: Unknown Cause.
Start date	10 March 2022
Start time	7:30 pm
End date	12 March 2022
End time	8.30 am
Raw SAIDI Value	8.01 minutes
Replaced SAIDI Value	0.84 minutes
Location of the Major Event	Outage event 1: Camphill, Central Otago Outage event 2: Port Chalmers, Dunedin Outage event 3: Ravensbourne, Dunedin Outage event 4: Port Chalmers, Dunedin Outage event 5: Queenstown Outage event 6: Arrowtown, Queenstown Outage event 7: Arrowtown, Queenstown Outage event 8: Omakau, Central Otago Outage event 9: Arrowtown, Queenstown
Main Equipment involved in the Major Event	Outage event 1: Subtransmission Lines; Outage event 2: Distribution Lines (Excluding LV);

	Outage event 3: Distribution Other (Excluding LV); and Outage event 4 to 9: Distribution Lines (Excluding LV).
How Aurora Energy responded to the Major Event	Outage event 1: Field crews responded to the outage event and repaired the defective equipment. Outage event 2: Field crews responded to the outage event and repaired the defective equipment. Outage event 3: Field crews responded to the outage event and repaired the defective equipment. Outage event 4: Initiated field response to patrol the feeder to determine if there was a cause for trip or safe to liven. Vegetation on the line found and removed. Upon completion of the feeder patrol, supply was restored to the feeder. Outage event 5: Initiated field response to patrol the feeder to determine if there was a cause for trip or safe to liven. Vegetation on the line found and removed. Upon completion of the feeder patrol, supply was restored to the feeder. Outage event 6: Field crews responded to the outage event and repaired the defective equipment. Outage event 7: Field crews patrolled the feeder to determine if there was a cause for trip or safe to liven. No fault cause or safety issues were found and supply was restored. Outage event 8: Initiated field response to patrol the feeder to determine if there was a cause for trip or safe to liven. Vegetation on the line found and removed. Upon completion of the feeder patrol, supply was restored to the feeder. Outage event 9: Field crews patrolled the feeder to determine if there was a cause for trip or safe to liven. No fault cause or safety issues were found and supply was restored.
Any mitigating factors that may have prevented or minimised the Major Event	This Major Event was a combination of nine unrelated, unplanned outage events on Aurora Energy's network during a rolling 24-hour period. As such, we do not believe that there were any mitigating factors in this instance that may have prevented or minimised the Major Event.
Description of any steps Aurora Energy proposes to take to mitigate the risk of future similar Major Events	Aurora Energy will continue to review, with an aim to improving, its fault response times, so that customers are impacted by unplanned outage events for no longer than necessary. Aurora Energy is also undertaking a significant asset replacement and renewal programme, with an aim to improving the safety and reliability of supply to consumers in future years.

13 March 2022 SAIDI Major Event

Table 23: Details of 13 March 2022 SAIDI Major Event

Details of 13 March 2022 SAIDI Major Event	
Cause	Three outage events contributed to the SAIDI Major Event: – Outage event 1: Defective Equipment; – Outage event 2: Unknown Cause; and – Outage events 3: Third-party Interference.
Start date	13 March 2022
Start time	11:00 am
End date	14 March 2022
End time	8.30 pm
Raw SAIDI Value	5.76 minutes
Replaced SAIDI Value	0.38 minutes
Location of the Major Event	Outage event 1: Queensberry, Central Otago Outage event 2: Fernhill, Queenstown Outage event 3: Cromwell, Central Otago
Main Equipment involved in the Major Event	Outage event 1: Distribution Lines (Excluding LV); Outage event 2: Distribution Lines (Excluding LV); and Outage event 3: Distribution Lines (Excluding LV).
How Aurora Energy responded to the Major Event	Outage event 1: Field crews responded to the outage event and repaired the defective equipment. Outage event 2: Field crews patrolled the feeder to determine if there was a cause for trip or safe to liven. No fault cause or safety issues were found and supply was restored. Outage event 3: The feeder was isolated and earthed after a vehicle collided with equipment. Field crews responded to the outage event and repaired the defective equipment.
Any mitigating factors that may have prevented or minimised the Major Event	This Major Event was a combination of three unrelated, unplanned outage events on Aurora Energy's network during a rolling 24-hour period. As such, we do not believe that there were any mitigating factors in this instance that may have prevented or minimised the Major Event.
Description of any steps Aurora Energy proposes to take to mitigate the risk of future similar Major Events	Aurora Energy will continue to review, with an aim to improving, its fault response times, so that customers are impacted by unplanned outage events for no longer than necessary. Aurora Energy is also undertaking a significant asset replacement and renewal programme, with an aim to improving the safety and reliability of supply to consumers in future years.

24 January 2022 SAIFI Major Event

Table 24: Details of 24 January 2022 SAIFI Major Event

Details of 24 January 2022 SAIFI Major Event	
Cause	Four outage events contributed to the SAIFI Major Event: – Outage event 1: Cause unknown; – Outage event 2: Cause unknown; – Outage event 3: Human error; and – Outage event 4: Human error.
Start date	24 January 2022
Start time	10:00 am
End date	25 January 2022
End time	6:30 pm
Raw SAIFI Value	0.08 interruptions
Replaced SAIFI Value	0.01 interruptions
Location of the Major Event	Outage event 1: Arrowtown, Queenstown Outage event 2: Frankton, Queenstown Outage event 3: Arrowtown, Queenstown Outage event 4: Coronet Peak, Queenstown
Main Equipment involved in the Major Event	Outage event 1: Distribution Lines (Excluding LV) Outage event 2: Distribution Lines (Excluding LV) Outage event 3: Distribution Other (Excluding LV) Outage event 4: Distribution Other (Excluding LV)
How Aurora Energy responded to the Major Event	Outage event 1: Field crews patrolled the feeder to determine if there was a cause for trip or safe to liven. No fault cause or safety issues were found and supply was restored. Outage event 2: Field crews patrolled the feeder to determine if there was a cause for trip or safe to liven. No fault cause or safety issues were found and supply was restored. Outage event 3: SEF protection was disabled before performing switching operations were undertaken to restore supply. Outage event 4: Configuration was repaired and supply restored.
Any mitigating factors that may have prevented or minimised the Major Event	The extent of outage event 3 may have been minimised if relevant staff had been aware that there was an SEF protection scheme in operation on the circuit breaker.
Description of any steps Aurora Energy proposes to take to mitigate the risk of future similar Major Events	Aurora Energy will investigate options to improve feeder SEF protection settings to provide for all SEF scenarios.

31 January 2022 SAIFI Major Event

Table 25: Details of 31 January 2022 SAIFI Major Event

Details of 31 January 2022 SAIFI Major Event	
Cause	Five outage events contributed to the SAIFI Major Event: – Outage event 1: Defective equipment; – Outage event 2: Defective equipment; – Outage event 3: Defective equipment; – Outage event 4: Cause unknown; and – Outage event 5: Human error.
Start date	31 January 2022
Start time	5:30 pm
End date	2 February 2022
End time	4:30 pm
Raw SAIFI Value	0.16 interruptions
Replaced SAIFI Value	0.01 interruptions
Location of the Major Event	Outage event 1: Fernhill, Queenstown Outage event 2: Cromwell, Central Otago Outage event 3: Cromwell, Central Otago Outage event 4: Tarras, Central Otago Outage event 5: Camp Hill, Central Otago
Main Equipment involved in the Major Event	Outage event 1: Distribution Other (Excluding LV) Outage event 2: Subtransmission Other Outage event 3: Subtranmission overhead Outage event 4: Distribution Lines (Excluding LV) Outage event 5: Subtransmission other
How Aurora Energy responded to the Major Event	Outage event 1: Field crews responded to the outage event and replaced the defective equipment. Outage event 2: Field crews responded to the outage event and repaired the defective equipment. Outage event 3: Field crews responded to the outage event and replaced the defective equipment. Outage event 4: Field crews patrolled the feeder to determine if there was a cause for trip or safe to liven. No fault cause or safety issues were found and supply was restored. Outage event 5: The impacted feeder was switched off, repairs made and supply restored.
Any mitigating factors that may have prevented or minimised the Major Event	At the time outage event 2 took place, the Upper Clutha network was in a n-1 state.

Description of any steps Aurora Energy proposes to take to mitigate the risk of future similar Major Events	Aurora Energy will continue to review, with an aim to improving, its fault response times, so that customers are impacted by unplanned outage events for no longer than necessary. Aurora Energy is also undertaking a significant asset replacement and renewal programme, with an aim to improving the safety and reliability of supply to consumers in future years.

6 February 2022 SAIFI Major Event

Table 26: Details of 6 February 2022 SAIFI Major Event

Details of 6 February 2022 SAIFI Major Event	
Cause	Three outage events contributed to the SAIFI Major Event: – Outage event 1: Vegetation – Outage event 2: Defective equipment – Outage event 3: Defective equipment
Start date	6 February 2022
Start time	5:00 pm
End date	8 February 2022
End time	4:00 pm
Raw SAIFI Value	0.13 interruptions
Replaced SAIFI Value	0.01 interruptions
Location of the Major Event	Outage event 1: Mosgiel, Dunedin Outage event 2: Queensbury, Central Otago Outage event 3: Queensbury, Central Otago
Main Equipment involved in the Major Event	Outage event 1: Distribution Lines (Excluding LV) Outage event 2: Subtransmission Lines Outage event 3: Distribution Other (Excluding LV)
How Aurora Energy responded to the Major Event	Outage event 1: Initiated field response to patrol the feeder to determine if there was a cause for trip or safe to liven. Vegetation on the line found and removed. Upon completion of the feeder patrol, supply was restored to the feeder. Outage event 2: Field crews responded to the outage event and repaired the defective equipment. Outage event 3: Field crews responded to the outage event and repaired the defective equipment.
Any mitigating factors that may have prevented or minimised the Major Event	This Major Event was a combination of three unrelated, unplanned outage events on Aurora Energy's network during a rolling 24-hour period. As such, we do not believe that there were any mitigating factors in this instance that may have prevented or minimised the Major Event.

Description of any steps Aurora Energy proposes to take to mitigate the risk of future similar Major Events	Aurora Energy will continue to review, with an aim to improving, its fault response times, so that customers are impacted by unplanned outage events for no longer than necessary. Aurora Energy is also undertaking a significant asset replacement and renewal programme, with an aim to improving the safety and reliability of supply to consumers in future years.

NORMALISATION OF RY22 MAJOR EVENTS

Table 26: Normalisation of RY22 SAIDI Major Events

Normalisation of RY22 SAIDI Major Events												
Aurora Energy's SAIDI Unplanned Boundary Value												5.69
1/48th of the SAIDI Unplanned Boundary Value	5 July 2021 Major Event			22 July 2021 Major Event			10 March 2022 Major Event			13 March 2022 Major Event		
	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour
0.1185	5/07/2021 11:00	0.0000	0.0000	22/07/2021 9:00	0.0000	0.0000	10/03/2022 19:30	0.0000	0.0000	13/03/2022 11:00	0.0000	0.0000
0.1185	5/07/2021 11:30	0.0000	0.0000	22/07/2021 9:30	0.0000	0.0000	10/03/2022 20:00	0.0000	0.0000	13/03/2022 11:30	0.0000	0.0000
0.1185	5/07/2021 12:00	0.0000	0.0000	22/07/2021 10:00	0.0000	0.0000	10/03/2022 20:30	0.0000	0.0000	13/03/2022 12:00	0.0000	0.0000
0.1185	5/07/2021 12:30	0.0000	0.0000	22/07/2021 10:30	0.0000	0.0000	10/03/2022 21:00	0.0000	0.0000	13/03/2022 12:30	0.0000	0.0000
0.1185	5/07/2021 13:00	0.0000	0.0000	22/07/2021 11:00	0.0000	0.0000	10/03/2022 21:30	1.9658	0.1185	13/03/2022 13:00	0.0000	0.0000
0.1185	5/07/2021 13:30	0.0000	0.0000	22/07/2021 11:30	0.0000	0.0000	10/03/2022 22:00	0.0000	0.0000	13/03/2022 13:30	0.0000	0.0000
0.1185	5/07/2021 14:00	0.0000	0.0000	22/07/2021 12:00	0.0000	0.0000	10/03/2022 22:30	0.0000	0.0000	13/03/2022 14:00	0.0000	0.0000
0.1185	5/07/2021 14:30	0.0000	0.0000	22/07/2021 12:30	0.0000	0.0000	10/03/2022 23:00	0.0000	0.0000	13/03/2022 14:30	0.0000	0.0000
0.1185	5/07/2021 15:00	0.0000	0.0000	22/07/2021 13:00	0.0000	0.0000	10/03/2022 23:30	0.0000	0.0000	13/03/2022 15:00	0.0000	0.0000
0.1185	5/07/2021 15:30	0.0000	0.0000	22/07/2021 13:30	0.0000	0.0000	11/03/2022 0:00	0.0000	0.0000	13/03/2022 15:30	0.0000	0.0000
0.1185	5/07/2021 16:00	0.0000	0.0000	22/07/2021 14:00	0.0000	0.0000	11/03/2022 0:30	0.0000	0.0000	13/03/2022 16:00	0.0000	0.0000
0.1185	5/07/2021 16:30	0.0000	0.0000	22/07/2021 14:30	0.0000	0.0000	11/03/2022 1:00	0.0000	0.0000	13/03/2022 16:30	0.0000	0.0000
0.1185	5/07/2021 17:00	0.0000	0.0000	22/07/2021 15:00	0.0000	0.0000	11/03/2022 1:30	0.0000	0.0000	13/03/2022 17:00	0.0000	0.0000
0.1185	5/07/2021 17:30	0.0000	0.0000	22/07/2021 15:30	0.0000	0.0000	11/03/2022 2:00	0.0000	0.0000	13/03/2022 17:30	0.0000	0.0000

Normalisation of RY22 SAIDI Major Events												
Aurora Energy's SAIDI Unplanned Boundary Value												5.69
1/48th of the SAIDI Unplanned Boundary Value	5 July 2021 Major Event			22 July 2021 Major Event			10 March 2022 Major Event			13 March 2022 Major Event		
	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour
0.1185	5/07/2021 18:00	0.0000	0.0000	22/07/2021 16:00	0.0000	0.0000	11/03/2022 2:30	0.0000	0.0000	13/03/2022 18:00	0.0000	0.0000
0.1185	5/07/2021 18:30	0.0000	0.0000	22/07/2021 16:30	0.0000	0.0000	11/03/2022 3:00	0.0000	0.0000	13/03/2022 18:30	0.0000	0.0000
0.1185	5/07/2021 19:00	0.0000	0.0000	22/07/2021 17:00	0.0000	0.0000	11/03/2022 3:30	0.0000	0.0000	13/03/2022 19:00	0.0000	0.0000
0.1185	5/07/2021 19:30	0.0000	0.0000	22/07/2021 17:30	0.0000	0.0000	11/03/2022 4:00	0.0000	0.0000	13/03/2022 19:30	0.0000	0.0000
0.1185	5/07/2021 20:00	0.0000	0.0000	22/07/2021 18:00	0.0000	0.0000	11/03/2022 4:30	0.0000	0.0000	13/03/2022 20:00	0.0000	0.0000
0.1185	5/07/2021 20:30	0.0000	0.0000	22/07/2021 18:30	0.0000	0.0000	11/03/2022 5:00	0.0000	0.0000	13/03/2022 20:30	0.0000	0.0000
0.1185	5/07/2021 21:00	0.0000	0.0000	22/07/2021 19:00	0.0000	0.0000	11/03/2022 5:30	0.0000	0.0000	13/03/2022 21:00	0.4529	0.1185
0.1185	5/07/2021 21:30	0.0000	0.0000	22/07/2021 19:30	0.0000	0.0000	11/03/2022 6:00	0.0000	0.0000	13/03/2022 21:30	0.0000	0.0000
0.1185	5/07/2021 22:00	0.0000	0.0000	22/07/2021 20:00	0.0000	0.0000	11/03/2022 6:30	0.0000	0.0000	13/03/2022 22:00	0.0000	0.0000
0.1185	5/07/2021 22:30	0.0000	0.0000	22/07/2021 20:30	0.0000	0.0000	11/03/2022 7:00	0.0000	0.0000	13/03/2022 22:30	0.0000	0.0000
0.1185	5/07/2021 23:00	0.0000	0.0000	22/07/2021 21:00	0.0000	0.0000	11/03/2022 7:30	0.0000	0.0000	13/03/2022 23:00	0.0095	0.0095
0.1185	5/07/2021 23:30	0.0000	0.0000	22/07/2021 21:30	0.0000	0.0000	11/03/2022 8:00	0.0000	0.0000	13/03/2022 23:30	0.0119	0.0119
0.1185	6/07/2021 0:00	0.0000	0.0000	22/07/2021 22:00	0.0000	0.0000	11/03/2022 8:30	0.0771	0.0771	14/03/2022 0:00	0.0000	0.0000
0.1185	6/07/2021 0:30	0.0000	0.0000	22/07/2021 22:30	0.0000	0.0000	11/03/2022 9:00	0.4730	0.1185	14/03/2022 0:30	0.0000	0.0000
0.1185	6/07/2021 1:00	0.0000	0.0000	22/07/2021 23:00	0.0000	0.0000	11/03/2022 9:30	0.0000	0.0000	14/03/2022 1:00	1.4096	0.1185
0.1185	6/07/2021 1:30	0.0000	0.0000	22/07/2021 23:30	0.0000	0.0000	11/03/2022 10:00	0.0000	0.0000	14/03/2022 1:30	0.0000	0.0000
0.1185	6/07/2021 2:00	0.0000	0.0000	23/07/2021 0:00	0.0000	0.0000	11/03/2022 10:30	0.0000	0.0000	14/03/2022 2:00	0.0000	0.0000
0.1185	6/07/2021 2:30	0.0000	0.0000	23/07/2021 0:30	0.0000	0.0000	11/03/2022 11:00	0.0000	0.0000	14/03/2022 2:30	0.0000	0.0000

Normalisation of RY22 SAIDI Major Events												
Aurora Energy's SAIDI Unplanned Boundary Value												5.69
1/48th of the SAIDI Unplanned Boundary Value	5 July 2021 Major Event			22 July 2021 Major Event			10 March 2022 Major Event			13 March 2022 Major Event		
	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour
0.1185	6/07/2021 3:00	0.0000	0.0000	23/07/2021 1:00	0.0000	0.0000	11/03/2022 11:30	0.0000	0.0000	14/03/2022 3:00	0.0000	0.0000
0.1185	6/07/2021 3:30	0.0000	0.0000	23/07/2021 1:30	0.0000	0.0000	11/03/2022 12:00	0.0000	0.0000	14/03/2022 3:30	0.0000	0.0000
0.1185	6/07/2021 4:00	0.0000	0.0000	23/07/2021 2:00	0.0000	0.0000	11/03/2022 12:30	0.0000	0.0000	14/03/2022 4:00	0.0000	0.0000
0.1185	6/07/2021 4:30	0.7777	0.1185	23/07/2021 2:30	0.0000	0.0000	11/03/2022 13:00	0.0017	0.0017	14/03/2022 4:30	0.0000	0.0000
0.1185	6/07/2021 5:00	0.0000	0.0000	23/07/2021 3:00	0.0000	0.0000	11/03/2022 13:30	0.0000	0.0000	14/03/2022 5:00	0.0000	0.0000
0.1185	6/07/2021 5:30	0.0000	0.0000	23/07/2021 3:30	0.0000	0.0000	11/03/2022 14:00	0.0000	0.0000	14/03/2022 5:30	0.0000	0.0000
0.1185	6/07/2021 6:00	0.0000	0.0000	23/07/2021 4:00	0.0000	0.0000	11/03/2022 14:30	0.0000	0.0000	14/03/2022 6:00	0.0000	0.0000
0.1185	6/07/2021 6:30	0.0000	0.0000	23/07/2021 4:30	0.0000	0.0000	11/03/2022 15:00	0.0000	0.0000	14/03/2022 6:30	0.0000	0.0000
0.1185	6/07/2021 7:00	0.0000	0.0000	23/07/2021 5:00	0.0000	0.0000	11/03/2022 15:30	0.0000	0.0000	14/03/2022 7:00	0.0000	0.0000
0.1185	6/07/2021 7:30	0.0000	0.0000	23/07/2021 5:30	0.0000	0.0000	11/03/2022 16:00	0.0000	0.0000	14/03/2022 7:30	0.0000	0.0000
0.1185	6/07/2021 8:00	0.0000	0.0000	23/07/2021 6:00	0.0000	0.0000	11/03/2022 16:30	0.0000	0.0000	14/03/2022 8:00	0.0000	0.0000
0.1185	6/07/2021 8:30	0.0000	0.0000	23/07/2021 6:30	0.0000	0.0000	11/03/2022 17:00	0.0000	0.0000	14/03/2022 8:30	0.0000	0.0000
0.1185	6/07/2021 9:00	0.0000	0.0000	23/07/2021 7:00	0.0000	0.0000	11/03/2022 17:30	0.0000	0.0000	14/03/2022 9:00	0.0000	0.0000
0.1185	6/07/2021 9:30	0.0000	0.0000	23/07/2021 7:30	0.0000	0.0000	11/03/2022 18:00	0.7347	0.1185	14/03/2022 9:30	0.0000	0.0000
0.1185	6/07/2021 10:00	2.6891	0.1185	23/07/2021 8:00	0.0000	0.0000	11/03/2022 18:30	0.0000	0.0000	14/03/2022 10:00	0.0000	0.0000
0.1185	6/07/2021 10:30	2.2635	0.1185	23/07/2021 8:30	6.2131	0.1185	11/03/2022 19:00	2.6744	0.1185	14/03/2022 10:30	3.8738	0.1185
0.1185	6/07/2021 11:00	1.3242	0.1185	23/07/2021 9:00	0.0012	0.0012	11/03/2022 19:30	0.0000	0.0000	14/03/2022 11:00	0.0000	0.0000
0.1185	6/07/2021 11:30	0.0000	0.0000	23/07/2021 9:30	0.0000	0.0000	11/03/2022 20:00	0.0000	0.0000	14/03/2022 11:30	0.0000	0.0000

Normalisation of RY22 SAIDI Major Events												
Aurora Energy's SAIDI Unplanned Boundary Value												5.69
1/48th of the SAIDI Unplanned Boundary Value	5 July 2021 Major Event			22 July 2021 Major Event			10 March 2022 Major Event			13 March 2022 Major Event		
	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour
0.1185	6/07/2021 12:00	0.0000	0.0000	23/07/2021 10:00	0.0000	0.0000	11/03/2022 20:30	0.0402	0.0402	14/03/2022 12:00	0.0000	0.0000
0.1185	6/07/2021 12:30	0.0000	0.0000	23/07/2021 10:30	0.0000	0.0000	11/03/2022 21:00	0.0000	0.0000	14/03/2022 12:30	0.0000	0.0000
0.1185	6/07/2021 13:00	0.0000	0.0000	23/07/2021 11:00	0.0000	0.0000	11/03/2022 21:30	0.1661	0.1185	14/03/2022 13:00	0.0000	0.0000
0.1185	6/07/2021 13:30	0.0000	0.0000	23/07/2021 11:30	0.0000	0.0000	11/03/2022 22:00	0.0000	0.0000	14/03/2022 13:30	0.0000	0.0000
0.1185	6/07/2021 14:00	0.0000	0.0000	23/07/2021 12:00	0.0000	0.0000	11/03/2022 22:30	0.0000	0.0000	14/03/2022 14:00	0.0000	0.0000
0.1185	6/07/2021 14:30	0.0000	0.0000	23/07/2021 12:30	0.0000	0.0000	11/03/2022 23:00	0.0000	0.0000	14/03/2022 14:30	0.0000	0.0000
0.1185	6/07/2021 15:00	0.0000	0.0000	23/07/2021 13:00	0.0000	0.0000	11/03/2022 23:30	0.0000	0.0000	14/03/2022 15:00	0.0000	0.0000
0.1185	6/07/2021 15:30	0.0000	0.0000	23/07/2021 13:30	0.0000	0.0000	12/03/2022 0:00	0.0000	0.0000	14/03/2022 15:30	0.0000	0.0000
0.1185	6/07/2021 16:00	0.0016	0.0016	23/07/2021 14:00	0.0303	0.0303	12/03/2022 0:30	0.0000	0.0000	14/03/2022 16:00	0.0000	0.0000
0.1185	6/07/2021 16:30	0.0000	0.0000	23/07/2021 14:30	0.0000	0.0000	12/03/2022 1:00	0.0053	0.0053	14/03/2022 16:30	0.0000	0.0000
0.1185	6/07/2021 17:00	0.0000	0.0000	23/07/2021 15:00	0.0000	0.0000	12/03/2022 1:30	0.0000	0.0000	14/03/2022 17:00	0.0000	0.0000
0.1185	6/07/2021 17:30	0.0000	0.0000	23/07/2021 15:30	0.0000	0.0000	12/03/2022 2:00	0.0000	0.0000	14/03/2022 17:30	0.0000	0.0000
0.1185	6/07/2021 18:00	0.0086	0.0086	23/07/2021 16:00	0.0000	0.0000	12/03/2022 2:30	0.0000	0.0000	14/03/2022 18:00	0.0000	0.0000
0.1185	6/07/2021 18:30	0.0000	0.0000	23/07/2021 16:30	0.0000	0.0000	12/03/2022 3:00	0.0000	0.0000	14/03/2022 18:30	0.0000	0.0000
0.1185	6/07/2021 19:00	0.0000	0.0000	23/07/2021 17:00	0.0000	0.0000	12/03/2022 3:30	0.0000	0.0000	14/03/2022 19:00	0.0000	0.0000
0.1185	6/07/2021 19:30	0.0000	0.0000	23/07/2021 17:30	0.0000	0.0000	12/03/2022 4:00	0.0000	0.0000	14/03/2022 19:30	0.0000	0.0000
0.1185	6/07/2021 20:00	0.0000	0.0000	23/07/2021 18:00	0.0000	0.0000	12/03/2022 4:30	0.0000	0.0000	14/03/2022 20:00	0.0000	0.0000
0.1185	6/07/2021 20:30	0.0000	0.0000	23/07/2021 18:30	0.0000	0.0000	12/03/2022 5:00	0.0000	0.0000	14/03/2022 20:30	0.0000	0.0000

Normalisation of RY22 SAIDI Major Events												
Aurora Energy's SAIDI Unplanned Boundary Value												5.69
1/48th of the SAIDI Unplanned Boundary Value	5 July 2021 Major Event			22 July 2021 Major Event			10 March 2022 Major Event			13 March 2022 Major Event		
	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour
0.1185	6/07/2021 21:00	0.0000	0.0000	23/07/2021 19:00	0.0000	0.0000	12/03/2022 5:30	0.0000	0.0000			
0.1185	6/07/2021 21:30	0.0000	0.0000	23/07/2021 19:30	0.0000	0.0000	12/03/2022 6:00	0.0000	0.0000			
0.1185	6/07/2021 22:00	0.0000	0.0000	23/07/2021 20:00	0.0000	0.0000	12/03/2022 6:30	0.0000	0.0000			
0.1185	6/07/2021 22:30	0.0000	0.0000	23/07/2021 20:30	0.0000	0.0000	12/03/2022 7:00	0.0000	0.0000			
0.1185	6/07/2021 23:00	0.0000	0.0000	23/07/2021 21:00	0.0000	0.0000	12/03/2022 7:30	0.0000	0.0000			
0.1185	6/07/2021 23:30	0.0000	0.0000	23/07/2021 21:30	0.0000	0.0000	12/03/2022 8:00	0.0000	0.0000			
0.1185	7/07/2021 0:00	0.0000	0.0000	23/07/2021 22:00	0.0000	0.0000	12/03/2022 8:30	1.8729	0.1185			
0.1185	7/07/2021 0:30	0.0000	0.0000	23/07/2021 22:30	0.0000	0.0000						
0.1185	7/07/2021 1:00	0.0000	0.0000	23/07/2021 23:00	0.0000	0.0000						
0.1185	7/07/2021 1:30	0.0000	0.0000	23/07/2021 23:30	0.0000	0.0000						
0.1185	7/07/2021 2:00	0.0000	0.0000	24/07/2021 0:00	0.0000	0.0000						
0.1185	7/07/2021 2:30	0.0000	0.0000	24/07/2021 0:30	0.0000	0.0000						
0.1185	7/07/2021 3:00	0.0000	0.0000	24/07/2021 1:00	0.0000	0.0000						
0.1185	7/07/2021 3:30	0.0000	0.0000	24/07/2021 1:30	0.0000	0.0000						
0.1185	7/07/2021 4:00	0.0000	0.0000	24/07/2021 2:00	0.0000	0.0000						
0.1185	7/07/2021 4:30	0.0000	0.0000	24/07/2021 2:30	0.0000	0.0000						
0.1185	7/07/2021 5:00	0.0000	0.0000	24/07/2021 3:00	0.0000	0.0000						
0.1185	7/07/2021 5:30	0.0000	0.0000	24/07/2021 3:30	0.0000	0.0000						

Normalisation of RY22 SAIDI Major Events												
Aurora Energy's SAIDI Unplanned Boundary Value												5.69
1/48th of the SAIDI Unplanned Boundary Value	5 July 2021 Major Event			22 July 2021 Major Event			10 March 2022 Major Event			13 March 2022 Major Event		
	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour	Half hour commencing	Raw SAIDI Value for half hour	Normalised SAIDI Value for half hour
0.1185	7/07/2021 6:00	0.0000	0.0000	24/07/2021 4:00	0.0000	0.0000						
0.1185	7/07/2021 6:30	0.0000	0.0000	24/07/2021 4:30	0.0000	0.0000						
0.1185	7/07/2021 7:00	0.0000	0.0000	24/07/2021 5:00	0.0000	0.0000						
0.1185	7/07/2021 7:30	0.0000	0.0000	24/07/2021 5:30	0.0000	0.0000						
0.1185	7/07/2021 8:00	0.0000	0.0000	24/07/2021 6:00	0.0000	0.0000						
0.1185	7/07/2021 8:30	0.0000	0.0000	24/07/2021 6:30	0.0000	0.0000						
0.1185	7/07/2021 9:00	0.0000	0.0000	24/07/2021 7:00	0.0000	0.0000						
0.1185	7/07/2021 9:30	0.0000	0.0000	24/07/2021 7:30	0.0000	0.0000						
0.1185				24/07/2021 8:00	0.0000	0.0000						
Total		**7.0646**	**0.4843**		**6.2446**	**0.1500**		**8.0112**	**0.8356**		**5.7577**	**0.3770**

Table 27: Normalisation of RY22 SAIFI Major Events

Normalisation of RY22 SAIFI Major Events									
Aurora Energy's SAIFI Unplanned Boundary Value									0.0737
1/48th of the SAIFI Unplanned Boundary Value	24 July 2021 Major Event			31 January 2022 Major Event			6 February 2022 Major Event		
	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour
0.0015	24/01/2022 10:00	0.0000	0.0000	31/01/2022 17:30	0.0000	0.0000	6/02/2022 17:00	0.0000	0.0000
0.0015	24/01/2022 10:30	0.0000	0.0000	31/01/2022 18:00	0.0116	0.0015	6/02/2022 17:30	0.0000	0.0000
0.0015	24/01/2022 11:00	0.0000	0.0000	31/01/2022 18:30	0.0000	0.0000	6/02/2022 18:00	0.0000	0.0000
0.0015	24/01/2022 11:30	0.0000	0.0000	31/01/2022 19:00	0.0000	0.0000	6/02/2022 18:30	0.0000	0.0000
0.0015	24/01/2022 12:00	0.0000	0.0000	31/01/2022 19:30	0.0000	0.0000	6/02/2022 19:00	0.0000	0.0000
0.0015	24/01/2022 12:30	0.0000	0.0000	31/01/2022 20:00	0.0088	0.0015	6/02/2022 19:30	0.0000	0.0000
0.0015	24/01/2022 13:00	0.0000	0.0000	31/01/2022 20:30	0.0000	0.0000	6/02/2022 20:00	0.0000	0.0000
0.0015	24/01/2022 13:30	0.0000	0.0000	31/01/2022 21:00	0.0000	0.0000	6/02/2022 20:30	0.0000	0.0000
0.0015	24/01/2022 14:00	0.0000	0.0000	31/01/2022 21:30	0.0000	0.0000	6/02/2022 21:00	0.0000	0.0000
0.0015	24/01/2022 14:30	0.0000	0.0000	31/01/2022 22:00	0.0000	0.0000	6/02/2022 21:30	0.0000	0.0000
0.0015	24/01/2022 15:00	0.0000	0.0000	31/01/2022 22:30	0.0000	0.0000	6/02/2022 22:00	0.0000	0.0000
0.0015	24/01/2022 15:30	0.0000	0.0000	31/01/2022 23:00	0.0000	0.0000	6/02/2022 22:30	0.0000	0.0000
0.0015	24/01/2022 16:00	0.0000	0.0000	31/01/2022 23:30	0.0000	0.0000	6/02/2022 23:00	0.0000	0.0000
0.0015	24/01/2022 16:30	0.0000	0.0000	1/02/2022 0:00	0.0000	0.0000	6/02/2022 23:30	0.0000	0.0000
0.0015	24/01/2022 17:00	0.0000	0.0000	1/02/2022 0:30	0.0000	0.0000	7/02/2022 0:00	0.0000	0.0000

Normalisation of RY22 SAIFI Major Events									
Aurora Energy's SAIFI Unplanned Boundary Value									0.0737
1/48th of the SAIFI Unplanned Boundary Value	24 July 2021 Major Event			31 January 2022 Major Event			6 February 2022 Major Event		
	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour
0.0015	24/01/2022 17:30	0.0000	0.0000	1/02/2022 1:00	0.0000	0.0000	7/02/2022 0:30	0.0000	0.0000
0.0015	24/01/2022 18:00	0.0000	0.0000	1/02/2022 1:30	0.0000	0.0000	7/02/2022 1:00	0.0000	0.0000
0.0015	24/01/2022 18:30	0.0000	0.0000	1/02/2022 2:00	0.0000	0.0000	7/02/2022 1:30	0.0000	0.0000
0.0015	24/01/2022 19:00	0.0163	0.0015	1/02/2022 2:30	0.0000	0.0000	7/02/2022 2:00	0.0000	0.0000
0.0015	24/01/2022 19:30	0.0000	0.0000	1/02/2022 3:00	0.0000	0.0000	7/02/2022 2:30	0.0000	0.0000
0.0015	24/01/2022 20:00	0.0000	0.0000	1/02/2022 3:30	0.0000	0.0000	7/02/2022 3:00	0.0000	0.0000
0.0015	24/01/2022 20:30	0.0000	0.0000	1/02/2022 4:00	0.0000	0.0000	7/02/2022 3:30	0.0000	0.0000
0.0015	24/01/2022 21:00	0.0000	0.0000	1/02/2022 4:30	0.0000	0.0000	7/02/2022 4:00	0.0000	0.0000
0.0015	24/01/2022 21:30	0.0000	0.0000	1/02/2022 5:00	0.0000	0.0000	7/02/2022 4:30	0.0000	0.0000
0.0015	24/01/2022 22:00	0.0000	0.0000	1/02/2022 5:30	0.0000	0.0000	7/02/2022 5:00	0.0000	0.0000
0.0015	24/01/2022 22:30	0.0000	0.0000	1/02/2022 6:00	0.0000	0.0000	7/02/2022 5:30	0.0000	0.0000
0.0015	24/01/2022 23:00	0.0000	0.0000	1/02/2022 6:30	0.0000	0.0000	7/02/2022 6:00	0.0000	0.0000
0.0015	24/01/2022 23:30	0.0000	0.0000	1/02/2022 7:00	0.0000	0.0000	7/02/2022 6:30	0.0000	0.0000
0.0015	25/01/2022 0:00	0.0000	0.0000	1/02/2022 7:30	0.0000	0.0000	7/02/2022 7:00	0.0000	0.0000
0.0015	25/01/2022 0:30	0.0000	0.0000	1/02/2022 8:00	0.0000	0.0000	7/02/2022 7:30	0.0000	0.0000
0.0015	25/01/2022 1:00	0.0157	0.0015	1/02/2022 8:30	0.0000	0.0000	7/02/2022 8:00	0.0000	0.0000
0.0015	25/01/2022 1:30	0.0000	0.0000	1/02/2022 9:00	0.0000	0.0000	7/02/2022 8:30	0.0000	0.0000
0.0015	25/01/2022 2:00	0.0000	0.0000	1/02/2022 9:30	0.0000	0.0000	7/02/2022 9:00	0.0000	0.0000

Normalisation of RY22 SAIFI Major Events									
Aurora Energy's SAIFI Unplanned Boundary Value									0.0737
1/48th of the SAIFI Unplanned Boundary Value	24 July 2021 Major Event			31 January 2022 Major Event			6 February 2022 Major Event		
	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour
0.0015	25/01/2022 2:30	0.0000	0.0000	1/02/2022 10:00	0.0000	0.0000	7/02/2022 9:30	0.0000	0.0000
0.0015	25/01/2022 3:00	0.0000	0.0000	1/02/2022 10:30	0.0000	0.0000	7/02/2022 10:00	0.0000	0.0000
0.0015	25/01/2022 3:30	0.0000	0.0000	1/02/2022 11:00	0.0000	0.0000	7/02/2022 10:30	0.0000	0.0000
0.0015	25/01/2022 4:00	0.0000	0.0000	1/02/2022 11:30	0.0000	0.0000	7/02/2022 11:00	0.0000	0.0000
0.0015	25/01/2022 4:30	0.0000	0.0000	1/02/2022 12:00	0.0000	0.0000	7/02/2022 11:30	0.0000	0.0000
0.0015	25/01/2022 5:00	0.0000	0.0000	1/02/2022 12:30	0.0000	0.0000	7/02/2022 12:00	0.0000	0.0000
0.0015	25/01/2022 5:30	0.0000	0.0000	1/02/2022 13:00	0.0000	0.0000	7/02/2022 12:30	0.0000	0.0000
0.0015	25/01/2022 6:00	0.0000	0.0000	1/02/2022 13:30	0.0000	0.0000	7/02/2022 13:00	0.0000	0.0000
0.0015	25/01/2022 6:30	0.0000	0.0000	1/02/2022 14:00	0.0000	0.0000	7/02/2022 13:30	0.0000	0.0000
0.0015	25/01/2022 7:00	0.0000	0.0000	1/02/2022 14:30	0.0000	0.0000	7/02/2022 14:00	0.0000	0.0000
0.0015	25/01/2022 7:30	0.0000	0.0000	1/02/2022 15:00	0.0000	0.0000	7/02/2022 14:30	0.0151	0.0015
0.0015	25/01/2022 8:00	0.0163	0.0015	1/02/2022 15:30	0.0000	0.0000	7/02/2022 15:00	0.0000	0.0000
0.0015	25/01/2022 8:30	0.0163	0.0015	1/02/2022 16:00	0.0000	0.0000	7/02/2022 15:30	0.0059	0.0015
0.0015	25/01/2022 9:00	0.0000	0.0000	1/02/2022 16:30	0.0000	0.0000	7/02/2022 16:00	0.0000	0.0000
0.0015	25/01/2022 9:30	0.0163	0.0015	1/02/2022 17:00	0.1085	0.0015	7/02/2022 16:30	0.1066	0.0015
0.0015	25/01/2022 10:00	0.0000	0.0000	1/02/2022 17:30	0.0000	0.0000	7/02/2022 17:00	0.0000	0.0000
0.0015	25/01/2022 10:30	0.0000	0.0000	1/02/2022 18:00	0.0000	0.0000	7/02/2022 17:30	0.0000	0.0000
0.0015	25/01/2022 11:00	0.0000	0.0000	1/02/2022 18:30	0.0000	0.0000	7/02/2022 18:00	0.0000	0.0000

Normalisation of RY22 SAIFI Major Events									
Aurora Energy's SAIFI Unplanned Boundary Value									0.0737
1/48th of the SAIFI Unplanned Boundary Value	24 July 2021 Major Event			31 January 2022 Major Event			6 February 2022 Major Event		
	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour
0.0015	25/01/2022 11:30	0.0000	0.0000	1/02/2022 19:00	0.0000	0.0000	7/02/2022 18:30	0.0000	0.0000
0.0015	25/01/2022 12:00	0.0000	0.0000	1/02/2022 19:30	0.0000	0.0000	7/02/2022 19:00	0.0000	0.0000
0.0015	25/01/2022 12:30	0.0000	0.0000	1/02/2022 20:00	0.0000	0.0000	7/02/2022 19:30	0.0026	0.0015
0.0015	25/01/2022 13:00	0.0000	0.0000	1/02/2022 20:30	0.0000	0.0000	7/02/2022 20:00	0.0000	0.0000
0.0015	25/01/2022 13:30	0.0000	0.0000	1/02/2022 21:00	0.0000	0.0000	7/02/2022 20:30	0.0000	0.0000
0.0015	25/01/2022 14:00	0.0000	0.0000	1/02/2022 21:30	0.0000	0.0000	7/02/2022 21:00	0.0000	0.0000
0.0015	25/01/2022 14:30	0.0001	0.0001	1/02/2022 22:00	0.0000	0.0000	7/02/2022 21:30	0.0000	0.0000
0.0015	25/01/2022 15:00	0.0000	0.0000	1/02/2022 22:30	0.0000	0.0000	7/02/2022 22:00	0.0000	0.0000
0.0015	25/01/2022 15:30	0.0000	0.0000	1/02/2022 23:00	0.0000	0.0000	7/02/2022 22:30	0.0000	0.0000
0.0015	25/01/2022 16:00	0.0000	0.0000	1/02/2022 23:30	0.0000	0.0000	7/02/2022 23:00	0.0000	0.0000
0.0015	25/01/2022 16:30	0.0000	0.0000	2/02/2022 0:00	0.0000	0.0000	7/02/2022 23:30	0.0000	0.0000
0.0015	25/01/2022 17:00	0.0000	0.0000	2/02/2022 0:30	0.0000	0.0000	8/02/2022 0:00	0.0000	0.0000
0.0015	25/01/2022 17:30	0.0000	0.0000	2/02/2022 1:00	0.0000	0.0000	8/02/2022 0:30	0.0000	0.0000
0.0015	25/01/2022 18:00	0.0000	0.0000	2/02/2022 1:30	0.0000	0.0000	8/02/2022 1:00	0.0000	0.0000
0.0015	25/01/2022 18:30	0.0000	0.0000	2/02/2022 2:00	0.0000	0.0000	8/02/2022 1:30	0.0000	0.0000
0.0015	6/07/2021 20:00	0.0000	0.0000	2/02/2022 2:30	0.0053	0.0015	8/02/2022 2:00	0.0000	0.0000
0.0015	6/07/2021 20:30	0.0000	0.0000	2/02/2022 3:00	0.0000	0.0000	8/02/2022 2:30	0.0000	0.0000
0.0015	6/07/2021 21:00	0.0000	0.0000	2/02/2022 3:30	0.0000	0.0000	8/02/2022 3:00	0.0000	0.0000

Normalisation of RY22 SAIFI Major Events									
Aurora Energy's SAIFI Unplanned Boundary Value									0.0737
1/48th of the SAIFI Unplanned Boundary Value	24 July 2021 Major Event			31 January 2022 Major Event			6 February 2022 Major Event		
	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour
0.0015	6/07/2021 21:30	0.0000	0.0000	2/02/2022 4:00	0.0000	0.0000	8/02/2022 3:30	0.0000	0.0000
0.0015	6/07/2021 22:00	0.0000	0.0000	2/02/2022 4:30	0.0000	0.0000	8/02/2022 4:00	0.0000	0.0000
0.0015	6/07/2021 22:30	0.0000	0.0000	2/02/2022 5:00	0.0000	0.0000	8/02/2022 4:30	0.0000	0.0000
0.0015	6/07/2021 23:00	0.0000	0.0000	2/02/2022 5:30	0.0000	0.0000	8/02/2022 5:00	0.0000	0.0000
0.0015	6/07/2021 23:30	0.0000	0.0000	2/02/2022 6:00	0.0007	0.0007	8/02/2022 5:30	0.0000	0.0000
0.0015	7/07/2021 0:00	0.0000	0.0000	2/02/2022 6:30	0.0000	0.0000	8/02/2022 6:00	0.0000	0.0000
0.0015	7/07/2021 0:30	0.0000	0.0000	2/02/2022 7:00	0.0000	0.0000	8/02/2022 6:30	0.0000	0.0000
0.0015	7/07/2021 1:00	0.0000	0.0000	2/02/2022 7:30	0.0000	0.0000	8/02/2022 7:00	0.0000	0.0000
0.0015	7/07/2021 1:30	0.0000	0.0000	2/02/2022 8:00	0.0000	0.0000	8/02/2022 7:30	0.0000	0.0000
0.0015	7/07/2021 2:00	0.0000	0.0000	2/02/2022 8:30	0.0000	0.0000	8/02/2022 8:00	0.0000	0.0000
0.0015	7/07/2021 2:30	0.0000	0.0000	2/02/2022 9:00	0.0000	0.0000	8/02/2022 8:30	0.0000	0.0000
0.0015	7/07/2021 3:00	0.0000	0.0000	2/02/2022 9:30	0.0000	0.0000	8/02/2022 9:00	0.0000	0.0000
0.0015	7/07/2021 3:30	0.0000	0.0000	2/02/2022 10:00	0.0000	0.0000	8/02/2022 9:30	0.0000	0.0000
0.0015	7/07/2021 4:00	0.0000	0.0000	2/02/2022 10:30	0.0000	0.0000	8/02/2022 10:00	0.0000	0.0000
0.0015	7/07/2021 4:30	0.0000	0.0000	2/02/2022 11:00	0.0000	0.0000	8/02/2022 10:30	0.0000	0.0000
0.0015	7/07/2021 5:00	0.0000	0.0000	2/02/2022 11:30	0.0000	0.0000	8/02/2022 11:00	0.0000	0.0000
0.0015	7/07/2021 5:30	0.0000	0.0000	2/02/2022 12:00	0.0000	0.0000	8/02/2022 11:30	0.0000	0.0000
0.0015	7/07/2021 6:00	0.0000	0.0000	2/02/2022 12:30	0.0000	0.0000	8/02/2022 12:00	0.0000	0.0000

Normalisation of RY22 SAIFI Major Events									
Aurora Energy's SAIFI Unplanned Boundary Value									0.0737
1/48th of the SAIFI Unplanned Boundary Value	24 July 2021 Major Event			31 January 2022 Major Event			6 February 2022 Major Event		
	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour	Half hour commencing	Raw SAIFI Value for half hour	Normalised SAIFI Value for half hour
0.0015	7/07/2021 6:30	0.0000	0.0000	2/02/2022 13:00	0.0002	0.0002	8/02/2022 12:30	0.0000	0.0000
0.0015	7/07/2021 7:00	0.0000	0.0000	2/02/2022 13:30	0.0089	0.0015	8/02/2022 13:00	0.0000	0.0000
0.0015	7/07/2021 7:30	0.0000	0.0000	2/02/2022 14:00	0.0000	0.0000	8/02/2022 13:30	0.0000	0.0000
0.0015	7/07/2021 8:00	0.0000	0.0000	2/02/2022 14:30	0.0000	0.0000	8/02/2022 14:00	0.0000	0.0000
0.0015	7/07/2021 8:30	0.0000	0.0000	2/02/2022 15:00	0.0000	0.0000	8/02/2022 14:30	0.0000	0.0000
0.0015	7/07/2021 9:00	0.0000	0.0000	2/02/2022 15:30	0.0000	0.0000	8/02/2022 15:00	0.0000	0.0000
0.0015	7/07/2021 9:30	0.0000	0.0000	2/02/2022 16:00	0.0177	0.0015	8/02/2022 15:30	0.0000	0.0000
0.0015				2/02/2022 16:30	0.0000	0.0000	8/02/2022 16:00	0.0000	0.0000
Total		**0.0810**	**0.0078**		**0.1617**	**0.0101**		**0.1303**	**0.0062**

Appendix G. Policies and Procedures for Capturing and Recording Interruptions and Calculating SAIDI/SAIFI

Capturing and Recording Interruptions

Records for all Interruptions (planned and unplanned) on the Aurora Energy network are maintained in electronic-copy and in databases. The relevant procedure for recording Interruption information is set out in document QP2109 "Network Outage Reporting"[1].

The duty Network Coordinator is responsible for initiating an outage report as soon as an Unplanned Interruption occurs and, when completed, attaching relevant information (for example, switching instructions and SCADA print-outs). The Network Operations Team Leader examines the daily report from the after-hours telephone answering service to ensure that reports for Interruptions involving single high voltage (HV) fuses or low voltage (LV) fuses supplying multiple consumers are captured. All details on the fault reports are subsequently checked by the Network Operations Manager.

The Network Operations Team is responsible for entering data from the report into the electronic database. The electronic database holds all of the data attributes for each Interruption required to calculate SAIDI Assessed Values and SAIFI Assessed Values.

Monitoring the quality of Interruption information entered into the database is the responsibility of the Network Operations Manager. Identifying and resolving problems with quality of data is performed weekly and again at month end.

The database is used to collect data on Interruptions where equipment is removed from service. It therefore includes all Planned and Unplanned Interruptions, as well as those involving all HV fuses and where LV fuses supply multiple ICPs. Momentary interruptions due to circuit reclosers at zone substations less than one minute are also included.

Successive Interruptions

We record and report on successive Interruptions, for the purposes of both SAIDI and SAIFI, if restoration of supply occurred for longer than one minute.

We recognise any stage of an outage event that interrupts consumers for a second time, or interrupts 'new' consumers as a result of fault finding, as an additional interruption, strictly in line with the definition of Interruption in the Determination.

[1] This is an interim document, under Delta branding, as not all process documentation has been converted to Aurora Energy branding following the expiry of Delta's management contract term from 1 July 2017, and the decision to repopulate Aurora Energy as a standalone distributor.

Outage Management System

The Network Operations team is currently completing the implementation of an Outage Management System (OMS), which aims to improve both the internal work processes and services delivered to customers. Aurora Energy's GE PowerOn Fusion system connects the network asset and customer models to accurately understand customer impact of outage events, and provides the opportunity for improving customer service.

Review of Interruptions

Each month, all Interruptions are reviewed by the Regulatory team, together with the Network Operations Manager, for consistency of coding.

A monthly summary of reliability performance is discussed at a monthly governance group meeting and is then reported to the Directors of Aurora Energy.

At the end of March each year, further analysis is carried out prior to the production of the reports for publication of the Statement and for information disclosure. These reports are scrutinised by the Network Operations Manager and the Regulatory team for consistency of coding and to ensure that only those interruptions that are consistent with the definition of "Interruption" are included in the Class B or C Interruptions.

Retention of Documentation

Retention of network Interruption documentation and database records are maintained for a sufficient period as required by law or regulation.

Calculating SAIDI and SAIFI

Meeting the definition of "Interruption"

Interruptions that meet the definition of an "Interruption" in the Determination are the only interruptions that contribute to Aurora Energy's SAIDI Assessed Value and SAIFI Assessed Value.

The following interruptions are therefore excluded from the calculations:

- interruptions where no consumers were affected;
- interruptions that occur on Aurora Energy's low voltage network;
- interruptions that last for less than a period of 1 minute;
- interruptions that relate to extended reserves;
- interruptions that are a result of an automatic under voltage, under frequency, or rolling outage scheme or similar arrangement required as part of the system operator services or other instruction from an authorised regulator;
- interruptions that are a result of a breach of the contract under which the electricity is conveyed;

- interruptions that are as a result of a request from the consumer and only that consumer is affected by the interruption;
- interruptions that are as a result of a request by the consumer's retailer; or
- interruptions that are for the purpose of isolating an unsafe installation.

Meeting the definition of "Class B Interruption"

A "Class B Interruption" is defined in the Determination as meaning *"planned interruptions by Aurora"*.

We interpret this as meaning Planned Interruptions that are initiated by Aurora Energy. Planned interruptions that are initiated by Transpower or an external third party are excluded.

Meeting the definition of "Class C interruption"

A "Class C Interruption" is defined in the Determination as meaning *"unplanned interruptions originating within the system fixed assets of Aurora"*. *"System fixed assets"* is defined in the Determination as meaning *"all fixed assets owned, provided, maintained, or operated by Aurora that are used or intended to be used for the supply of electricity lines services."*

We interpret this as meaning Unplanned Interruptions that originate within our network. Unplanned Interruptions that originate on assets that are external to our network, but that interrupt the supply of electricity on our network, are excluded.

Customer Interruption Minutes

The Customer Interruption Minutes value is used to calculate SAIDI. The value is calculated by applying the following formula:

> *Interruption duration x number of active ICPs affected by the interruption = Customer Interruption Minutes*

The interruption duration is the length of time between the Interruption start time and the Interruption restoration time, expressed in minutes.

Total number of consumers on the network

Consumer numbers are derived from the geographic information system (GIS) for that segment of the circuit affected by the planned or unplanned interruption. Each month the ICPs in the GIS are reconciled with the active ICPs in the network connection database used for line charge billing to retailers. The network connection database is updated daily from the national registry and a full reconciliation with the national registry is carried out at the end of each month.

The consumer number used to calculate the SAIDI Assessed Value and the SAIFI Assessed Value is the average of the start period (April) consumer number billed to retailers and the end period (March) consumer number billed to retailers.

Raw SAIDI value

The raw SAIDI value for an Interruption is calculated by applying the following formula:

$$\frac{\textit{Customer Interruption Minutes}}{\textit{Total number of consumers on the network}} = \textit{Raw SAIDI value}$$

Raw SAIFI value

The raw SAIFI value for an Interruption is calculated by applying the following formula:

$$\frac{\textit{Number of customers affected}}{\textit{Total number of consumers on the network}} = \textit{Raw SAIFI value}$$

Planned SAIDI Assessed Value

The Planned SAIDI Assessed Value is calculated in accordance with paragraph (2) of Schedule 3.1 of the Determination.

If a planned interruption meets the definition of:

- a "Class B Notified Interruption"; or
- an "Intended Interruption"

in the Determination, the $SAIDI_N$ value and $SAIDI_B$ value are calculated for that Interruption. The $SAIDI_B$ value, if any, is then attributed to that Interruption and half of the $SAIDI_N$ value, if any, resulting in one SAIDI value for the Interruption.

If a Planned Interruption does not meet either of the above definitions, the $SAIDI_B$ value (being the raw SAIDI value) is attributed to that Interruption.

The SAIDI Values calculated for every Class B Planned Interruption commencing within the CPP Assessment Period are then summed to determine the Planned SAIDI Assessed Value.

Planned SAIFI Assessed Value

The Planned SAIFI Assessed Value is calculated in accordance with paragraph (3) of Schedule 3.1 of the Determination.

The raw SAIFI Values for every Class B Planned Interruption commencing within the CPP Assessment Period are then summed to determine the Planned SAIFI Assessed Value.

Unplanned SAIDI Assessed Value

The Unplanned SAIDI Assessed Value is calculated in accordance with paragraph (2) of Schedule 3.2 of the Determination.

The following steps are followed to calculate the Unplanned SAIDI Assessed Value:

- **Step 1 – allocating SAIDI to a 30 minute period:** The raw SAIDI Value for an Interruption is allocated to the relevant 30 minute period that starts either on the half hour or half past the hour.

  Aurora Energy does this by allocating the raw SAIDI Value for an Interruption to the 30 minute period that correlates to the Interruption start time.

  For example, if the Interruption start time is 11:34 on 20 June 2020, the 30 minute period to which the raw SAIDI Value for that Interruption is allocated would be the 11:30 period on 20 June 2020. The duration of the Interruption has no bearing on the 30 minute period to which the raw SAIDI Values are allocated.
- **Step 2 – identifying a Major Event**: Major Events are identified where, in any 24-hour period, the SAIDI Value exceeds the SAIDI Unplanned Boundary Value. The 24-hour periods are rolled half-hourly. Consistent with the Commission's commentary in its Reasons Paper on the Electricity Distribution Services Default Price-Quality Path Determination 2020[2], a Major Event can last longer than 24 hours as long as the Major Event criteria is met.
- **Step 3 – replacement of SAIDI**: If a SAIDI Major Event is identified, the SAIDI Value for each 30 minute period within the SAIDI Major Event that exceeds 1/48th of Aurora Energy's SAIDI Unplanned Boundary Value[3] is replaced with 1/48th of Aurora Energy's SAIDI Unplanned Boundary Value. This new value becomes the normalised SAIDI Value for that 30 minute period.
- **Step 4 – sum of normalised SAIDI**: The Unplanned SAIDI Assessed Value is then calculated by summing the normalised SAIDI Values for every 30 minute period within the CPP Assessment Period.

Unplanned SAIFI Assessed Value

The Unplanned SAIFI Assessed Value is calculated in accordance with paragraph (3) of Schedule 3.2 of the Determination, and the same steps as set out for calculating Unplanned SAIDI Assessed Value above at paragraph G.6.10 are followed, with the exception being the application of Aurora Energy's SAIFI Unplanned Boundary Value, which is specified in Schedule 3.2 of the Determination as being 0.0737.

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[2] Default price-quality paths for electricity distribution businesses from 1 April 2020 – Final decision, Reasons Paper, 27 November 2019, paragraphs K69 to K74.

[3] Aurora Energy's SAIDI Unplanned Boundary is specified in Schedule 3.2 of the Determination as being 5.69.

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