

HORIZON ENERGY DISTRIBUTION LIMITED

Default Price-Quality Path

Annual Compliance Statement

1 April 2021 – 31 March 2022 Assessment Period

1 August 2022

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1. Introduction

Horizon Energy Distribution Limited is subject to price-quality regulation under Part 4 of the Commerce Act 1986. The Commerce Commission has set a Default Price-Quality Path (DPP) which applies to Horizon Energy Distribution Limited from 1 April 2020.

This annual compliance statement is published in accordance with clause 11.4 of the 2020 DPP Determination, and applies to the second assessment period, commencing 1 April 2021 and ending 31 March 2022.

2. Date prepared

This statement was prepared on 1 August 2022.

3. Wash-up amount

3.1 Statement of compliance

As demonstrated in Table 1 in Section 3.2, and consistent with clause 8.6 of the 2020 DPP Determination, Horizon Energy Distribution Limited has complied with the wash-up amount calculation for the second assessment period.

3.2 Wash-up amount calculation

Table 1

Wash-up amount RY22		
Term	Description	Value (\$000)
Actual allowable revenue (AAR)	<i>Sum of actual net allowable revenue, actual pass-through and recoverable costs, wash-up amount and revenue wash-up draw down amount</i>	34,346
Actual revenue (AR)	<i>Sum of actual revenue from prices plus other regulated income</i>	33,785
Revenue foregone (RV)	<i>Actual net allowable revenue x (revenue reduction percentage - 20%) when revenue reduction percentage is greater than 20%, otherwise nil</i>	-
Wash-up amount	<i>AAR - AR - RV</i>	561

Further information supporting actual allowable revenue is included in Section 3.2.1.

Further information supporting actual revenue is included in Section 3.2.2.

Further information supporting revenue foregone is included in Section 3.2.3.



3.2.1 Actual allowable revenue

Table 2 below shows the actual allowable revenue for the assessment period consistent with Schedule 1.6 of the 2020 DPP Determination.

Table 2

Actual allowable revenue RY22		
Term	Description	Value (\$000)
Actual net allowable revenue (ANAR)	<i>Amount specified as forecast net allowable revenue for the second assessment period</i>	24,378
Actual pass-through costs	<i>Sum of all pass-through costs that were incurred or approved by the Commission in the assessment period</i>	396
Actual recoverable costs	<i>Sum of all recoverable costs that were incurred or approved by the Commission in the assessment period</i>	8,305
Actual net allowable revenue RY22 adjustment	<i>The amount calculated for the assessment period ending 31 March 2022 under clause 8.6 of the 2020 DPP Determination</i>	1,267
Total actual allowable revenue (AAR)	<i>Actual net allowable revenue + actual pass-through costs and actual recoverable costs + wash up ANAR adjustment</i>	34,346

Further information supporting actual pass-through costs, actual recoverable costs and the pass-through balance is included in Appendix A.

3.2.2 Actual revenue

Table 3 below shows actual revenue for the assessment period consistent with clause 4.2 of the 2020 DPP Determination.

Table 3

Actual revenue RY22		
Term	Description	Value (\$000)
Actual revenue from prices	<i>Actual prices between 1 April 2021 and 31 March 2022 multiplied by actual quantities for the assessment period</i>	33,503
Other regulated income	<i>Other income associated with supply of electricity distribution services</i>	282
Total actual revenue (AR)	<i>Sum of actual revenue from prices plus other regulated income</i>	33,785

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

3.2.3 Revenue foregone

Table 4 below shows the revenue foregone consistent with clause 4.2 of the 2020 DPP Determination.

Table 4

Revenue foregone RY22		
Term	Description	Value (\$000)
Actual net allowable revenue (ANAR)	<i>Amount specified as forecast net allowable revenue for the second assessment period</i>	24,378
Revenue reduction percentage (RRP)	<i>1 - (actual revenue from prices / forecast revenue from prices)</i>	-1.11%
Revenue foregone (RV)	<i>Actual net allowable revenue x (RRP - 20%) when RRP is greater than 20%, otherwise nil</i>	-

4. Quality standards

4.1 Statement of compliance with planned interruptions quality standards

Horizon Energy Distribution Limited is subject to a planned accumulated SAIDI limit and a planned accumulated SAIFI limit which are assessed for the DPP regulatory period as stated in clause 9.2 of the 2020 DPP Determination.

Table 5 and Table 6 below show the planned accumulated SAIDI and SAIFI limits for Horizon Energy Distribution Limited for the DPP regulatory period and the planned SAIDI and SAIFI assessed values for the first assessment period.

Table 5

Planned interruptions quality standard - SAIDI	
Sum of planned SAIDI assessed values ≤ Planned accumulated SAIDI limit	
Planned accumulated SAIDI limit	858.6300
Planned SAIDI assessed value (to date) second assessment	115.7655
Compliance result	Compliant

Table 6

Planned interruptions quality standard - SAIFI	
Sum of planned SAIFI assessed values ≤ Planned accumulated SAIFI limit	
Planned accumulated SAIFI limit	5.4415
Planned SAIFI assessed value (to date) second assessment	0.7845
Compliance result	Compliant

4.2 Statement of compliance with unplanned interruptions quality standards

As demonstrated in Table 7 and Table 8 below, and consistent with clause 9.7 of the 2020 DPP Determination, Horizon Energy Distribution Limited has complied with the unplanned interruptions quality standard.

Table 7

Unplanned interruptions quality standard RY22 - SAIDI		
Unplanned SAIDI assessed value ≤ Unplanned SAIDI limit		
Unplanned SAIDI limit		194.5300
Unplanned SAIDI assessed value	<i>Sum of normalised SAIDI values for Class C interruptions commencing within the assessment period</i>	134.4237
Compliance result		Compliant

Table 8

Unplanned interruptions quality standard RY22 - SAIFI		
Unplanned SAIFI assessed value ≤ Unplanned SAIFI limit		
Unplanned SAIFI limit		2.3904
Unplanned SAIFI assessed value	<i>Sum of normalised SAIFI values for Class C interruptions commencing within the assessment period</i>	1.4814
Compliance result		Compliant

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

4.2.1 Major events

Table 9 and Table 10 below show the SAIDI and SAIFI values attributed to major events which occurred during the assessment period.

Further information about major events is included in Appendix D.

Table 9

Unplanned SAIDI major events RY22			
Start	End	Pre-normalised unplanned SAIDI	Normalised unplanned SAIDI
14/07/2021 15:30:00 PM	16/07/2021 14:30:00 PM	15.59	0.3060
2/11/2021 12:00 AM	4/11/2021 13:30:00 PM	147.7249	4.1078

Table 10

Unplanned SAIFI major events RY22			
Start	End	Pre-normalised unplanned SAIFI	Normalised unplanned SAIFI
14/07/2021 15:30:00 PM	16/07/2021 14:30:00 PM	0.17	0.0024
16/08/2021 17:00:00 PM	18/08/2021 14:30:00 PM	0.1199	0.0049
2/11/2021 10:00 AM	4/11/2021 09:00 AM	0.2491	0.0285

4.3 Statement of compliance with extreme event standard

As demonstrated in Table 11 below, and consistent with clause 9.9 of the 2020 DPP Determination, Horizon Energy Distribution Limited has complied with the extreme event standard.

Table 11

Extreme event standard RY22	
<i>Unplanned SAIDI value \leq 120 minutes, and customer interruption minutes \leq six million during any 24-hour period, excluding unplanned interruptions from major external factors</i>	
Number of extreme events	Compliance result
-	Compliant

4.4 Quality Incentive Adjustment

Table 12 below shows Horizon Energy Distribution Limited’s quality incentive adjustment for the assessment period.

Table 12

Quality Incentive Adjustment RY22		
Term	Description	Value (\$000)
SAIDI planned adjustment	$(SAIDI_{planned, target} - SAIDI_{planned, assessed}) \times 0.5 \times IR$	10
SAIDI unplanned adjustment	$(SAIDI_{unplanned, target} - SAIDI_{unplanned, assessed}) \times IR$	54
Total adjustment	$SAIDI_{planned adjustment} + SAIDI_{unplanned adjustment}$	64
Revenue at risk	$0.02 * ANAR$	488
Total penalty/reward		64
67th percentile estimate of post-tax WACC		4.23%
Quality incentive adjustment		69



Table 13 below shows Horizon Energy Distribution Limited’s quality incentive adjustment inputs consistent with Schedule 4 of the 2020 DPP Determination.

Table 13

Quality Incentive Adjustment Inputs RY22					
Term	Units	Value	Term	Units	Value
SAIDI planned interruption cap	minutes	171.73	SAIDI unplanned interruption cap	minutes	194.53
SAIDI planned interruption collar	minutes	0.00	SAIDI unplanned interruption collar	minutes	0.00
SAIDI planned interruption target	minutes	57.24	SAIDI unplanned interruption target	minutes	144.35
Planned SAIDI assessed value	minutes	53.45	Unplanned SAIDI assessed value	minutes	134.42
Incentive rate		5,397			
Actual net allowable revenue (ANAR)	\$000	24,378			
SAIDI planned interruption target	minutes	57.24	SAIDI unplanned interruption target	minutes	144.35
Minimum of the planned SAIDI cap and assessed value	minutes	53.45	Minimum of the unplanned SAIDI cap and assessed value	minutes	134.42
Planned SAIDI subject to incentive	minutes	3.79	Unplanned SAIDI subject to incentive	minutes	9.93
Adjustment (IR x 0.5)	\$	2,699	Adjustment (IR)	\$	5,397
SAIDI planned adjustment	\$000	10.239	SAIDI unplanned adjustment	\$000	53.572



5. Transactions

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

6. Director's certification

A Director's certificate in the form set out in Schedule 7 of the 2020 DPP Determination is included as Appendix E.

7. Assurance report

An assurance report meeting the requirements of Schedule 8 of the 2020 DPP Determination is included in Appendix F.



Appendix A – Pass-through and recoverable costs

Pass-through costs

Table 14

Actual and forecast pass-through costs RY22				
Actual pass-through costs	Actual (\$000)	Forecast (\$000)	Forecast variance (\$000)	Explanation for variances
Rates on system fixed assets	229	222	7	Minor variance on rates charged
Commerce Act levies	43	58	(15)	Lower charges in new year
Electricity Authority levies	107	110	(3)	Minor variance
Utilities Disputes levies	17	15	2	Minor variance
Total actual pass-through costs	396	405	(9)	



Recoverable costs

Table 15

Actual and forecast recoverable costs RY22				
Actual recoverable costs	Actual (\$000)	Forecast (\$000)	Forecast variance (\$000)	Explanation for variances
IRIS incentive adjustment	726	726	-	
Transmission charges	3,520	3,526	(6)	New ICCP charge lower from Dec'21.
New investment contract charges	-	-	-	
System operator services charges	-	-	-	
Avoided transmission charges	731	731	-	
Distributed generation allowance	3,169	3,169	-	
Claw-back	-	-	-	
Catastrophic event allowance	-	-	-	
Extended reserves allowance	-	-	-	
Quality incentive adjustment	39	39	-	
Capex wash-up adjustment	91	91	-	
Reconsideration event allowance	-	-	-	
Quality standard variation engineers fee	-	-	-	
Urgent project allowance	-	-	-	
Revenue wash-up draw down amount	-	-	-	
Fire and Emergency NZ levies	28	38	(10)	Lower actual FENZ charges.
Innovation project allowance	-	-	-	
Total actual recoverable costs	8,305	8,321	(16)	



Pass-through balance

Table 16

Actual allowable revenue RY22		
Term	Description	Value (\$000)
Actual net allowable revenue (ANAR _{previous})	<i>Amount specified as forecast net allowable revenue for the first assessment period</i>	23,912
CPI Calculated	<i>As per Schedule 1.6 Clause 8.6 (3)</i>	5.30%
Actual net allowable revenue (ANAR_{new})	<i>Actual net allowable revenue previous x (1 + CPI calculated)</i>	25,179
Actual net allowable revenue (ANAR_{new adjustment})	<i>Actual net allowable revenue new - previous</i>	1,267

Table 17

DCPI2021/22			
Denominator		Numerator	
CPIJun2020	1047	CPIJun2021	1082
CPISep2020	1054	CPISep2021	1106
CPIDec2020	1059	CPIDec2021	1122
CPIMar2021	1068	CPIMar2022	1142
Total	4228	Total	4452
DCPI2021/22	5.298%		

Source: Statistics NZ, SE9A Series



Appendix B – Prices and quantities

Table 18 shows the actual prices and quantities for actual revenue from prices for the second assessment period.

Table 18

Actual revenue from prices RY22				
Price Category	Unit	Unit price	Actual quantity	Actual revenue (\$'000)
Low User Domestic - Urban	\$/kWh	0.10195	45,160,036	4,604
Low User Domestic - Urban	\$/ICP/day	0.15	8,588	470
Low User Domestic - Rural	\$/kWh	0.10195	22,718,901	2,316
Low User Domestic - Rural	\$/ICP/day	0.15	3,989	218
Standard User Domestic - Urban	\$/kWh	0.00729	38,169,329	278
Standard User Domestic - Urban	\$/ICP/day	2.22490	4,687	3,806
Standard User Domestic - Rural	\$/kWh	0.00729	36,911,739	269
Standard User Domestic - Rural	\$/ICP/day	2.22490	4,475	3,634
Under Verandah Lights	\$/day	0.85055	15	5
Electric Fences	\$/day	0.84582	6	2
Lanark	\$/month	-8.64000	1	(0)
Street Lights	\$/light/month	5.71852	5,121	351
Telecom - PCM 24 Hour	\$/PCM/month	62.19361	61	46
Telecom - PCM Night	\$/PCM/month	27.83596	3	1
Capacity Group 2 - Urban	\$/kWh	0.04064	13,321,991	541
Capacity Group 2 - Urban	\$/ICP/day	2.18361	797	635
Capacity Group 2 - Rural	\$/kWh	0.06873	23,877,324	1,641
Capacity Group 2 - Rural	\$/ICP/day	3.43118	1,550	1,942
Capacity Group 3 - Urban	\$/kWh	0.04516	10,104,420	456
Capacity Group 3 - Urban	\$/ICP/day	5.83106	267	568
Capacity Group 3 - Rural	\$/kWh	0.05205	17,142,722	892
Capacity Group 3 - Rural	\$/ICP/day	9.15201	319	1,067
Capacity Group 4 - Urban	\$/kWh	0.05848	2,083,923	122
Capacity Group 4 - Urban	\$/ICP/day	12.54985	34	157
Capacity Group 4 - Rural	\$/kWh	0.06605	1,758,203	116
Capacity Group 4 - Rural	\$/ICP/day	14.23304	30	158
Capacity Group 5 - Urban	\$/kWh	0.05229	2,225,533	116
Capacity Group 5 - Urban	\$/kVA/day	0.10342	4,104	155
Capacity Group 5 - Rural	\$/kWh	0.09392	1,086,586	102
Capacity Group 5 - Rural	\$/kVA/day	0.11962	3,931	172
Network Maximum Demand - Variable	\$/kWh	0.02573	56,200,002	1,446
Network Maximum Demand - Capacity	\$/kVA/mth	1.95494	48,978	1,149
Network Maximum Demand - Demand	\$/kW/mth	5.43125	31,528	2,055
Major Industrial Non-Standard Customers				
Fonterra (BOPE)	\$/month	32,265	1	387
Fonterra Lipid & Distillery	\$/month	10,277	1	123
Asaleo Care (TP)	\$/month	75,274	1	903
Whakatane Mill (TP)	\$/month	118,357	1	1,420
Kaingaroa Timberlands (TP)	\$/month	22,093	1	265
CHH - Kawerau (TP)	\$/month	37,035	1	444
Norske Skog Oxidation Ponds (TP)	\$/month	14,044	1	169
Sequal Investments	\$/month	17,116	1	205
Kawerau Dairy Ltd	\$/month	5,872	1	70
Fonterra Assets	\$/month	1,250	1	15
GDL Breaker Contract	\$/month	585	1	7
BOPE TG1 & TG2	\$/month	-	1	-
Total actual revenue from prices				33,503



Table 19 shows the forecast revenue from prices for the second assessment period from the price setting compliance statement.

Table 19

Forecast revenue from prices RY22	
Total forecast revenue from prices	33,135



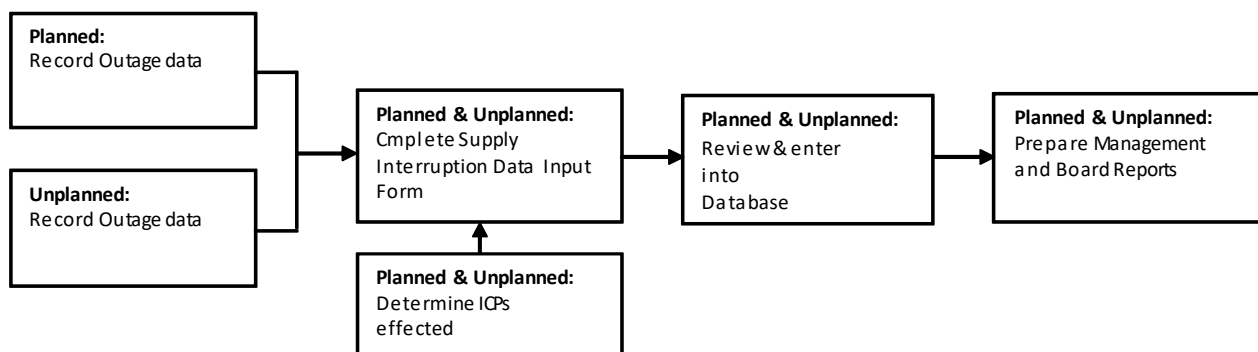
Appendix C – Policies and procedures for measuring planned and unplanned interruptions

The intention was for the manual recording of switching operations for interruptions to disappear, however we have continued with the existing method of manually recording operations for FY22. Work is underway to complete all interruption management within the SCADA system.

Current Process

Capture of Statistical Information

The procedures followed to capture statistical information for planned outages and unplanned outages (less than 24 hours' notice) are very similar and rely on the accurate recording of the timing and sequence of operations carried out on the network. The following diagram sets out the procedural flow for the recording of planned and unplanned outage data. Each flow is also discussed in detail below.



Planned Outages – Initial Recording of Outage Data

The sequence of operations for all planned outages are recorded on a Network Switching Schedule

This schedule records:

- Outage dates
- Outage location and equipment
- Outage type
- Switching instructions
- Mechanism for notification of outages
- Issuing of permits
- The exact time of each operation from the SCADA screen

Unplanned Outages – Initial Recording of Outage Data

The sequence of operations for all unplanned outages are recorded on an unplanned outage instruction sheet, similar details as above are recorded as the instructions are carried out.

Planned and Unplanned Outages – Supply Interruption Data Input Form

Following the completion of the switching, information is transferred to a Supply Interruption Data Input Form. Relevant switching operations are recorded along with customer numbers (discussed below) and length of time before restoration. This data is used to calculate the SAIDI and SAIFI impact of the outage.

Planned and Unplanned Outages – Customer Numbers

Customer numbers (ICPs) for both unplanned and planned outages are sourced from the Network Management System (NMS) database. ICPs are counted between isolation points on the network to determine the impact of an outage. The NMS database is updated regularly to the national registry with new and disconnected customers.

Planned and Unplanned Outages – Collation of Data

On completion of the Supply Interruption Data Input form, it is entered into the Horizon Energy Support Systems Database. The information is reviewed for accuracy and completeness before it is reported against. This database contains data for all outages in the current year and prior years.

Planned and Unplanned Outages – Management and Board Reports

From the database reports are generated containing statistics on SAIDI and SAIFI. SAIDI and SAIFI calculations are performed based on Schedule 4 of the Electricity Distribution Services Default Price-Quality Path Determination 2020. Reporting based on these calculations is provided to Management and the Board of Directors to drive performance and network improvements.

Disclaimer

The information presented in this Default Price-Quality Path Compliance Statement has been prepared solely for the purpose of complying with the requirements of the Electricity Distribution Services Default Price-Quality Path Determination 2020. This statement has not been prepared for any other purpose and Horizon Energy Distribution Limited expressly disclaims any liability to any other party who may rely on this statement for any other purpose.



Appendix D – SAIDI and SAIFI major events

Tables 20,21 and 22 below show the normalisation of the SAIDI and SAIFI major events that took place during the assessment period, consistent with Schedule 3.2 of the 2020 DPP Determination.

Table 20 part 1

Normalisation of unplanned SAIDI major events RY22						
SAIDI unplanned boundary value						14.6900
1/48th of the SAIDI unplanned boundary value	14-16/07/2021			2-4/11/2021		
	Half hour commencing	Raw SAIDI value for Class C interruption	Normalised SAIDI value for Class C interruption	Half hour commencing	Raw SAIDI value for Class C interruption	Normalised SAIDI value for Class C interruption
0.3060	03:30 PM	0.0000	0.0000	12:00 AM	0.0000	0.0000
0.3060	04:00 PM	0.0000	0.0000	12:30 AM	0.0000	0.0000
0.3060	04:30 PM	0.0000	0.0000	01:00 AM	0.0000	0.0000
0.3060	05:00 PM	0.0000	0.0000	01:30 AM	2.0210	0.3060
0.3060	05:30 PM	0.0000	0.0000	02:00 AM	0.0000	0.0000
0.3060	06:00 PM	0.0000	0.0000	02:30 AM	0.0000	0.0000
0.3060	06:30 PM	0.0000	0.0000	03:00 AM	0.0000	0.0000
0.3060	07:00 PM	0.0000	0.0000	03:30 AM	0.0000	0.0000
0.3060	07:30 PM	0.0000	0.0000	04:00 AM	0.0000	0.0000
0.3060	08:00 PM	0.0000	0.0000	04:30 AM	0.0000	0.0000
0.3060	08:30 PM	0.0000	0.0000	05:00 AM	0.0000	0.0000
0.3060	09:00 PM	0.0000	0.0000	05:30 AM	0.0000	0.0000
0.3060	09:30 PM	0.0000	0.0000	06:00 AM	0.0000	0.0000
0.3060	10:00 PM	0.0000	0.0000	06:30 AM	0.0000	0.0000
0.3060	10:30 PM	0.0000	0.0000	07:00 AM	0.0000	0.0000
0.3060	11:00 PM	0.0000	0.0000	07:30 AM	0.0000	0.0000
0.3060	11:30 PM	0.0000	0.0000	08:00 AM	0.0000	0.0000
0.3060	12:00 AM	0.0000	0.0000	08:30 AM	0.0000	0.0000
0.3060	12:30 AM	0.0000	0.0000	09:00 AM	0.0000	0.0000
0.3060	01:00 AM	0.0000	0.0000	09:30 AM	0.0000	0.0000
0.3060	01:30 AM	0.0000	0.0000	10:00 AM	0.0000	0.0000
0.3060	02:00 AM	0.0000	0.0000	10:30 AM	0.0000	0.0000
0.3060	02:30 AM	0.0000	0.0000	11:00 AM	0.0000	0.0000
0.3060	03:00 AM	0.0000	0.0000	11:30 AM	0.0000	0.0000
0.3060	03:30 AM	0.0000	0.0000	12:00 PM	0.0000	0.0000
0.3060	04:00 AM	0.0000	0.0000	12:30 PM	0.0000	0.0000
0.3060	04:30 AM	0.0000	0.0000	01:00 PM	0.0000	0.0000
0.3060	05:00 AM	0.0000	0.0000	01:30 PM	0.0000	0.0000
0.3060	05:30 AM	0.0000	0.0000	02:00 PM	0.0000	0.0000
0.3060	06:00 AM	0.0000	0.0000	02:30 PM	0.0000	0.0000
0.3060	06:30 AM	0.0000	0.0000	03:00 PM	0.0000	0.0000
0.3060	07:00 AM	0.0000	0.0000	03:30 PM	0.0000	0.0000
0.3060	07:30 AM	0.0000	0.0000	04:00 PM	0.0000	0.0000
0.3060	08:00 AM	0.0000	0.0000	04:30 PM	0.0000	0.0000
0.3060	08:30 AM	0.0000	0.0000	05:00 PM	0.0000	0.0000
0.3060	09:00 AM	0.0000	0.0000	05:30 PM	0.0000	0.0000
0.3060	09:30 AM	0.0000	0.0000	06:00 PM	0.0000	0.0000
0.3060	10:00 AM	0.0000	0.0000	06:30 PM	0.0000	0.0000
0.3060	10:30 AM	0.0000	0.0000	07:00 PM	0.0000	0.0000
0.3060	11:00 AM	0.0000	0.0000	07:30 PM	0.0000	0.0000
0.3060	11:30 AM	0.0000	0.0000	08:00 PM	0.0000	0.0000
0.3060	12:00 PM	0.0000	0.0000	08:30 PM	0.0000	0.0000
0.3060	12:30 PM	0.0000	0.0000	09:00 PM	0.0000	0.0000
0.3060	01:00 PM	0.0000	0.0000	09:30 PM	0.0000	0.0000
0.3060	01:30 PM	0.0000	0.0000	10:00 PM	0.0000	0.0000
0.3060	02:00 PM	0.0000	0.0000	10:30 PM	0.0000	0.0000



Table 20 part 2

Normalisation of unplanned SAIDI major events RY22						
SAIDI unplanned boundary value						14.6900
1/48th of the SAIDI unplanned boundary value	14-16/07/2021			2-4/11/2021		
	Half hour commencing	Raw SAIDI value for Class C interruption	Normalised SAIDI value for Class C interruption	Half hour commencing	Raw SAIDI value for Class C interruption	Normalised SAIDI value for Class C interruption
0.3060	02:30 PM	0.0000	0.0000	11:00 PM	0.0000	0.0000
0.3060	03:00 PM	15.5876	0.3060	11:30 PM	21.9586	0.3060
0.3060	03:30 PM	0.0000	0.0000	12:00 AM	0.0000	0.0000
0.3060	04:00 PM	0.0000	0.0000	12:30 AM	0.0000	0.0000
0.3060	04:30 PM	0.0000	0.0000	01:00 AM	0.0000	0.0000
0.3060	05:00 PM	0.0000	0.0000	01:30 AM	0.0000	0.0000
0.3060	05:30 PM	0.0000	0.0000	02:00 AM	0.0000	0.0000
0.3060	06:00 PM	0.0000	0.0000	02:30 AM	0.0000	0.0000
0.3060	06:30 PM	0.0000	0.0000	03:00 AM	0.0000	0.0000
0.3060	07:00 PM	0.0000	0.0000	03:30 AM	0.0000	0.0000
0.3060	07:30 PM	0.0000	0.0000	04:00 AM	0.0000	0.0000
0.3060	08:00 PM	0.0000	0.0000	04:30 AM	0.0000	0.0000
0.3060	08:30 PM	0.0000	0.0000	05:00 AM	0.0000	0.0000
0.3060	09:00 PM	0.0000	0.0000	05:30 AM	0.0000	0.0000
0.3060	09:30 PM	0.0000	0.0000	06:00 AM	0.0000	0.0000
0.3060	10:00 PM	0.0000	0.0000	06:30 AM	3.8505	0.3060
0.3060	10:30 PM	0.0000	0.0000	07:00 AM	57.2562	0.3060
0.3060	11:00 PM	0.0000	0.0000	07:30 AM	1.0356	0.3060
0.3060	11:30 PM	0.0000	0.0000	08:00 AM	5.9211	0.3060
0.3060	12:00 AM	0.0000	0.0000	08:30 AM	0.0000	0.0000
0.3060	12:30 AM	0.0000	0.0000	09:00 AM	6.0078	0.3060
0.3060	01:00 AM	0.0000	0.0000	09:30 AM	4.2397	0.3060
0.3060	01:30 AM	0.0000	0.0000	10:00 AM	0.0283	0.0283
0.3060	02:00 AM	0.0000	0.0000	10:30 AM	0.0000	0.0000
0.3060	02:30 AM	0.0000	0.0000	11:00 AM	0.0000	0.0000
0.3060	03:00 AM	0.0000	0.0000	11:30 AM	19.7808	0.3060
0.3060	03:30 AM	0.0000	0.0000	12:00 PM	0.0000	0.0000
0.3060	04:00 AM	0.0000	0.0000	12:30 PM	0.0000	0.0000
0.3060	04:30 AM	0.0000	0.0000	01:00 PM	0.0000	0.0000
0.3060	05:00 AM	0.0000	0.0000	01:30 PM	0.0000	0.0000
0.3060	05:30 AM	0.0000	0.0000	02:00 PM	22.7904	0.3060
0.3060	06:00 AM	0.0000	0.0000	02:30 PM	0.6757	0.3060
0.3060	06:30 AM	0.0000	0.0000	03:00 PM	0.0000	0.0000
0.3060	07:00 AM	0.0000	0.0000	03:30 PM	0.0000	0.0000
0.3060	07:30 AM	0.0000	0.0000	04:00 PM	0.0000	0.0000
0.3060	08:00 AM	0.0000	0.0000	04:30 PM	0.0000	0.0000
0.3060	08:30 AM	0.0000	0.0000	05:00 PM	0.0000	0.0000
0.3060	09:00 AM	0.0000	0.0000	05:30 PM	0.0000	0.0000
0.3060	09:30 AM	0.0000	0.0000	06:00 PM	0.0000	0.0000
0.3060	10:00 AM	0.0000	0.0000	06:30 PM	0.0000	0.0000
0.3060	10:30 AM	0.0000	0.0000	07:00 PM	0.0706	0.0706
0.3060	11:00 AM	0.0000	0.0000	07:30 PM	0.0000	0.0000
0.3060	11:30 AM	0.0000	0.0000	08:00 PM	0.0000	0.0000
0.3060	12:00 PM	0.0000	0.0000	08:30 PM	0.0000	0.0000
0.3060	12:30 PM	0.0000	0.0000	09:00 PM	0.0000	0.0000
0.3060	01:00 PM	0.0000	0.0000	09:30 PM	0.0000	0.0000



Table 20 part 3

Normalisation of unplanned SAIDI major events RY22						
SAIDI unplanned boundary value						14.6900
1/48th of the SAIDI unplanned boundary value	14-16/07/2021			2-4/11/2021		
	Half hour commencing	Raw SAIDI value for Class C interruption	Normalised SAIDI value for Class C interruption	Half hour commencing	Raw SAIDI value for Class C interruption	Normalised SAIDI value for Class C interruption
0.3060	01:30 PM	0.0000	0.0000	10:00 PM	0.0000	0.0000
0.3060	02:00 PM	0.0000	0.0000	10:30 PM	0.0000	0.0000
0.3060	02:30 PM	0.0000	0.0000	11:00 PM	0.0000	0.0000
Total		15.5876	0.3060	11:30 PM	0.0000	0.0000
				12:00 AM	1.5483	0.3060
				12:30 AM	0.0000	0.0000
				01:00 AM	0.0000	0.0000
				01:30 AM	0.0000	0.0000
				02:00 AM	0.0000	0.0000
				02:30 AM	0.0000	0.0000
				03:00 AM	0.0000	0.0000
				03:30 AM	0.0000	0.0000
				04:00 AM	0.0000	0.0000
				04:30 AM	0.0000	0.0000
				05:00 AM	0.0000	0.0000
				05:30 AM	0.0000	0.0000
				06:00 AM	0.0000	0.0000
				06:30 AM	0.0000	0.0000
				07:00 AM	0.0000	0.0000
				07:30 AM	0.0000	0.0000
				08:00 AM	0.0000	0.0000
				08:30 AM	0.0000	0.0000
				09:00 AM	0.0000	0.0000
				09:30 AM	0.0225	0.0225
				10:00 AM	0.0000	0.0000
				10:30 AM	0.0000	0.0000
				11:00 AM	0.0000	0.0000
				11:30 AM	0.5099	0.3060
				12:00 PM	0.0078	0.0078
				12:30 PM	0.0000	0.0000
				01:00 PM	0.0000	0.0000
				01:30 PM	0.0000	0.0000
			Total		147.7249	4.1078

Combined SAIDI and SAIFI Major Events

14-16/07/2021

Cause - Transpower CB WTH 2722 tripped at 15:18pm on 15/07/22 affecting a total of 4462 ICP's, wildlife has been recorded as the most likely cause.

Location - The fault was located at an open tie point CB7152 between Factory and Opotiki feeders.

Response - The fault occurred during office hours and there were several field operators and network controllers available to deal with this interruption.

- The Opotiki feeder was assessed for any potential public safety risk and then livened first.



- The Factory feeder was the second feeder to be livened after assessing the potential public safety risk and then livened
- The Hospital feeder livening was delayed due to the need to assess the public safety risk before the manual sectionalising and restoration.
- Following the successful restoration of all feeders with no-fault locations identified fault crews were sent to various sites to identify potential fault locations.
- Subsequent modelling of the fault impedances determined a possible fault location around CB7152. This site was inspected, and evidence of a fault was found. An aerial inspection by drone identified a flashover between the insulators of the circuit breaker most likely caused by a bird.

Mitigating Factors – CB7152 as a tie between the Factory and Opotiki feeders was a historical tie switch that no longer offers any value on a meshed network. The circuit breaker was isolated following the identification of the fault.

Future Improvements – The tie-point switch CB7152 has since been permanently removed. The future projects (further automation/sub-transmission/protection system upgrades) to the Waitotahi-Opotiki region will improve our response and reduce the likelihood of a similar event.

2-4/11/2021

Cause – A severe weather event started on the 2nd of November at approximately 21:00 and continued through to approximately 22:00 on Thursday 4th November when the wind started to settle.

Location – Multiple Outages across Network

Response – Below is a sequence of events and the response related to these interruptions.

- The first fault occurred on the Factory feeder at approximately 23:00 on 02/11/2021. Field crews completed repairs around 02:30 on the 03/11/2021.
- On the 3rd of November further tripping of CB's indicated on SCADA with reports of lines down increasing exponentially as the day progressed and due to the risk of trees falling trees all around in the field, the decision was made to use the time to assess the damages and plan the repairs for when the weather subsided and was safe for the field teams to complete repairs
- Due to the excess of vegetation related faults, it was decided to contract external arborists to assist our field teams in cutting back the trees to both eliminate the current risk on the network and to mitigate the risk of similar events in the future.
- During the event we had all available field workers including asset inspectors, supervisors, designers working long hours to assess the extent of the damages and restore the network.
- The field staff in conjunction with the support teams and the Network Controllers worked closely to dispatch staff and manage the large number of faults over the 4 days.
- The management team HEDL were actively involved behind the scenes ensuring the community was briefed and kept informed of the outstanding faults.
- HSL Management and support teams kept in contact with the field teams and actively managed their welfare.
- The Field Teams and the Network Controllers fatigue levels were monitored, with the teams working rotational shifts to allow sufficient rest breaks for teams to recover from the extended hours worked.
- Over the duration of the event the Field teams travelled a combined total of approximately 23,450 km.
- To aid with the timely restoration of customers' supply, we used two helicopters for a total of approximately 26 hours over the event. This enabled the quick identification of faults. The helicopters were also used for the transportation of gear and the stringing of conductors in hard to access areas. Overall, this helped reduce the duration customers were without supply.



- To give customers on the end of the Waihau Bay feeder some reprieve from not having supply we installed a 300kVA generator on the end of the feeder on the morning of the 05/11/2021, as we were carried out repairs to several fault locations along the coast that were damaged from falling trees. This feeder was finally restored around 22:00 on the 05/11/2021
- To assist customers in the Toatoa area, we distributed portable generators with supplementary fuel to customers on the evening of the 04/11/2021. The repairs on the Toatoa SWER Line were finally repaired on 06/11/2021 due to the extent of the damages to the network.
- During the 50kV Te Kaha outage, we utilised the backup generator located at the substation, to supply the Te Kaha and Waihau Bay feeders and dispatched 2 x 1MVA rental generators as additional backup.

Mitigating Factors – Once the risk to worker safety due to the high winds had reduced, field workers assessed the locations and the extent of the damage. Faults were then systematically repaired and restored.

Future Improvements – There were no realistic network improvements identified that could minimise the effects of a similar event happening in the future. Horizon Energy Distribution Limited supports changes to the Tree Regulations to enable trees that are within fall distance of powerlines to be actively managed by the tree owners, as the current regulations only allow EDBs to deal with trees that are in the growth limit and notice zones. This change will start to reduce the incidents of damage caused by vegetation outside of our control.

Table 21 part 1

Normalisation of unplanned SAIFI major events RY22						
SAIFI unplanned boundary value						0.1170
1/48th of the SAIFI unplanned boundary value	14-16/07/2021			16-18/08/2021		
	Half hour commencing	Raw SAIFI value for Class C interruption	Normalised SAIFI value for Class C interruption	Half hour commencing	Raw SAIFI value for Class C interruption	Normalised SAIFI value for Class C interruption
0.0024	03:30 PM	0.0000	0.0000	05:00 PM	0.0000	0.0000
0.0024	04:00 PM	0.0000	0.0000	05:30 PM	0.0000	0.0000
0.0024	04:30 PM	0.0000	0.0000	06:00 PM	0.0000	0.0000
0.0024	05:00 PM	0.0000	0.0000	06:30 PM	0.0000	0.0000
0.0024	05:30 PM	0.0000	0.0000	07:00 PM	0.0000	0.0000
0.0024	06:00 PM	0.0000	0.0000	07:30 PM	0.0000	0.0000
0.0024	06:30 PM	0.0000	0.0000	08:00 PM	0.0000	0.0000
0.0024	07:00 PM	0.0000	0.0000	08:30 PM	0.0000	0.0000
0.0024	07:30 PM	0.0000	0.0000	09:00 PM	0.0000	0.0000
0.0024	08:00 PM	0.0000	0.0000	09:30 PM	0.0000	0.0000
0.0024	08:30 PM	0.0000	0.0000	10:00 PM	0.0000	0.0000
0.0024	09:00 PM	0.0000	0.0000	10:30 PM	0.0000	0.0000
0.0024	09:30 PM	0.0000	0.0000	11:00 PM	0.0000	0.0000
0.0024	10:00 PM	0.0000	0.0000	11:30 PM	0.0000	0.0000
0.0024	10:30 PM	0.0000	0.0000	12:00 AM	0.0000	0.0000
0.0024	11:00 PM	0.0000	0.0000	12:30 AM	0.0000	0.0000
0.0024	11:30 PM	0.0000	0.0000	01:00 AM	0.0000	0.0000
0.0024	12:00 AM	0.0000	0.0000	01:30 AM	0.0000	0.0000
0.0024	12:30 AM	0.0000	0.0000	02:00 AM	0.0000	0.0000
0.0024	01:00 AM	0.0000	0.0000	02:30 AM	0.0000	0.0000
0.0024	01:30 AM	0.0000	0.0000	03:00 AM	0.0000	0.0000
0.0024	02:00 AM	0.0000	0.0000	03:30 AM	0.0000	0.0000
0.0024	02:30 AM	0.0000	0.0000	04:00 AM	0.0000	0.0000
0.0024	03:00 AM	0.0000	0.0000	04:30 AM	0.0000	0.0000
0.0024	03:30 AM	0.0000	0.0000	05:00 AM	0.0000	0.0000
0.0024	04:00 AM	0.0000	0.0000	05:30 AM	0.0000	0.0000
0.0024	04:30 AM	0.0000	0.0000	06:00 AM	0.0000	0.0000
0.0024	05:00 AM	0.0000	0.0000	06:30 AM	0.0000	0.0000
0.0024	05:30 AM	0.0000	0.0000	07:00 AM	0.0000	0.0000
0.0024	06:00 AM	0.0000	0.0000	07:30 AM	0.0000	0.0000
0.0024	06:30 AM	0.0000	0.0000	08:00 AM	0.0000	0.0000
0.0024	07:00 AM	0.0000	0.0000	08:30 AM	0.0000	0.0000
0.0024	07:30 AM	0.0000	0.0000	09:00 AM	0.0000	0.0000
0.0024	08:00 AM	0.0000	0.0000	09:30 AM	0.0000	0.0000
0.0024	08:30 AM	0.0000	0.0000	10:00 AM	0.0000	0.0000
0.0024	09:00 AM	0.0000	0.0000	10:30 AM	0.0000	0.0000
0.0024	09:30 AM	0.0000	0.0000	11:00 AM	0.0000	0.0000
0.0024	10:00 AM	0.0000	0.0000	11:30 AM	0.0000	0.0000
0.0024	10:30 AM	0.0000	0.0000	12:00 PM	0.0000	0.0000
0.0024	11:00 AM	0.0000	0.0000	12:30 PM	0.0423	0.0024
0.0024	11:30 AM	0.0000	0.0000	01:00 PM	0.0000	0.0000
0.0024	12:00 PM	0.0000	0.0000	01:30 PM	0.0000	0.0000
0.0024	12:30 PM	0.0000	0.0000	02:00 PM	0.0000	0.0000
0.0024	01:00 PM	0.0000	0.0000	02:30 PM	0.0000	0.0000
0.0024	01:30 PM	0.0000	0.0000	03:00 PM	0.0000	0.0000
0.0024	02:00 PM	0.0000	0.0000	03:30 PM	0.0000	0.0000
0.0024	02:30 PM	0.0000	0.0000	04:00 PM	0.0000	0.0000
0.0024	03:00 PM	0.1745	0.0024	04:30 PM	0.0776	0.0024



Table 21 part 2

Normalisation of unplanned SAIFI major events RY22						
SAIFI unplanned boundary value						0.1170
1/48th of the SAIFI unplanned boundary value	14-16/07/2021			16-18/08/2021		
	Half hour commencing	Raw SAIFI value for Class C interruption	Normalised SAIFI value for Class C interruption	Half hour commencing	Raw SAIFI value for Class C interruption	Normalised SAIFI value for Class C interruption
0.0024	03:30 PM	0.0000	0.0000	05:00 PM	0.0000	0.0000
0.0024	04:00 PM	0.0000	0.0000	05:30 PM	0.0000	0.0000
0.0024	04:30 PM	0.0000	0.0000	06:00 PM	0.0000	0.0000
0.0024	05:00 PM	0.0000	0.0000	06:30 PM	0.0000	0.0000
0.0024	05:30 PM	0.0000	0.0000	07:00 PM	0.0000	0.0000
0.0024	06:00 PM	0.0000	0.0000	07:30 PM	0.0000	0.0000
0.0024	06:30 PM	0.0000	0.0000	08:00 PM	0.0000	0.0000
0.0024	07:00 PM	0.0000	0.0000	08:30 PM	0.0000	0.0000
0.0024	07:30 PM	0.0000	0.0000	09:00 PM	0.0000	0.0000
0.0024	08:00 PM	0.0000	0.0000	09:30 PM	0.0000	0.0000
0.0024	08:30 PM	0.0000	0.0000	10:00 PM	0.0000	0.0000
0.0024	09:00 PM	0.0000	0.0000	10:30 PM	0.0000	0.0000
0.0024	09:30 PM	0.0000	0.0000	11:00 PM	0.0000	0.0000
0.0024	10:00 PM	0.0000	0.0000	11:30 PM	0.0000	0.0000
0.0024	10:30 PM	0.0000	0.0000	12:00 AM	0.0000	0.0000
0.0024	11:00 PM	0.0000	0.0000	12:30 AM	0.0000	0.0000
0.0024	11:30 PM	0.0000	0.0000	01:00 AM	0.0000	0.0000
0.0024	12:00 AM	0.0000	0.0000	01:30 AM	0.0000	0.0000
0.0024	12:30 AM	0.0000	0.0000	02:00 AM	0.0000	0.0000
0.0024	01:00 AM	0.0000	0.0000	02:30 AM	0.0000	0.0000
0.0024	01:30 AM	0.0000	0.0000	03:00 AM	0.0000	0.0000
0.0024	02:00 AM	0.0000	0.0000	03:30 AM	0.0000	0.0000
0.0024	02:30 AM	0.0000	0.0000	04:00 AM	0.0000	0.0000
0.0024	03:00 AM	0.0000	0.0000	04:30 AM	0.0000	0.0000
0.0024	03:30 AM	0.0000	0.0000	05:00 AM	0.0000	0.0000
0.0024	04:00 AM	0.0000	0.0000	05:30 AM	0.0000	0.0000
0.0024	04:30 AM	0.0000	0.0000	06:00 AM	0.0000	0.0000
0.0024	05:00 AM	0.0000	0.0000	06:30 AM	0.0000	0.0000
0.0024	05:30 AM	0.0000	0.0000	07:00 AM	0.0000	0.0000
0.0024	06:00 AM	0.0000	0.0000	07:30 AM	0.0000	0.0000
0.0024	06:30 AM	0.0000	0.0000	08:00 AM	0.0000	0.0000
0.0024	07:00 AM	0.0000	0.0000	08:30 AM	0.0000	0.0000
0.0024	07:30 AM	0.0000	0.0000	09:00 AM	0.0000	0.0000
0.0024	08:00 AM	0.0000	0.0000	09:30 AM	0.0000	0.0000
0.0024	08:30 AM	0.0000	0.0000	10:00 AM	0.0000	0.0000
0.0024	09:00 AM	0.0000	0.0000	10:30 AM	0.0000	0.0000
0.0024	09:30 AM	0.0000	0.0000	11:00 AM	0.0000	0.0000
0.0024	10:00 AM	0.0000	0.0000	11:30 AM	0.0000	0.0000
0.0024	10:30 AM	0.0000	0.0000	12:00 PM	0.0000	0.0000
0.0024	11:00 AM	0.0000	0.0000			
0.0024	11:30 AM	0.0000	0.0000			
0.0024	12:00 PM	0.0000	0.0000			
0.0024	12:30 PM	0.0000	0.0000			
0.0024	01:00 PM	0.0000	0.0000			
0.0024	01:30 PM	0.0000	0.0000			
0.0024	02:00 PM	0.0000	0.0000			
0.0024	02:30 PM	0.0000	0.0000			
Total		0.1745	0.0024	Total	0.1199	0.0049



Table 22 part 1

Normalisation of unplanned SAIFI major events RY22						
SAIFI unplanned boundary value						0.1170
1/48th of the SAIFI unplanned boundary value	2-4/11/2021			Event reference		
	Half hour commencing	Raw SAIFI value for Class C interruption	Normalised SAIFI value for Class C interruption	Half hour commencing	Raw SAIFI value for Class C interruption	Normalised SAIFI value for Class C interruption
0.0024	10:00 AM	0.0000	0.0000	12:00 AM		-
0.0024	10:30 AM	0.0000	0.0000	12:30 AM		-
0.0024	11:00 AM	0.0000	0.0000	01:00 AM		-
0.0024	11:30 AM	0.0000	0.0000	01:30 AM		-
0.0024	12:00 PM	0.0000	0.0000	02:00 AM		-
0.0024	12:30 PM	0.0000	0.0000	02:30 AM		-
0.0024	01:00 PM	0.0000	0.0000	03:00 AM		-
0.0024	01:30 PM	0.0000	0.0000	03:30 AM		-
0.0024	02:00 PM	0.0000	0.0000	04:00 AM		-
0.0024	02:30 PM	0.0000	0.0000	04:30 AM		-
0.0024	03:00 PM	0.0000	0.0000	05:00 AM		-
0.0024	03:30 PM	0.0000	0.0000	05:30 AM		-
0.0024	04:00 PM	0.0000	0.0000	06:00 AM		-
0.0024	04:30 PM	0.0000	0.0000	06:30 AM		-
0.0024	05:00 PM	0.0000	0.0000	07:00 AM		-
0.0024	05:30 PM	0.0000	0.0000	07:30 AM		-
0.0024	06:00 PM	0.0000	0.0000	08:00 AM		-
0.0024	06:30 PM	0.0000	0.0000	08:30 AM		-
0.0024	07:00 PM	0.0000	0.0000	09:00 AM		-
0.0024	07:30 PM	0.0000	0.0000	09:30 AM		-
0.0024	08:00 PM	0.0000	0.0000	10:00 AM		-
0.0024	08:30 PM	0.0000	0.0000	10:30 AM		-
0.0024	09:00 PM	0.0000	0.0000	11:00 AM		-
0.0024	09:30 PM	0.0000	0.0000	11:30 AM		-
0.0024	10:00 PM	0.0000	0.0000	12:00 PM		-
0.0024	10:30 PM	0.0000	0.0000	12:30 PM		-
0.0024	11:00 PM	0.0000	0.0000	01:00 PM		-
0.0024	11:30 PM	0.0293	0.0024	01:30 PM		-
0.0024	12:00 AM	0.0000	0.0000	02:00 PM		-
0.0024	12:30 AM	0.0000	0.0000	02:30 PM		-
0.0024	01:00 AM	0.0000	0.0000	03:00 PM		-
0.0024	01:30 AM	0.0000	0.0000	03:30 PM		-
0.0024	02:00 AM	0.0000	0.0000	04:00 PM		-
0.0024	02:30 AM	0.0000	0.0000	04:30 PM		-
0.0024	03:00 AM	0.0000	0.0000	05:00 PM		-
0.0024	03:30 AM	0.0000	0.0000	05:30 PM		-
0.0024	04:00 AM	0.0000	0.0000	06:00 PM		-
0.0024	04:30 AM	0.0000	0.0000	06:30 PM		-
0.0024	05:00 AM	0.0000	0.0000	07:00 PM		-
0.0024	05:30 AM	0.0000	0.0000	07:30 PM		-
0.0024	06:00 AM	0.0000	0.0000	08:00 PM		-
0.0024	06:30 AM	0.0101	0.0024	08:30 PM		-
0.0024	07:00 AM	0.0258	0.0024	09:00 PM		-
0.0024	07:30 AM	0.0054	0.0024	09:30 PM		-
0.0024	08:00 AM	0.0179	0.0024	10:00 PM		-
0.0024	08:30 AM	0.0000	0.0000	10:30 PM		-
0.0024	09:00 AM	0.0018	0.0018	11:00 PM		-
0.0024	09:30 AM	0.0513	0.0024	11:30 PM		-
0.0024	10:00 AM	0.0027	0.0024	12:00 AM		-



Table 22 part 2

Normalisation of unplanned SAIFI major events RY22						
SAIFI unplanned boundary value						0.1170
1/48th of the SAIFI unplanned boundary value	2-4/11/2021			Event reference		
	Half hour commencing	Raw SAIFI value for Class C interruption	Normalised SAIFI value for Class C interruption	Half hour commencing	Raw SAIFI value for Class C interruption	Normalised SAIFI value for Class C interruption
0.0024	10:30 AM	0.0000	0.0000	12:30 AM		-
0.0024	11:00 AM	0.0000	0.0000	01:00 AM		-
0.0024	11:30 AM	0.0823	0.0024	01:30 AM		-
0.0024	12:00 PM	0.0000	0.0000	02:00 AM		-
0.0024	12:30 PM	0.0000	0.0000	02:30 AM		-
0.0024	01:00 PM	0.0000	0.0000	03:00 AM		-
0.0024	01:30 PM	0.0000	0.0000	03:30 AM		-
0.0024	02:00 PM	0.0173	0.0024	04:00 AM		-
0.0024	02:30 PM	0.0028	0.0024	04:30 AM		-
0.0024	03:00 PM	0.0000	0.0000	05:00 AM		-
0.0024	03:30 PM	0.0000	0.0000	05:30 AM		-
0.0024	04:00 PM	0.0000	0.0000	06:00 AM		-
0.0024	04:30 PM	0.0000	0.0000	06:30 AM		-
0.0024	05:00 PM	0.0000	0.0000	07:00 AM		-
0.0024	05:30 PM	0.0000	0.0000	07:30 AM		-
0.0024	06:00 PM	0.0000	0.0000	08:00 AM		-
0.0024	06:30 PM	0.0000	0.0000	08:30 AM		-
0.0024	07:00 PM	0.0017	0.0017	09:00 AM		-
0.0024	07:30 PM	0.0000	0.0000	09:30 AM		-
0.0024	08:00 PM	0.0000	0.0000	10:00 AM		-
0.0024	08:30 PM	0.0000	0.0000	10:30 AM		-
0.0024	09:00 PM	0.0000	0.0000	11:00 AM		-
0.0024	09:30 PM	0.0000	0.0000	11:30 AM		-
0.0024	10:00 PM	0.0000	0.0000	12:00 PM		-
0.0024	10:30 PM	0.0000	0.0000	12:30 PM		-
0.0024	11:00 PM	0.0000	0.0000	01:00 PM		-
0.0024	11:30 PM	0.0000	0.0000	01:30 PM		-
0.0024	12:00 AM	0.0007	0.0007	02:00 PM		-
0.0024	12:30 AM	0.0000	0.0000	02:30 PM		-
0.0024	01:00 AM	0.0000	0.0000	03:00 PM		-
0.0024	01:30 AM	0.0000	0.0000	03:30 PM		-
0.0024	02:00 AM	0.0000	0.0000	04:00 PM		-
0.0024	02:30 AM	0.0000	0.0000	04:30 PM		-
0.0024	03:00 AM	0.0000	0.0000	05:00 PM		-
0.0024	03:30 AM	0.0000	0.0000	05:30 PM		-
0.0024	04:00 AM	0.0000	0.0000	06:00 PM		-
0.0024	04:30 AM	0.0000	0.0000	06:30 PM		-
0.0024	05:00 AM	0.0000	0.0000	07:00 PM		-
0.0024	05:30 AM	0.0000	0.0000	07:30 PM		-
0.0024	06:00 AM	0.0000	0.0000	08:00 PM		-
0.0024	06:30 AM	0.0000	0.0000	08:30 PM		-
0.0024	07:00 AM	0.0000	0.0000	09:00 PM		-
0.0024	07:30 AM	0.0000	0.0000	09:30 PM		-
0.0024	08:00 AM	0.0000	0.0000	10:00 PM		-
0.0024	08:30 AM	0.0000	0.0000	10:30 PM		-
0.0024	09:00 AM	0.0000	0.0000	11:00 PM		-
Total		0.2491	0.0285		-	-



SAIFI Major Events

16-18/08/2021

Cause – This SAIFI Major event is attributable to 2 separate interruptions.

- The first outage occurred at 12:57 pm on 17/08/21 on the Ruatoki feeder affecting 1,081 ICP's, the cause was due to vegetation due to high winds
- The second outage occurred at 16:44pm on 17/08/21 on the Hospital feeder affecting 1,984 ICP's, the cause was due to high winds.

Location – 2 Separate Locations

- Ruatoki feeder vicinity transformer 27O027
- Hospital feeder spur line past RMC 265

Response – Fault 210817A

- The initial tripping of CB35 was at 12:57pm.
- The end of Ruatoki feeder was being back fed by the Taneatua feeder at the time due to a planned interruption.
- The ICP count was higher due to the configuration of the network at the time.
- The line was sectionalised in stages, 861 ICP's back fed at 14:42pm (1 hour 45 minutes), 103 ICP's back fed at 15:05pm and final restoration of 16 ICP's at 15:27 pm.

Response – Fault 210817B

- The initial tripping of CB WT13 & CB OP27 was at 16:44pm.
- Sectionalising and back-feeding began at 17:00pm and continued to 18:06pm to restore 1,501 ICPs
- The final restoration of 483 ICP's at 00:47am.

Mitigating Factors – The overall response to these interruptions was good with field workers and control room workers identifying the fault locations and restoring sections of the network as soon as possible.

Future Improvements – There were no realistic network improvements identified that could minimise the effects of a similar event happening in the future. Horizon Energy Distribution Limited supports changes to the Tree Regulations to enable trees that are within fall distance of powerlines to be actively managed by the tree owners, as the current regulations only allow EDBs to deal with trees that are in the growth limit and notice zones. This change will start to reduce the incidents of damage caused by vegetation outside of our control.

Appendix E – Director’s certificate

We, Anthony de Farias and Lorraine Witten being directors of Horizon Energy Distribution Limited certify that, having made all reasonable enquiry, to the best of my/our knowledge and belief, the attached annual compliance statement of Horizon Energy Distribution Limited, and related information, prepared for the purposes of the *Electricity Distribution Services Default Price-Quality Path Determination 2020* has been prepared in accordance with all the relevant requirements.

Dated 1 day of August 2022



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Anthony de Farias



.....

Lorraine Witten

Independent Reasonable Assurance Report to the Directors of Horizon Energy Distribution Limited and to the New Zealand Commerce Commission

Opinion

Our reasonable assurance opinion has been formed on the basis of the matters outlined in this report.

In our opinion, in all material respects, the Annual Compliance Statement of Horizon Energy Distribution Limited (the "Company") has been prepared in accordance with clause 11 of the Electricity Distribution Services Default-Price-Quality-Path Determination 2020 (consolidating all amendments as of 20 May 2020) (NZCC 21 and NZCC 3) (the "Determination") for the regulatory period ended 31 March 2022.

As far as appears from an examination, in all material respects, 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.

Information subject to assurance

We have performed an engagement to provide reasonable assurance in relation to the Company's Annual Compliance Statement for the regulatory period ended 31 March 2022.

Criteria

The criteria we have assessed the Annual Compliance Statement against is the Determination.

Standards we followed

We conducted our reasonable assurance engagement in accordance with International Standard on Assurance Engagements (New Zealand) 3000 (Revised) *Assurance Engagements other than audits or reviews of historical financial information* and Standard on Assurance Engagements SAE 3100 (Revised) *Assurance Engagements on Compliance*. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion. In accordance with those standards we have:

- used our professional judgement to assess the risk of material misstatement and plan and perform the engagement to obtain reasonable assurance that the Annual Compliance Statement is free from material misstatement or non-compliance, whether due to fraud or error;
- considered relevant internal controls when designing our assurance procedures, however we do not express an opinion on the effectiveness of these controls; and
- ensured that the engagement team possesses the appropriate knowledge, skills and professional competencies.

How to interpret reasonable assurance and material misstatement

Reasonable assurance is a high level of assurance, but is not a guarantee that it will always detect a material misstatement or non-compliance when it exists.

Misstatements, including omissions, within the Annual Compliance Statement are considered material if, individually or in the aggregate, they could reasonably be expected to influence the relevant decisions of the intended users taken on the basis of the Annual Compliance Statement.



Use of this assurance Report

Our report should not be regarded as suitable to be used or relied on by any party's other than Horizon Energy Distribution Limited and the New Zealand Commerce Commission for any purpose or in any context. Any party other than Horizon Energy Distribution Limited and the New Zealand Commerce Commission who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk.

To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than Horizon Energy Distribution Limited and the New Zealand Commerce Commission for our work, for this independent reasonable assurance report, or for the opinions we have reached.

Our report is released to Horizon Energy Distribution Limited and the New Zealand Commerce Commission on the basis that it shall not be copied, referred to or disclosed, in whole (save for Horizon Energy Distribution Limited's own internal purposes) or in part, without our prior written consent.

Directors' responsibility for Annual Compliance Statement

The Directors of Horizon Energy Distribution Limited are responsible for the preparation and fair presentation of the Annual Compliance Statement in accordance with the Determination. This responsibility includes such internal control as the Directors determine is necessary to enable the preparation of the Annual Compliance Statement that is free from material misstatement or non-compliance whether due to fraud or error.

Our responsibility

Our responsibility is to express an opinion to the directors on whether the preparation and presentation of the Annual Compliance Statement is, in all material respects, in accordance with the Determination.

Our independence and quality control

We have complied with the independence and other ethical requirements of Professional and Ethical Standard 1 International Code of Ethics for Assurance Practitioners (Including International Independence Standards) (New Zealand) issued by the New Zealand Auditing and Assurance Standards Board, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Professional and Ethical Standard 3 (Amended) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our firm has also provided other services to services Horizon Energy Distribution Limited including the annual audit of the financial statements, regulatory assurance services, agreed upon procedures in relation to Interim Financial Statements, taxation compliance and advisory services. Subject to certain restrictions, partners and employees of our firm may also deal with the Company on normal terms within the ordinary course of trading activities of the business of the Company. These matters have not impaired our independence as assurance providers of the Company for this engagement. The firm has no other relationship with, or interest in, the Company.

KPMG
Auckland

1 August 2022