

networktasman

Your consumer-owned electricity distributor

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NETWORK TASMAN LIMITED

DEFAULT PRICE-QUALITY PATH COMPLIANCE STATEMENT

Assessment for Year ended 31 March 2020 (Assessment Period Five)

Pursuant to the Commerce Act
Electricity Distribution Services Default Price-Quality Path
Determination 2015

Dated 26 June 2020

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1 Directors' Certification

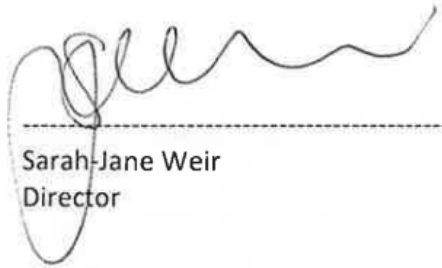
Default Price-Quality Path Compliance Statement

Year Ended 31 March 2020

We, Michael John McCliskie and Sarah-Jane Weir, being directors of Network Tasman Limited, certify that, having made all reasonable enquiry, to the best of our knowledge and belief, the attached Annual Compliance Statement of Network Tasman Limited, and related information, prepared for the purposes of the Electricity Distribution Services Default Price-Quality Path Determination 2015 are true and accurate.



Michael John McCliskie
Director



Sarah-Jane Weir
Director

Dated: 26 June 2020

2 Default Price-Quality Path Compliance Statement

a). Background

Network Tasman Limited (NTL) is a Non Exempt Electricity Distribution Business as defined in section 54G of the Commerce Act 1986 and consequently is subject to Default Price-Quality Regulation. This statement provides an assessment of NTL's compliance with the requirements of the Electricity Distribution Services Default Price-Quality Path Determination 2015 (the **DPP Determination 2015**) for the year ended 31 March 2020.

b). Information

The audited information NTL has included in this statement has been prepared specifically to comply with the requirements of Clauses 8-11 of the DPP Determination 2015. This audited information includes:

- NTL's schedule of DPP prices for 2019/2020 (Appendix 1)
- Calculation of the maximum allowable notional revenue compared with notional revenue distribution prices and quantities (Appendix 2)
- Pass through revenue calculations (Appendix 3)
- Calculation of pass-through balance (Appendix 4)
- Applicability of recoverable costs for 2019/20 DPP compliance (Appendix 5)
- Pass-through and recoverable costs used to set prices (Appendix 6)
- Reliability data and assessment (Appendix 7)
- Reliability recording policies and procedures (Appendix 8)
- Pass-through prices and quantities for 2018/19 (Appendix 9)

c). Price Path Compliance

Network Tasman Limited **fully complies with the default price path** requirements specified in Clause 8 of the DPP Determination 2015 for the year to 31 March 2020. The following test confirms NTL's compliance.

Test: Clause 8.3 of the DPP Determination 2015

The Notional Revenue for a Non-exempt EDB (NTL) in the Assessment Period for the year to 31 March 2020 must not exceed the allowable notional revenue for the Assessment Period:

Test per Clause 8.3:	NR < ANR
Where:	NR = Notional Revenue
	ANR = Allowable Notional Revenue
ANR _{2019/20}	\$30,644,230
NR _{2019/20}	\$18,701,300
Result:	NR does not exceed ANR

This test confirms NTL's compliance with the Default Price Path. Actual Notional Revenue *NR_{2019/20}* was \$11,942,930 *less* than the Allowable Notional Revenue for the Assessment Period ended 31 March 2020. The supporting evidence for the test above is provided in Appendices 1 and 2. NTL's schedule of distribution prices is contained in Appendix 1. Calculation of the allowable notional revenue and notional revenue is in Appendix 2.

Notional Revenue in the DPP compliance assessment includes all revenue NTL has derived from supply of the following controlled, non-contestable line function services:

- Electricity conveyance services provided under Use of Systems Agreements with electricity retailers
- Electricity conveyance services provided under Direct Connection Agreements with major electricity consumers and embedded electricity generators
- Network development levies and connection fees charged to new electrical loads at the time of their connection to Network Tasman Limited’s distribution network.
- Application fees for Small Scale Distributed Generation (SSDG)

The Allowable Notional Revenue for the year to 31 March 2020 was calculated using the following formula set out in Schedule 3B of the DPP Determination 2015:

$$ANR_{2019/20} = (\sum DP_{2018/19} Q_{2017/18} + (ANR_{2018/19} - NR_{2018/19})) \times (1 + \Delta CPI) \times (1 - X)$$

d). Quality Standard Compliance

Network Tasman Limited **complies with the default quality standard** in Clause 9 of the DPP Determination 2015 for the assessment period ended 31 March 2020.

Under Clause 9 of the DPP Determination 2015, to comply for Assessment Five, NTL must either:

- Under 9.1a, comply with the annual reliability assessment; or
- Under 9.1b, have complied with the annual reliability assessments in each of the two preceding Assessment periods.

Network Tasman complies with the default quality standard set out in the DPP Determination 2015 by complying with Clause 9.1a. The following test confirms NTL’s compliance under 9.1a.

Figure 1: Quality standards compliance with clause 9.1b of the DPP Determination 2015

Test per 9.1a:	
Quality Standard Compliance – Regulatory Period Five	
SAIDI Assessed Value ≤ SAIDI Limit recalculated in accordance with Schedule 4B	
Assessed Value	130.59
SAIDI Limit	148.31
SAIDI complies with assessment	
SAIFI Assessed Value ≤ SAIFI Limit recalculated in accordance with Schedule 4B	
Assessed Value	1.060
SAIFI Limit	1.565
SAIFI complies with assessment	
Test per 9.1b:	
Quality Standard Compliance – Regulatory Period Four	
SAIDI Assessed Value ≤ SAIDI Limit recalculated in accordance with Schedule 4B	

Assessed Value	160.25
SAIDI Limit	148.31
SAIFI does not comply with assessment	
SAIFI Assessed Value ≤ SAIFI Limit recalculated in accordance with Schedule 4B	
Assessed Value	1.125
SAIFI Limit	1.565
SAIFI complies with assessment	
Quality Standard Compliance – Regulatory Period Three	
SAIDI Assessed Value ≤ SAIDI Limit recalculated in accordance with Schedule 4B	
Assessed Value	120.74
SAIDI Limit	148.31
SAIDI complies with assessment	
SAIFI Assessed Value ≤ SAIFI Limit recalculated in accordance with Schedule 4B	
Assessed Value	0.971
SAIFI Limit	1.565
SAIFI complies with assessment	

e). Transactions compliance

On 1 December 2014, NTL acquired from Transpower the 66kV transmission line to the Cobb hydro-electric power station and connection assets at Motueka and Golden Bay. As per clause 10.6 of the DPP Determination 2015 relating to the purchase of system fixed assets from Transpower, NTL has recalculated the SAIDI and SAIFI limits, boundary values, caps and collars contained in Schedule 4A, according to the methodology specified in Schedule 4B in the annual reliability assessment. These values were recalculated in the preparation of Assessment One. Details of the recalculations are set out in Appendix 7. NTL has not undertaken any other transmission acquisition in the relevant period.

NTL has not undertaken an Amalgamation, Merger or Major Transaction (as defined in the Determination 2015) in the assessment period for the year ended 31 March 2020.

f). Restructure of Prices Compliance

NTL is required to state the nature of any price restructure it has undertaken that first applied during the current (2019/20) or preceding (2018/19) assessment period and identify the consumer groups affected.

If NTL has undertaken a price restructure that first applied during the current or preceding assessment period and NTL has derived quantities for the purpose of calculating notional

revenue or allowable notional revenue under clause 8.10, this compliance statement must include:

- (a) The methodology used to determine the quantities that correspond to each restructured price;
- (b) The forecast of the quantities corresponding to each restructured price for that assessment period, and the actual quantities; and
- (c) An explanation for any differences between the actual and forecast quantities.

Nature of price restructures in 2018/19 and 2019/20

NTL undertook two price restructures during the current and preceding assessment periods.

Price category 1 restructure

For the 2019/20 assessment period, NTL split the single Group 1 price category (price category “1”) into the following three new price categories:

- 1GL (General) for non-residential connections such as businesses, shops, sports clubs, etc.
- 1RL (Residential – low use) for connections that are primary residences and use less than 8,000kWh per year. This price category is a low user tariff as regulated by the *Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004* (LFC regulations).
- 1RS (Residential – standard use) for connections that are either primary residences that use more than 8,000kWh per year or a residential connection that isn’t a primary residence, such as a bach.

Prior to 1 April 2019, most residential consumers and some small businesses (ie, those who have supplies with a maximum delivery capacity of 15kVA) were classified as Group 1 connections. Group 1 connections had a single price category (price category “1”).

Prior to 1 April 2019, Group 1 fixed charges were set at 15 cents per day (for all connections) to comply with the *Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004* (the LFC Regulations) and to minimise administrative/transactions costs. From 1 April 2019, daily fixed charges of 15 cents per day applied to price category 1RL only. Price categories 1RS and 1GL were subject to daily fixed charge of 75 cents per day.

OPK Restructure

For the 2018/19 assessment period, NTL closed the OPK price code (off-peak) and migrated all ICPs on the price code to NTL’s *controlled water* price code (WSR). OPK was a controlled price code with few ICPs.

Deriving quantities

Price category 1 restructure

There is a mismatch in calculating notional revenue ($DP_{2019/20} * Q_{2017/18}$) where $Q_{2017/18}$ contains volumes for the single price category “1”, but $DP_{2019/20}$ contains three price categories (1RL, 1RS, 1GL) in place of price category “1”, as price category “1” was split into three separate price categories.

The combined quantities attributed to the 1RL, 1RS and 1GL price categories are equal to the 2017/18 quantities for the same price category code for single price category “1”. Quantities are

allocated to each of the new price category codes are based on actual relative consumption for same price category codes during the 2019/20.

This is consistent with the methodology set out in Clause 8.9 of the DPP Determination 2015.

Table 1Table 2 below illustrates Network Tasman’s forecast quantities for the restructured price and the actual quantities.

Table 1: Restructured Group 1 price category – forecast and actual quantities (2019/20)

Price category code	Forecast	Actual
1GL	3,186	3,369
1GLANY	17,309,200	17,332,479
1GLDAY	487,721	525,875
1GLGEN	52,727	58,729
1GLNIT	380,233	372,970
1GLWSR	1,462,147	1,441,183
1RL	21,447	17,888
1RLANY	74,667,487	66,934,968
1RLDAY	458,722	962,760
1RLGEN	588,076	1,390,566
1RLNIT	1,532,610	1,562,559
1RLWSR	30,127,748	25,857,544
1RS	12,331	15,878
1RSANY	97,856,543	99,824,783
1RSDAY	1,270,951	1,507,781
1RSGEN	1,117,875	1,050,514
1RSNIT	2,473,671	2,398,838
1RSWSR	32,731,176	33,177,731
Total fixed	36,963	37,236
Total volume	262,516,887	254,399,280

There was significant uncertainty of the proportion of ICPs that would be allocated to the most appropriate price category for their circumstances. The Government’s Electricity Price Review noted that a significant proportion of ICPs (around 23%) are not on the most appropriate price category and could offer no explanation for why this number was so high.¹ The 23% estimate made by the Electricity Price Review is a national number. We could not match the data with similar information we received from some of our larger retailers, creating material uncertainty (and ultimately inaccuracy) in our forecasts for each of the new price categories.

Despite difficulties forecasting the allocation of consumption and ICPs within the three price categories, overall consumption and ICP volume forecasts for Group 1 connections were within the normal bounds of year-on-year variation.

OPK Restructure

¹ Electricity Price Review, Initial Analysis of Retail Billing Data, 15 October 2018, pp 22-24

There is a mismatch in calculating notional revenue and allowable notional revenue where Q_{2017/18} contains volumes for both OPK and WSR price category, but DP_{2018/19} and DP_{2019/20} contain no OPK price category, as consumers that were on the OPK price category were migrated to the WSR price category. The quantities attributed to WSR_{2018/19} and WSR_{2019/20} price categories are equal to the combined 2017/18 quantities for the WSR and OKK price categories. This is consistent with the methodology set out in Clause 8.9 of the DPP Determination 2015.

Table 2 below illustrates Network Tasman’s forecast quantities for the restructured price and the actual quantities.

Table 2: Restructured Controlled Water price category – forecast and actual quantities (2019/20)

Price category code	Forecast	Actual	Variance
1GLWSR	1,462,147	1,441,183	-1%
1RLWSR	30,127,748	25,857,544	-14%
1RSWSR	32,731,176	33,177,731	1%
2WSR	3,904,055	3,403,110	-13%
2LWSR	45,675	46,684	2%
2HWSR	6,288	7,182	14%
HLFWSR	39,685	23,572	-41%

The forecast for the price category codes above are primarily based on the actual volumes from the previous two years available at the time the budget is set.

As discussed above, uncertainty in how many Group 1 connections would be placed in the correct price category resulted in error when forecasting the distribution WSR consumption across the three Group 1 price categories. Overall Group 1 WSR consumption is within the bounds of year-on-year variation.

The variation between forecast and actual volumes for 2WSR was due to a forecasting error.

It is difficult to accurately forecast quantities for price categories 2LLFC and 2HLFC which include 2LWSR and 2HWSR, as the number of ICPs on these price categories are not material (they account for approximately 0.1% of all ICPs) and small changes result in significant changes in consumption.

The variation in forecast and actual volumes for HLFWSR was due to the loss of two significant ICPs from the HLF price category.

g). Recoverable Costs and Pass-Through Costs

In accordance with the DPP Determination 2015 the recoverable and pass-through cost categories described below have been included in NTL’s Default Price Path calculations.

- i) **Recoverable Costs** V_{2019/20} include the following cost categories:
 - Charges billed by Transpower
 - i. Connection charges
 - ii. Interconnection charges
 - iii. New Investment charges

- Avoided transmission charges paid to embedded generators
- Avoided Transpower charge liability as a result of a transmission asset acquisition
- Quality incentive adjustment
- Capex wash-up adjustment

A list of the recoverable costs described in the Electricity Distribution Services Input Methodologies Determination 2012 (as amended at December 2015), and their applicability to NTL's DPP assessment for the year ended March 2020 is set out in Appendix 5.

- ii) **Pass Through Costs $K_{2019/20}$** include the following costs categories:
- Local Authority *Rates* levied on NTL's systems fixed assets including lines, cables, electrical equipment and substation land and buildings.
 - Electricity Authority *Levies* for the regulatory costs allocated to all EDBs under an industry levy formula determined by government.
 - Commerce Act *Levies* for the funding of Commerce Commission EDB regulatory activities that are allocated to all EDBs under an industry levy formula determined by government.
 - Utilities Disputes *Levies* for funding the contribution all EDBs make towards the independent electricity and gas industry complaints resolution scheme.

A comparison of actual pass through and recoverable costs with those used to set prices is set out in Appendix 6.

h). Methodology used to set prices for 2019/20

Network Tasman set its posted prices for the 12 months commencing 1 April 2019 by determining the revenue requirement that would best satisfy the pricing principles set out in NTL's Statement of Corporate Intent and the Electricity Authority's distribution pricing principles. The way in which the revenue requirement is allocated to different customer groups in setting prices is discussed in detailed in Network Tasman's Pricing Methodology disclosure. The resulting total delivery prices are contained in Appendix 1.

It is noted that the Distribution and Pass-through price components calculated for the purposes of the DPP differ from the Distribution and Transmission price components contained in our pricing schedule disclosure, as they are prepared on a separate basis. Network Tasman was granted an exemption by the Commerce Commission in relation to its pricing disclosures. This means that published transmission charges do not need to fully recover the incentive associated with the avoided Transpower liability that arises from the purchase of 66kV assets. In comparison the Pass-Through prices prepared for the purposes of the DPP are required to fully recover the incentive.

For the purposes of the DPP, pass-through prices were calculated by using a multiplier applied to the total delivery price to ensure that total pass-through revenue is as close as possible to the sum of pass-through costs and recoverable costs. Distribution prices are lowered accordingly. The total delivery price applied in the DPP is the same as in price schedule disclosures.

i). Pass-through balance for 2019/20

The pass-through balance for 2019/20 is -\$5,326 (see Appendix 4 for details as to how this was calculated). This means that the pass-through prices for 2019/20 under-recover recoverable and pass-through costs by approximately \$5,326.

The pass-through balance has been calculated as the Pass-through Revenue for 2019/20 minus Pass-Thru Costs for 2019/20 minus Recoverable Costs for 2019/20 plus the Pass-through Balance for 2018/19 adjusted for the cost of debt.

j). Network Tasman SAIDI & SAIFI Policies and Procedures

NTL is required under Clause 11.5 (e) of the Determination 2015 to describe the policies and procedures used to record the SAIDI and SAIFI statistics for the Assessment Period ended 31 March 2020. This information is provided in Appendix 8.

k). New Investment Contracts (NIC)

For the 2019/20 year, Transpower NIC charges to Network Tasman totalled \$120,928 (excluding GST).

3 Disclaimer

The information disclosed by Network Tasman Limited in this Default Price-Quality Path Compliance Statement 2020 has been prepared solely for the purposes of complying with the requirements of the *Commerce Act 1986* and the DPP Determination 2015.

The information in this compliance statement relates only to the lines business activities covered by the DPP Determination 2015. NTL is involved in other activities that are not required to be reported on under the Determination.

The information in this compliance statement has not been prepared for any other purpose than that required by the DPP Determination 2015 and Network Tasman Limited expressly disclaims any liability to any party who may rely on this information for any other purpose.

Appendix 1: Schedule of DPP prices for 2019/20

The following table sets out for each price during the year ended 31 March 2020, the total price, the distribution portion of the price and the pass-through portion of the price, as required by clause 11.4(d) of the DPP Determination 2015.

PriceCode/ description	Units	Distribution Price	Pass-through Price	Total Price
Streetlights (Watts)	\$/W/day	0.00062	0.00049	0.00111
OUNM count	\$/day	0.2776	0.2234	0.501
1RL	\$/day	0.4156	0.3344	0.75
1RS	\$/day	0.0831	0.0669	0.15
1GL	\$/day	0.4156	0.3344	0.75
2LLFC	\$/day	0.0831	0.0669	0.15
2HLFC	\$/day	0.0831	0.0669	0.15
2	\$/kVA/day	0.0393	0.0317	0.071
HLF	\$/kVA/day	0.1728	0.1391	0.3119
1GLANY	\$/kWh	0.0154	0.0123	0.0277
1GLDAY	\$/kWh	0.0184	0.0148	0.0332
1GLGEN	\$/kWh	0	0	0
1GLNIT	\$/kWh	0.0033	0.0027	0.006
1GLWSR	\$/kWh	0.0047	0.0037	0.0084
1RLANY	\$/kWh	0.0342	0.0275	0.0617
1RLDAY	\$/kWh	0.0388	0.0312	0.07
1RLGEN	\$/kWh	0	0	0
1RLNIT	\$/kWh	0.0068	0.0054	0.0122
1RLWSR	\$/kWh	0.0103	0.0082	0.0185
1RSANY	\$/kWh	0.0154	0.0123	0.0277
1RSDAY	\$/kWh	0.0184	0.0148	0.0332
1RSGEN	\$/kWh	0	0	0
1RSNIT	\$/kWh	0.0033	0.0027	0.006
1RSWSR	\$/kWh	0.0047	0.0037	0.0084
2ANY	\$/kWh	0.0219	0.0176	0.0395
2DAY	\$/kWh	0.0249	0.0201	0.045
2NIT	\$/kWh	0.0066	0.0053	0.0119
2GEN	\$/kWh	0	0	0
2WSR	\$/kWh	0.0089	0.0071	0.016
2LANY	\$/kWh	0.0625	0.0502	0.1127
2LDAY	\$/kWh	0.0753	0.0606	0.1359
2LNIT	\$/kWh	0.0223	0.0179	0.0402
2LGEN	\$/kWh	0	0	0
2LWSR	\$/kWh	0.0275	0.0221	0.0496
2HANY	\$/kWh	0.1036	0.0834	0.187

2HDAY	\$/kWh	0.1136	0.0914	0.205
2HNIT	\$/kWh	0.0702	0.0564	0.1266
2HGEN	\$/kWh	0	0	0
2HWSR	\$/kWh	0.0853	0.0687	0.154
HLFANY	\$/kWh	0.0081	0.0066	0.0147
HLFDAY	\$/kWh	0.009	0.0072	0.0162
HLFNIT	\$/kWh	0.0021	0.0017	0.0038
HLFGEN	\$/kWh	0	0	0
HLFWSR	\$/kWh	0.0026	0.0021	0.0047
Cat 3.1 Summer Day	\$/kWh	0.0027	0	0.0027
Cat 3.1 Summer Night	\$/kWh	0.0014	0	0.0014
Cat 3.1 Winter Day	\$/kWh	0.0049	0	0.0049
Cat 3.1 Winter Night	\$/kWh	0.0014	0	0.0014
Cat 3.1 RCPD \$/kW/day	\$/kW/day	0.1751	0.1408	0.3159
Cat 3.1 Anytime \$/kVA day	\$/kVA/day	0.0632	0.0509	0.1141
Cat 3.3 Summer Day	\$/kWh	0.0082	0	0.0082
Cat 3.3 Summer Night	\$/kWh	0.0043	0	0.0043
Cat 3.3 Winter Day	\$/kWh	0.021	0	0.021
Cat 3.3 Winter Night	\$/kWh	0.0043	0	0.0043
Cat 3.3 RCPD \$/kW/day	\$/kW/day	0.1751	0.1408	0.3159
Cat 3.3 Anytime \$/kVA day	\$/kVA/day	0.0763	0.0613	0.1376
Cat 3.4 Summer Day	\$/kWh	0.0082	0	0.0082
Cat 3.4 Summer Night	\$/kWh	0.0043	0	0.0043
Cat 3.4 Winter Day	\$/kWh	0.021	0	0.021
Cat 3.4 Winter Night	\$/kWh	0.0043	0	0.0043
Cat 3.4 RCPD \$/kW/day	\$/kW/day	0.1751	0.1408	0.3159
Cat 3.4 Anytime \$/kVA day	\$/kVA/day	0.0801	0.0644	0.1445
Cat 3.5 Summer Day	\$/kWh	0.0056	0	0.0056
Cat 3.5 Summer Night	\$/kWh	0.0034	0	0.0034
Cat 3.5 Winter Day	\$/kWh	0.0179	0	0.0179
Cat 3.5 Winter Night	\$/kWh	0.0034	0	0.0034
Cat 3.5 RCPD \$/kW/day	\$/kW/day	0.1751	0.1408	0.3159
Cat 3.5 Anytime \$/kVA day	\$/kVA/day	0.0763	0.0613	0.1376
G3 Reactive Charge	\$/kVAr/day	0.261	0	0.261
Cat 6.2	\$/year	199,867	260,525	460,392
Cat 6.1	\$/year	196,658	1,731,347	1,928,005
Large Embedded Generator	\$/year	1,373,225	343,459	1,716,684
Nelson Electricity	\$/year	0	1,633,243	1,633,243
Pioneer (Matiri)	\$/year	0	2,326	2,326
NCA Admin G0	\$/ICP	125	n/a	125
NCA Admin G1	\$/ICP	250	n/a	250
NCA Admin G2	\$/ICP	325	n/a	325

NCA Admin G3	\$/ICP	400	n/a	400
SSDG < 10kW	\$/SSDG	0	0	0
Part 1	\$/SSDG	200	n/a	200
Part 1a	\$/SSDG	100	n/a	100
SSDG > 10kW and < 100kW	\$/SSDG	500	n/a	500
SSDG > 100kW and <1000kW	\$/SSDG	1,000	n/a	1,000
SSDG > 1000kW	\$/SSDG	5,000	n/a	5,000
NDL - Group 1 uncapped	\$/kVA*km	7.44	n/a	7.44
NDL - Group 1 Capped	\$/ICP	3,250.00	n/a	3,250.00
NDL - Group 2	\$/kVA*km	18.32	n/a	18.32
NDL Subdivision	\$/ICP	2,170.75	n/a	2,170.75
Generator Pupu Ntw Charge	\$/ICP	684	0	684
Generator Onekaka Ntw Charge	\$/ICP	5,664	0	5,664
Generator Brooklyn Ntw Charge	\$/ICP	360	0	360

Appendix 2: Allowable notional revenue and notional revenue for year to 31 March 2020

Allowable Notional Revenue for Assessment Five	
$\sum DP_{2018/19} Q_{2017/18} =$	\$17,974,542
$ANR_{2018/19} - NR_{2018/19} =$	\$12,208,816
$\Delta CPI =$	1.53%
$X =$	0
$ANR = (\sum DP_{2018/19} Q_{2017/18} + (ANR_{2018/19} - NR_{2018/19}))(1 + \Delta CPI)(1 - X) =$	\$30,644,203

Table 3: Calculation of Notional Revenue (2019/20)

PriceCode/description	Quantity Units	Price Units	$Q_{2017/18}$	$DP_{2019/20}$	Notional Revenue
Streetlights (Watts)	Watts	\$/W/day	564,477	0.00062	128,091
OUNM count	ICPs	\$/day	83	0.27760	8,433
1GL	ICPs	\$/day	3,289	0.41560	500,327
1RL	ICPs	\$/day	17,465	0.08310	531,178
1RS	ICPs	\$/day	15,502	0.41560	2,358,028
2LLFC	ICPs	\$/day	37	0.08310	1,125
2HLFC	ICPs	\$/day	0	0.08310	0
2	kVA	\$/kVA/day	122,706	0.03930	1,764,979
HLF	kVA	\$/kVA/day	3,403	0.17280	215,222
1GLANY	kWh	\$/kWh	16,780,521	0.01540	258,420
1GLDAY	kWh	\$/kWh	380,051	0.01840	6,993
1GLGEN	kWh	\$/kWh	46,601	0.00000	0
1GLNIT	kWh	\$/kWh	346,470	0.00330	1,143
1GLWSR	kWh	\$/kWh	1,434,763	0.00470	6,743
1RLANY	kWh	\$/kWh	64,803,403	0.03420	2,216,276
1RLDAY	kWh	\$/kWh	695,789	0.03880	26,997
1RLGEN	kWh	\$/kWh	1,031,088	0.00000	0
1RLNIT	kWh	\$/kWh	1,451,537	0.00680	9,870
1RLWSR	kWh	\$/kWh	25,742,350	0.01030	265,146
1RSANY	kWh	\$/kWh	96,645,831	0.01540	1,488,346
1RSDAY	kWh	\$/kWh	1,089,677	0.01840	20,050
1RSGEN	kWh	\$/kWh	640,430	0.00000	0
1RSNIT	kWh	\$/kWh	2,228,398	0.00330	7,354
1RSWSR	kWh	\$/kWh	33,029,926	0.00470	155,241
2ANY	kWh	\$/kWh	67,411,254	0.02190	1,476,306
2DAY	kWh	\$/kWh	17,044,395	0.02490	424,405
2NIT	kWh	\$/kWh	7,576,020	0.00660	50,002
2GEN	kWh	\$/kWh	186,037	0.00000	0
2WSR	kWh	\$/kWh	3,622,755	0.00890	32,243
2LANY	kWh	\$/kWh	206,000	0.06250	12,875

2LDAY	kWh	\$/kWh	22,000	0.07530	1,657
2LNIT	kWh	\$/kWh	14,000	0.02230	312
2LGEN	kWh	\$/kWh	18,345	0.00000	0
2LWSR	kWh	\$/kWh	49,000	0.02750	1,348
2HANY	kWh	\$/kWh	9,000	0.10360	932
2HDAY	kWh	\$/kWh	0	0.11360	0
2HNIT	kWh	\$/kWh	0	0.07020	0
2HGEN	kWh	\$/kWh	0	0.00000	0
2HWSR	kWh	\$/kWh	4,000	0.08530	341
HLFANY	kWh	\$/kWh	4,525,000	0.00810	36,653
HLFDAY	kWh	\$/kWh	4,547,000	0.00900	40,923
HLFNIT	kWh	\$/kWh	1,520,000	0.00210	3,192
HLFGEN	kWh	\$/kWh	0	0.00000	0
HLFWSR	kWh	\$/kWh	34,000	0.00260	88
Cat 3.1 Summer Day	kWh	\$/kWh	3,969,303	0.00270	10,717
Cat 3.1 Summer Night	kWh	\$/kWh	1,666,679	0.00140	2,333
Cat 3.1 Winter Day	kWh	\$/kWh	3,106,876	0.00490	15,224
Cat 3.1 Winter Night	kWh	\$/kWh	1,340,967	0.00140	1,877
Cat 3.1 RCPD \$/kW/day	kW	\$/kW/day	1,541	0.17510	98,757
Cat 3.1 Anytime \$/kVA day	kVA	\$/kVA/day	2,432	0.06320	56,255
Cat 3.1 Generation	kWh	\$/kWh	0	0.00000	0
Cat 3.3 Summer Day	kWh	\$/kWh	4,034,545	0.00820	33,083
Cat 3.3 Summer Night	kWh	\$/kWh	1,777,139	0.00430	7,642
Cat 3.3 Winter Day	kWh	\$/kWh	2,127,360	0.02100	44,675
Cat 3.3 Winter Night	kWh	\$/kWh	789,663	0.00430	3,396
Cat 3.3 RCPD \$/kW/day	kW	\$/kW/day	1,210	0.17510	77,545
Cat 3.3 Anytime \$/kVA day	kVA	\$/kVA/day	2,335	0.07630	65,207
Cat 3.3 Generation	kWh	\$/kWh	1,760,720	0.00000	0
Cat 3.4 Summer Day	kWh	\$/kWh	46,999,551	0.00820	385,396
Cat 3.4 Summer Night	kWh	\$/kWh	16,763,407	0.00430	72,083
Cat 3.4 Winter Day	kWh	\$/kWh	36,468,965	0.02100	765,848
Cat 3.4 Winter Night	kWh	\$/kWh	13,066,669	0.00430	56,187
Cat 3.4 RCPD \$/kW/day	kW	\$/kW/day	17,789	0.17510	1,140,037
Cat 3.4 Anytime \$/kVA day	kVA	\$/kVA/day	43,489	0.08010	1,274,950
Cat 3.4 Generation	kWh	\$/kWh	0	0.00000	0
Cat 3.5 Summer Day	kWh	\$/kWh	5,112,408	0.00560	28,629
Cat 3.5 Summer Night	kWh	\$/kWh	2,246,150	0.00340	7,637
Cat 3.5 Winter Day	kWh	\$/kWh	4,050,491	0.01790	72,504
Cat 3.5 Winter Night	kWh	\$/kWh	1,784,429	0.00340	6,067
Cat 3.5 RCPD \$/kW/day	kW	\$/kW/day	1,856	0.17510	118,945
Cat 3.5 Anytime \$/kVA day	kVA	\$/kVA/day	3,739	0.07630	104,415
Cat 3.5 Generation	kWh	\$/kWh	2,281	0.00000	0
G3 Reactive Charge	kVAr	\$/kVAr/day	194	0.26100	18,532
Cat 6.2	ICP	\$/year	1	199,867.08	199,867
Cat 6.1	ICP	\$/year	1	196,658.13	196,658

Large Embedded Generator	ICP	\$/year	1	1,373,225	1,373,225
Nelson Electricity	Connection	\$/year	1	0	0
Pioneer (Matiri)	Connection	\$/year	0	0	0
NCA Admin G0	ICP	\$/ICP	0	125.00	0
NCA Admin G1	ICP	\$/ICP	661	250.00	165,300
NCA Admin G2	ICP	\$/ICP	52	325.00	17,030
NCA Admin G3	ICP	\$/ICP	12	400.00	4,800
SSDG < 10kW					
Part 1	SSDG	\$/SSDG	163	200.00	32,600
Part 1a	SSDG	\$/SSDG	3	100.00	300
SSDG > 10kW and < 100kW	SSDG	\$/SSDG	1	500.00	500
SSDG > 100kW and <1000kW	SSDG	\$/SSDG	0	1,000.00	0
SSDG > 1000kW	SSDG	\$/SSDG	0	5,000.00	0
NDL - Group 1 uncapped	kVA*km	\$/kVA*km	6,480	7.44	48,230
NDL - Group 1 Capped	ICP	\$/ICP	0	3,250.00	0
NDL - Group 2	kVA*km	\$/kVA*km	6,170	18.32	113,024
NDL Subdivision	ICP	\$/ICP	11	2,170.75	23,878
Generator Pupu Ntw Charge	ICP	\$/ICP	1	684.00	684
Generator Onekaka Ntw Charge	ICP	\$/ICP	1	5,664.00	5,664
Generator Brooklyn Ntw Charge	ICP	\$/ICP	1	360.00	360
Total Notional Revenue NR				18,701,300	

Appendix 3: Pass-through revenue calculations

The calculation of pass-through revenue is contained in the following table in which 2019/20 pass-through prices (PTP_{2019/20}) are multiplied by 2019/20 quantities (Q_{2019/20}).

Table 4: Calculation of Pass-through revenue

PriceCode/description	Quantity Units	Price Units	Q ₂₀₁₉₋₂₀	PTP ₂₀₁₉₋₂₀	PTP ₂₀₁₉₋₂₀ Q ₂₀₁₉₋₂₀
Streetlights (Watts)	Watts	\$/W/day	401,161	0.00049	71,944.21
OUNM count	ICPs	\$/day	71	0.2234	5,805.27
1GL	ICPs	\$/day	3,369	0.3344	412,333.26
1RL	ICPs	\$/day	17,888	0.0669	437,994.84
1RS	ICPs	\$/day	15,878	0.3344	1,943,314.77
2LLFC	ICPs	\$/day	50	0.0669	1,224.27
2HLFC	ICPs	\$/day	5	0.0669	122.43
2	kVA	\$/kVA/day	124,241	0.0317	1,441,468.93
HLF	kVA	\$/kVA/day	3,286	0.1391	167,292.23
1GLANY	kWh	\$/kWh	17,332,479	0.0123	213,189.49
1GLDAY	kWh	\$/kWh	525,875	0.0148	7,782.95
1GLGEN	kWh	\$/kWh	58,729	0.0000	0.00
1GLNIT	kWh	\$/kWh	372,970	0.0027	1,007.02
1GLWSR	kWh	\$/kWh	1,441,183	0.0037	5,332.38
1RLANY	kWh	\$/kWh	66,934,968	0.0275	1,840,711.62
1RLDAY	kWh	\$/kWh	962,760	0.0312	30,038.10
1RLGEN	kWh	\$/kWh	1,390,566	0.0000	0.00
1RLNIT	kWh	\$/kWh	1,562,559	0.0054	8,437.82
1RLWSR	kWh	\$/kWh	25,857,544	0.0082	212,031.86
1RSANY	kWh	\$/kWh	99,824,783	0.0123	1,227,844.82
1RSDAY	kWh	\$/kWh	1,507,781	0.0148	22,315.15
1RSGEN	kWh	\$/kWh	1,050,514	0.0000	0.00
1RSNIT	kWh	\$/kWh	2,398,838	0.0027	6,476.86
1RSWSR	kWh	\$/kWh	33,177,731	0.0037	122,757.60
2ANY	kWh	\$/kWh	69,893,679	0.0176	1,230,128.75
2DAY	kWh	\$/kWh	17,932,042	0.0201	360,434.05
2NIT	kWh	\$/kWh	7,849,416	0.0053	41,601.90
2GEN	kWh	\$/kWh	427,169	0.0000	0.00
2WSR	kWh	\$/kWh	3,403,110	0.0071	24,162.08
2LANY	kWh	\$/kWh	250,907	0.0502	12,595.54
2LDAY	kWh	\$/kWh	24,605	0.0606	1,491.03
2LNIT	kWh	\$/kWh	12,671	0.0179	226.81
2LGEN	kWh	\$/kWh	18,871	0.0000	0.00
2LWSR	kWh	\$/kWh	46,684	0.0221	1,031.71
2HANY	kWh	\$/kWh	15,571	0.0834	1,298.62
2HDAY	kWh	\$/kWh	0	0.0914	0.00
2HNIT	kWh	\$/kWh	0	0.0564	0.00
2HGEN	kWh	\$/kWh	0	0.0000	0.00
2HWSR	kWh	\$/kWh	7,182	0.0687	493.40
HLFANY	kWh	\$/kWh	4,488,030	0.0066	29,621.00
HLFDAY	kWh	\$/kWh	3,653,743	0.0072	26,306.95

HLFNIT	kWh	\$/kWh	1,471,417	0.0017	2,501.41
HLFGEN	kWh	\$/kWh	14,826	0.0000	0.00
HLFWSR	kWh	\$/kWh	23,572	0.0021	49.50
Cat 3.1 Summer Day	kWh	\$/kWh	4,114,707	0.00	0.00
Cat 3.1 Summer Night	kWh	\$/kWh	1,674,858	0.00	0.00
Cat 3.1 Winter Day	kWh	\$/kWh	2,828,725	0.00	0.00
Cat 3.1 Winter Night	kWh	\$/kWh	1,215,141	0.00	0.00
Cat 3.1 RCPD \$/kW/day	kW	\$/kW/day	1,496	0.1408	77,093.07
Cat 3.1 Anytime \$/kVA day	kVA	\$/kVA/day	2,216	0.0509	41,282.75
Cat 3.3 Summer Day	kWh	\$/kWh	3,971,532	0.00	0.00
Cat 3.3 Summer Night	kWh	\$/kWh	1,814,863	0.00	0.00
Cat 3.3 Winter Day	kWh	\$/kWh	2,393,512	0.00	0.00
Cat 3.3 Winter Night	kWh	\$/kWh	994,024	0.00	0.00
Cat 3.3 RCPD \$/kW/day	kW	\$/kW/day	1,301	0.1408	67,044.17
Cat 3.3 Anytime \$/kVA day	kVA	\$/kVA/day	2,572	0.0613	57,704.88
Cat 3.4 Summer Day	kWh	\$/kWh	48,754,992	0.00	0.00
Cat 3.4 Summer Night	kWh	\$/kWh	17,465,367	0.00	0.00
Cat 3.4 Winter Day	kWh	\$/kWh	38,540,541	0.00	0.00
Cat 3.4 Winter Night	kWh	\$/kWh	13,936,484	0.00	0.00
Cat 3.4 RCPD \$/kW/day	kW	\$/kW/day	17,719	0.1408	913,109.68
Cat 3.4 Anytime \$/kVA day	kVA	\$/kVA/day	47,255	0.0644	1,113,819.25
Cat 3.5 Summer Day	kWh	\$/kWh	5,444,725	0.00	0.00
Cat 3.5 Summer Night	kWh	\$/kWh	2,409,267	0.00	0.00
Cat 3.5 Winter Day	kWh	\$/kWh	4,588,589	0.00	0.00
Cat 3.5 Winter Night	kWh	\$/kWh	2,021,091	0.00	0.00
Cat 3.5 RCPD \$/kW/day	kW	\$/kW/day	1,785	0.1408	91,986.05
Cat 3.5 Anytime \$/kVA day	kVA	\$/kVA/day	3,750	0.0613	84,134.25
G3 Reactive Charge	kVAr	\$/kVAr/day	138	0.0000	0.0000
Cat 6.2	ICP	\$/year	1	260,525.40	260,525.40
Cat 6.1	ICP	\$/year	1	1,731,346.65	1,731,346.65
Large Embedded Generator	ICP	\$/year	1	343,459	343,459
Nelson Electricity	Connection	\$/year	1	1,633,243	1,633,243
Pioneer (Matiri)	Connection	\$/year	1	2,326	2,326
NCA Admin G0	ICP	\$/ICP	0.00	n/a	0
NCA Admin G1	ICP	\$/ICP	0.00	n/a	0
NCA Admin G2	ICP	\$/ICP	0.00	n/a	0
NCA Admin G3	ICP	\$/ICP	0.00	n/a	0
SSDG < 10kW					
Part 1	SSDG	\$/SSDG	0.00	n/a	0
Part 1a	SSDG	\$/SSDG	0.00	n/a	0
SSDG > 100kW and <1000kW	SSDG	\$/SSDG	0.00	n/a	0
SSDG > 10kW and < 100kW	SSDG	\$/SSDG	0	n/a	0
SSDG > 1000 kW	SSDG	\$/SSDG	0	n/a	0
NDL - Group 1 uncapped	kVA*km	\$/kVA*km	0.00	n/a	0
NDL - Group 1 Capped	ICP	\$/ICP	0.00	n/a	0
NDL - Group 2	kVA*km	\$/kVA*km	0.00	n/a	0
NDL Subdivision	ICP	\$/ICP	0.00	n/a	0
Generator Pupu Ntw Charge	ICP	\$/ICP	1	0	0

Generator Onekaka Ntw Charge	ICP	\$/ICP	1	0	0
Generator Brooklyn Ntw Charge	ICP	\$/ICP	1	0	0
P(vk)2019-20Q2020					16,328,442

Appendix 4: Calculation of Pass-through Balance

$$PTB_{2019/20} = \sum PTP_{2019/20} Q_{2019/20} - K_{2019/20} - V_{2019/20} + PTB_{2018/19}(1+r)$$

$\sum PTP_{2020} Q_{2020}$	\$16,328,442
K ₂₀₂₀	\$370,130
V ₂₀₂₀	\$15,955,997
PTB _{t-1}	(\$7,202)
r=	6.09%
Pass Through Balance	<u><u>(\$5,326)</u></u>

Reconciliation

The Pass-Through Balance has changed from -\$7,202 in 2018/19 to -\$5,326 in 2019/20.

Table 5: Pass-through Balance Reconciliation

Pass-through Balance Reconciliation	
PTB _{2018/19} adjusted for the cost of debt	(\$7,640)
Forecast 2020 pass-through & recoverable costs	\$16,262,076
Actual 2020 pass-through & recoverable costs	\$16,326,128
Variance in cost estimation	\$64,052
Forecast 2020 pass-through & recoverable costs	\$16,262,076
Actual 2020 pass-through & recoverable revenue	\$16,328,442
Variance in revenue estimation	\$66,367
PTB _{2019/20}	(\$5,326)

Appendix 5: Applicability of recoverable costs for 2019/20 DPP compliance

The recoverable costs that may be claimed under the DPP are set out in 3.1.3(1) of *Electricity Distribution Services Input Methodologies Determination 2012* as amended and consolidated as of 15 December 2015. An assessment of which of these are relevant to NTL's DPP calculation for the year ended 31 March 2020 is set out in the table below.

Subclause of 3.1.3(1)	Recoverable cost	Applicability to NTL for Assessment Four
(a)(i)	IRIS incentive adjustment	Not applicable in the current assessment period.
(a)(ii)	CPP transition	Not applicable.
(b)	Charges payable to Transpower for electricity lines services in respect of the transmission system	Applicable - connection and interconnection charges billed by Transpower.
(c)	Transpower NIA charge	Applicable.
(d)	Charges for System Operator services	Not applicable.
(e)	Transpower charges for transmission and NIA that have been avoided as a result of an acquisition of transmission assets	Applicable as a result of December 2014 acquisition by NTL of transmission assets from Transpower.
(f)	Distributed generation allowance	Applicable – Avoided Cost of Transmission (ACOT) payments.
(g)	Claw-back applied by the Commission.	Not applicable.
(h)-(l)	Relevant to CPP	Not applicable.
(m)	Energy efficiency and demand side management incentive allowance	Not applicable.
(n)	Catastrophic allowance	Not applicable.
(o)	Extended reserves allowance	Not applicable.
(p)	Quality incentive adjustment	Applicable.
(q)	Capex wash-up adjustment	Applicable – source from Commerce Commission capex wash-up adjustment calculator.
(r)	Transmission asset wash-up adjustment	Not relevant because transmission asset acquisition by NTL was completed prior to the commencement of the regulatory period.
(s)	2013-15 NPV wash-up allowance	Not applicable – only relevant to Alpine, Centralines and Top Energy.
(t)	A reconsideration event allowance	Not applicable.

Appendix 6: Pass-through and recoverable costs used to set prices

Pass-through costs used to set prices are those contained in the Budget column of Table 6 below. Variation between actual and amount used to set prices is minor for the pass-through costs, aside from an under-estimate of the Utilities Disputes levies.

Network Tasman budgeted for Electricity Authority levies of \$126,000 for 2019/20. However, \$30,000 of this is passed through to Nelson Electricity. As this \$30,000 cost is not a pass-through cost for regulatory purposes, Network Tasman has reduced the budgeted Electricity Authority Levy by \$30,000 to account for this.

Table 6: Pass-through costs used to set prices

Pass Through (K_{2019/2020})	Budget	Actual	Variance
Commerce Commission Levy	\$81,948	\$76,305	-7%
Electricity Authority	\$96,000	\$101,982	6%
Utilities Disputes	\$22,000	\$24,493	11%
Local Body Rates	\$173,000	\$167,351	-3%
Total Pass-through Costs	\$372,948	\$370,130	-1%

Recoverable costs used to set prices are those contained in the Budget column of Table 7 below.

Table 7: Recoverable costs used to set prices

Recoverable Costs 2020	Budget	Actual	Variance
Transpower Transmission Charges for YE March 2020	\$10,517,184	\$10,596,945	0.8%
Avoided Transmission Charges (Embedded Generators)	\$1,575,710	\$1,562,819	-0.8%
Avoided Transmission Allowance (per Schedule 5E)	\$3,905,952	\$3,905,952	0.0%
Capex Wash-up Adjustment	(\$306,018)	(\$306,018)	0.0%
Quality Incentive Adjustment	\$196,299	\$196,299	0.0%
Total Recoverable Costs	\$15,889,128	\$15,955,997	0.4%

Appendix 7: Reliability data and assessment – 2019/20

Annual reliability assessment (Compliance test)			
a. SAIDI. Assessed value =< SAIDI Limit			
	Assessed Value		-
	SAIDI Limit		130.59
	Test		148.31
			0.88
b. SAIFI. Assessed value =< SAIFI Limit			
	Assessed Value		1.060
	SAIFI Limit		1.565
	Test		0.677
1 Recalculation of Assessed values for test			
Recalculation of Boundary Values			<u>Recalculation</u>
			-
	SAIDI Unplanned Boundary Value		7.26
	SAIFI Unplanned Boundary Value		0.082
	<i>a boundary is the 23rd largest value in reference dataset</i>		
SAIDI_B	\sum daily SAIDI _B values during assessment five		102.18
SAIDI_C	\sum daily SAIDI _C values during assessment five(1)		79.50
SAIFI_B	\sum daily SAIFI _B values during assessment five		0.360
SAIFI_C	\sum daily SAIFI _C values during assessment five(1)		0.880
	Note 1. where any daily value > boundary value, use boundary value		
	B = Planned, C = Unplanned		
SAIDI Assessed Value	recalculation=SAIDI _B ×0.5+SAIDI _C		130.586
SAIFI Assessed Value	recalculation=SAIFI _B ×0.5+SAIFI _C		1.060
2 Recalculation of Limits			
Based on new reference dataset with acquired fixed asset outages included			
2.1 Recalculate Targets.			
			-
	Daily _{planned}		623.82
	Daily _{unplanned}		949.14

SAIDITarget				126.10
Daily _{planned}				3.094
Daily _{unplanned}				11.932
SAIFITarget				1.348
<i>Daily planned/unplanned is sum of all values in Reference Dataset</i>				
<i>Recalculated Targets are (DailyPlanned*0.5+DailyUnplanned)/10</i>				
2.2 Recalculate Deviation per 4B				
SAIDId _{deviation}				1.162
SAIFId _{deviation}				0.011
2.3 New limits				
SAIDI Limit		<i>Recalculation=(Target+(Sdeviation*√365)</i>		148.31
SAIFI Limit		<i>Recalculation=(Target+(Sdeviation*√365)</i>		1.565
3 Recalculation for Quality Incentive Adjustment				
<i>For information only in Assessment five</i>				
SAIDI Collar		<i>Recalculation=(Target-(Sdeviation*√365)</i>		103.90
SAIFI Collar		<i>Recalculation=(Target-(Sdeviation*√365)</i>		1.131
SAIDI Cap		<i>= SAIDI Limit</i>		148.31
SAIFI Cap		<i>= SAIFI Limit</i>		1.565
a) Find SSAIDI				
SAIDI _{IR}				6,325
SAIDI _{target}				126.105
SAIDI _{assess}				130.586
SSAIDI= (SAIDI_{IR}*(SAIDI_{target}-SAIDI_{assess}))				(\$28,338)
b) Find SAIDI_{IR}				
SAIDI _{cap}				148.313
SAIDI _{target}				126.105
REV _{risk}	1%	28,092,000		280,920
SAIDI_{IR}=(0.5*RevRisk)/(SAIDI_{cap}=SAIDI_{target})				\$6,325
c) Find SSAIFI				
SAIFI _{IR}				646,590
SAIFI _{target}				1.348
SAIFI _{assess}				1.131
SSAIFI= (SAIFI_{IR}*(SAIFI_{target}-SAIFI_{assess}))				\$140,460

d) Find SAIFIIR				-
SAIFicap				1.565
SAIFtarget				1.348
REVRisk	1%	28,092,000		280,920
SAIFIIR=(0.5×RevRisk)/(SAIFicap=SAIFtarget)				\$646,590
e) Calculate incentive				
SSAIDI				(\$28,338)
SSAIFI				\$140,460
STOTAL = SSAIDI + SSAIFI				\$112,122

Note: Recalculated on 10yr reference dataset as per Schedule 4B

Quality Incentives

As per the calculations above, the quality incentive for use in Assessment Two of the new regulatory period (2021/22) is \$112,122.

Major Event Days

There was one major event days during the year ending 31 March 2020,

Date	Event
20-Aug-2019	Tree interference with 33kV and 11kV lines

Appendix 8: Reliability Recording Policies and Procedures

For the purposes of compiling annual SAIDI and SAIFI data:

- 1) A high voltage outage on the distribution network is defined as an event resulting in loss of supply to any number of consumers for a duration of more than one minute
- 2) Only those outages resulting in de-energisation of a high voltage feeder or conductor (6.6kV and above on NTL's network) are included in SAIDI & SAIFI statistics. Outages stemming from low voltage (400V) equipment are excluded.
- 3) Both planned (Class B) and unplanned (Class C) events are included within high voltage outage statistics
- 4) All high voltage outages are managed through Network Tasman's control room by a qualified NTL System Operator
- 5) The Faults and Maintenance Contract between NTL and its faults contractor, Delta, obligates both parties to manage all outage events centrally through the System Operator located in NTL's control room.
- 6) All HV fault switching operations are recorded by the System Operator in the Control Room Log at the time the activity takes place. This provides a detailed record of the switching events for future reference and record keeping.

Under fault conditions, customers affected by operation of a distribution system high voltage protection device can be divided into:

- (a) Those within the core fault area (i.e. who won't have supply restored until the necessary line repairs are completed)
- (b) Those outside the immediate fault area (i.e. who can have power restored through co-ordinated switching activity)

To calculate the customer minutes lost under each fault event, each event is approximated as a maximum two step restoration process. This is in keeping with the philosophy of fault restoration that relies on the following sequential process for supply restoration:

- (a) Identification, isolation and minimisation of the core fault area.
- (b) Restoration, through switching, of supply to areas not immediately within the core fault area
- (c) Making repairs and restoration of the core fault area.

The switching and recording process is managed by a NTL System Operator using NTL's Geographical Information System (GIS). To record outage data the operator draws geographical selection polygons around all sections of the high voltage line affected by the fault event. The software is then used to select and identify all the distribution transformers within the fault area. A query is then made into NTL's customer connection database to find and list all customers (ICPs) connected to those transformers affected by the fault event.

This data is then used in the following formula to calculate the total customer minutes for a fault event:

$$\begin{aligned} & \text{Total No. of customers initially affected} \times (\text{Time Unfaulted Area restored} - \text{Time of Initial} \\ & \text{Interruption}) \\ & + \\ & \text{No. of Fault area customers} \times (\text{Time Fault Area restored} - \text{Time Unfaulted Area restored}) \end{aligned}$$

Planned and unplanned events rely on essentially the same recording process however by nature, planned interruptions can be identified down to a predetermined set of consumers within a known area in advance.

The total customer minutes for a planned interruption are thus calculated using the following formula:

$$\text{Total No. of customers interrupted} \times (\text{Time Interrupted Area restored} - \text{Time of Initial Interruption})$$

The system operator records details of all outage events in the NTL Outage Database. This is an access database that remains on line in the control room. Each planned or unplanned event forms one record entry into the database. For the avoidance of doubt, an unplanned loss of supply event can, in some circumstances, be followed by restoration of supply and then by a successive interruption as a result of isolating the initial cause or making repairs and completing the permanent restoration of supply to all consumers. Where this occurs, NTL's reported SAIFI records the initial outage and not any subsequent short duration outages required to effect the restoration of supply. NTL's reported SAIDI includes the customer minutes from subsequent short duration outages required to effect the restoration of supply. The Outages Database is subject to NTL's normal electronic file backup and security protocols.

The Outage Database records the following data fields for each event:

- Date
- ID number of the protective device that has operated (allows identification of the HV feeder and area affected)
- Area: (Text description of area affected)
- Description; (Text description of fault cause and type – recorded once known)
- Outage type (Planned Shutdown or Fault)
- Area Class (Urban or Rural)
- Fault Class (Overhead or Underground)
- Fault Voltage (6.6kV, 11kV, 33kV, 66kV)
- Outage Region (Stoke, Motueka, Golden Bay, Kikiwa, Murchison)
- Time of Initial Interruption
- Time Unfaulted Area Restored
- Time Fault area restored
- Customers (ICPs) in Total Area (recorded post event)
- Customers (ICPs) in Fault area (recorded post event)

Unless otherwise stated all data is recorded on line by the NTL System Operator at the time of the event.

The outage database supports the following NTL activities:

- 1) Queries on an as needed basis by NTL's Network and Operations Managers
- 2) Summary outage statistics are prepared and provided to NTL's CEO and Board of Directors on a monthly basis and are compared against expected values.
- 3) Annual outage statistics are prepared and independently audited for regulatory and financial reporting purposes.
- 4) Summary statistics are recorded on a cumulative basis and are used for comparative analysis and form a key input into NTL's annual Asset Management Planning process.

- 5) Annual data is also reported against reliability targets in NTL's SCI, Information Disclosure Statements and Annual Financial Statements.
- 6) The SCI targets are negotiated and agreed annually with the Network Tasman Trust.

Appendix 9: 2018/19 quantities and pass-through prices

As required under the clause 11.4(f) of the DPP Determination, 2018/19 quantities and pass-through prices and pass-through revenue are in the following table.

PriceCode/description	Quantity		Q _{2018/19}	PTP _{2018/19}	PTP _{2018/19} Q _{2018/19}
	Units	Price Units			
Streetlights (Watts)	Watts	\$/W/day	482,759	0.00062	109,248.36
OUNM count	ICPs	\$/day	76	0.2811	7,797.71
1	ICPs	\$/day	36,743	0.0781	1,047,414.33
2LLFC	ICPs	\$/day	42	0.0781	1,197.27
2HLFC	ICPs	\$/day	3	0.0781	85.52
2	kVA	\$/kVA/day	123,027	0.0276	1,239,374.00
HLF	kVA	\$/kVA/day	3,271	0.1623	193,772.40
1ANY	kWh	\$/kWh	186,734,522	0.0351	6,228,520.84
1DAY	kWh	\$/kWh	2,443,944	0.0400	76,282.29
1NIT	kWh	\$/kWh	4,353,472	0.0027	11,932.39
1WSR	kWh	\$/kWh	61,049,006	0.0089	553,780.17
2ANY	kWh	\$/kWh	70,539,858	0.0291	1,891,898.96
2DAY	kWh	\$/kWh	18,489,393	0.0335	562,384.50
2NIT	kWh	\$/kWh	8,295,338	0.0006	4,752.61
2WSR	kWh	\$/kWh	3,523,850	0.0062	24,406.36
2LANY	kWh	\$/kWh	214,627	0.0508	10,018.06
2LDAY	kWh	\$/kWh	20,317	0.0552	977.54
2LNIT	kWh	\$/kWh	12,496	0.0221	293.36
2LWSR	kWh	\$/kWh	38,681	0.0277	1,187.83
2HANY	kWh	\$/kWh	17,430	0.0759	473.84
2HDAY	kWh	\$/kWh	0	0.0803	0.00
2HNIT	kWh	\$/kWh	1,667	0.0472	0.00
2HWSR	kWh	\$/kWh	8,633	0.0529	53.75
HLFANY	kWh	\$/kWh	4,566,466	0.0083	42,000.64
HLFDAY	kWh	\$/kWh	3,949,083	0.0093	37,613.62
HLFNIT	kWh	\$/kWh	1,493,736	0.0000	0.00
HLFWSR	kWh	\$/kWh	30,296	0.0017	58.71
GENA	kWh	\$/kWh	3,721,795	0.00	0.00
Cat 3.1 Summer Day	kWh	\$/kWh	4,197,968	0.00	0.00
Cat 3.1 Summer Night	kWh	\$/kWh	1,723,077	0.00	0.00
Cat 3.1 Winter Day	kWh	\$/kWh	2,817,503	0.00	0.00
Cat 3.1 Winter Night	kWh	\$/kWh	1,209,066	0.00	0.00
Cat 3.1 RCPD \$/kW/day	kW	\$/kW/day	1,519	0.1317	73,010.99
Cat 3.1 Anytime \$/kVA day	kVA	\$/kVA/day	2,222	0.0466	37,794.32
Cat 3.3 Summer Day	kWh	\$/kWh	4,112,157	0.00	0.00
Cat 3.3 Summer Night	kWh	\$/kWh	1,834,068	0.00	0.00
Cat 3.3 Winter Day	kWh	\$/kWh	2,305,575	0.00	0.00
Cat 3.3 Winter Night	kWh	\$/kWh	920,149	0.00	0.00
Cat 3.3 RCPD \$/kW/day	kW	\$/kW/day	936	0.1317	44,989.00
Cat 3.3 Anytime \$/kVA day	kVA	\$/kVA/day	2,310	0.0565	47,647.59
Cat 3.4 Summer Day	kWh	\$/kWh	48,718,022	0.00	0.00

PriceCode/description	Quantity		Q _{2018/19}	PTP _{2018/19}	PTP _{2018/19} Q _{2018/19}
	Units	Price Units			
Cat 3.4 Summer Night	kWh	\$/kWh	17,351,628	0.00	0.00
Cat 3.4 Winter Day	kWh	\$/kWh	36,947,803	0.00	0.00
Cat 3.4 Winter Night	kWh	\$/kWh	13,492,919	0.00	0.00
Cat 3.4 RCPD \$/kW/day	kW	\$/kW/day	17,993	0.1317	864,836.62
Cat 3.4 Anytime \$/kVA day	kVA	\$/kVA/day	45,177	0.0594	979,954.14
Cat 3.5 Summer Day	kWh	\$/kWh	5,430,149	0.00	0.00
Cat 3.5 Summer Night	kWh	\$/kWh	2,454,319	0.00	0.00
Cat 3.5 Winter Day	kWh	\$/kWh	4,958,976	0.00	0.00
Cat 3.5 Winter Night	kWh	\$/kWh	2,212,690	0.00	0.00
Cat 3.5 RCPD \$/kW/day	kW	\$/kW/day	1,687	0.1317	81,085.94
Cat 3.5 Anytime \$/kVA day	kVA	\$/kVA/day	3,713	0.0565	76,586.79
G3 Reactive Charge	kVAr	\$/kVAr/day	190	0.0000	0.0000
Cat 6.2	ICP	\$/year	1	332,757.00	332,757.00
Cat 6.1	ICP	\$/year	1	1,911,716.00	1,911,716.00
Large Embedded Generator	ICP	\$/year	1	340,452	340,452
Nelson Electricity	Connection	\$/year	1	2,103,589	2,103,589
Pioneer (Matiri)	Connection	\$/year	1	192,306	192,306
NCA Admin G0	ICP	\$/ICP	0.00	n/a	0
NCA Admin G1	ICP	\$/ICP	0.00	n/a	0
NCA Admin G2	ICP	\$/ICP	0.00	n/a	0
NCA Admin G3	ICP	\$/ICP	0.00	n/a	0
SSDG < 10kW					
Part 1	SSDG	\$/SSDG	0.00	n/a	0
Part 1a	SSDG	\$/SSDG	0.00	n/a	0
SSDG > 100kW and <1000kW	SSDG	\$/SSDG	0.00	n/a	0
SSDG > 10kW and < 100kW	SSDG	\$/SSDG	0	n/a	0
SSDG > 1000 kW	SSDG	\$/SSDG	0	n/a	0
NDL - Group 1 uncapped	kVA*km	\$/kVA*km	0.00	n/a	0
NDL - Group 1 Capped	ICP	\$/ICP	0.00	n/a	0
NDL - Group 2	kVA*km	\$/kVA*km	0.00	n/a	0
NDL Subdivision	ICP	\$/ICP	0.00	n/a	0
Generator Pupu Network Charge	ICP	\$/ICP	1	0	0
Generator Onekaka Network Charge	ICP	\$/ICP	1	0	0
Generator Brooklyn Network Charge	ICP	\$/ICP	1	0	0
PTP _{2018/19} Q _{2018/19}					19,132,251

Independent Assurance Report

To the directors of Network Tasman Limited and the Commerce Commission

The Auditor-General is the auditor of Network Tasman Limited (the company). The Auditor-General has appointed me, John Mackey, using the staff and resources of Audit New Zealand, to provide an opinion, on his behalf, on whether the Annual Compliance Statement for the year ended on 31 March 2020 on pages 2 to 29 has been prepared, in all material respects, with the Electricity Distribution Services Default Price-Quality Path Determination 2015 (the Determination) as amended by the Electricity Distribution Services Default Price-Quality Path (Compliance Statement Due Date and Auditor's Report) Amendments Determination 2020, issued by the Commerce Commission NZ on 9 April 2020 (the "Determination as amended").

Opinion

In our opinion:

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

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

Basis of opinion

We conducted our engagement in accordance with the International Standard on Assurance Engagements (New Zealand) 3000 (Revised): Assurance Engagements Other Than Audits or Reviews of Historical Financial Information and the Standard on Assurance Engagements 3100 (Revised): Assurance Engagements on Compliance issued by the New Zealand Auditing and Assurance Standards Board. Copies of these standards are available on the External Reporting Board's website.

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

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

In assessing the disclosures about compliance with the price path in clause 8 of the Determination, as amended, for the assessment period ended on 31 March 2020, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 2 to 21 (excluding references to Quality Standards Compliance) and pages 28 to 29 of the Annual Compliance Statement.

In assessing the disclosures about compliance with the quality standards in clause 9 of the Determination, as amended, for the assessment period ended on 31 March 2020, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 3 to 4 (excluding references to Price Path Compliance) and pages 22 to 27 of the Annual Compliance Statement.

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

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

Scope and inherent limitations

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

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

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

Directors' responsibilities for the preparation of the Annual Compliance Statement

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

Our responsibility for the Annual Compliance Statement

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

Independence and quality control

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

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

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

The Auditor-General, and his employees, and Audit New Zealand and its employees may deal with the Company and its subsidiaries on normal terms within the ordinary course of trading activities of the Company. Other than any dealings on normal terms within the ordinary course of business, this engagement, and the annual audit of the Company's financial statements, we have no relationship with or interests in the Company and its subsidiaries.

Use of this report

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



John Mackey
Audit New Zealand
On behalf of the Auditor-General
Christchurch New Zealand
26 June 2020