



Orion New Zealand Limited

Electricity Distribution Services

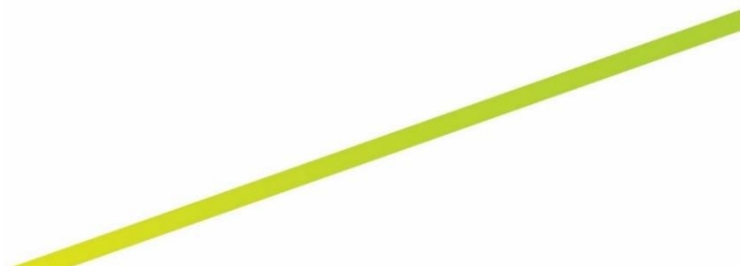
Default Price-Quality Path

Determination 2020

Annual price-setting compliance statement

For prices applying from 1 April 2020

Issued 24 February 2020



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INTRODUCTION

- 1 Orion New Zealand Limited (Orion) owns and operates the electricity distribution network in central Canterbury between the Waimakariri and Rakaia rivers, and from the Canterbury coast to Arthur's Pass. Our network covers 8,000 square kilometres of diverse geography, including Christchurch city, Banks Peninsula, farming communities and high country regions. We receive electricity from Transpower's national grid at seven separate locations and we distribute this electricity to more than 200,000 homes and businesses.
- 2 We charge electricity retailers on a wholesale basis for this delivery service. Retailers, in turn, include this cost in their retail electricity prices - our delivery charges, including Transpower's charges, typically amount to 36% of a household's electricity bill.
- 3 As a natural monopoly service provider, we are subject to government regulation under the Commerce Act 1986. Pursuant to the requirements of this Act, the Commerce Commission has set a regulatory framework that includes information disclosure regulations, default price-quality paths (DPP) and the option for distribution businesses to apply for a customised price-quality path (CPP).
- 4 Orion is subject to the Electricity Distribution Services Default Price-Quality Path Determination 2020 (the Determination) set by the Commerce Commission and applying for the five year regulatory period from 1 April 2020 to 31 March 2025.
- 5 The Determination requires us to issue an "annual price-setting compliance statement" prior to the start of each assessment period, as well as an "annual compliance statement" within 5 months after the end of each assessment period to demonstrate compliance, or otherwise, with the requirements of the Determination.
- 6 This annual price-setting compliance statement covers the information requirements detailed in clause 11 of the Determination in relation to prices applying from 1 April 2020 to 31 March 2021, the first assessment period in the five year regulatory period.

COMPLIANCE STATEMENT

- 7 Orion has complied with the price path in clause 8.3 of the Determination, with forecast revenue from prices of \$227,988.4k being less than forecast allowable revenue of \$230,961.7k.
- 8 This statement was prepared and certified on 24 February 2020
- 9 This statement has been certified by a director of Orion and a copy of this certification is attached.
- 10 Details supporting compliance follow.

SUPPORTING INFORMATION

- 11 Clause 8.3 of the Determination requires that forecast revenue from prices in the first assessment period not exceed the forecast allowable revenue for that assessment period.
- 12 Note that all prices, charges, costs and revenue figures in this document are stated excluding GST.

Forecast revenue from prices

- 13 Forecast revenue from prices is calculated as the sum of each price multiplied by each corresponding forecast quantity.
- 14 The schedule of prices that we have set for the assessment period (as published on our website) is included in appendix A.
- 15 Our basis for determining forecast quantities is set out in appendix C.
- 16 Multiplying the two together provides our forecast revenue from prices of \$227,988.4k, as shown in the following table.

Forecast revenue from prices worksheet

	FY2021 Delivery Prices	FY2021 Forecast Quantities	Days applicable	Price x Quantity
Streetlighting, general and irrigation connections				(\$000)
Streetlighting fixed charge	0.0997 \$/con/day	50,332.0 cons	365 days	1,831.6
General fixed charge	0.1500 \$/con/day	204,239.0 cons	365 days	11,182.1
Streetlighting and general connections Peak charge (peak period demand)	0.4120 \$/kW/day	470,054 kW	365 days	70,686.7
Streetlighting, general and irrigation connections volume charge				
Weekdays (Mon to Fri, 7am - 9pm)	0.06707 \$/kWh	1,127,892 MWh		75,647.7
Nights & weekends (Sat & Sun)	0.01798 \$/kWh	1,287,995 MWh		23,158.2
General connections				
Low power factor charge	0.2000 \$/kVAr/day	0 kVAr	365 days	-
Irrigation connections				
Capacity charge	0.4490 \$/kW/day	76,807 kW	182 days	6,276.5
Power factor correction rebate	(0.1658) \$/kVAr/day	25,587 kVAr	182 days	(772.1)
Interruptibility rebate	(0.0415) \$/kW/day	50,998 kW	182 days	(385.2)
Major customer connections and embedded networks				
Fixed charge	10.0000 \$/con/day	402.0 cons	365 days	1,467.3
Fixed charge (additional connections)	5.0000 \$/con/day	93.0 cons	365 days	169.7
Extra switches	3.2700 \$/switch/day	104.0 switches	365 days	124.1
11k Metering equipment	4.2600 \$/con/day	41.9 cons	365 days	65.2
11kV Underground cabling	3.3400 \$/km/day	7.3 km	365 days	8.9
11kV Overhead lines	2.1000 \$/km/day	3.0 km	365 days	2.3
Transformer capacity	0.0119 \$/kVA/day	333,432.0 kVA	365 days	1,448.3
Peak charge (control period demand)	0.3955 \$/kVA/day	111,736.0 kVA	365 days	16,129.9
Nominated maximum demand	0.1044 \$/kVA/day	264,287.0 kVA	365 days	10,070.9
Metered maximum demand	0.0762 \$/kVA/day	223,488.0 kVA	365 days	6,215.9
Large capacity connections				
Distribution services				
Ops, maint & admin (dedicated assets)	10.300 \$/kVA/year	19,000.0 kVA	365 days	195.7
Ops, maint & admin (shared assets)	23.630 \$/kVA/year	18,290.0 kVA	365 days	432.2
Asset charge (dedicated assets)	11.350 \$/kVA/year	19,000.0 kVA	365 days	215.7
Asset charge (shared assets)	28.260 \$/kVA/year	18,290.0 kVA	365 days	516.9
Ops, maint & admin (dedicated assets)	6.060 \$/kVA/year	16,000.0 kVA	365 days	97.0
Ops, maint & admin (shared assets)	10.780 \$/kVA/year	13,430.0 kVA	365 days	144.8
Asset charge (dedicated assets)	14.220 \$/kVA/year	16,000.0 kVA	365 days	227.5
Asset charge (shared assets)	25.290 \$/kVA/year	13,430.0 kVA	365 days	339.6
Transmission services				
Interconnection charge (winter)	56.140 \$/kVA/year	6,344.0 kVA	365 days	356.2
Interconnection charge (summer)	48.200 \$/kVA/year	14,632.0 kVA	365 days	705.3
Connection charge	4.910 \$/kVA/year	14,632.0 kVA	365 days	71.8
Interconnection charge (winter)	54.760 \$/kVA/year	1,679.0 kVA	365 days	91.9
Interconnection charge (summer)	47.030 \$/kVA/year	11,265.0 kVA	365 days	529.8
Connection charge	1.450 \$/kVA/year	11,265.0 kVA	365 days	16.3
Customer investment contract charge	45.100 \$/kVA/year	16,000.0 kVA	365 days	721.6
Export credits				
Real power component	(0.0721) \$/kW/day	538.7 kW	365 days	(14.2)
Reactive power component	(0.0237) \$/kVAr/day	153.1 kVAr	365 days	(1.3)
Miscellaneous				
Monthly invoice charge	30.00 \$/invoice	432.0 invoices		13.0
Failure to pay notice	50.00 \$/notice	10.0 notices		0.5
Default and termination notice	100.00 \$/notice	2.0 notices		0.2

Forecast Revenue from Prices FY2021

227,988.4

Forecast Allowable Revenue

- 17 The calculation of forecast allowable revenue (FAR) is set out in Schedule 1.5 of the determination as:

$$\text{FAR} = \text{FNAR} + \text{FPRC} + \text{OWAB} + \text{PTBA}$$

Where

FNAR is the forecast net allowable revenue;

FPRC is the forecast pass-through and recoverable costs;

OWAB is the opening wash-up account balance; and

PTBA is the pass-through balance allowance.

- 18 The calculation of each of these components is set out below.

Forecast net allowable revenue (FNAR)

- 19 FNAR is stated for Orion in Schedule 1.4 of the Determination as \$158,498k for the first assessment period.

Forecast pass-through and recoverable costs (FPRC)

- 20 FPRC is defined as the sum of all forecast pass-through costs and forecast recoverable costs, excluding any recoverable cost that is a revenue wash-up draw down amount. Schedule 1.5 of the Determination further requires that these forecasts must be demonstrably reasonable.
- 21 The following table sets out the individual components that we have included in the calculation of FPRC. To demonstrate the reasonableness of the amounts we include a description of our basis for establishing the forecast, the prior period forecast, and the actual cost from the period before that.

Forecast pass-through and recoverable costs	IM reference ¹	Basis of forecast	FY21 forecast \$000	FY20 forecast \$000	FY19 actual \$000
Transpower and System Operator charges					
Connection	3.1.3(1)(b)	Set to the amounts advised by Transpower in its pricing update	3,771.5	4,452.4	4,331.3
Interconnection	3.1.3(1)(b)		56,930.6	52,705.7	65,836.0
New investment	3.1.3(1)(c)		1,646.4	2,052.9	2,209.7
System Operator charges	3.1.3(1)(d)		0	0	0
			62,348.5	59,211.0	72,377.0
Avoided transmission charges					
Addington/Middleton connection charges avoided (fifth assessment period following the assessment period in which the purchase occurred)	3.1.3(1)(e)	Calculated in accordance with Determination schedule 5.1 clause 1(a)(i) – the amount determined by Transpower for the year preceding the assessment period in which the charge was first recovered	2,717.0 ²	2,958.3	2,941.7
Hororata and Islington charges avoided (second assessment period following the assessment period in which the purchase occurred)	3.1.3(1)(e)		309.9	304.0	308.2
Bromley connection charges avoided (final allowable claim was in FY20 but not included in forecast that year)	3.1.3(1)(e)		0	0	985.2
			3,026.9	3,262.4	4,235.1
Other recoverable costs					
FENZ levy	3.1.3(1)(w)	Set to align with FY19 actual plus an allowance for minor growth in property holdings	100.0	NA	98.0
Pass through costs					
Local authority rates on system fixed assets	3.1.2(2)(a)	Set to align with updated estimates for FY20 with adjustments for growth	4,213.0	3,994.0	3,894.9
Commerce Commission Levies	3.1.2(2)(b)(i)		505.0	520.0	422.9
Electricity Authority Levies	3.1.2(2)(b)(ii)		616.0	600.0	588.1
Utilities Disputes Levies	3.1.2(2)(b)(iii)		113.0	110.0	109.4
			5,447.0	5,224.0	5,015.3
Total recoverable costs			70,922.4	67,697.3	81,725.4

¹ Clause reference to the Electricity Distribution Services Input Methodologies Determination 2012 [2012] NZCC 26

² In our pricing model this was calculated as \$2,798.0k but subsequently corrected to \$2,717.0k

- 22 For all pass through and recoverable cost allowances that are not stated in the table above, we have considered each allowance and determined that they are not applicable for Orion in the assessment period, and our forecast for each amount is nil.

Opening wash-up account balance (OWAB)

- 23 The Opening wash-up account balance is specified in Schedule 1.7 of the Determination and provides for the under or over recovery against allowable revenue to be carried forward, with interest. It is specified as nil for the first and second assessment periods in the regulatory period.

Pass-through balance allowance (PTBA)

- 24 The Pass-through balance allowance provides for any under or over recovery of pass-through costs during the prior regulatory period to be carried forward in prices. In the first assessment period an estimate of the pass through balance is included, and in the second assessment period any residual amount is included.

- 25 For the first assessment period the PTBA is calculated as:

$$(-1) \times ePTB \times (1 + 67^{\text{th}} \text{ percentile estimate of post tax WACC})$$

Where ePTB is the pass-through balance as at 31 March 2020 at the end of the prior regulatory period

67th percentile post tax WACC is 4.23%

- 26 Following the end of our customised price path, Orion was only subject to the prior DPP determination for a single year, and the pass-through balance is simply the amount accumulated in that year (ending 31 March 2020).
- 27 To estimate the amount, we have updated our estimate of the revenue we expect from our published pass-through prices (using updated estimates of chargeable quantities) and deducted off updated estimates of our pass-through costs.
- 28 The revenue from pass through prices is calculated using the pass through prices that we published in our FY20 Pricing Methodology. The relevant schedule of prices is included in appendix B for reference.

Components (i)	Transmission Price	Incentives and Recoveries Price	Rates and Levies Price	Units	FY2020 Updated Qty estimates	Days applicable	Estimated Pass Through Revenue
Days in price/quantity year						366	
(S000)							
Streetlighting, general and irrigation connections							
Streetlighting fixed charge	(0.0038)	0.0038	0.0049	\$/con/day	49,492.0 cons	366 days	88.8
General fixed charge		0.0426	0.0551	\$/con/day	200,840.9 cons	366 days	7,181.7
Streetlighting and general connections							
Peak charge (peak period demand)	0.1450			\$/kW/day	471,669 kW	366 days	25,031.5
Streetlighting, general and irrigation connections volume charge							
Weekdays (Mon to Fri, 7am - 9pm)	0.01517			\$/kWh	1,121,109 MWh		17,007.2
Nights & weekends (Sat & Sun)	0.00297			\$/kWh	1,288,264 MWh		3,826.1
General connections							
Low power factor charge	0.0500			\$/kVAr/day	0 kVAr	366 days	-
Irrigation connections							
Capacity charge	0.0630	0.0172	0.0223	\$/kW/day	77,505 kW	183 days	1,453.8
Power factor correction rebate	0.0000			\$/kVAr/day	25,511 kVAr	183 days	-
Interruption rebate	0.0000			\$/kW/day	50,443 kW	183 days	-
Major customer connections and embedded networks							
Fixed charge	0.0000			\$/con/day	485.80 cons	366 days	-
Extra switches	0.0000			\$/switch/day	103.00 switches	366 days	-
11k Metering equipment	0.0000			\$/con/day	41.90 cons	366 days	-
11kV Underground cabling	0.0000			\$/km/day	7.30 km	366 days	-
11kV Overhead lines	0.0000			\$/km/day	3.00 km	366 days	-
Transformer capacity	0.0000			\$/kVA/day	327,519.40 kVA	366 days	-
Peak charge (control period demand)	0.1507			\$/kVA/day	108,044.80 kVA	366 days	5,959.3
Nominated maximum demand	0.0090	0.0056	0.0073	\$/kVA/day	258,516.70 kVA	366 days	2,072.1
Metered maximum demand	0.0713			\$/kVA/day	227,222.90 kVA	366 days	5,929.6
Large capacity connections							
Distribution services							
Ops, maint & admin (dedicated assets)		0.441		\$/kVA/year	19,000.00		8.4
Ops, maint & admin (shared assets)		1.202		\$/kVA/year	18,290.00		22.0
Asset charge (dedicated assets)			0.582	\$/kVA/year	19,000.00		11.1
Asset charge (shared assets)			1.587	\$/kVA/year	18,290.00		29.0
Ops, maint & admin (dedicated assets)		0.339		\$/kVA/year	16,000.00		5.4
Ops, maint & admin (shared assets)		0.548		\$/kVA/year	13,430.00		7.4
Asset charge (dedicated assets)			0.645	\$/kVA/year	16,000.00		10.3
Asset charge (shared assets)			0.501	\$/kVA/year	13,430.00		6.7
Transmission services							
Interconnection charge (winter)	54.290			\$/kVA/year	6,044.70		328.2
Interconnection charge (summer)	44.840			\$/kVA/year	14,632.00		656.1
Connection charge	5.600			\$/kVA/year	14,632.00		81.9
Interconnection charge (winter)	52.980			\$/kVA/year	1,601.90		84.9
Interconnection charge (summer)	43.800			\$/kVA/year	11,265.00		493.4
Connection charge	1.290			\$/kVA/year	11,265.00		14.5
Customer investment contract charge	52.430			\$/kVA/year	16,000.00		838.9
Total Pass through Revenue (PTR ₂₀₂₀)							71,148.3

30 Updated estimate of pass-through costs:

FY20 Pass-through costs	FY20 updated estimate \$000	FY20 original forecast \$000
Transpower and System Operator charges		
Connection	4,452.4	4,452.4
Interconnection	52,705.7	52,705.7
New investment	2,052.9	2,052.9
System Operator charges	0.0	0.0
	<hr/> 59,211.0	<hr/> 59,211.0
Avoided transmission charges		
Addington/Middleton connection charges avoided (fifth assessment period following the assessment period in which the purchase occurred)	2,779.3	2,958.3
Bromley connection charges avoided (final allowable claim was in FY20 but not included in forecast that year)	986.9	0.0
Hororata and Islington charges avoided (second assessment period following the assessment period in which the purchase occurred)	304.0	304.0
	<hr/> 4,070.3	<hr/> 3,262.4
Pass through costs		
Local authority rates on system fixed assets	4,109.7	3,994.0
Commerce Commission Levies	486.1	520.0
Electricity Authority Levies	604.4	600.0
Utilities Disputes Levies	112.8	110.0
	<hr/> 5,312.9	<hr/> 5,224.0
Incentives		
Operational expenditure rolling incentive scheme	4,032.9	4,034.1
	<hr/>	<hr/>
Total recoverable costs	72,627.0	71,731.4

31 Therefore, our estimate for pass-through balance (ePTB) is:

$$\$71,148.3\text{k} - \$72,627.0\text{k} = -\$1,478.7\text{k}$$

32 And pass-through balance allowance (PTBA) is:

$$(-1) \times -\$1,478.7 \times (1 + 4.23\%) = \$1,541.3$$

33 Substituting these results back into the equation for forecast allowable revenue gives:

$$\begin{aligned} \text{FAR} &= \text{FNAR} + \text{FPRC} + \text{OWAB} + \text{PTBA} \\ &= \$158,498.0\text{k} + \$70,922.4 + \$0.0\text{k} + \$1,541.3 \\ &= \$230,961.7\text{k} \end{aligned}$$

APPENDIX A – DELIVERY AND EXPORT PRICE SCHEDULES FOR FY21

Electricity delivery price schedule for Orion NZ Ltd				
(applicable from 1 April 2020)				
This schedule lists the wholesale prices that Orion uses to charge electricity retailers and directly contracted customers for the electricity delivery service in Orion's network area. This delivery service includes the transmission and distribution of electricity to homes and businesses, but does not include the cost of the electricity itself. Please refer to your electricity retailer for details of retail electricity prices.				
All prices exclude GST	Price Category Code ³	Price Component Code ³	Delivery Price	Unit of measure
Streetlighting connections	LIG			
Fixed charge		STFXD	0.0997	\$/con/day
Peak charge (peak period demand)		GENPK	0.4120	\$/kW/day
Volume charge				
Weekdays (Mon to Fri, 7am to 9pm)		VOLWD	0.06707	\$/kWh
Nights & weekends (Sat & Sun)		VOLNW	0.01798	\$/kWh
General connections	GEN			
Fixed charge		GENFXD	0.1500	\$/con/day
Peak charge (peak period demand)		GENPK	0.4120	\$/kW/day
Volume charge				
Weekdays (Mon to Fri, 7am to 9pm)		VOLWD	0.06707	\$/kWh
Nights & weekends (Sat & Sun)		VOLNW	0.01798	\$/kWh
Low power factor charge		LOWPF	0.2000	\$/kVAr/day
Irrigation connections	IRR			
Capacity charge		ICCAP	0.4490	\$/kW/day*
Volume charge				
Weekdays (Mon to Fri, 7am to 9pm)		VOLWD	0.06707	\$/kWh
Nights & weekends (Sat & Sun)		VOLNW	0.01798	\$/kWh
Rebates				
Power factor correction rebate		ICPFC	(0.1658)	\$/kVAr/day*
Interruptibility rebate		ICIRR	(0.0415)	\$/kW/day*
* applied from 1 October to 31 March only				
Major customer and embedded network connections	MCC			
Fixed charge		MCFXD	10.0000	\$/con/day
Fixed charge (additional connections)		MCFXDA	5.0000	\$/con/day
Extra switches		EQESW	3.2700	\$/switch/day
11kV Metering equipment		EQMET	4.2600	\$/con/day
11kV Underground cabling		EQUGC	3.3400	\$/km/day
11kV Overhead lines		EQOHL	2.1000	\$/km/day
Transformer capacity		EQTFC	0.0119	\$/kVA/day
Peak charge (control period demand)		MCCPD	0.3955	\$/kVA/day
Nominated maximum demand		MCNMD	0.1044	\$/kVA/day
Metered maximum demand		MCMMD	0.0762	\$/kVA/day
Large capacity connections	LCC			
Individually assessed prices advised and charged directly to the customers				
Miscellaneous				
Monthly invoice and contract charge to retailers and directly contracted customers		INVFXD	30.00	\$/invoice
Failure to pay notice		INVFTP	50.00	\$/notice
Default and termination notice		INVDAT	100.00	\$/notice
Notes				
1. Full details on how we apply these prices are included in our <i>Pricing Policy</i> document, available on our website.				
2. Peak and volume prices for streetlighting, general connections and irrigation connections are applied to peak loadings and volumes derived from measurements taken at grid exit points, and it is appropriate to allow for normal network losses when assessing the contribution individual connections make to these charges. All other prices in this schedule are applied against measurements or ratings taken at the connection.				
3. The applicable price category code is recorded against each connection ICP on the Electricity Authority's registry, and the price component code is used in our mandatory 'electricity information exchange protocol' files.				



Export credit schedule for Orion NZ Ltd

(applicable from 1 April 2020)



This schedule lists the credit prices that we use to credit electricity retailers or directly contracted customers for exports or contributions from their distributed generation. The credits do not represent the purchase of electricity. They are a recognition of the value to Orion in providing its delivery service. Credits are only available for generation approved by Orion and customers must apply in advance.

For exporting generators that were in place prior to 6 December 2016 and approved by the Electricity Authority an additional credit reflecting any actual savings in Transpower charges is available (at the date of issue of this schedule, no exporting generators have been approved by the Electricity Authority). In addition to applying for our distribution credit, exporting customers can approach Transpower (for example, under Transpower's demand response program) for recognition of any transmission benefit, and approach their electricity retailer for recognition of the value of energy exported.

Export credits are based on electricity exported only during specific time periods. Our prices for credits are:

(excluding GST)				
Generator rated output	Period applied	Credit prices	Price Component Code ³	Unit of measure
0 - 30kW generation ²				
Anytime credits (without PV), or	Anytime	0.00300	EXPA	\$/kWh
Anytime credits (with PV)	(24 hours, 7 days)	0.00010	EXPAPV	\$/kWh
0 - 30kW generation ²				
Peak period credits (with or without PV)	Chargeable peak period	0.21070	EXPPP	\$/kWh
30 - 750kW Control period credits ⁴				
- real power, plus	Chargeable control period	0.0721	EXPCP1	\$/kW/day
- reactive power ⁵		0.0237	EXPCP2	\$/kVAr/day
above 750kW	Individually assessed prices provided on application			

Notes for export credit pricing

1. Full details, including metering requirements and how credit prices are applied, are available in our *Export Credits Policy* document available on our website.
2. Small 0 to 30kW generators may elect (in advance) to receive the alternative peak period based credits, subject to the installation of appropriate metering to record peak period export.
3. The price component code is used in our mandatory 'electricity information exchange protocol' files.
4. Control period credits are assessed during control periods and applied as an annual credit at 365/366 times the daily credit price.
5. The credit quantity for reactive power (kVAr) export is limited to 33% of the credit quantity for real power (kW) export in each half hour period, the equivalent of exporting with a 0.95 lagging power factor.
6. Approximately 11 connections are approved for export credits.

(extract from our FY20 Pricing Methodology document)

Electricity delivery price schedule for Orion NZ Ltd

(applicable from 1 April 2019)

Orion

This schedule lists the wholesale prices that Orion uses to charge electricity retailers and directly contracted customers for the electricity delivery service in Orion's network area. This delivery service includes the transmission and distribution of electricity to homes and businesses, but does not include the cost of the electricity itself. Please refer to your electricity retailer for details of retail electricity prices. The components of the total delivery price are shown in order to meet information disclosure and price path compliance requirements.

All prices exclude GST	Price breakdown				Delivery Price (total)	Unit of measure
	Transmission	Incentives and Recoveries	Rates and Levies	Net Distribution		
Streetlighting connections <i>approx 49,513 connections</i>						
Fixed charge	(0.0038)	0.0038	0.0049	0.1084	0.1133	\$/con/day
Peak charge (peak period demand)	0.1450			0.2842	0.4292	\$/kW/day
Volume charge						
Weekdays (Mon to Fri, 7am to 9pm)	0.01517			0.06042	0.07559	\$/kWh
Nights & weekends (Sat & Sun)	0.00297			0.01501	0.01798	\$/kWh
General connections <i>approx 201,095 connections</i>						
Fixed charge		0.0426	0.0551	0.0523	0.1500	\$/con/day
Peak charge (peak period demand)	0.1450			0.2842	0.4292	\$/kW/day
Volume charge						
Weekdays (Mon to Fri, 7am to 9pm)	0.01517			0.06042	0.07559	\$/kWh
Nights & weekends (Sat & Sun)	0.00297			0.01501	0.01798	\$/kWh
Low power factor charge	0.0500			0.1500	0.2000	\$/kVar/day
Irrigation connections <i>approx 1,066 connections</i>						
Capacity charge	0.0630	0.0172	0.0223	0.3671	0.4696	\$/kW/day*
Volume charge						
Weekdays (Mon to Fri, 7am to 9pm)	0.01517			0.06042	0.07559	\$/kWh
Nights & weekends (Sat & Sun)	0.00297			0.01501	0.01798	\$/kWh
Rebates						
Power factor correction rebate				(0.1755)	(0.1755)	\$/kVar/day*
Interruptibility rebate				(0.0439)	(0.0439)	\$/kW/day*
* applied from 1 October to 31 March only						
Major customer and embedded network connections <i>approx 487 connections</i>						
Fixed charge				10.0000	10.0000	\$/con/day
Extra switches				3.6700	3.6700	\$/switch/day
11kV Metering equipment				4.4500	4.4500	\$/con/day
11kV Underground cabling				3.2900	3.2900	\$/km/day
11kV Overhead lines				2.0700	2.0700	\$/km/day
Transformer capacity				0.0138	0.0138	\$/kVA/day
Peak charge (control period demand)	0.1507			0.2641	0.4148	\$/kVA/day
Nominated maximum demand	0.0090	0.0056	0.0073	0.0916	0.1135	\$/kVA/day
Metered maximum demand	0.0713				0.0713	\$/kVA/day
Large capacity connections <i>15 connections</i>						
Individually assessed prices advised and charged directly to the customers						
Miscellaneous						
Monthly invoice and contract charge to retailers and directly contracted customers				30.00	30.00	\$/invoice
Failure to pay notice				50.00	50.00	\$/notice
Default and termination notice				100.00	100.00	\$/notice

Notes

- Full details on how we apply these prices are included in our Pricing Policy document, available on our website.
- Peak and volume prices for streetlighting, general connections and irrigation connections are applied to peak loadings and volumes derived from measurements taken at grid exit points, and it is appropriate to allow for normal network losses when assessing the contribution individual connections make to these charges. All other prices in this schedule are applied against measurements or ratings taken at the

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Methodology for deriving delivery prices (from 1 April 2019)

APPENDIX C – BASIS OF FORECAST QUANTITIES FOR FY21

Quantity forecasts for FY21					
Price component	Units	Forecast FY21	Updated FY20	Actual FY19	Basis of forecast
Streetlighting connections					
Fixed charge	Connections	50,332	49,492	48,659	6 year linear trend
Peak charge (peak period demand)	kW	2,382	2,225	2,995	7 year average less 10% reduction to take into account the rollout of LED public lighting
Volume charge					
Weekdays (Mon to Fri, 7am - 9pm)	MWh	2,909	3,233	3,572	FY20 estimate less a 10% reduction to take into account the rollout of LED public lighting
Nights & weekends (Sat Sun)	MWh	19,536	21,707	23,984	
General Connections					
Fixed charge	Connections	204,239	200,841	197,649	5 year linear trend
Peak charge (peak period demand)	kW	467,672	469,444	466,088	5 year average with an allowance for structural re-categorisations resulting from the lowering of the major customer minimum loading requirement in FY19 and FY20
Volume charge					
Weekdays (Mon to Fri, 7am - 9pm)	MWh	1,068,955	1,062,713	1,072,170	5 year linear trend with an allowance for structural re-categorisations resulting from the lowering of the major customer minimum loading requirement in FY19 and FY20
Nights & weekends (Sat Sun)	MWh	1,191,087	1,190,260	1,188,155	
Low power factor charge	kVAr	0	0	0	Assumes no customers will have this applied
Irrigation connections					
Capacity charge	kW	76,807	77,505	77,756	Monthly linear trend post completion of the Central Plains Water Enhancement Scheme in mid-2018
Volume charge					
Weekdays (Mon to Fri, 7am - 9pm)	MWh	56,028	55,164	43,504	Linear regression model using chargeable capacity and annual NIWA rainfall data as explanatory variables. Forecast is based on average annual rainfall between October and March over the past 30 years
Nights & weekends (Sat Sun)	MWh	77,372	76,297	61,321	
Rebates					
Power factor correction rebate	kVAr	25,587	25,511	25,377	Monthly linear trend post completion of the Central Plains Water Enhancement Scheme in mid-2018
Interruptibility rebate	kW	50,998	50,443	49,903	
Major customer connections & embedded networks					
Fixed charge		402	486	432	Existing major customer connections plus 1.5% growth. Projected growth aligns with growth observed over the last 6 months and the number of new connections currently in progress and expected to be lived over the next 12 months
Fixed charge (additional connections)		0	NA	NA	
Dedicated equipment					
Extra switches	Switches	104.0	103.0	106.7	Existing major customer connections
11kV Metering equipment	Connections	41.9	41.9	46.8	
11kV Underground cabling	km	7.3	7.3	5.8	
11kV Overhead lines	km	3.0	3.0	3.1	
Transformer capacity	kVA	333,432	327,519	300,705	Existing major customer connections plus 1.5% growth (as detailed above)
Peak charge (control period demand)	kVA	111,736	108,045	103,567	Existing major customer connections plus 0.7% growth. Recent growth in the control period demand quantity has tended to be around half that of the other major customer pricing components
Nominated maximum demand	kVA	264,287	258,517	239,702	Existing major customer connections plus 2% growth. Unlike the other metered quantities this is reviewed monthly rather than annually and does not typically reduce if loading levels reduce. This asymmetry generally results in 0.5% annual growth
Metered maximum demand	kVA	223,488	227,223	213,951	Existing major customer connections plus 1.5% growth (as detailed above)
Large capacity connections					
Distribution charges					
Ops, maint & admin (dedicated assets)	kVA	19,000.0	19,000.0	12,000	Individually assessed using historical loading levels and input from the customer
Ops, maint & admin (shared assets)	kVA	18,290.0	18,400.0	13,469	
Asset charge (dedicated assets)	kVA	19,000.0	19,000.0	12,000	
Asset charge (shared assets)	kVA	18,290.0	18,400.0	13,469	
Ops, maint & admin (dedicated assets)	kVA	16,000.0	16,000.0	16,000	
Ops, maint & admin (shared assets)	kVA	13,430.0	14,270.0	14,463	
Asset charge (dedicated assets)	kVA	16,000.0	16,000.0	16,000	
Asset charge (shared assets)	kVA	13,430.0	14,270.0	14,463	
Transmission charges					
Interconnection charge (winter)	kVA	6,344.0	6,044.7	3,943	Individually assessed using historical loading levels and input from the customer
Interconnection charge (summer)	kVA	14,632.0	14,701.0	9,460	
Connection charge	kVA	14,632.0	14,701.0	9,460	
Interconnection charge (winter)	kVA	1,679.0	1,601.9	1,640	
Interconnection charge (summer)	kVA	11,265.0	12,427.0	11,631	
Connection charge	kVA	11,265.0	12,427.0	11,631	
Customer investment contract charge	kVA	16,000.0	16,000.0	16,000	
Export credits					
0 - 30kW generation					
Anytime (without PV)	kWh	0.0	0.0	0.0	There are no connections currently approved to receive these credits and no applications have been received pending approval
Anytime (with PV)	kWh	0.0	0.0	0.0	
Peak period (with or without PV)	kWh	0.0	0.0	0.0	
30 - 750kW generation					
Control period real power	kW	538.7	538.7	1,331.0	With the removal of transmission credits on 1 April 2019 following Electricity Authority rule changes we observed a large reduction in generation during our chargeable control periods in FY20. Until a clear trend is observed we have adopted the same quantity as last year for our FY21 projection
Control period reactive power	kVAr	153.1	153.1	300.9	
Miscellaneous					
Monthly invoice and contract charge	Invoices	432	426	417	27 retailers and 9 major direct customers
Failure to pay notice	Notices	10	8	NA	Last year's quantity
Default and termination notice	Notices	2	2	NA	Last year's quantity

DIRECTOR'S CERTIFICATE FOR ANNUAL PRICE-SETTING COMPLIANCE STATEMENT

We, Deborah Jane Taylor and Bruce Donald Gemmell, being directors of Orion New Zealand Limited certify that, having made all reasonable enquiry, to the best of our knowledge and belief, the attached annual price-setting compliance statement of Orion New Zealand 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, and all forecasts used in the calculations for forecast revenue from prices and forecast allowable revenue are reasonable.


Deborah Jane Taylor
Bruce Donald Gemmell

24 February 2020