



Orion New Zealand Limited

Electricity Distribution Services

Default Price-Quality Path

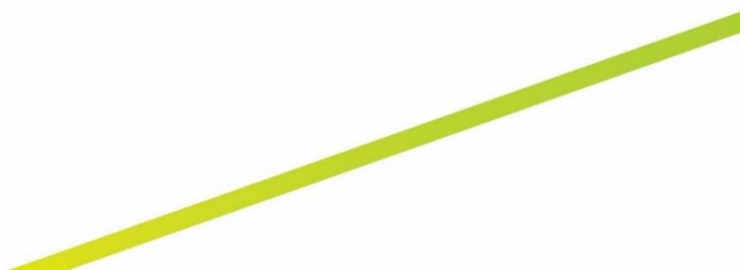
Determination 2020

# 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<br>Delivery Prices | FY2021 Forecast<br>Quantities | Days<br>applicable | Price x<br>Quantity |
|--|---------------------------|-------------------------------|--------------------|---------------------|
| <b>Streetlighting, general and irrigation connections</b>                  |                           |                               |                    |                     |
|  |                           |                               |                    | (\$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<br>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)             |
| <b>Major customer connections and embedded networks</b>                    |                           |                               |                    |                     |
| 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             |
| <b>Large capacity connections</b>  |                           |                               |                    |                     |
| 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               |
| <b>Export credits</b>  |                           |                               |                    |                     |
| 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)               |
| <b>Miscellaneous</b>   |                           |                               |                    |                     |
| 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 <sup>1</sup> | Basis of forecast  | FY21 forecast<br>\$000 | FY20 forecast<br>\$000 | FY19 actual<br>\$000 |
|---|---------------------------|--|------------------------|------------------------|----------------------|
| <b>Transpower and System Operator charges</b>   |                           |  |                        |                        |                      |
| 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                    |
|   |                           |  | <b>62,348.5</b>        | <b>59,211.0</b>        | <b>72,377.0</b>      |
| <b>Avoided transmission charges</b>   |                           |  |                        |                        |                      |
| 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 <sup>2</sup>   | 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                |
|   |                           |  | <b>3,026.9</b>         | <b>3,262.4</b>         | <b>4,235.1</b>       |
| <b>Other recoverable costs</b>  |                           |  |                        |                        |                      |
| 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                 |
| <b>Pass through costs</b>   |                           |  |                        |                        |                      |
| 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                |
|   |                           |  | <b>5,447.0</b>         | <b>5,224.0</b>         | <b>5,015.3</b>       |
| <b>Total recoverable costs</b>  |                           |  | <b>70,922.4</b>        | <b>67,697.3</b>        | <b>81,725.4</b>      |

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

<sup>2</sup> 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

67<sup>th</sup> 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.



30 Updated estimate of pass-through costs:

| <b>FY20 Pass-through costs</b>  | <b>FY20<br/>updated estimate<br/>\$000</b> | <b>FY20<br/>original forecast<br/>\$000</b> |
|---|--|---|
| <b>Transpower and System Operator charges</b>   |  |   |
| 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   |
|   | 59,211.0                                   | 59,211.0                                    |
| <b>Avoided transmission charges</b>   |  |   |
| 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                                       |
|   | 4,070.3                                    | 3,262.4                                     |
| <b>Pass through costs</b>   |  |   |
| 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                                       |
|   | 5,312.9                                    | 5,224.0                                     |
| <b>Incentives</b>   |  |   |
| Operational expenditure rolling incentive scheme  | 4,032.9                                    | 4,034.1                                     |
|   | <b>72,627.0</b>                            | <b>71,731.4</b>                             |

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**

| <b>Electricity delivery price schedule for Orion NZ Ltd</b>  |                                  |  |                |                 |
|--|----------------------------------|---|----------------|-----------------|
| (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 <sup>3</sup> | Price Component Code <sup>3</sup>   | Delivery Price | Unit of measure |
| <b>Streetlighting connections</b> 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          |
| <b>General connections</b> 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     |
| <b>Irrigation connections</b> 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  |                                  |   |                |                 |
| <b>Major customer and embedded network connections</b> 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      |
| <b>Large capacity connections</b> LCC  |                                  |   |                |                 |
| Individually assessed prices advised and charged directly to the customers   |                                  |   |                |                 |
| <b>Miscellaneous</b>   |                                  |   |                |                 |
| 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       |
| <b>Notes</b>   |                                  |   |                |                 |
| 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.  |                                  |   |                |                 |

| <b>Export credit schedule for Orion NZ Ltd</b>   |   |  |   |                        |
|--|---|---|---|------------------------|
| <b>(applicable from 1 April 2020)</b>  |   |   |   |                        |
| <p>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.</p> <p>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.</p> <p>Export credits are based on electricity exported only during specific time periods. Our prices for credits are:</p> |   |   |   |                        |
| <i>(excluding GST)</i>   |   |   |   |                        |
| <b>Generator rated output</b>  | <b>Period applied</b>                                       | <b>Credit prices</b>  | <b>Price Component Code<sup>3</sup></b> | <b>Unit of measure</b> |
| 0 - 30kW generation <sup>2</sup>   |   |   |   |                        |
| 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 <sup>2</sup>   |   |   |   |                        |
| Peak period credits (with or without PV)   | Chargeable peak period                                      | 0.21070   | EXPPP                                   | \$/kWh                 |
| 30 - 750kW Control period credits <sup>4</sup>   |   |   |   |                        |
| - real power, plus   | Chargeable control period                                   | 0.0721  | EXPCP1                                  | \$/kW/day              |
| - reactive power <sup>5</sup>  |   | 0.0237  | EXPCP2                                  | \$/kVAr/day            |
| above 750kW  | <i>Individually assessed prices provided on application</i> |   |   |                        |
| <b>Notes for export credit pricing</b>   |   |   |   |                        |
| 1. Full details, including metering requirements and how credit prices are applied, are available in our <i>Export Credits Policy</i> 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.   |   |   |   |                        |

**APPENDIX B – PASS THROUGH PRICES APPLIED IN FY20**  
(extract from our FY20 Pricing Methodology document)

|    |                 |                           |                  |                  |                        |                 |
|---|-----------------|---------------------------|------------------|------------------|------------------------|-----------------|
| <b>Electricity delivery price schedule for Orion NZ Ltd</b>   |                 |                           |                  |                  |                        |                 |
| (applicable from 1 April 2019)  |                 |                           |                  |                  |                        |                 |
| 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 |                        |                 |
| <b>Streetlighting connections</b> <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          |
| <b>General connections</b> <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     |
| <b>Irrigation connections</b> <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   |                 |                           |                  |                  |                        |                 |
| <b>Major customer and embedded network connections</b> <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      |
| <b>Large capacity connections</b> <i>15 connections</i>   |                 |                           |                  |                  |                        |                 |
| Individually assessed prices advised and charged directly to the customers  |                 |                           |                  |                  |                        |                 |
| <b>Miscellaneous</b>  |                 |                           |                  |                  |                        |                 |
| 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       |
| <b>Notes</b>  |                 |                           |                  |                  |                        |                 |
| 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  |                 |                           |                  |                  |                        |                 |

**APPENDIX C – BASIS OF FORECAST QUANTITIES FOR FY21**


| Quantity forecasts for FY21                               |             |               |              |             |   |  |
|---|-------------|---------------|--------------|-------------|---|--|
| Price component   | Units       | Forecast FY21 | Updated FY20 | Actual FY19 | Basis of forecast   |  |
| <b>Streetlighting connections</b>                         |             |               |              |             |   |  |
| 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      |   |  |
| <b>General Connections</b>                                |             |               |              |             |   |  |
| 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   |  |
| <b>Irrigation connections</b>                             |             |               |              |             |   |  |
| 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      |   |  |
| <b>Major customer connections &amp; embedded networks</b> |             |               |              |             |   |  |
| 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)  |  |
| <b>Large capacity connections</b>                         |             |               |              |             |   |  |
| 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       |   |  |
| 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      |   |  |
| <b>Export credits</b>                                     |             |               |              |             |   |  |
| 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       |   |  |
| <b>Miscellaneous</b>                                      |             |               |              |             |   |  |
| 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