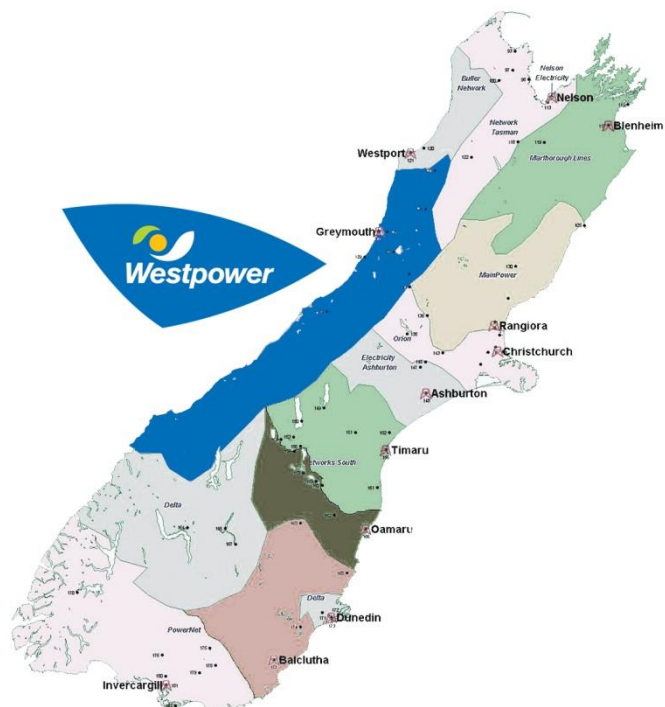




Pricing Methodology



Effective 1 April 2019

Contents

1	INTRODUCTION	4
2	2019 PRICING SUMMARY	5
2.1	Overview of Methodology	5
2.2	2019 Pricing Changes	6
3	PRICING CONSIDERATIONS AND OBJECTIVES	7
3.1	Network considerations	7
3.2	Cost drivers	7
3.3	Regulatory considerations	8
3.4	Equitable considerations	8
3.5	Consumer consultation	9
3.6	Interaction with electricity retailers	9
3.7	Network extension policy	9
4	TARGET REVENUE	11
4.1	Transmission costs	11
4.2	Distribution costs	12
5	CONSUMER GROUPS	14
6	ALLOCATION OF COSTS	15
6.1	Allocators	15
6.2	Alignment of allocated costs to revenue	17
7	TARIFF OPTIONS	18
7.2	Distributed Generation (DG)	22
7.3	Non-Standard charges	22
7.4	Changes to prices	23
7.5	Revenue summary	23
8	PRICING STRATEGY	24
9	ELECTRICITY AUTHORITY PRICING PRINCIPLES CONFORMANCE	25
10	COMMERCE COMMISSION INFORMATION DISCLOSURE CONFORMANCE	30
APPENDIX A	Westpower Pricing Schedule	32
APPENDIX B	Westpower Special Discount 2019	33

Revision History

Version Number	Reviewed By	Review Date	Changes Made to Methodology
11	R Griffiths	April 2015	Nil
12	R Griffiths	April 2016	Nil
13	R Griffiths	April 2017	Nil
14	R Griffiths	April 2018	Nil
15	R Griffiths	April 2019	Nil

Glossary

AMD	Anytime Maximum Demand
CMD	Coincident Maximum Demand
CPI	Consumer Price Index
Grid	Transpower's National Transmission System
GXP	Grid Exit Point
ICP	Installation Control Points for each consumer
Kilowatt (kW)	Measurement of electricity demand at any time (volts x amps)
Kilowatt hour (kWh)	Measurement of electrical energy delivered each hour
RAB	Regulatory Asset Base
RCPD	Regional Coincident Peak Demand
TOU	Time of Use (measurements every half hour)

1 INTRODUCTION

This document describes the approach that has been developed by Westpower to set charges for electricity distribution services effective from 1 April 2019.

Westpower is one of fourteen distribution companies in the South Island. It owns and operates the electricity distribution network across 18,017 sq kms of the West Coast of the South Island. The network distributes 287GWh of electricity over 2,173 kms of lines and cables to supply 13,368 consumers.

The company is owned by the West Coast Electric Power Trust on behalf of consumers. Excess revenue is given back to consumers in the form of a discretionary discount on lines charges and dividends made to the Trust.

This year the Board of Directors have resolved to distribute \$3million to consumers as per the resolution in Appendix B.

Comments and suggestions for improvement are welcome at any time, addressed to:

The General Manager

Assets and Engineering Services

Westpower Limited

Greymouth.

2 2019 PRICING SUMMARY

2.1 Overview of Methodology

On 1 April each year, Westpower sets charges that seek to recover costs associated with delivering electricity to consumers. The 2019/20 target revenue is \$20.82 million and includes the following costs:

- Transpower’s charges for use of the transmission system;
- Payments to distributed generators in relation to avoided Transpower charges;
- Operation and maintenance costs;
- Administration costs;
- Capital costs including depreciation and a return on investment; and
- Taxation.

These costs are allocated to consumer groups relative to each consumer groups’ use of the network:

- Transmission costs are allocated based on each consumer group’s share of transmission system’s coincident peak demand (CPD);
- Administration costs are allocated per connection; and
- All other distribution costs are allocated by their asset use, based on the regulatory value of the asset.

Target revenue is recovered through a mixture of fixed, consumption and peak demand charges:

- **Fixed Charges:** Residential consumers are charged a regulated 15 cents per day. Non Residential consumer fixed charges are based on assessed or actual capacity.
- **Peak Demand Charges:** Consumers that have advanced time of use (TOU) meters that measure half hourly usage are charged a peak demand charge based on the share of the transmission system RCPD or Anytime Maximum Demand (AMD)
- **Consumption Charges:** Consumers with non-TOU meters are charged a consumption charge (Kwh).

2019 pricing methodology overview



2.2 2019 Pricing Changes

Westpower has used broadly the same pricing methodology for several years. The key changes in 2019 are:

- Distribution prices have increased by 2% to recover an overall 2% increase in costs; and
- In general, transmission prices have decreased 21% at a time when overall transmission costs have increased 7.7%. This occurs due to the process of passing on direct costs where they develop. It was caused by an unusual Summer RCPD, shifting the peaks from mass market to large summer loads, much of which relates to the Westland Milk Products factory on Hokitika.

While the methodology has not changed, each year revenues within each group move to take account of changes in forecast billed quantities and of changes in allocations of costs which have been updated between consumer groups.

The following table provides an indication of the total change in revenue (including transmission revenue) from the average consumer in common tariff categories.

Average revenue change in each nominated consumer group

Tariff Category	Average Annual consumption (kWh)	Average AMD	Average CPD	2019/20 annual revenue	2018/19 annual revenue	\$ Annual Change	% Annual Change
		(kW)	(kW)	(\$'000)	(\$'000)	(\$'000)	
Category 1 Residential - 24 hour	4,400	NA	NA	5,105	4,892	213	4.4%
Category 1 General - 24 hour	7,684	NA	NA	1,477	1,520	(43)	(2.8%)
Category 2 - Medium Load	45,691	NA	NA	2,832	2,723	109	4.0%
Category 2 - Large Load	NA	2,707	NA	839	838	1	0.1%
Category 3 - Medium Bulk	NA	20,095	7,521	3,086	2,712	374	13.8%
Category 4 - Large Bulk	NA	3,000	6,615	1,028	598	430	71.8%
Category 5 - Special Load	NA	514	134	372	371	1	0.4%

Note 1: The increase in Category 4 revenue is attributed to a gain in demand associated with the RCPD summer peak.

Note 2: This table does not show all Westpower revenue across all possible tariffs, but merely demonstrates what an average customer on one of the standard tariffs (e.g. 24-hour) would be paying in terms of volume related charges.

3 PRICING CONSIDERATIONS AND OBJECTIVES

3.1 Network considerations

The rugged and remote location of our network, located on the West Coast of the South Island, drives higher costs into our pricing structures:

- **Transmission.** Westpower has one of the highest transmission charges in NZ due to its remote location from the grid. It is almost twice the national average and constitutes 22% of Westpower's line charges.
- **Coastal Terrain.** Salt air corrosion on the West Coast is severe, so all the components of our network require additional protection, such as double dipped galvanising and marine grade stainless steel. These present higher costs than inland areas. Glass insulators are often used and these are more expensive than the traditional polymer insulators.
- **Remote, Rural and Rugged Terrain.** Remote, rural and rugged areas of the network account for 92% of overhead circuit and 40% of connections. Rugged hills, combined with high winds necessitate stronger structures than flat land so the strength and size of network components are determined by physical conditions rather than electrical load, with associated higher cost.
- **Long Narrow Coastal Strip of Land.** Westpower's network comprises one long line from North to South, with meshed networks occurring only within the townships. The distance from end to end is similar to Wellington to Auckland and this necessitates subtransmission lines (66 kV and 33 kV) beyond what would be expected for the size of the electrical load. Subtransmission lines are more expensive than distribution lines and require very expensive zone substations to reduce voltage. Westpower has 338 kilometres of subtransmission line (15% of total lines) and 19 zone substations valued at around \$20m.

The West Coast has mild summers and winters and much of the residential hot water is heated by wood/coal fires. As a result, residential demand is considerably lower than in other centres throughout NZ. Westpower's average residential annual consumption is 6,365 kWh compared with the East Coast of the South Island, where the average load is 9,000 kWh.

While residential consumers account for 80% of connections, they only account for 28% of consumption. The remaining load is spread across some 2,700 non-residential connections, with the 20 largest connections accounting for 52% of consumption.

3.2 Cost drivers

Westpower seeks to set prices to recover the fair and efficient costs associated with operating the business. 67% of these costs are related to operations, maintenance or investment in network assets, as well as Transpower charges. Remaining costs are associated with general management. The key cost drivers relevant to setting prices are therefore network related. Network cost drivers include:

- **Demand:** The common cost driver for all line companies is investment in network capacity to meet demand. Generally speaking, the higher the load factor, the more efficient the use of the network capacity and the more efficient the recovery of the cost. At 64%, Westpower's load factor is slightly above industry average, despite heavy use of load control and good pricing signals to move load from peak periods to off-peak periods. Demand also contributes to Transpower charges.
- **Circuit length:** As discussed above, Westpower's network comprises one long line from North to South with meshed networks in key townships. The cost to serve rural connections in particular, drives significant circuit length related costs into our business.

- **Number of connections:** New connections drive asset-related and ongoing operations and maintenance costs. Westpower's network extensions policy (discussed below) requires consumers to pay for connection related asset costs upfront, subject to certain contributions from Westpower. However, each new connection also creates operating and maintenance costs, including network operations and planning, fault restoration, maintenance and general administration costs. New connections therefore increase operating costs over time, which must be reflected in prices.
- **Consumer requests for dedicated assets or services:** The provision of street-lighting is a service category that has specific assets identifiable to a dedicated consumer group. KiwiRail also have dedicated assets associated with its connections to the national grid at Oira.

3.3 Regulatory considerations

Electricity distribution businesses are considered to be natural monopolies, as it is not efficient to replicate the network to provide competition. Recognising this, distribution businesses are regulated by the Commerce Commission (Commission) under Part 4 of the Commerce Act. These regulations ensure that distribution services are delivered at prices that are fair and reasonable and at an acceptable quality.

Westpower is currently exempt from direct price and quality regulation under the Commerce Act due to it being owned by its consumers. However, the Commission maintains oversight by requiring Westpower to disclose information about its network business under the Electricity Distribution Information Disclosure determination 2012, consolidated in 2015 (EDIDD). In particular, clause 2.4.1 of the ID determination requires Westpower to publicly disclose its pricing methodology for determining line charges.

The pricing methodology must also describe the extent to which pricing aligns with a set of distribution Pricing Principles determined by the Electricity Authority. These principles provide guidance for efficient network pricing and other market considerations. The Electricity Authority has also provided guidelines on the content of pricing methodologies.

Section 9 and 10 set out our compliance with these requirements.

Other relevant pricing regulations include:

- **The Electricity (Low Fixed Charges Tariff Options for Residential Consumers) Regulations 2004 (LFC Regulations):** These require Westpower to offer a tariff option to low use residential consumers (defined as using less than 8,000 kWh per annum) with a fixed tariff not exceeding 15 cents per day.
- **Part 6 of the Electricity Industry Participation Code:** Any charges applying to distributed generation (DG) connections must not exceed the incremental costs of connecting this DG to the network, including any avoided costs.

3.4 Equitable considerations

Westpower strives to treat all consumers equitably when setting prices. Costs are therefore allocated to consumer groups based on usage of the network. It is also recognised that all consumers benefit from the utilisation of certain shared assets and costs, so prices are averaged over large groups of consumers with similar usage patterns.

One exception is made for rural regions, where the cost to supply these consumers is considerably higher than in urban areas. Despite these costs, Westpower has decided not to distinguish between urban and rural consumers on our network. This recognises the threat of regulation under the Electricity Industry Act 2010, which could be triggered where the change in rural prices significantly exceeds that experienced by urban consumers.

3.5 Consumer consultation

A customer survey was undertaken in September 2018 by Utility Consultants Limited. This was the 7th survey performed for Westpower by this company over the last 14 years.

This customer survey represented a continuation of the regular surveys that Westpower uses to remain informed of customer preferences for a range of matters including the former statutory requirement to consult customers on their preference for price and supply reliability.

Market segments sampled

The segments sampled included 500 of Westpower's consumers on a pro rata basis over the Reefton, Kumara, Hokitika, Greymouth and Dobson GXP areas. Questions included value for money perception, understanding of Westpower's cost structure, preferences for price and supply reliability, likely uptake of new technologies e.g. solar power and electric vehicles, and preferences for EV charging.

Survey response rate

The survey completion rate was 37%, which is slightly above other similar surveys.

Key findings

Key findings of the survey in terms of pricing and quality were that most respondents:

- were aware that the Westpower component of the monthly bills was between 20% and 40%, although a number of respondents thought it was none;
- did not know how Westpower's costs vary with electricity consumption;
- understood well that Westpower will need to spend more money to install bigger wires if the network gets overloaded
- think Westpower's average daily line charge of \$2.35 is definitely good value;
- would prefer to pay about the same to have the power go off about the same; and
- would prefer to pay a fixed monthly charge to Westpower

In view of the foregoing, Westpower's current Asset Management Policy of maintaining current levels of service, while capturing any efficiency gains that become available, has been confirmed. Following a careful review by the Board of Directors, Westpower will not be significantly increasing or decreasing levels of investment in the network.

3.6 Interaction with electricity retailers

Westpower notifies all electricity retailers trading on the network sixty days in advance of new prices taking effect.

All retailers using the network repackage Westpower's prices. Accordingly, Westpower publically discloses its pricing in such a manner that delivery costs can be easily calculated from the retailer's electricity invoices to consumers.

3.7 Network extension policy

In addition to network prices, Westpower's network extension policy requires most costs relating to the extension of the network to be paid for by the consumer, with any assets vested in Westpower.

Westpower will, however, provide a suitable transformer up to a maximum capacity of 200 kVA (where required) at no cost to the consumer. The provision of a transformer of larger capacity will be considered on a case-by-case basis.

Where the network extension results in additional benefits to our network (for instance in terms of network security), we may choose, at our sole discretion, to fund a portion of the extension cost.

Westpower shall ensure that new consumers wishing to connect to network line extensions, previously funded by original consumers, will equitably compensate the original users for the shared line component, as a pre-requisite for supply.

Any capital contributions or vested assets made by new consumers are not included in the calculation of network prices.

Further information on our network extension policy can be found on our website at:

<http://www.westpower.co.nz/sites/default/files/993S008.pdf>

4 TARGET REVENUE

Westpower has forecast the following costs for 2019/20, which we will seek to be recovered through prices. Target revenue has increased by 3.2% in total since 2018/19.

2019/20 Target Revenue

	2019/20 (\$000)	2018/19 (\$000)	Change (%)
Transmission Costs			
Transmission Charges	2,406	1,544	55.8%
Avoided Transmission Charges	1,890	2,430	(22.2%)
Otira Charges	211	213	(0.8%)
Transmission Subtotal	4,507	4,186	7.7%
Distribution Costs			
Administration	3,692	3,544	4.2%
Operations and Maintenance	4,753	4,981	(4.6%)
Depreciation	4,359	4,378	(0.4%)
Return on Capital	3,126	2,838	10.1%
Taxation	383	256	50%
Distribution Subtotal	16,314	15,997	2.0%
Total Target Revenue	20,821	20,183	3.2%

4.1 Transmission costs

Avoided transmission charges in the transmission component have reduced due to the lower Upper South Island Regional Peak Demand.

4.1.1 Transmission charges (fixed costs)

Transpower costs include interconnection, connection and new investment agreement charges for use of core grid and GXP assets, respectively.

Transpower's 2019/20 Interconnection Charge rate decreased 3.86%, from \$113.77 per kilowatt to \$109.38 per kilowatt, which, together with the regional coincident peak demand increase from 9,074 kW to 16,532 kW, resulted in Westpower's overall transmission charges increasing 7.7%.

4.1.2 Avoided Transmission Costs

Avoided transmission costs are payments made to distributed generators connected to the Westpower network. These generators provide electricity to consumers at times of peak demand, thereby reducing transmission system demand and Transpower charges payable by Westpower. Without distributed generation, Westpower would otherwise pay this amount to Transpower; hence the term "avoided cost".

These costs are highly dependent on the performance of generators each year in supplying the demand at the time of the Upper South Island Peak demand, and may vary significantly depending upon generation capacity available or associated hydrological conditions.

Embedded generators generated a higher proportion of the peak demand during the year and this was partly due to the new 7.6 MW Amethyst Hydro Station being online during a winter peak demand period.

4.1.3 Otira

Otira charges are paid directly to Transpower in relation to grid connection assets at Otira. They are separated here to allow allocation of these costs to KiwiRail, the sole user of the Otira assets.

4.2 Distribution costs

Operations and maintenance expenditure is driven by a range of factors including increased compliance costs. An example, Westpower is required to submit detailed Corridor Access Requests (CARs) for any work that is to be carried out in a road corridor.

This year's AMP expenditure is focused on a proactive reliability centered maintenance approach, where an effort is being made to collect accurate condition assessment data that can be used to support a targeted maintenance regime. While there was a short-term increase in maintenance expenditure as previously hidden deep defects are identified, for example, a need to replace an increased number of defective crossarms, this year's maintenance cost will be reduced by avoiding unnecessary reactive expenditure.

In addition, Westpower is working toward conformance with ISO 55000 for its asset management systems, and this required an increased level of upfront standards development to meet the required assessment level. From a long-term perspective, however, this will provide assurance that Westpower is spending at an optimum level on its assets.

Westpower's capital expenditure is relatively low when compared to other similar sized electricity distribution businesses, following an extensive period of renewal between 2003 and 2012, when many of the ageing assets were replaced as they came to the end of the economic lives. This makes sense when it is considered that most of these assets were originally built around the same time.

The legacy of this investment is that the network is relatively new and its overall condition is very good. Moreover, long run marginal maintenance costs have been reduced, notwithstanding the short term effects from a more proactive maintenance approach discussed above.

Westpower uses distribution automation extensively throughout its network to reduce fault restoration times and costs, and deploys innovative technology solutions to overcome short-term network constraints, which may result in voltage regulation issues, wherever this is economically attractive. Examples of these solutions include automatic switched capacitor banks and STATCOMs to provide voltage support in preference to capital intensive conductor upgrade programs.

Compliance costs continue to represent a significant proportion of Westpower's fixed annual costs. This is exacerbated when changes to reporting requirements are introduced, requiring additional resource to come up to speed, so stability in this area is always welcomed.

Notwithstanding the above, Westpower's operations and maintenance costs are at the higher end of the spectrum, but this is due to the geographical spread of our assets, the relatively low customer density on the network and the difficult environmental conditions that we often have to cope with the terms of network performance.

4.2.1 Administration

These costs include general management and overheads associated with operating the distribution business. They have decreased this year due to efficiency gains across all sectors of the business.

4.2.2 Operations and Maintenance

These costs are associated with operations and maintenance of network assets. They have decreased again slightly this year due to a number of factors, such as:

- Productivity improvements in the condition assessment program; and
- Unexpected weather related contingency events that are normally included in the budgets have been excluded this year on the understanding the Board would approve such expenditure, post any event unfolding, rather than providing a contingency for these events in the budgets.

4.2.3 Depreciation

The return of our capital investment in the network is based on straight line depreciation of our regulated asset base (RAB).

4.2.4 Return on capital

The return on capital is based on a 2.90% target return on investment (post-tax and net of revaluations and other distribution income) on RAB.

4.2.5 Taxation

A forecast tax expense associated with the network business. Tax is incurred in proportion to the profit the business earns.

5 CONSUMER GROUPS

Consumers are allocated to groups on the basis of their expected load pattern and use of dedicated assets. Non-standard consumer groups are those where prices apply to less than 4 consumers.

Consumer groups

Category	Standard	Description	Rationale	ICPs	GWH
Category 1	Standard	Consumers with load less than 15 kVA	All residential and general consumers fall into this category, because their consumption quantities are similar. The two are distinguished because each place different demands on the network and hence have different fixed charges, to recover demand related costs.	12,671	81
Category 2 Medium Loads	Standard	Greater than 15 kVA and less than 200 kVA	Medium size businesses fall into this category as they have a much higher consumption than Category 1 consumers. They do not necessarily place a correspondingly high demand on the network when the network is operating at its peak capacity, for example, at 6pm on a weekday. That is not to say there is no demand cost associated with this Category and the demand costs are recovered by a fixed annual amount charged on the nominal demand placed on the network. The consumption tariffs are lower than Category 1 due to the much higher usage this Category reflects.	845	54
Category 2 Large Loads	Standard	Greater than 100 kVA and less than 200 kVA	Large businesses with large electrical loads are usually sited not far from zone substations and use less of the network as a result. Their usage is monitored by meters measuring consumption every half hour so the actual demand placed on the network at any given time is easily measured. Specific charges can be applied to demand in consultation with the consumer.	17	1
Category 3 Bulk	Standard	Greater than 200 kVA capacity	Tariffs are based on demand on the network and coincident demand at the source Grid Exit Point.	18	72
Category 4 Large Bulk	Non-Standard	Greater than 2500 kVA capacity	Tariffs are based on demand on the network and coincident demand at the source Grid Exit Point.	1	63
Category 5 Otira	Non-Standard	Supply to the Otira Tunnel	Otira constitutes an isolated GXP that is not interconnected with the rest of Westpower's network, and is dedicated almost solely to the supply of KiwiRail infrastructure. This area has been ring-fenced in terms of costs (both fixed and volume related) that can rightly be attributed to the major consumer.	1	1.5
Street Lighting	Standard	Public Utility Lighting	Westpower supplies a distribution network for public lighting and recovers costs as part of its community sponsorship through community ownership.	85	1.3

6 ALLOCATION OF COSTS

6.1 Allocators

The costs represented in Section 4 are considered individually and allocated to consumer group categories using allocators that are consistent with the cost drivers set out in Section 2. Within each consumer category, methods are applied that are economically efficient, equitable and practical. These allocators and allocations of cost are discussed below.

Distribution and transmission costs are allocated as follows:

Cost Allocators

Cost item	Allocator	Rationale
Administration Costs	Number of connections	Recognises that these costs are generally shared by all consumers
Operations and Maintenance	Asset Allocator	Maintenance costs are generally incurred in proportion to the value of the asset.
Depreciation		Depreciation is the return of the capital investment in the asset base.
Return on Capital		The return on capital is allocated according to asset use, as determined by the asset allocation.
Taxation		Tax is allocated on the same basis as the return on capital.
Transmission	RCPD	Transmission costs are allocated by the demand placed on the transmission system as measured by each consumer group category's share of RCPD.

6.1.1 Number of connections

The measurement is the number of Installation Control Points (ICPs) in each consumer group.

Connections Allocator

	Lighting	Residential	General	Medium	Large	Bulk	Large Bulk	Otira	Total
No Consumers	85	10,907	1,764	845	17	18	1	1	13,638

6.1.2 Westpower Anytime Maximum Demand (AMD)

Measurements of the maximum demand throughout the year are made at all connections with the exception of Category 1 connections. Residential demand is not measured directly at the consumer's meter, but is profiled off a typical residential installation. The total Westpower maximum demand is 48,476 kW and is allocated to tariff categories as follows:

AMD Allocator

Demand (kW)	Lighting	Residential	General	Medium	Large	Bulk	Large Bulk	Otira	Total
AMD	109	10,281	4,421	13,033	1,655	15,934	2,424	618	48,476

6.1.3 Transpower Regional Coincident Peak Demand (RCPD)

Westpower's share of Upper South Island RCPD from May to September 2018 was 16.532 MW. This is much higher than the previous year, hence the increase in transmission charges this year. This is allocated to consumer group categories as follows:

RCPD Allocator

Demand (kW)	Lighting	Residential	General	Medium	Large	Bulk	Large Bulk	Otira	Total
RCPD	23	3,796	1,016	2,454	955	5,067	3,043	178	16,532

Asset allocator

Assets are allocated based on Westpower's assessment of the use of different assets by each consumer group category. Where assets are shared by most categories Westpower will allocate assets based on AMD.

The asset allocation is based on the asset value determined under the Commerce Commission input methodologies for determining RAB. The current asset valuation is \$107.7M as at 31 March 2018.

The result of asset allocation is:

Allocation of RAB values to consumer groups

Distribution Allocation	Lighting	Residential	General	Medium	Large	Bulk	Large Bulk	Otira	Total
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Subtransmission	33	3,077	1,323	3,901	495	4,769	726	0	14,325
Substations	47	4,396	1,890	5,573	708	6,813	1,037	0	20,464
Distribution	148	13,914	5,983	17,638	2,240	3,235	164	837	44,159
Equipment	68	6,361	2,735	8,063	1,024	0	0	382	18,633
Low Voltage	0	3,100	1,333	3,929	499	0	0	186	9,047
Street Lighting	754	0	0	0	0	0	0	0	754
Land	1	69	30	88	11	108	16	0	323
Total	1,049	30,917	13,294	39,192	4,977	14,925	1,943	1,406	107,704

6.2 Alignment of allocated costs to revenue

Westpower attempts to be accurate in aligning costs with revenue. However this cannot be exactly achieved in any year due to various practical constraints. In particular, applying cost allocations to prices explicitly would result in year on year price volatility, arising from changes to allocators and costs. We therefore attempt to smooth tariff changes to align to costs over time.

Westpower takes this approach as it provides pricing stability and allows consumers to make decisions on long term options with some confidence. However, where usage patterns or revenues diverge considerably from cost allocations, Westpower will consider individual changes to a particular tariff.

In practice, any difference in cost allocations is accounted for by adjusting the return on capital to balance the cost/revenue equation. These adjustments are neutral to revenue, but effectively change the return on capital for each consumer group, albeit by very small amounts. The data, for example, shows the return on capital for the general group is 2.91% against the average return of 2.90% over all assets. This partly reflects the constraints of the LFC regulations, under which Westpower cannot fully recover costs associated with supplying residential consumers.

The following table compares revenue for each consumer group category with cost allocations. The out of balance line highlights the extent of (under)/over recovery of implied cost allocations.

	Lighting	Residential	General	Medium	Large	Bulk	Large Bulk	Otira	Total
Transmission	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Transmission Cost	6	997	267	645	251	1,331	800	211	4,507
Target Revenue	6	998	267	645	251	1,332	800	207	4,507
Out of Balance	0	1	1	1	0	1	0	(3)	0
Distribution									
Administration	23	2,953	478	229	5	5	0	0	3,692
Operation and Maintenance	46	1,364	587	1,730	220	659	86	62	4,753
Depreciation	42	1,251	538	1,586	201	604	79	57	4,359
Return on Capital	30	897	386	1,138	144	433	56	41	3,126
Taxation	4	110	47	139	18	53	7	5	383
Distribution Cost	146	6,576	2,036	4,822	588	1,754	228	165	16,314
Target Revenue	146	6,581	2,036	4,815	588	1,754	228	165	16,314
Out of Balance	0	5	1	(7)	(0)	0	0	(0)	(1)
Total Target Revenue	152	7,580	2,304	5,460	839	3,086	1,028	372	20,821
Return on Asset Value	2.94%	2.92%	2.91%	2.89%	2.91%	2.91%	2.92%	2.63%	2.90%
Summary	Lighting	Residential	General	Medium	Large	Bulk	Large Bulk	Otira	Total
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Transmission	6	998	267	645	251	1,332	800	207	4,507
Distribution	146	6,581	2,036	4,815	588	1,754	228	165	16,314
Target Revenue	152	7,580	2,304	5,460	839	3,086	1,028	372	20,821

7 TARIFF OPTIONS

Westpower adopts the following types of charges:

- **Fixed charges:** All connections are charged a fixed charge per connection or per unit of capacity (kW or kVA);
- **Consumption charges:** Kilowatt hour (kWh) volume charges are applied to all Category 1 and Category 2 medium loads; and
- **Peak demand charges:** Kilowatt (kW) demand charges, as measured by TOU meters or as assessed by Westpower, are applied to Category 2 large loads and Categories 3, 4 and 5.

7.1.1 Fixed Charges

Fixed charges are applied to all connections in order to recover a minimum amount of cost, regardless of usage. This is particularly important for low use connections (ie electric fences and holiday homes), where a 100% volume related charge would not recover a reasonable proportion of costs.

Fixed charges broadly increase relative to connection capacity-size across the consumer groups:

- **Category 1 Residential:** The LFC regulations cap the fixed daily charge at 15 cents per day for low use residential consumers. Westpower has chosen to apply this regulated charge to all Category 1 residential consumers in order to avoid price segregation.
- **Streetlights/Category 1 and Category 2 Medium Loads:** The daily fixed charge is set commensurate with the higher assessed capacity requirements of these connections.
- **Category 2 Large Loads and Categories 3, 4 and 5:** Fixed charges are applied per unit of assessed capacity for the coming year (kW or kVA).

Fixed charges are presented in the tables below.

7.1.2 Volume Related Charges

Volume related charges are levied on Category 1 and 2 connections as well as on streetlight connections, and include a distribution and transmission component. This recovers the remainder of target revenue not already recovered through fixed charges. Volume charges encourage efficient use of network capacity as the more a consumer uses – the more they pay.

The volume charge is calculated using forecast kWh data for the forthcoming pricing year, but is levied upon actual consumption, measured by meters directly, or derived from the electricity market using default usage profiles provided by electricity retailers.

Overall efficiency is further enhanced if charging structures contain pricing signals designed to incentivise efficient consumption patterns. Westpower has adopted the following volume based charges to signal the peak time periods which drive capacity investments:

- **Load Control Tariffs.** Controlling heating of hot water at peak loading times goes unnoticed by consumers due to the storage capacity of hot water cylinders but greatly decreases the demand on the network. Westpower passes on these savings to consumers who have hot water control by separately metering the hot water supply and charging a lower tariff for the reduced service.
- **Day/Night (Economy) Tariffs.** Night-time network loads are light, so Westpower encourages consumers to transfer load (such as dish and clothes washing and drying) to the night period and provides a low tariff for this service. Further encouragement for this night

service is provided by slightly higher day-time tariffs when this option is chosen. However, the customer may choose when to use the energy.

- **24 hour Supply.** If load transfer tariffs do not suit consumers, they have the choice of a 24 hour tariff. This tariff is slightly higher than average to cover network costs when usage occurs due the peak load time.
- **Night Only Tariffs.** Night only tariffs are provided for loads that can only be supplied during the night-time period and cannot be overridden by the customer for use during the daytime period. This differs from the Economy Night tariff in that the customer is not able to choose when the energy will be used. The rate is higher than the Economy Night tariff because none of the other volume related components are recovered in a related daytime rate.

A balanced marketing approach must be taken when designing the above tariffs to produce pricing signals that are attractive to consumers and which, at the same time, maintain revenue. The percentage variation between the tariffs presented is derived from Westpower's experience operating in this market.

For Category 2 consumers, a volume charge recovers costs incurred on a connection basis, including costs for maintaining distribution substations and low voltage reticulation.

Similarly, fixed costs are determined to a large extent by the capacity of equipment required to supply the consumer, and so the distribution charge is based on the assessed capacity (or Notional Units of Demand) required for the coming year and remains fixed throughout the year.

Fixed and volume tariffs are presented below, along with revenue and chargeable quantities.

Category 1 – Loads less than 15 kVA

		Chargeable Quantity	Distribution Price	Transmission Price	Distribution Revenue	Transmission Revenue	Total Revenue
		kWh	c/kWh	c/kWh	\$000	\$000	\$000
Residential							
Fixed Charges	per year	10,907	15.00		597		597
Volume Charges	24hr	40,952,734	10.674	1.793	4,371	734	5,105
	Controlled	13,823,906	6.352	1.067	878	148	1,026
	Day	5,573,578	12.451	2.092	694	117	811
	Night	3,795,671	0.584		22		22
	Night only	623,866	3.024		19		19
Total Revenue		64,769,756			6,581	998	7,580
General							
		kWh	c/kWh	c/kWh	\$000	\$000	\$000
Fixed Charges	per year	1,764	74.53		480		480
Volume Charges	24hr	12,118,375	10.394	1.793	1,260	217	1,477
	Controlled	715,026	6.186	1.067	44	8	52
	Day	2,031,750	12.135	2.092	247	43	289
	Night	1,000,954	0.568		6		6
	Night only	20,682	2.944		1		1
Total Revenue		15,886,787			2,036	267	2,304

Category 2 – Loads up to 100 kVA

		Chargeable Quantity	Distribution Price	Transmission Price	Distribution Revenue	Transmission Revenue	Total Revenue
Medium Loads		kWh	c/kWh	c/kWh	\$000	\$000	\$000
Fixed Charges	per year	37,331	8.41		1,145		1,145
Volume Charges	24hr	26,911,738	8.937	1.586	2,405	427	2,832
	Controlled	2,169,735	2.996	0.532	65	12	77
	Day	11,999,412	9.707	1.723	1,165	207	1,372
	Night	12,922,323	0.253		33		33
	Night only	169,606	1.127		2		2
Total Revenue		54,172,813			4,815	645	5,460

Street Lights

Street Lighting		Chargeable Quantity	Distribution Price	Transmission Price	Distribution Revenue	Transmission Revenue	Total Revenue
		kWh	c/kWh	c/kWh	\$000	\$000	\$000
Fixed Charges		3,042	6.406		71		71
Volume Charges		1,300,128	5.779	0.465	75	6	81
Total Revenue					146	6	152

7.1.3 Peak Charges

A peak demand charge is levied on Categories 2, Large Loads and Categories 3, 4 and 5. They include a distribution and transmission component. The distribution component is recovered based on each connection's AMD. Transmission charges for Category 2 Large Loads are also recovered based on AMD. For the remaining categories, transmission charges are recovered based on the Regional Coincident Peak Demand (RCPD), aligning to how transmission charges are calculated.

Transpower's interconnection charges (the major component of Transpower charges) are calculated based on the 100 highest RCPD on the transmission system at all GXP connections in the Upper South Island. Consumers in Categories 3, 4 and 5 all have half-hour TOU metering, so it is possible to calculate the exact contribution each consumer makes to the Transpower Charge. That is, each consumer's CPD is known at the time of the 100 highest RCPD peaks and the contribution towards Westpower's costs can be allocated.

Effectively this means that the same rates will be passed through without markup to bulk consumers and furthermore, any consumers that are able to avoid the RCPD periods will, in future years, reap the benefits of avoiding the related Interconnection Charges that are passed through in Westpower's tariff as a CPD Charge (Tariff codes C3CP, C4CP and C5CP).

The principles applied in allocating transmission costs include:

- Otira is ring-fenced as far as transmission charges are concerned and KiwiRail is expected to provide full revenue recovery for this GXP, as they are the predominant consumer.
- The Interconnection Charge, including the methodology for applying it, is passed directly though to Category 3, 4 and 5 consumers in the CPD charge based upon their demand at the time of the RCPD.
- The Interconnection Charge is passed directly though to Category 2, Large Loads, consumers in the Peak Charge based upon their anytime demand.

Fixed and Peak Demand Charges – Category 2 Large Loads, and Categories 3, 4 and 5

Category 2

	Chargeable Quantity	Distribution Price	Transmission Price	Distribution Revenue	Transmission Revenue	Total Revenue
Large Loads	kW	c/kWh	c/kWh	\$000	\$000	\$000
Fixed Charges	2,707	8.41		83		83
Volume Charges	2,297	60.22	29.97	505	251	756
Total Revenue				588	251	839

Category 3

	Chargeable Quantity	Distribution Price	Transmission Price	Distribution Revenue	Transmission Revenue	Total Revenue
Bulk	kW			\$000	\$000	\$000
Fixed Charges	20,095	13.89	6.95	1,019	509	1,528
Volume Charges	14,500	13.89		735		735
	7,521		29.97		823	823
Total Revenue				1,754	1,332	3,086

Category 4

	Chargeable Quantity	Distribution Price	Transmission Price	Distribution Revenue	Transmission Revenue	Total Revenue
Large Bulk	kW			\$000	\$000	\$000
Fixed Charges	3,000	10.42	6.95	114	76	190
Volume Charges	3,000	10.42		114		114
	6,615		29.97		724	724
Total Revenue				228	800	1,028

Category 5

	Chargeable Quantity	Distribution Price	Transmission Price	Distribution Revenue	Transmission Revenue	Total Revenue
Otira	kW			\$000	\$000	\$000
Fixed Charges	514	73.97	102.76	139	193	332
Volume Charges	508	13.89		26		26
	134		29.97		15	15
Total Revenue				165	207	372

7.2 Distributed Generation (DG)

Under Part 6 of the Electricity Industry Participation Code, charges are to be based on recovery of reasonable costs incurred by distributor to connect the distributed generator and to comply with connection and operation standards within the network, and must include consideration of any identifiable avoided or avoidable costs

Westpower recognises this pricing principle as follows:

- Smaller generators can connect to the network and utilise the distribution network for delivering their generation to other connections, while only incurring a nominal network charge for the direct incremental costs involved in managing network voltage profiles during times of light load. This implicit discount to normal lines charges recognises the potential avoided transmission costs associated with local generation, which are typically small in nature given small scale DG generation does not always coincide with peak use.
- Large embedded generators are paid avoided transmission charge benefits to encourage such generators to reliably generate during transmission peak periods.

The level of the nominal charge for smaller generators to connect to the network will be carefully analysed during the 2019/20 pricing year and, once calculated, advertised as a new tariff in line with the notification timeframes contained in the EDIDD 2012.

7.3 Non-Standard charges

Two connections in Categories 4 and 5 are currently on non-standard tariffs, as each tariff applies to less than 4 connections.

Category 4 was developed in 2000 to recognise a small number of very large consumers who had effectively funded earlier investment in Westpower's network to provide the demands that their business required at the time and it would be inequitable to charge them the full marginal investment costs of providing increased demand to new consumers.

Category 4 is not open to any new customers, in virtue of the fact that they are benefiting from the significant marginal investment that Westpower has put in place since the year 2000.

The methodology for calculating non-standard prices for these groups is discussed in the pricing methodology.

The criteria to be a non-standard consumer are:

- A significant large load (eg. >2500 kVA);
- Significant use of dedicated assets (ie Otira tunnel connections); and
- Non-standard pricing requirements.

Westpower will discuss any non-standard pricing requirements on application.

The obligations and responsibilities to non-standard connections in the event of an interruption to supply are no different to that of standard consumers.

Some customers require additional security, such as an $n-1$ configuration, and this is funded directly by the customer and generally as a capital contribution.

Category 5 was specifically created for the supply of the fan extraction load at the Otira Tunnel. The associated GXP at Otira is only required because of the tunnel load, and apart from a few residential houses and a small hotel in the area, constitutes the majority of the monthly demand.

Therefore, the charges levied on the sole major consumer, Kiwi Rail, are effectively ring fence and recover the associated Transpower charges.

7.4 Changes to prices

Appendix A sets out the tariffs that apply from 1 April 2019. Details of key changes made to pricing are discussed in Section 2.

7.5 Revenue summary

The table below summarises the total projected revenue from both transmission and distribution charges from all consumer categories.

Cost Allocators

	Lighting	Residential	General	Medium	Large	Bulk	Large Bulk	Otira	Total
No Consumers	85	10,907	1,764	845	17	18	1	1	13,638
AMD (kW)	109	10,281	4,421	13,033	1,655	15,934	2,424	618	48,476
CMD (kW)	23	3,796	1,016	2,454	955	5,067	3,043	178	16,532
Consumption (GWh)	1,300	64,770	15,887	54,173	13,411	72,588	63,286	1,457	286,872

Revenue from prices

	Lighting \$000	Residential \$000	General \$000	Medium \$000	Large \$000	Bulk \$000	Large Bulk \$000	Otira \$000	Total \$000
Transmission	6	998	267	645	251	1,332	800	207	4,507
Distribution	146	6,581	2,036	4,815	588	1,754	228	165	16,314
Target Revenue	152	7,580	2,304	5,460	839	3,086	1,028	372	20,821

8 PRICING STRATEGY

This section considers Westpower's pricing strategy over the next five years.

The Electricity Authority has signalled that overall transmission charges on the West Coast may rise dramatically due to a proposed restructure of transmission pricing. Westpower will continue to lobby for a better outcome for its consumers but, regardless of the outcome of this proposal, Westpower will continue to pass through transmission charges at cost.

Smart meters are currently being rolled out across the country that have half hourly remote read and load control functionality. These new meters can facilitate more advanced forms of network pricing, most notably, mass market TOU or peak demand pricing. When and if "smart meters" are introduced to the Westpower network, Westpower will take a circumspect approach to developing and implementing TOU tariffs for Categories 1 and 2 consumers (that are currently on non-TOU meters).

Westpower note that the Electricity Authority is currently encouraging distributors to consider how they will respond to potential disruptive technologies, such as solar photovoltaic (PV) roof-top panels and electric vehicles. At this stage, Westpower is monitoring uptake of these technologies on the network, and will respond accordingly should any significant issues arise.

It is also noted that the Electricity Networks Association's Distribution Pricing Working Group (DPWG) is also investigating distribution pricing solutions to these challenges as part of its terms of reference. Westpower will monitor and consider any outcomes or recommendations from this work stream.

9 ELECTRICITY AUTHORITY PRICING PRINCIPLES CONFORMANCE

In this section Westpower sets out how it considers it meets the Electricity Authority's pricing principles. Each principle is stated, followed by Westpower's commentary.

Signal economic costs

(a) **Prices are to signal the economic costs of service provision, by:**

- i. being subsidy free (equal to or greater than incremental costs, and less than or equal to standalone costs), except where subsidies arise from compliance with legislation and/or other regulation;**

This principle sets out that prices are subsidy free where they fall within the range of incremental cost and stand alone cost:

$$\text{Incremental Cost} \leq \text{Prices} \leq \text{Stand Alone Cost}$$

Westpower considers that, as far as reasonably practical, its prices are subsidy-free as it applies a cost allocation model to allocate costs across the consumer base to determine the revenue requirement, which is then used as a basis for establishing prices for each consumer group.

Incremental Cost

Incremental cost is the cost incurred in connecting one more consumer to the network. In the long-run, incremental costs include service line connection costs and associated upstream network reinforcement costs, as well as incremental operating expenditure (eg non-network Opex).

The asset based component of incremental cost will exclude any consumer contributions or vested assets, which are paid for by the consumer upfront. Westpower's network extension policy is for the consumer to pay for all costs of connection except for the cost of a transformer and associated equipment, which is paid for by Westpower (up to 200 kVA).

The remaining incremental cost associated with operating expenditure is therefore likely to be low. Our analysis suggests that on average each new connection contributes to a \$276 increase per annum in non-network expenditure. Westpower notes a new Category 1, 24 hr residential consumer would need to consume only 2,000 kWh per annum for prices to fall below incremental cost. This highlights the situation where cross-subsidies may arise with low use connections, partly due to the low fixed charge applied under LFC regulations (capped at \$54.75 per year). The option of a higher fixed charge for non-residential consumers goes some way to resolve this issue for larger connections and is likely to mean that prices exceed incremental cost.

As discussed earlier, cross subsidies may also arise between urban and rural consumers, given the higher costs of supplying rural consumers. The table below shows urban revenue far outweighs urban operating costs, while rural revenue is far lower than operating costs.

	ICP/km	Revenue/km	Revenue	Cost
Urban:	70.15/km	\$13,113/km	\$1.5M	\$173K
Rural:	3.72/km	\$696/km	\$1.0M	\$2.2M

Stand alone cost

Stand alone cost is the cost of the consumer's next best alternative to distributed supply. The main option available to consumers to bypass the network is with small scale distributed generation (eg an off-grid solar PV plus batteries solution). The cost of installing such PV systems is currently uneconomic in most cases (circa \$50k-\$100k upfront plus ongoing regular replacement of batteries). However, this option may be economic for both the consumer and Westpower for new connections that are remote from distribution circuits. In any case, the costs of PV and battery technologies are rapidly falling. Westpower will monitor uptake of PV on the network to ensure our pricing incentivises efficient distribution investments.

- ii. *having regard, to the extent practicable, to the level of available service capacity; and***
- iii. *signalling, to the extent practicable, the impact of additional usage on future investment costs.***

Westpower has lightly loaded distribution feeders, due to the very long nature of the area supplied, and the low number of consumers on those long feeders. This requires an unusually high number of zone substations (19 in total). This configuration results in the network capacity being relatively underutilised, in some instances. Added to this, is the recent loss of two significant mining loads which has significantly reduced the load. While there is spare capacity on the network, there is no possibility of utilising this capacity by encouraging additional load, again, due to the vast extent of the network.

Nevertheless, Westpower's pricing structure seeks to signal efficient usage of existing capacity through:

- Consumer groups based on load groups;
- Fixed charges based on actual or assessed capacity requirements;
- Differentials between controlled and uncontrolled usage for Category 1 and 2 consumers; and
- TOU and night/day charges, to signal the value of consuming outside of peak periods when capacity is less constrained.

The impact of such price signals lessens the need to invest further in additional network capacity. That is, as consumers increase their use of network capacity, where practicable, they pay increased line charges:

- For Category 1 consumers there is emphasis on the volume related tariff so, as volumes increase, use of network charges increases. Additionally, because Westpower offers different tariff rates for controlled and uncontrolled use, there are incentives for consumers to have controllable loads (e.g. water heating, which makes up a material proportion of consumption, normally around 40%). In future, as smart meters become available, Westpower will enhance its tariff structures to further encourage consumers to shift discretionary loads outside of peak periods.
- For non-residential consumers, Westpower signals the costs of additional capacity usage through increasing fixed charges as consumers increase their nominated capacity. For

those consumers that have TOU metering, charges are based on on-peak demands, providing a direct price signal to reduce demands in peak periods.

- For large industrial consumers, which require increases in capacity to serve their needs or additional equipment to meet their security of supply objectives, individual prices are provided. Therefore consumers face the costs of their additional requirements directly.

In a consumer survey, conducted in September 2018, consumers were asked about pricing to lessen future investment costs. The survey provided an example of controlling air conditioning units. The survey responses indicated that Westpower should “cautiously consider demand side management initiatives”. This market segment did not reveal an obvious preference for interrupting non-critical air-conditioning if it meant long-term price rises could be avoided.

(b) Where prices on ‘efficient’ incremental costs would under-recover allowed revenues, the shortfall should be made up by setting prices in a manner that has regard to consumers’ demand responsiveness, to the extent practicable.

It is currently not practical to assess consumer demand responsiveness to set charges. Westpower, like all distributors, is forced to use tariff structures which use high volume related charges as the only practical means of differentiating consumers’ elasticity or willingness to pay. If demand is reduced, the cost to maintain the existing infrastructure is not reduced accordingly.

However, this principle is also concerned with consumer willingness to pay. Westpower note that Category 1 and 2 consumers have tariff options which weight willingness to pay against quality of supply. For example, consumers with a lower willingness to pay are likely to adopt a controlled tariff or night/day tariff over the higher priced 24 hour tariff, and accept a slightly lower quality of supply. Peak charges also incentivise consumers with a low willingness to pay to shift demand off peak.

(c) Provided that prices satisfy (a) above, prices should be responsive to the requirements and circumstances of stakeholders in order to:

- i. discourage uneconomic bypass;***
- ii. allow for negotiation to better reflect the economic value of services and enable stakeholders to make price/quality trade-offs or nonstandard arrangement for services; and***
- iii. where network economics warrant, and to the extent practicable, encourage investment in transmission and distribution alternatives (e.g. distributed generation or demand response) and technology innovation.***

Westpower’s compliance under these guidelines is achieved as follows.

Uneconomic bypass

The avoidance of uneconomic bypass is partly achieved through Westpower’s cost allocation approach to setting tariffs, whereby pricing is set below stand-alone costs, through the use of a proportional cost allocation approach.

Westpower sets specific charges for large industrial consumers to ensure that charges reflect the economic costs of service provision, thereby discouraging uneconomic bypass and allowing such consumers to negotiate their specific needs. Five years ago, Westpower installed a new zone sub-station at short-notice for a large industrial consumer, providing an enhanced security of supply for that consumer at an increased charge.

As discussed above, it may be possible for a new consumer to gain access directly to distributed generation within the Westpower network and hence by-pass the network (e.g. PV or a large embedded generator). This is unlikely due to the relatively small size of the embedded generation. If Westpower could not meet the connection costs associated with such a consumer, then this would be uneconomic and we would likely encourage the consumer to proceed, as the benefits to the community at large would outweigh the loss to Westpower.

Price/quality trade-offs

Almost all consumers have indicated a preference for paying about the same price to receive about the same reliability. This response has proved almost identical over time and across other EDBs.

Westpower provides consumers the opportunities to make price and quality trade-offs, in the design of connection to the network. This may include circuit redundancy or higher capacity transformer connections, for large consumers. The costs of higher quality are paid by the consumer (subject to a potential Westpower rebate) prior to connection of these assets as part of our Network Extensions Policy.

Transmission alternatives

Westpower offers incentives to distributed generation as a transmission alternative. This includes:

- Paying avoided transmission charge benefits to large embedded generators to encourage such generators to reliably generate during transmission peak periods.
- Allowing smaller generators to connect to the network and utilise the distribution network for delivering their generation to other connections without incurring network charges. Connection costs are applicable, as per Westpower's Distributed Generation Policy.

Distribution alternatives

Because of Westpower's peak/control-period prices, consumers have a clear value against which to assess network alternatives or behaviour changes. Many consumers, particularly major consumers, have the opportunity to turn on generators, reduce demand, or both in response to Westpower's pricing. Westpower's residential consumers heat their hot water through controlled meters in response to Westpower's very low controlled pricing rate.

(d) Development of prices should be transparent, promote price stability and certainty for stakeholders, and changes to prices should have regard to the impact on stakeholders.

Westpower's development of prices:

1. Is transparent:

- (i) through this disclosure statement, Westpower provides information on the costs it allocates to different consumer groups; and
- (ii) in addition to this disclosure, Westpower publishes a pricing schedule which details the different charges between tariffs and consumer group categories. Consumers can review charges and weigh up costs for changing capacity requirements or load profile and the resulting benefits. Every other year there is formal consultation between retailers and Westpower on pricing strategy, price category and tariff development.

- 2. Promotes price stability:** Westpower updates its cost of service model annually. To ensure price stability to consumers, any price changes made attempt to limit price shocks to any particular consumer group to less than 10%. As distribution charges, including transmission charges, make up around 30% of a typical consumer's bill, this ensures no consumer would face significant price increase due to changes in distribution charges.

3. **Promotes certainty:** Westpower endeavours to maintain its tariff structures and differentials between tariffs, so that consumers who make investments (for example in controllable loads) due to the savings between controlled and uncontrolled rates are able to realise the savings expected when the original investment was made. With the introduction of smart meters, Westpower intends to take a circumspect approach to developing and implementing TOU tariffs. This is so that consumers are not unduly disadvantaged by the introduction of smart meters. Consumers will have time to consider behavioural changes and investments to avoid adverse bill impacts.

(e) Development of prices should have regard to the impact of transaction costs on retailers, consumers and other stakeholders and should be economically equivalent across retailers.

Westpower recognises the need to minimise undue complexity for retailers, subject to its legitimate business needs to signal costs to consumers and ensure equity between consumers. 99.68% of connections (and hence retailer invoices) have the same pricing structure and the remaining 0.32% have the same structure, thereby minimising cost for retailers.

All retailers are subject to the same tariff schedules from Westpower. Therefore, Westpower considers that its prices are economically equivalent across all retailers.

10 COMMERCE COMMISSION INFORMATION DISCLOSURE CONFORMANCE

In this section Westpower sets out how it considers it meets the EDIDD 2012 requirements. Each disclosure requirement is stated, followed by Westpower's commentary.

The Electricity Authority and the Commerce Commission have very similar disclosure requirements so this section guides the reader to the relevant sections of this methodology to confirm the conformance requirements.

(a) Prices should be based on a well-defined, clearly explained and published methodology, with any material revisions to the methodology notified and clearly marked.

This pricing methodology is based on a well-defined methodology that is clearly explained and published on the company's website. There have been no material changes in methodology since the EDIDD was founded in 2012 but this 2018 disclosure has expanded on its explanations and details to better inform readers.

(b) The pricing methodology disclosed should demonstrate:

- How the methodology links to the pricing principles and any non-compliance;

See Section 9

- (i) The rationale for consumer groupings and the method for determining the allocation of consumers to the consumer groups;

See Section 3.3

- (ii) Quantification of key components of costs and revenues;

See Section 4

- (iii) An explanation of the cost allocation methodology and the rationale for the allocation to each consumer grouping;

See Section 5

- (iv) An explanation of the derivation of tariffs to be charged to each consumer group and the rationale for the tariff design;

See Section 6

- (v) Pricing arrangements that will be used to share the value of any deferral of investment in distribution and transmission assets, with the investors in alternatives such as distributed generation or load management, where alternatives are practicable and where network economics warrant.

See Sections 5.4 & 6.3

(c) The pricing methodology should:

- (i) Employ industry standard terminology, where possible;

See Glossary

- (ii) Where a change to the previous pricing methodology is implemented, describe the impact on consumer classes and the transition arrangements implemented to introduce the new methodology.

See Section 7

APPENDIX A Westpower Pricing Schedule

WESTPOWER LTD

DISTRIBUTION AND TRANSMISSION PRICES

APPLICABLE 01 APRIL 2019

ALL PRICES ARE EXCLUSIVE OF GST

Consumers	Tariff code	Units	TARIFF APRIL 2018			TARIFF APRIL 2019			
			Distribution Price (Westpower)	Transmission Price (Transpower)	Delivery Price	Distribution Price (Westpower)	Transmission Price (Transpower)	Delivery Price	
CATEGORY 1: RESIDENTIAL - WP1D									
FIXED PRICES									
Distribution Charge	WP1D	c/connection/day	15.00		15.00	15.00		15.00	
VOLUME PRICES									
Uncontrolled	9,308	D	c/kWh	10.44	2.27	12.72	10.67	1.79	12.47
Controlled	6,964	DC	c/kWh	6.21	1.35	7.57	6.35	1.07	7.42
Day and Night - Day -16 hours	1,599	DD	c/kWh	12.18	2.65	14.84	12.45	2.09	14.54
Day and Night - Night - 8 hours	1,648	DE	c/kWh	0.57	0.00	0.57	0.58	0.00	0.58
Night Boost	474	DN	c/kWh	2.96	0.00	2.96	3.02	0.00	3.02
Distributed Generation	22	DG	c/kWh	0.00	0.00	0.00	0.00	0.00	0.00
CATEGORY 1: GENERAL (Up to and including 15 kVA) - WP1N									
FIXED PRICES									
Distribution Charge	WP1N	c/connection/day	73.07		73.07	74.53		74.53	
VOLUME PRICES									
Uncontrolled	1,577	N	c/kWh	10.19	2.27	12.46	10.39	1.79	12.19
Controlled	277	NC	c/kWh	6.06	1.35	7.42	6.19	1.07	7.25
Day and Night - Day -16 hours	157	ND	c/kWh	11.89	2.65	14.54	12.13	2.09	14.22
Day and Night - Night - 8 hours	157	NE	c/kWh	0.56	0.00	0.56	0.57	0.00	0.57
Night Boost	17	NN	c/kWh	2.89	0.00	2.89	2.94	0.00	2.94
CAPACITY PRICES									
Unmetered Supply	32	WPU	c/kWh	10.19	2.27	12.46	10.39	1.79	12.19
Phone Booth Charge	21	UPB	c/kWh	15.28	0.00	15.28	15.59	0.00	15.59
Phone Cabinet Charge	25	UPC	c/kWh	6.27	0.00	6.27	6.39	0.00	6.39
CATEGORY 1: STREET LIGHTING - WPSL									
FIXED PRICES									
Distribution Charge	WPSL	c/connection/day	6.28		6.28	6.41		6.41	
VOLUME PRICES									
Public Lighting	32	SL	c/kWh	5.66	0.59	6.26	5.78	0.46	6.24
Under Verandah Lighting	28	UV	c/kWh	5.66	0.59	6.26	5.78	0.46	6.24
CATEGORY 2: MEDIUM LOAD - WP2N									
FOR LOAD GREATER THAN 15 KVA and UP TO 100 KVA									
CAPACITY PRICES									
Distribution Charge	WP2N	c/kVA/day	8.24		8.24	8.41		8.41	
VOLUME PRICES									
Uncontrolled	589	U1	c/kWh	8.76	2.01	10.77	8.94	1.59	10.52
Controlled	256	U2	c/kWh	2.94	0.67	3.61	3.00	0.53	3.53
Day and Night - Day -16 hours	336	U3N	c/kWh	9.52	2.18	11.70	9.71	1.72	11.43
Day and Night - Night - 8 hours	334	U3L	c/kWh	0.25	0.00	0.25	0.25	0.00	0.25
Night Boost	29	U5	c/kWh	1.10	0.00	1.11	1.13	0.00	1.13
CATEGORY 2: LARGE LOAD - C2F									
FOR LOAD GREATER THAN 100 KVA and UP TO 200 KVA									
CAPACITY PRICES									
Capacity Charge	17	C2F	c/kVA/day	8.24		8.24	8.41		8.41
DEMAND PRICES									
Peak Demand	17	C2P	c/kW/day	59.03	31.17	90.21	60.22	29.97	90.18
CATEGORY 3: MEDIUM BULK LOAD - C3F									
FOR LOADS GREATER THAN 200kVA									
CAPACITY PRICES									
Capacity Charge	18	C3F	c/kVA/day	13.62	6.95	20.56	13.89	6.95	20.84
DEMAND PRICES									
Distribution Peak Demand	18	C3P	c/kW/day	13.62		13.62	13.89		13.89
Transmission Coincident Peak Demand	18	C3CP	c/kW/day		31.17	31.17		29.97	29.97
CATEGORY 4: LARGE BULK LOAD - C4F									
Large Bulk (loads over 2500kVA)									
CAPACITY PRICES									
Capacity Charge	1	C4F	c/kVA/day	10.22	6.95	17.17	10.42	6.95	17.37
DEMAND PRICES									
Distribution Peak Demand	1	C4P	c/kW/day	10.22		10.22	10.42		10.42
Transmission Coincident Peak Demand	1	C4CP	c/kW/day		31.17	31.17		29.97	29.97
CATEGORY 5: SPECIAL LOAD - C5F									
Tranzrail Otira									
CAPACITY PRICES									
Capacity Charge	1	C5F	c/kVA/day	72.52	101.89	174.41	73.97	102.76	176.74
DEMAND PRICES									
Distribution Peak Demand	1	C5P	c/kW/day	13.62		13.62	13.89		13.89
Transmission Coincident Peak Demand	1	C5CP	c/kW/day		31.17	31.17		29.97	29.97
Power Factor Charge									
Annual charge per kVA of assessed correction required to bring PF up to 0.95		C2PF	\$/kVAR/year	116.82			116.82		116.82



SPECIAL DISCOUNT 2019

The Board of Westpower has resolved to provide a discount of lines charges to consumers of \$3m for 2019. The amount of each consumers discount will be provided to retailers and consumers will see the discount on their power accounts in December 2019.

Outlined below is the methodology for allocation of the special discount between customer classes. Please note that this methodology is consistent to that applied in previous years.

- a. The consumers are split into two groups, one of category 1 and 2 consumers (domestic and small to medium businesses), and the other of category 3, 4, and 5 consumers (large businesses and bulk consumers)
- b. The total discount is allocated to each group based on the proportionate share of total income received from each group.
- c. Category 3, 4 and 5 will receive a share of their entitlement based on total consumption for the 12 months ending 30 September 2019.
- d. Category 1 and 2 consumers receive a fixed amount of \$15 per consumer, with the remainder allocated on the basis of consumption for the 12 months ending 30 September 2019.