



Pricing Methodology



Effective 1 April 2015

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Revision History

Version Number	Reviewed By	Review Date	Changes Made to Methodology
11	R Griffiths	April 2015	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 2015.

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 266GWh of electricity over 2,085kms of lines and cables to supply 13,300 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.

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

The General Manager

Assets and Engineering Services

Westpower Limited

Greymouth.

2 2015 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. 2015/16 target revenue is \$20.7m 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
- Tax.

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 coincident peak demand (CPD)
- Administration costs are allocated per connection
- 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:** Domestic consumers are charged a regulated 15 cents per day. Non Domestic 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 CPD or Anytime Maximum Demand (AMD)
- **Consumption Charges:** Consumers with non-TOU meters are charged a consumption charge (Kwh).

2015 pricing methodology overview



2.2 2015 pricing changes

Westpower has used broadly the same pricing methodology for several years now. The key changes in 2015 are:

- Prices have increased to:
 - recover an overall 4% increase in costs
 - take account of changes in forecast billed quantities
 - take account of changes in allocations of costs which have been updated between consumer groups.

Category 1 domestic distribution consumption charges have increased by 1.2%, with domestic fixed charges not changing. Non-domestic charges have increased to recover the remaining target revenue. The following table details the total change in lines charges (including transmission) for the average consumer in common tariff categories.

Average price change in each consumer group

Tariff Category	Average Annual consumption (kWh)	Average AMD (kW)	Average CPD (kW)	2015/16 annual lines charges (\$'000)	2014/15 annual lines charges (\$'000)	\$ Annual Change (\$'000)	% Annual Change
Category 1 Domestic - 24 hour	4205	NA	NA	\$5,100	\$5,047	\$53	1.05%
Category 1 Non-Domestic - 24 hour	7424	NA	NA	\$1,920	\$1,906	\$14	0.77%
Category 2 Non-TOU	47333	NA	NA	\$2,633	\$2,607	\$26	1.00%
Category 2 TOU	NA	2742	NA	\$876	\$881	-\$5	-0.64%
Category 3 Bulk	NA	16968	9538	\$3,475	\$3,490	-\$15	-0.44%
Category 4 Large Bulk	NA	4435	3630	\$821	\$831	-\$10	-1.3%
Category 5 Otira	NA	438	160	\$348	\$346	\$2	0.62%

Note: 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 variable 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 24% of Westpower's line charges.
- **Coastal Terrain.** Salt air corrosion on the West Coast is severe, so all of 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 (66kV and 33kV) 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 20 zone substations valued at about \$20m.

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

While domestic consumers account for 80% of connections, they only account for 23% of consumption. The remaining load is spread across some 2700 non-domestic connections, with the 25 largest connections accounting for 46% of consumption.

3.2 Cost drivers

Westpower seeks to set prices to recover the fair and efficient costs associated with operating the business. 84% of these costs are related to operations, maintenance or investment in network assets, as well as Transpower's 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 Otira.

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 services information disclosure determination 2012 (ID Determination). 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 Domestic Consumers) Regulations 2004 (LFC Regulations):** These require Westpower to offer a tariff option to low use domestic consumers (defined as using less than 8,000kWh 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 December 2014 by Utility Consultants Limited was the 6th survey performed for Westpower by this company over the last 10 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 include the 25 largest customers, along with a random selection of 491 mass market customers pro-rated over the Reefton, Kumara, Hokitika, Greymouth and Dobson GXP areas.

Survey response rate

Response rates of 36% and 34% were achieved for the large customers and the mass market respectively.

Key findings

Key findings of the survey in terms of pricing and quality were

- Confirmation of previously obtained survey results that continuity and restoration are most important.
- A view that Westpower are very good at continuity and restoration.
- A strong preference for paying about the same to receive about the same reliability and a slight preference for sharing efficiency gains as improved reliability rather than as lower prices.

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 our pricing in such a manner that delivery costs can be easily calculated from the retailer's electricity invoices to consumers.

3.7 Network extensions 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, 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 2015/16, which we will seek to recover through prices. Target revenue has increased by 4% in total since 2014/15, resulting from a 8% increase in transmission charges and a 2% increase in distribution costs.

2015/16 Target Revenue

	2015/16 (\$000)	2014/15 (\$000)	Change (%)
Transmission Costs			
Transmission Charges	2,312	2,300	1%
Avoided Transmission Charges	2,544	2,171	17%
Otira Charges	195	195	0%
Transmission Subtotal	5050	4,664	8%
Distribution Costs			
Administration	3,417	3,343	2%
Operations and Maintenance	5,709	5,568	3%
Depreciation	3,766	3,745	1%
Return on Capital	2,407	2,290	5%
Taxation	506	482	1%
Distribution Subtotal	15,805	15,430	2%
Total Target Revenue	20,855	20,094	4%

4.1 Transmission costs

By way of explanation, the most significant change has been in the avoided transmission charges in the transmission component. This in turn, is driven by the performance of the embedded generators in terms of their generation at the time of the Upper South Island Regional Peak Demands.

Interestingly, while there was a slight decrease in transmission *prices* this year, the transmission *charge* increased significantly because of quantity changes as discussed below.

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 2015/16 Interconnection Charge rate decreased from \$114.47 per kilowatt to \$110.35 per kilowatt. However, while these particular charges have decreased, Westpower's overall transmission charges have increased because our transmission system coincident peak demand has increased from 14,761kW to 15,604kW.

4.1.2 *Avoided Transmission Costs*

Avoided transmission costs are payments 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 2015/16 year and this was partly due to the new 7.6 MW Amethyst Hydro Station being online for the first time during a winter peak demand period.

4.1.3 *Otira*

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

4.2 Distribution costs

Increased operations and maintenance expenditure is driven by a range of factors including increased compliance costs. An example, Westpower is now 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 centred 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 will be 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 next year, the long term maintenance cost will be reduced by avoiding unnecessary reactive expenditure.

In addition, Westpower is working toward gaining ISO 55000 accreditation for its asset management systems, and this requires 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.

Interestingly, 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 programmes.

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 O&M 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 increased mainly due to increases in salaries and wages.

4.2.2 Operations and Maintenance

These costs are associated with operations and maintenance of network assets. They have increased due to a number of factors, such as :-

- more regular extreme weather events
- higher compliance costs when accessing road corridors
- higher health and safety compliance costs (training, equipment etc)
- increased contractor rates
- increased plant and materials costs

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% 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 domestic consumers and small non-domestic businesses 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.	12,352	61
Category 2	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.	814	16
Category 2 TOU	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.	18	9
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.	21	71
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.	3	51
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 variable) that can rightly be attributed to the major consumer.	1	1
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.	NA	1

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

Measured as the number of connection points (ICPs) in each consumer group.

Connections Allocator

	Lighting	Domestic	Non-Domestic	Commercial	TOU	Bulk	Large Bulk	Otira	Total
Consumers #	85	10,436	1,916	814	18	21	3	1	13,294

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. Domestic demand is not measured directly at the consumer's meter, but is profiled off a typical domestic installation. The total Westpower maximum demand is 48,000 kilowatts and is allocated to tariff categories as follows:

AMD Allocator

Demand (kW)

	Lighting	Domestic	Non-Domestic	Commercial	TOU	Bulk	Large Bulk	Otira	Total
AMD	150	8,870	4,180	12,345	1,900	16,690	3,300	565	48,000

6.1.3 Transpower Regional Coincident Peak Demand (RCPD)

Upper South Island RCPD was 65,604 kilowatts from May to September 2014. Westpower's share of this was 15,604. This is higher than the previous year and contributes to higher transmission charges this year, despite the interconnection charge rate dropping from \$114.47 to \$110.35. We have allocated this to consumer group categories as follows:

RCPD allocator

Demand (kW)	Lighting	Domestic	Non-Domestic	Commercial	TOU	Bulk	Large Bulk	Otira	Total
RCPD	30	3,750	1,100	2,750	950	5,193	1,600	231	15,604

6.1.4 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 we 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 \$114.6M as at 31 March 2014.

The result of asset allocation is:

Allocation of RAB values to consumer groups

Distribution Allocation

	Lighting	Domestic	Non-Domestic	Commercial	TOU	Bulk	Large Bulk	Otira	Total
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Subtransmission	48	2,851	1,343	3,967	611	5,364	1,061	0	15,244
Substations	69	4,072	1,919	5,668	872	7,662	1,515	0	21,777
Distribution	230	13,587	6,403	18,910	2,910	3,835	253	865	46,993
Equipment	106	6,279	2,959	8,739	1,345	0	0	400	19,829
Low Voltage	0	3,065	1,445	4,266	657	0	0	195	9,628
Street Lighting	802	0	0	0	0	0	0	0	802
Land	1	64	30	89	14	121	24	0	344
Total	1,256	29,919	14,099	41,640	6,409	16,982	2,852	1,461	114,618

6.2 Alignment of allocated costs to revenue

Westpower attempts to be accurate in aligning costs with revenue but 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. The data, for example, shows the return on capital for the domestic group is 1.9% against the average return of 2.0% on all assets. This partly reflects the constraints of the LFC regulations, under which Westpower cannot fully recover costs associated with supplying domestic 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.

Cost Allocations

Revenue Requirements

	Lighting	Domestic	Non-Domestic	Commercial	TOU	Bulk	Large Bulk	Otira	Total
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Transpower Charges	4	528	155	387	134	731	225		2,164
Avoided Transmission	5	620	182	455	157	859	265		2,544
Otira Charges								204	204
Transmission Cost	9	1,148	337	842	291	1,590	490	204	4,912
Target Revenue	8	1,153	333	843	303	1,574	502	195	4,912
Out of Balance	(1)	5	(4)	1	12	(16)	12	(9)	0
Administration	22	2,683	493	209	5	5	1	0	3,417
Operation and Maintenance	63	1,490	702	2,074	319	846	142	73	5,709
Depreciation	43	1,018	480	1,417	218	578	97	50	3,901
Return on Capital	25	598	282	833	128	340	57	29	2,292
Taxation	5	127	60	176	27	72	12	6	486
Distribution Cost	158	5,916	2,016	4,710	697	1,841	309	158	15,805
Target Revenue	156	5,886	1,997	4,706	687	1,900	319	153	15,805
Out of Balance	(1)	(30)	(20)	(4)	(10)	60	9	(5)	-0
Total Target Revenue	165	7,039	2,330	5,549	990	3,475	821	348	20,717
Return on Asset Value	1.8%	1.9%	1.8%	2.0%	2.0%	2.3%	2.8%	1.1%	2.0%

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) variable charges are applied to all category 1 and category 2 non-TOU metered loads
- **Peak demand charges:** kilowatt (kW) demand charges, as measured by TOU meters or as assessed by Westpower, and are applied to category 2 TOU 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 per cent variable charge would not recover a reasonable proportion of costs.

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

- **Category 1 domestic:** The LFC regulations cap the fixed daily charge at 15 cents per day for low use domestic consumers. Westpower has chosen to apply this regulated charge to all category 1 domestic consumers in order to avoid price segregation.
- **Streetlights/Category 1 and Category 2 non-domestic:** the daily fixed charge is set commensurate with the higher assessed capacity requirements of these connections.
- **Category 2 TOU and 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 overleaf.

7.1.2 Consumption Charges

Consumption 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. Consumption charges encourage efficient use of network capacity as the more a consumer uses; the more they pay.

The consumption 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 consumption 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.** 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 Rate because none of the other variable 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 our experience operating in this market.

For Category 2 consumers, a consumption 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.

Consumption tariffs are presented below, alongside information on revenue and billing quantities.

Fixed and variable charges – Category 1, Category 2 and Streetlights

		Chargeable Quantity	Distribution Price	Transmission Price	Distribution Revenue	Transmission Revenue	Total Revenue
		kWh	c/kWh	c/kWh	\$000	\$000	\$000
Category 1 - Domestic							
Fixed Charges	per year	10,436	\$54.72		571		571
Consumption Charges							
	24hr	37,546,778	10.077	2.205	3,783	828	4,611
	Controlled	13,454,659	5.997	1.312	807	177	983
	Day	5,780,817	11.755	2.572	680	149	828
	Night	3,956,938	0.551		22		22
	Night only	829,617	2.855		24		24
Domestic Revenue		61,568,809			5,886	1,153	7,039
Category 1 - Non-Domestic							
Fixed Charges	per year	1,916	\$258.87		496		496
Consumption Charges							
	24hr	12,323,436	9.891	2.205	1,219	272	1,491
	Controlled	867,192	5.887	1.312	51	11	62
	Day	1,945,387	11.538	2.572	224	50	275

	Night	999,105	0.541		5	5
	Night only	27,778	2.802		1	1
Non-Domestic Revenue		16,162,898			1,997	333
<hr/>						
Street Lighting						
<hr/>						
	Fixed Charges	3,403	\$22.25		76	76
	Consumption Charges	1,465,867	5.5	0.572	81	8
						89
	Streetlight Revenue				156	8
						165
<hr/>						

		Chargeable Quantity kWh	Distribution Price c/kWh	Transmission Price c/kWh	Distribution Revenue \$000	Transmission Revenue \$000	Total Revenue \$000
Category 2							
Fixed Charges	per year per notional unit of demand	34,556	\$29.20		1,009		1,009
Consumption Charges							
	24hr	25,181,191	8.505	1.95	2,142	491	2,633
	Controlled	3,033,012	2.852	0.654	86	20	106
	Day	15,685,353	9.237	2.119	1,449	332	1,781
	Night	7,959,668	0.241		19		19
	Night only	65,458	1.073		1		1
Category 2 Revenue		51,924,682			4,706	843	5,549

7.1.3 Peak Charges

A peak demand charge is levied on categories 2 ToU, 3, 4 and 5, and include a distribution and transmission component. The distribution component is recovered based on each connection anytime maximum demand (AMD). Transmission charges for category 2 TOU are also recovered based on AMD. For the remaining categories, transmission charges are recovered based on Coincident Peak Demand (CPD), aligning to how Transmission charges are calculated.

Transpower's interconnection charges (the major component of Transpower charges) are calculated based on the 12 highest regional coincident peak demands (RCPD) on the transmission system at all GXP connections in the upper South Island. Consumers in categories 3-5 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 twelve 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 should be 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 in terms of consumption.
- 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 Time of Use consumers in the Peak Charge based upon their anytime demand.

Fixed and Peak Demand Charges – Category 2 TOU, 3, 4 and 5

Category 2 - TOU						
	Chargeable Quantity	Distribution Price	Transmission Price	Distribution Revenue	Transmission Revenue	Total Revenue
	kW			\$000	\$000	\$000
Fixed Charges	3,894	\$29.20		114		114
AMD Charges	2,742	\$209.16	\$110.35	574	303	876
Category 3 Bulk						
Fixed Charges	22,419	\$48.25	\$23.28	1,082	522	1,604
AMD Charges	16,968	\$48.25		819		819
CPD Charge	9,538		\$110.35		1,053	1,053
Total Revenue				1,900	1,574	3,475
Category 4 Large Bulk						
Fixed Charges	4,364	\$36.20	\$23.28	158	102	260
AMD Charges	4,435	\$36.20		161		161
CPD Charge	3,630		\$110.35		401	401
Total Revenue				319	502	821
Category 5 Otira						
Fixed Charges	514	\$256.95	\$345.50	132	178	310
AMD Charges	438	\$48.25		21		21
CPD Charge	160		\$110.35		18	18
Total Revenue				153	195	348

7.2 Distributed Generation (DG)

Under Part 6 of the Electricity Industry Participation Code, charges for distributed generation cannot exceed the incremental cost of connecting DG to the network, taking account of any avoided distribution or transmission 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 2015/16 pricing year and, once calculated, advertised as a new tariff in line with the notification timeframes contained in the information disclosure determination.

7.3 Non-Standard charges

Four connections in Categories 4 and 5 are currently on non-standard tariffs, as each tariff applies to less than 4 connections. The same prices apply to all 3 connections on Category 4.

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. Two of these consumers have recently ceased operating and it is therefore likely that the number of consumers in this category will reduce to one next year.

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 is:

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

We are willing to 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 having 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 domestic houses and a small hotel in the area, constitutes the month vast majority of the demand.

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

2015 TARIFFS

7.4 Changes to prices

Appendix A sets out the tariffs that apply from 1 April 2015. 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.

Revenue from prices

	Lighting	Domestic	Non-Domestic	Commercial	TOU	Bulk	Large Bulk	Otira	Total
Consumers #	85	10,436	1,916	814	18	21	3	1	13,294
AMD (kW)	150	8,870	4,180	12,345	1,900	16,690	3,300	565	48,000
CMD (kW)	30	3,750	1,100	2,750	950	5,193	1,600	231	15,604
Consumption (GWh)	1,466	61,569	16,163	51,925	13,411	72,588	63,286	1,457	281,865
	Lighting	Domestic	Non-Domestic	Commercial	TOU	Bulk	Large Bulk	Otira	Total
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Transmission	8	1,153	333	843	303	1,574	502	195	4,912
Distribution	156	5,886	1,997	4,706	687	1,900	319	153	15,805
Target Revenue	165	7,039	2,330	5,549	990	3,475	821	348	20,717

8 PRICING STRATEGY

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

Transmission charges will continue to be passed through at cost. Transpower has signalled that overall transmission charges will remain broadly flat in nominal terms for the foreseeable future.

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, we will take a circumspect approach to developing and implementing TOU tariffs for categories 1 and 2 consumers (that are currently on non-TOU meters).

We 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, we are monitoring uptake of these technologies on the network, and will respond accordingly should any significant issues arise.

We note 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. We will monitor and consider any outcomes or recommendations from this workstream.

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 200kVA).

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 \$260 increase per annum in non-network expenditure (2014 real). We note a new Category 1 24 hr domestic consumer would need to consume only 2,000kWh per annum for prices to fall below incremental cost. This highlights cross-subsidies 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-domestic 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 (20 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 our 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
- **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 variable 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-domestic 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 August 2013, 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 variable consumption 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. We 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. Two 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 (eg 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 our 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;
- (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 make up around 37% 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 ID Determination 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 IDD was founded in 2012 but this 2015 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 CHARGES								
APPLICABLE 01 APRIL 2015								
ALL CHARGES ARE EXCLUSIVE OF GST								
CATEGORY 1 DOMESTIC	CONSUMERS	CODES	TARIFF APRIL 2014			TARIFF APRIL 2015		
FIXED CHARGES:								
DISTRIBUTION CHARGE - per 12 month period			WP1D			\$54.72		
UNIT CHARGES (VARIABLE):								
Tariff Name		Tariff code	Westpower Distribution (cents per unit)	Trans Power Transmission (cents per unit)	Total Variable Line Charges (cents per unit)	Westpower Distribution (cents per unit)	Trans Power Transmission (cents per unit)	Total Variable Line Charges (cents per unit)
Domestic 24hr	8929	D	9.957	2.183	12.140	10.077	2.205	12.282
Controlled 17hr	6780	DC	5.926	1.299	7.225	5.997	1.312	7.309
Economy, day	1648	DD	11.616	2.547	14.163	11.755	2.572	14.327
Economy, night	1648	DE	0.545	0.000	0.545	0.551	0.000	0.551
Night only	594	DN	2.821	0.000	2.821	2.855	0.000	2.855
CATEGORY 1 NON-DOMESTIC (For loads less than 15 kVA)								
DISTRIBUTION CHARGE - per 12 month period			WP1N			\$258.87		
UNIT CHARGES (VARIABLE):								
Tariff Name								
Non-domestic 24hr	1660	N	9.793	2.183	11.976	9.891	2.205	12.096
Controlled 17hr	322	NC	5.829	1.299	7.128	5.887	1.312	7.199
Economy, day	176	ND	11.424	2.547	13.971	11.538	2.572	14.110
Economy, night	178	NE	0.536	0.000	0.536	0.541	0.000	0.541
Night only	21	NN	2.774	0.000	2.774	2.802	0.000	2.802
Unmetered Supply	6	WPU	9.793	2.183	11.976	9.891	2.205	12.096
Phone Booth Charge	35	UPB	14.689	0.000	14.689	14.836	0.000	14.836
Phone Cabinet Charge	30	UPC	6.025	0.000	6.025	6.085	0.000	6.085
STREET LIGHTING:								
FIXED CHARGES:								
DISTRIBUTION CHARGE per 12 month period per light			WPSL			\$22.25		
UNIT CHARGES (VARIABLE):								
Tariff Name								
Public Lighting	68	SL	5.445	0.566	6.011	5.500	0.572	6.072
Under Verandah Lighting		UV	5.445	0.566	6.011	5.500	0.572	6.072
CATEGORY 2								
FOR LOAD GREATER THAN 15 KVA and UP TO 200 KVA								
FIXED CHARGES:								
DISTRIBUTION CHARGE - per 12 month period per Notional Unit of Demand			WP2N			\$28.91		
UNIT CHARGES (VARIABLE):								
Tariff Name								
Non Domestic 24hr	532	U1	8.421	1.931	10.352	8.505	1.950	10.455
Non Domestic Controlled	276	U2	2.823	0.648	3.471	2.852	0.654	3.506
Non Domestic Economy, day	336	U3N	9.146	2.098	11.244	9.237	2.119	11.356
Non Domestic Economy, night	336	U3L	0.239	0.000	0.239	0.241	0.000	0.241
Non Domestic Night	26	U5	1.062	0.000	1.062	1.073	0.000	1.073
CATEGORY 2 (TIME OF USE METERING)								
FOR LOAD GREATER THAN 100 KVA and UP TO 200 KVA								
Fixed Annual Capacity Charge. (per kW per year)	17	C2F	\$28.91		\$28.91	\$29.20		\$29.20
Peak charge. (per kW per year)	17	C2P	\$207.09	\$114.47	\$321.56	\$209.16	\$110.35	\$319.51
CATEGORY 3								
BULK (loads over 200kVA)								
Fixed Annual Capacity Charge. (per kVA per year)	18	C3F	\$47.77	\$23.05	\$70.82	\$48.25	\$23.28	\$71.53
Peak charge. (per kW per year)	18	C3P	\$47.77		\$47.77	\$48.25		\$48.25
Transpower Coincident peak demand per kW per year	18	C3CP		\$114.47	\$114.47		\$110.35	\$110.35
CATEGORY 4								
Large Bulk (loads over 2500kVA)								
Fixed Annual Capacity Charge:	3	C4F	\$35.84	\$23.05	\$58.89	\$36.20	\$23.28	\$59.48
Peak charge. (per kW per year)	3	C4P	\$35.84		\$35.84	\$36.20		\$36.20
Transpower Coincident peak demand per kW per year	3	C4CP		\$114.47	\$114.47		\$110.35	\$110.35
CATEGORY 5								
Tranzrail Otira								
Fixed Annual Capacity Charge:	1	C5F	\$254.41	\$342.98	\$597.39	\$256.95	\$345.50	\$602.45
Peak charge, per kW per year:	1	C5P	\$47.77		\$47.77	\$48.25		\$48.25
Transpower Coincident peak demand per kW per year	1	C5CP		\$114.47	\$114.47		\$110.35	\$110.35
Power Factor Charge								
Annual charge per kVA of assessed correction required to bring PF up to 0.95		C2PF	\$115.66			\$116.82		