

# Wellington Electricity Lines Limited

# 2015/16 Pricing Methodology Disclosure

Pursuant to:

Electricity Distribution Information Disclosure Determination 2012 Distribution Pricing Principles and Information Disclosure Guidelines 2010

31 March 2015

# 2015/16 PRICING METHODOLOGY DISCLOSURE

# Shortened forms

Abbreviation	Definition or description
2015/16 Disclosure of Prices	Wellington Electricity Lines Limited's 2015/16 Disclosure of Prices
Capacity	The amount of energy that a part of the network is able to carry
Commission	New Zealand Commerce Commission (NZCC)
Consumer	A person that consumes or acquired electricity lines services
Consumer Group	The category of consumer used by the EDB for the purpose of setting prices
Controlled Load	The Distributor controls the hours in which electricity supply is made available
CPI	Consumer Price Index
CPI-X	CPI minus X is a common form of price regulation which permits annual price increases (or decreases) in real terms based on a predetermined X value <sup><math>1</math></sup>
Demand	Energy consumption at a point in time
Distributed generator	Any person who owns or operates equipment that is connected to Wellington Electricity Lines Limited's distribution network, including through a consumer installation, and is capable of injecting electricity into Wellington Electricity Lines Limited's network
DPP Determination 2015	Decision No. NZCC 33, Electricity Distribution Services Default Price-Quality Path Determination 2015
EDB	Electricity Distribution Business
Electricity Authority	The Electricity Authority or, as appropriate, its predecessor the Electricity Commission
Electricity Network	Is the electricity distribution network owned by Wellington Electricity Lines Limited for the conveyance of electricity. The distribution network includes but is not limited to the substations, lines, poles, transformers, circuit breakers, switchgear, cabling,

<sup>&</sup>lt;sup>1</sup> Refer section 8.2, "Electricity Distribution Services Default Price-Quality Path Determination 2015", 28 November, 2014.

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Abbreviation	Definition or description
	associated fittings, and other fittings, fixtures, control and operations equipment and facilities, fuses and isolating devices
GXP	A Transpower grid exit point
HV	High Voltage – equipment or supplies at voltages of 11kV, 22kV or 33kV
ID Determination 2012	Decision No. NZCC 22, Electricity Distribution Disclosure Determination 2012, 1 October 2012
ID Guidelines 2010	Electricity Authority's, Distribution Pricing Principles and Information Disclosure Guidelines, February 2010
IM Determination 2012	Decision No. NZCC26 Electricity Distribution Services Input Methodologies Determination 2012
LFC Regulations	Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulation 2004
LRMC	Long Run Marginal Costs
LV	Low Voltage – equipment or supply at a voltage of 220 V single phase or 415 V three phase
MAR	Maximum Allowable Revenue
Network	Means Wellington Electricity Lines Limited's Electricity Network
Point of Connection	A point at which a consumer's fittings interconnect with the Network as described by diagrams <sup>2</sup> as used from time to time by Wellington Electricity Lines Limited
Power Factor (PF)	A measure of the ratio of real power to total power of a load. The relationship between real, reactive and total power is as follows: PF = Real Power (kW) / Total Power (kVA) Total Power $(kVA = (kW^2 + kVAr^2)^{0.5}$
Pricing Methodology Disclosure	Wellington Electricity Lines Limited's Pricing Methodology Disclosure Document
WELL	Wellington Electricity Lines Limited

<sup>&</sup>lt;sup>2</sup> Regional diagrams can be found in section 2.9 of "Electricity Network Pricing Schedule, Module 15"

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# 1 Introduction

This document describes WELL's pricing methodology for the 2015/16 disclosure year commencing 1 April 2015. This document has been prepared in accordance with clause 2.4 of the ID Determination 2012 and demonstrates consistency with the ID Guidelines 2010.

## **1.1** Disclosure Requirements

WELL is a supplier of electricity distribution lines services and is regulated by:

- The Commerce Commission under Part 4 of the Commerce Act 1986; and
- The Electricity Authority under the Electricity Industry Act 2010.

Part 4 of the Commerce Act 1986 states that all suppliers of electricity lines services are subject to information disclosure regulation by the Commerce Commission.<sup>3</sup> The purpose of information disclosure regulation is to ensure that sufficient information is readily available to interested persons to assess whether the purpose of Part 4 is being met.<sup>4</sup>

The Commerce Commission's ID Determination 2012 specifies that each EDB must publicly disclose its pricing methodology before the start of each disclosure year commencing 1 April.

Additionally, the Electricity Authority's ID Guidelines 2010 set out voluntary principles and guidelines for information disclosure relating to EDBs pricing methodologies.

The requirements of clause 2.4 of the ID Determination 2012 are as follows:

Disclosure of pricing methodologies

- 2.4.1 Every EDB must publicly disclose, before the start of each disclosure year, a pricing methodology which-
  - (1) Describes the methodology, in accordance with clause 2.4.3 below, used to calculate the prices payable or to be payable;
  - (2) Describes any changes in prices and target revenues;
  - (3) Explains, in accordance with clause 2.4.5 below, the approach taken with respect to pricing in non-standard contracts and distributed generation (if any);
  - (4) Explains whether, and if so how, the EDB has sought the views of consumers, including their expectations in terms of price and quality, and reflected those views in calculating the prices payable or to be payable. If the EDB has not sought the views of consumers, the reasons for not doing so must be disclosed.

<sup>&</sup>lt;sup>3</sup> Section 54F of the *Commerce Act 1986* 

<sup>&</sup>lt;sup>4</sup> Section53A of the *Commerce Act 1986* 

- 2.4.2 Any change in the pricing methodology or adoption of a different pricing methodology, must be publicly disclosed at least 20 working days before prices determined in accordance with the change or the different pricing methodology take effect.
- 2.4.3 Every disclosure under clause 2.4.1 above must-
  - (1) Include sufficient information and commentary to enable interested persons to understand how prices were set for each consumer group, including the assumptions and statistics used to determine prices for each consumer group;
  - (2) Demonstrate the extent to which the pricing methodology is consistent with the pricing principles and explain the reasons for any inconsistency between the pricing methodology and the pricing principles;
  - (3) State the target revenue expected to be collected for the disclosure year to which the pricing methodology applies;
  - (4) Where applicable, identify the key components of target revenue required to cover the costs and return on investment associated with the EDB's provision of electricity lines services. Disclosure must include the numerical value of each of the components;
  - (5) State the consumer groups for whom prices have been set, and describe-

(a) the rationale for grouping consumers in this way;

(b) the method and the criteria used by the EDB to allocate consumers to each of the consumer groups;

- (6) If prices have changed from prices disclosed for the immediately preceding disclosure year, explain the reasons for changes, and quantify the difference in respect of each of those reasons;
- (7) Where applicable, describe the method used by the EDB to allocate the target revenue among consumer groups, including the numerical values of the target revenue allocated to each consumer group, and the rationale for allocating it in this way;
- (8) State the proportion of target revenue (if applicable) that is collected through each price component as publicly disclosed under clause 2.4.18.
- 2.4.4 Every disclosure under clause 2.4.1 above must, if the EDB has a pricing strategy-
  - (1) Explain the pricing strategy for the next 5 disclosure years (or as close to 5 years as the pricing strategy allows), including the current disclosure year for which prices are set;
  - (2) Explain how and why prices for each consumer group are expected to change as a result of the pricing strategy;
  - (3) If the pricing strategy has changed from the preceding disclosure year, identify the changes and explain the reasons for the changes.

- 2.4.5 Every disclosure under clause 2.4.1 above must-
  - (1) Describe the approach to setting prices for non-standard contracts, including-

(a) the extent of non-standard contract use, including the number of ICPs represented by non-standard contracts and the value of target revenue expected to be collected from consumers subject to non-standard contracts;

(b) how the EDB determines whether to use a non-standard contract, including any criteria used;

(c) any specific criteria or methodology used for determining prices for consumers subject to non-standard contracts and the extent to which these criteria or that methodology are consistent with the pricing principles;

(2) Describe the EDB's obligations and responsibilities (if any) to consumers subject to non-standard contracts in the event that the supply of electricity lines services to the consumer is interrupted. This description must explain-

(a) the extent of the differences in the relevant terms between standard contracts and non-standard contracts;

(b) any implications of this approach for determining prices for consumers subject to non-standard contracts;

(3) Describe the EDB's approach to developing prices for electricity distribution services provided to consumers that own distributed generation, including any payments made by the EDB to the owner of any distributed generation, and including the-

(a) prices; and

(b) value, structure and rationale for any payments to the owner of the distributed generation.

# **1.2** Related Pricing documents

In addition to this Pricing Methodology Disclosure document, the following pricing related material is available on WELL's website:<sup>5</sup>

- 2015/16 Disclosure of Prices;
- 2015/16 Line Charge Notice;
- 2015/16 Electricity Network Pricing Schedule (Module 15);
- 2015/16 Transmission Pass Through Methodology; and
- Customer Contributions Policy.

<sup>&</sup>lt;sup>5</sup> Available at: <u>http://www.welectricity.co.nz/disclosures</u> - 2015 Pricing

# 2 Consumer Groups and Pricing

This section of the document provides the following information requirements:

- Reasons and criteria for consumer groups;
- Setting of current prices;
- Change in price from prior disclosure year;
- Obligations and responsibilities to consumers on non standard contracts; and
- Consumer views on pricing.

# 2.1 Reasons and Criteria for Consumer Groups

Clauses 2.4.3(5) and 2.4.5(1)(b) of the ID Determination 2012 requires the reasons and criteria for consumer groups to be stated.

WELL has the following consumer groups:

- Standard contracts
  - Unmetered;
  - Residential;
  - Non-Residential Low Voltage Connection;
  - Non-Residential Transformer Connection;
  - Industrial; and
- Non Standard Individual Contracts

WELL's Electricity Line Charges Schedule<sup>6</sup> sets out prices set for the 2015/16 pricing year for the Standard Contract customer groups.

WELL groups consumers by voltage level connection and consumer type. The consumer groups are categorised broadly by their load characteristics and their use of different electricity assets drives homogeneous consumer groupings. As an example the large industrial consumer group does not make use of the 400 volt low voltage (LV) reticulation network. These homogeneous groups are determined by the step change in costs to serve these consumers.

The following sets out the criteria used by WELL to allocate consumers to consumer groups:

# Unmetered

The Unmetered consumer group includes consumers who do not have any metering because the cost of metering is prohibitive relative to their consumption.

#### Residential

The Residential consumer group adheres to the definition of "Domestic consumer" in the LFC Regulations, where the primary use of the point of connection is a private

<sup>&</sup>lt;sup>6</sup> Available at: <u>http://www.welectricity.co.nz/disclosures</u> - 2015 Pricing

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dwelling not normally used for any business activity. This consumer group almost exclusively use the Low Voltage Network, they place similar capacity demands on the network and they can utilise night and controlled load tariffs. This consumer group is further split between low and standard users. A low user is a residential consumer who consumes less than 8000 kWh per year and who is on a low user residential retailer tariff option. The LFC Regulations mandates a low fixed lines charge of 15 cents per day. A standard user is a residential consumer who consumes more than 8000 kWh per year.

#### Non Residential Low Voltage Connection

The Non Residential Low Voltage Connection consumer group has consumers with connection of up to 1500kVA capacity, in a non-private dwelling used for business activity and receive supply from WELL's Low Voltage Network.

## Non Residential Transformer Connection

The Non Residential Transformer Connection consumer group has consumers with connection up to and including 1500kVA capacity, on a non-private dwelling used for business activity and receives a supply from a transformer owned by WELL dedicated to supplying a single consumer.

#### Industrial

The Industrial consumer group has consumers with a High Voltage connection greater than 1500kVA capacity, on a non-private dwelling used for business activity. Applicable tariffs for these connections are determined on a locational basis which is in one of three service areas, CBD, Urban and Rural. The service areas are outlined in Figure 2. To meet this level of capacity considerable and often dedicated investment in network assets is required.

#### Non standard contracts

The non standard contracts consumer group is made up of consumers who have unusual connection characteristics which makes a standard contract inappropriate. For non-standard consumers a confidential contractual agreement exists between WELL and the individual consumer which determines the terms and conditions for the supply of the electricity lines services and price.

In accordance with its Customer Contributions Policy<sup>7</sup> WELL uses the following criteria to determine if a non standard contract is appropriate:

- the consumer represents an unusual credit risk; or
- the consumer wants to reserve future network capacity; or
- there are unusual asset ownership or demarcation issues; or
- the consumer and/or WELL wishes to contract for additional services not covered in standard contracts; or
- the site to be connected has unusual locational or security issues; or
- the connection relates to a commercial subdivision (including a multi-floor high rise building) and single connection via a dedicated substation 1.5MVA and above or is a high voltage (11,000 volts and above) connection; or

<sup>&</sup>lt;sup>7</sup> Available at: <u>http://www.welectricity.co.nz/disclosures</u> - 2015 Pricing

• any other unusual circumstances that WELL, at its discretion, considers warrants the use of a non standard rather than standard contract.

The following table depicts the relationship between the consumer group and load characteristics.

	Unmetered	Residential	Low Voltage	Transformer	Industrial	Non Standard individual contracts
<1kVA	~	×	×	×	×	×
<=15kVA	×	√	√	~	×	×
>15kVA & <=69kVA	×	×	√	~	×	×
>69kVA & <=138kVA	×	×	√	√	×	×
>138kVA & <=300kVA	×	×	✓	~	×	×
>300kVA & <=1500kVA	×	×	×	×	~	~
>1500kVA	×	×	×	×	~	~

Table 1 – Consumer group and load characteristics

# 2.2 Setting of Current Prices

WELL sets prices differently for consumers on standard contracts versus those on non standard contracts.

# Standard contracts

In accordance with Clause 2.4.3(1) of the ID Determination 2012, WELL's 2015/16 disclosure year prices for standard consumers are set:

- In accordance with the Electricity Distribution Services Default Price-Quality Path Determination 2015 which requires WELL to apply a weighted average price-cap based on a specified Maximum Allowable Revenue and the forecast change in constant price revenue growth;
- Including a forecast of Recoverable and Pass-through costs;
- In compliance with the LFC Regulations; and
- In such a way that revenue lies between the stand-alone and avoidable cost for each consumer group (refer to section 3 for further information).

#### Non standard contracts

Information regarding setting prices for non standard contracts, is required under clause 2.4.5(1)(a) and (c) of the ID Determination 2012.

For Non Standard Individual contracts established prior to the transfer of ownership of the network in 2009, WELL will honour the previously agreed connection policy and price. For Non Standard Individual contracts established under WELL's ownership, WELL applied the methodology in accordance with section 2.1C of the

Customer Contributions Policy.<sup>8</sup> WELL's Customer Contributions Policy describes the extent to which the policy is consistent with the relevant pricing principles.

The table below provides the information on the extent of non-standard contract use.

Non Standard Contract Statistics	Total
Number of Non Standard Contracts	9
Number of ICPs	31
2015/16 Target Revenue	\$ 2,794,873
Table 2 New Standard Contract Stat	.0

Table 2 – Non Standard Contract Statistics<sup>9</sup>

#### Distributed generators

In accordance with Clause 2.4.5(3)(a) of the ID Determination 2012, Distributed generators may be on either standard or non-standard contracts depending on the circumstances as described in section 2.1.

The prices for distributed generators on standard contracts for the supply of electricity distribution services are determined in accordance with the discussion of standard contracts within this section.

The prices for distributed generators on non standard contracts for the supply of electricity lines services are determined in accordance with the discussion of non-standard contracts within this section.

For further information on connection of distributed generation refer to our web-site: <u>http://www.welectricity.co.nz/getting-connected/generating-your-own-electricity/</u>

# Other Charges - Electricity

There are a number of Other Charges that WELL charge when applicable. Table 3 provides the charges applicable for the 2015/16 period.

Charge	Unit	Charge Applicable 1 April 2015 to 31 March 2016
New connection fee - single phase connection	per connection point	117.00
New connection fee - two or three phase connection	per connection point	365.00
Site visit fee	per site visit	152.00
Permanent disconnection fee	per point of disconnection	233.00
Late, incorrect or incomplete consumption fee data	per hour	122.00

#### Table 3 – Other Charges

WELL's 2015-16 Network Pricing Schedule<sup>10</sup> provides further description of the Other Charges.

<sup>&</sup>lt;sup>8</sup> Available at: <u>http://www.welectricity.co.nz/disclosures</u> - 2015 Pricing

<sup>&</sup>lt;sup>9</sup> Target Revenue includes transmission and pass through cost recovery

<sup>&</sup>lt;sup>10</sup> Available at: <u>http://www.welectricity.co.nz/disclosures</u> - 2015 Pricing

#### 2.3 Change in Price from Prior Disclosure year

In accordance with Clauses 2.4.1(2) and 2.4.3(6) of the ID Determination 2012, the 2015/16 prices, applying to consumers on standard contracts, have been adjusted from 2014/15 prices for the impact of changes in:

- Regulated Default Price-Quality Path Price Adjustment determined by the Commerce Commission;<sup>11</sup>
- Transpower Transmission Charges;<sup>12</sup>
- Other Pass Through and Recoverable Costs;<sup>13</sup>
- The Consumer Price Index (CPI)<sup>14</sup>; and
- The balance between fixed and variable tariffs for standard users.

## Regulated Default Price-Quality Path Price Adjustment:

As a regulated electricity distributor WELL is governed by the Commerce Act 1986. This means that WELL is subject to a "default price-quality path" set by the Commerce Commission. In 2014 the Commerce Commission reset the default price-quality path applying for the period from 1 April 2015 to 31 March 2020. The 2015/16 year is therefore the first year of the new price-quality path and hence a 'starting price adjustment' applies. This starting price adjustment re-sets WELL's prices to a level that is intended to enable WELL to recover its allowable notional revenue, as determined by the Commerce Commission.

#### Transpower Transmission charges:

This is the fee charged by the national electricity grid operator, Transpower, to transport energy from generators to the Wellington network. WELL passes this fee on to its customers at cost.

#### Other Pass through and Recoverable costs:

This includes Local Council rates, Commerce Commission levies, Electricity Authority levies, Electricity and Gas Complaints levies and Avoided Cost of Transmission payments. Wellington Electricity passes on these charges to customers at cost.

#### Consumer Price Index (CPI) adjustment:

This adjusts our pricing in line with inflation.

#### Balance between fixed and variable tariffs for standard users:

WELL provides tariffs that reflect consumer demand for energy and comply with the LFC Regulations. Low user tariffs are applicable for consumers who use less than 8,000 kWh per annum and standard user tariffs apply to consumers who use more than 8,000 kWh per annum. Standard users have a higher fixed daily charge to reflect

<sup>&</sup>lt;sup>11</sup> As determined in section 8 of the Electricity Distribution Services Default Price-Quality Path Determination 2015

<sup>&</sup>lt;sup>12</sup> As defined in clause 1.4.3 of the Electricity Distribution Information Disclosure Determination 2012

<sup>&</sup>lt;sup>13</sup> As defined in clause 1.4.3 of the Electricity Distribution Information Disclosure Determination 2012

<sup>&</sup>lt;sup>14</sup> As defined in clause 1.1.4 of the Electricity Distribution Services Input Methodologies Determination 2012

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the increased capacity used by these consumers. As at 1 April 2015, the fixed daily charge for standard users has increased from 90 cents per day to one dollar per day. Whilst standard users will have a higher fixed daily charge, they will also have a larger than average reduction in their variable charge (\$/kWh). WELL has reduced the standard user variable charge (\$/kWh) by an average -22% as a result of the increased fixed daily charge.

Table 4 indicates the overall proportional impact on lines charges (including nonstandard and standard contracts) from 2014/15 to 2015/16 as a result of the impact of the above factors. Table 4 also reflects the changes in target revenue from 2014/15 to 2015/16.

Change in Average Lines Charge Price Compo	nent
Methodology Inputs	%
Regulated Starting Price Adjustment 15	-8.57%
Transpower Transmission Charges 16	-2.26%
Other Pass Through and Recoverable Costs	0.09%
Consumer Price Index (CPI) Adjustment $\pi$	0.88%
Total Change	-9.86%

 Table 4 – Change in Lines Charge Price Component

The change in lines charges for 2015/16 is expected to result in an overall decrease in the average customers annual lines charges of 9.86%, when fixed and variable kWh charges are aggregated together.

The above table highlights the average change in the lines charge component of a consumer's electricity bill. Our lines charges represent around 30% - 40% of the total electricity bill paid by consumers. Consumers should be aware that energy retailers will package up our tariffs into their own tariffs charged to consumers and the actual impact on consumer electricity bills will vary according to their price plan, consumption and market variations. Consumers should check with their energy retailer to understand the actual impact on their total electricity bill.

For consumers on non-standard contracts WELL increased the Distribution Charge price component from 2014/15 in accordance with conditions of the individual contracts. Total line charges are the sum of the Distribution and Transmission charges. Transmission Charges are applied to non-standard contracts in accordance with WELL's *Transmission pass through methodology*.<sup>18</sup>

<sup>&</sup>lt;sup>15</sup> The change in Distribution Line Charges associated with the Starting Price Adjustment is -15.03%.

<sup>&</sup>lt;sup>16</sup> The change in Transmission Line Charges associated with the Transpower Transmission Charges is -5.82%.

<sup>&</sup>lt;sup>17</sup> The change in Distribution Line Charges associated with the CPI Adjustment is 1.44%.

<sup>&</sup>lt;sup>18</sup> Available at: <u>http://www.welectricity.co.nz/disclosures</u> - 2015 Pricing. This document is updated twice per disclosure year to reflect the change to the transmission costs payable by WELL to Transpower, changes are effective 1 April and 1 July.

#### 2.4 Obligations and responsibilities to consumers on Non Standard Contracts

In accordance with 2.4.5(2) of the ID Determination 2012, all of WELL's nonstandard contracts contain the same commitments to supply security or restoration priority as WELL's standard Use of Network Agreement with some special conditions:

- Two non-standard contracts commit WELL to contract specific communications protocols in the event of supply disruption;
- None of WELL's non-standard pricing is affected by supply disruptions; and
- WELL has one non-standard contract where certain types of supply disruptions impose financial obligations on WELL.

As noted above, where WELL's non standard individual contracts were established prior to the transfer of ownership of the network in 2009, WELL will honour the previously agreed connection policy and price.

## 2.5 Consumer views on pricing

In accordance with Clause 2.4.1(4) of the ID Determination 2012, in December 2011 WELL undertook a consumer survey which contacted a random sample of 3,120 consumers; of those 412 agreed to take part in the survey.

The responses to questions raised in the survey regarding consumers expectations of price and quality is reflected in the following Table 5.

Question	No	Yes	Unsure
Would you be prepared to pay a bit more for your power if it meant fewer power cuts?	77%	14%	9%
Would you be prepared to have slightly more power cuts if it meant prices were a bit cheaper?	75%	20%	5%

Table 5 – Survey Questions

On the basis of the responses received, WELL determined that the majority of consumers were comfortable with the current price/quality balance and that there was no reason to change the approach to calculating prices from prior years.

WELL intends to undertake a similar survey in 2015 to measure whether consumer views on pricing have changed in any way since the last survey in 2011.

# 3 Target Revenue

In accordance with Clauses 2.4.1(2) and 2.4.3(3),(4) of the ID Determination 2012, the target revenue expected to be collected in the 2015/16 Disclosure year is \$159.5 million. This is determined in accordance with the "Electricity Distribution Services Default Price-Quality path Determination, 2015" (28 November, 2014).

Table 6 outlines key cost components required to cover the costs and return on investment for the 2015/16 year associated with WELL's provision of electricity lines services in accordance with the DPP Determination 2015.

Key cost allowance in accordance with DPP decision	Building Block Allowance (\$m)
Opex	32.0
Depreciation	29.8
Return on capital	31.7
Tax allowance	9.2
Recoverable costs	63.0
Pass-through costs	3.4
MAR allowed under DPP decision	98.8

Table 6 – Key cost components to cover provision of electricity line services<sup>19</sup>

In accordance with Clause 2.4.3(7) of the ID Determination 2012 Table 7 outlines the target revenue allocated to each consumer group for the 2015/16 Disclosure year.

Target Revenue by consumer group							
Consumer Group	\$m						
Unmetered	3.8						
Residential	97.0						
Low Voltage	37.7						
Transmission	12.5						
Industrial	5.7						
Non Standard Individual Contracts	2.8						
Total	159.5						

Table 7 – Target Revenue by consumer group<sup>20</sup>

A Stand-alone and Avoidable cost methodology is used to allocate the target revenue amount to consumer groups. These costs are compared with the weighted average revenue derived from WELL's tariffs.

<sup>&</sup>lt;sup>19</sup> Opex, Depreciation, Return on capital and Tax allowance are the 2015/16 values provided in the DPP Determination 2015. Recoverable costs and Pass-through costs are determined for the 2015/16 period in accordance with the requirements in the DPP Determination 2015.

<sup>&</sup>lt;sup>20</sup> Includes Pass through and Recoverable costs, including transmission charges.

#### **Definition of Stand-alone and Avoidable cost**

These two categories of cost may be defined as follows:

The *Stand-alone cost* of serving a consumer group is the cost of developing and operating distribution infrastructure in order to serve the consumer group in question. Stand-alone cost is a forward looking concept and considers the costs of entry based on current market conditions and technology. Where the network business recovers more revenue than the stand-alone cost of serving a consumer class, it follows that a hypothetical alternate supplier may enter the market and supply that particular consumer group. Prices above the stand-alone cost could not therefore be sustained in a competitive market and may create the possibility of efficient bypass of the existing infrastructure; and

The *Avoidable cost* for a consumer group is the cost that would be avoided should the distribution business no longer serve that specific consumer group (whilst all other groups remained supplied). If a consumer group were to be charged below the avoidable cost, it would be economically beneficial for the business to stop supplying that consumer group as the associated costs would exceed the revenue obtained from the consumer. Further, where avoidable costs are higher than revenue recovered, the associated tariff levels may also result in inefficient levels of consumption, hence the rationale for having avoidable costs as a lower bound.

# Methodology of calculating Stand-alone and Avoidable costs

## Stand-alone costs

Stand-alone costs comprise both the capital and operating costs of service provision. The stand-alone network capital cost for each tariff class was derived from an estimate of the proportions of the cost of providing network infrastructure that would need to remain in place to service the load in each of the tariff classes in turn, if the other tariff classes were no longer required to be supplied. The stand-alone operating costs for a consumer class has been estimated as the total of all operating cost less the avoidable operating costs of serving all the other tariff classes.

#### Avoidable costs

In a similar manner to the stand-alone costs, the avoidable costs associated with each of the consumer classes were derived from an estimate made of the network costs that could be avoided, in the event that each of the consumer classes were no longer served.

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The revenue expected to be recovered from each of WELL's consumer groups in 2015/16 is based on setting tariffs such that revenues lie within the stand-alone and avoidable cost range.



Figure 1 - Avoided and stand alone window<sup>21</sup>

<sup>&</sup>lt;sup>21</sup> Excludes Pass through and Recoverable costs, including transmission charges.

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# Clause 2.4.3(8) of the ID Determination 2012 requires that the proportion of target revenue collected through each price component is noted.

Description	Code	Fixed Charge (FIXD)	Demand (DAMD)	Capacity Charge (CAPY)	On-Pk Demand Chg (DOPC)	Pwr Factor Charge (PWRF)	Uncontrolled / Var Chg (24UC)	Night Charge (NITE)	Controlled Charge (CTRL)	All Inclusive Charge (AICO)	Individual Contracts (IC)	Total
Level I and Director Materia vitte and a satest	0400	day	kVA/mth	kVA/day	kW/mth	kVAr/mth	kWh	kWh	kWh	kWh	ea	%
Low User - Single Meter without control	G100	0.6%	-	-	-	-	5.4%	0.0%	-	-	-	6.0%
Low User - Dual Meter with control	G101	0.2%	-		-		1.3%	0.0%	0.5%	-	-	2.0%
Low User - Single Meter with control	G102	2.1%	-		-		-	0.1%		18.7%	-	20.9%
Low User - 3 Phase Standard User - Single Mater without control	G103	0.0%	-	_	_	_	0.1%	-	_	_	_	0.1%
Standard User - Single Meter with control	G104	2.7%	_		_		4.0%	0.0%	- 0.1%	_	_	0.7%
Standard User - Dual Meter with control	G105	1.1%	-		_		1.0%	0.0%	0.1%	- 12.49/	-	2.1%
Standard User - 3 Phase	G100	9.5%	_	_	_		- 0.2%	0.0%	_	12.4%	_	22.0%
Low Lloor Dual Motor with control Electric Vehicle	G107	0.176	-	_	_	_	0.3%	_	_	_	_	0.4 /0
Standard Lloar Dual Mater with control Electric Vehicle	G100	_	-	_	_	_	_	_	_	_	_	-
	Domoctio	16 29/	-	_	_	_	10 79/	- 0.2%	- 0.6%	21.2%	_	-
Total	Domestic	10.3%	-	-	-	-	12.7%	0.2%	0.0%	31.2%	-	00.0%
Small Commercial <=15kVA Low Voltage	GV02	0.6%	_	_	_	_	1.6%	_	-	_	_	2.3%
Small Commercial >15kVA and <=69kVA Low Voltage	GV07	3.4%	-	-	-	-	8.3%	-	-	-	-	11.7%
Small Commercial >15kVA and <=69kVA Transformer	GX07	0.0%	-	-	-	-	0.0%	-	-	-	-	0.0%
Medium Commercial >69kVA and <=138kVA Low Voltage	GV14	0.7%	-	-	-	-	1.6%	-	-	-	-	2.4%
Medium Commercial >69kVA and <=138kVA Transformer	GX14	0.0%	-	-	-	-	0.1%	-	-	_	-	0.1%
Large Commercial >138kVA and <=300kVA Low Voltage	GV30	0.8%	-	-	-	-	1.1%	-	-	-	-	1.9%
Large Commercial >138kVA and <=300kVA Transformer	GX30	0.2%	-	-	-	-	0.5%	-	-	-	-	0.7%
Total Cor	nmercial	5.7%	-	-	-	-	13.2%	-	-	-	-	18.9%
Small Industrial >300kVA Low Voltage	GV99	1.8%	2.8%	_	_	_	0.9%	_	-	_	_	5.5%
Small Industrial <=15kVA Transformer	GX02	_	_	_	_	_	_	_	-	_	_	_
Small Industrial >300kVA Transformer	GX99	1.2%	3.7%	0.7%	_	_	1.4%	-	-	-	_	7.0%
Large Industrial >1500kVA CBD/IndustrialHigh Voltage	GC60	0.0%	_	0.3%	1.4%	0.1%	0.1%	-	-	_	-	1.9%
Large Industrial >1500kVA UrbanHigh Voltage	GU60	0.0%	-	0.2%	1.2%	0.1%	0.1%	_	-	-	-	1.6%
Large Industrial >1500kVA RuralHigh Voltage	GR60	0.0%	_	0.0%	0.1%	0.0%	0.0%	_	_	_	_	0.1%
Total I	ndustrial	3.0%	6.5%	1.2%	2.7%	0.2%	2.5%	-	-	-	-	16.1%
Unmetered Non Street Lighting <1kVA	G001	0.0%	_		_		2.0%	_	_			2.0%
Unmetered Street Lighting <1k\/A	G002	0.4%	_	_	_	_	0.0%	_	-	_	_	0.4%
Total Unmetered		0.4%	-	-	_	-	2.0%	_	_	-	-	2.4%
Individual Contracto											1.00/	1 00/
Total Individual Contracts	Contracts										1.6%	1.8%
		05 4634	0.400	4.000/	0.70%	0.400/		0.45%	0.500	04.45%	4.75%	100.000
IOTAI		25.43%	6.49%	1.22%	2.70%	0.18%	30.34%	0.15%	0.58%	31.15%	1.75%	100.00%

Table 8 – Proportion of Target Revenue by price component

# 4 Avoided Cost of Transmission Payments

In accordance with Clause 2.4.5(3)(b) of the ID Determination 2012, WELL may pay a distributed generator that injects into its network an Avoided Cost of Transmission (ACOT) payment, if the distributed generator:

- Has an injection capacity of 200kVA or greater; and
- Is deemed by WELL to be supporting its network during the 100 Transmission peaks on a pro-rata basis.

WELL determines the benefit to its network which arises as a result of the operation of the distributed generator to be the direct avoidance of Transpower<sup>22</sup> interconnection transmission charges (interconnection charges) during peak demand periods. In determining the magnitude of any ACOT payment to a distributed generator, WELL considers that:

- The distributed generator must generate in a manner that reduces interconnection charges incurred by WELL in accordance with the applicable Transmission Pricing Methodology (TPM);
- WELL and its consumers should be no worse off than had the distributed generation investment not occurred; and
- No potential long term transmission connection or interconnection benefits are payable to the distributed generator.<sup>23</sup>

To receive ACOT payments the distributed generator must provide data in a format acceptable to WELL, including:

- Data supplied by the distributed generator, to be used in relation to ACOT invoicing, must be audited by a Qualified Independent Auditor approved by WELL;
- Load and generation data must be adjusted to include distributor loss factors;
- Time of Use data must be the same data that is provided to the reconciliation manager of the electricity market;
- Data to be used in relation to ACOT invoicing must be submitted to WELL by the 5th working day in December each year; and
- The distributed generator must invoice WELL on a monthly basis from 1 April following submission of the data.

# **Calculation of ACOT payment**

WELL calculates the ACOT payment based on Transpower's current TPM approved by the Electricity Authority. WELL will amend the calculation of the ACOT payment if Transpower's TPM is amended.

Based on Transpower's current TPM the calculation of the gross ACOT payment to a distributed generator will be determined as follows:

<sup>&</sup>lt;sup>22</sup> Transpower Limited (Transpower) owns and operates the national transmission grid in New Zealand.

<sup>&</sup>lt;sup>23</sup> Any potential long term benefits of avoided transmission cannot be ascertained by Wellington Electricity nor ascribed to individual distributed generators. Any potential benefits should be negotiated with Transpower directly by the Generator.

 $RCPD_G * IR_{CF} - (RCPD_{WELL}*(IR_A - IR_{CF})) * (1 - Admin)$ 

Where: RCPD<sub>G</sub> Average of the generation (kW) injected by the distributed generator coincident with the 100 Lower North Island Peaks for the measurement period relating to each 12 month period commencing 1 April. IR<sub>A</sub> The interconnection rate published by Transpower for the relevant 12 month period commencing 1 April. **IR**<sub>CF</sub> The counterfactual interconnection rate  $(IR_{CF})$  is calculated as: =IC Revenue / (  $RCPD_{TP} + RCPD_G$ ) **RCPD**<sub>WELL</sub> The average of the sum of demand across all Wellington Electricity GXPs coincident with the 100 Lower North Island Peaks for the relevant 12 month period commencing 1 April. **RCPD**<sub>TP</sub> Sum of the average of the RCPD for each consumer at a connection location for all consumers at all connection locations for all regions (excluding RCPD<sub>WELL</sub>) for the relevant 12 month period commencing 1 April. Admin A percentage recovery of the benefits attributable to the Generator reflecting the incremental costs incurred by WELL. This percentage is determined on a case by case basis.

# **5** Pricing Principles

In accordance with Clause 2.4.3(2) of the ID Determination 2012, the Electricity Authority's Pricing Principles are contained in the Distribution Pricing Principles and Information Disclosure Guidelines 2010. WELL understands that Pricing Principles consist of well accepted, high level principles and were introduced on a voluntary compliance basis.

## 5.1 Pricing principle (a) (i)

- (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 legislative and/or other regulations and/or the Government Policy Statement;

It can be observed that the revenue for each network tariff group falls within the bounds of the stand-alone and avoidable costs and hence are subsidy-free. Refer to section 3 of this document.

# 5.2 Pricing Principles (a)(ii)(iii)

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

WELL has regard to the available service capacity and signals capacity constraints through its tariff design as follows:

# Controlled Load

WELL has a day and night price signal which incentivises movement of controllable demand away from congestion periods. WELL provides discounted pricing through controlled loads to domestic and small business consumers. This price differential signals the opportunity to consumers to receive a lower lines function services cost by shifting load away from congestion periods. Typically these opportunities are taken up through the timing of heating of electric storage hot-water which has the cylinders charged by electricity between 11pm and 7am.

#### Demand (kW)

The demand charge provides a strong price signal by incentivising consumers to reduce their demand at high network congestion periods by curtailing their loads. Any growth in the demand results in higher charges to the consumer.

#### Power Factor Charge

To encourage power factor management, a power factor charge is applied to industrial consumers who fail to correct inductive loads. This signals to the consumer the need to manage power factor and that any lack of management will result in a charge to them.

#### 5.3 Pricing Principle (b)

(b) Where prices based 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.

WELL has regard to the ability of consumers to respond to the price signals provided by its network tariffs. The efficiency gains of marginal cost pricing are realised when a tariff based on the marginal cost of supply induces the consumer to make behavioural change.

There are however a number of issues associated with using demand responsiveness to determine prices. Energy Retailers can package tariffs in accordance with their own requirements. There is a lack of information on price elasticity specific to the New Zealand electricity sector. The Commerce Commission has noted that in the longer term, for many consumers, demand for electricity distribution services is demand-unresponsive.<sup>24</sup> A number of international studies, including a study undertaken by the National Institute of Economic and Industry Research on the Australian National Electricity Market in 2007<sup>25</sup>, have similarly shown inelastic electricity demand responsiveness.

To the extent possible within the limitations imposed by network tariff structures, metering constraints and issues with demand responsiveness, WELL signals the long run marginal cost of supply through those tariff charging parameters with the greatest price elasticity of demand, namely the variable consumption charges that are based on the consumers energy use and maximum demand.

#### 5.4 Pricing Principles (c)(i)(ii)(iii)

- (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 arrangements for services; and
  - (iii) where network economics warrant, and to the extent practicable, encourage investment in transmission distribution alternatives (e.g. distributed generation or demand response) and technology innovation.

As noted in section 3, prices above the standalone cost could not be sustained in a competitive market and may create the possibility of efficient bypass of the existing

<sup>&</sup>lt;sup>24</sup> Commerce Commission, Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper. Available at http://www.comcom.govt.nz/regulated-industries/input-methodologies-2/electricitydistribution/

<sup>&</sup>lt;sup>25</sup> National Institute of Economic and Industry Research (2007), The Own Price Elasticity of Demand for Electricity in NEM Regions, National Electricity Market Management Company; referenced in PWC document, Investigation of the efficient operation of price signals in the NEM. Available at http://www.aema.gov.av/Madia/dags/DwC%20renort\_f0f0217\_tala\_45d4\_8756\_4b0b6cbas5de\_0\_PDE

http://www.aemc.gov.au/Media/docs/PwC% 20 report-f0 fa 0217-1e1e-45d4-8f76-4b9b6 cbac5de-0.PDF

infrastructure. As WELL's prices are below the stand alone costs, bypassing the network is discouraged.

WELL utilises standard tariffs but has in place a policy to negotiate connection costs and pricing with non-standard consumers. This has been taken up by 9 existing consumers that have individually negotiated supply through WELL's network. WELL continues this policy to better reflect consumer opportunities to vary service and price standards and enable customers to make efficient decisions between transmission and distribution alternatives. The regulatory framework that WELL operates under requires ongoing information disclosure including the Asset Management Plan which sets out capital and operating requirements for the Network. This regulatory approach imposes a discipline on the network businesses to design their networks efficiently.

## 5.5 Pricing Principle (d)

(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.

All prices are developed in a systematic approach that broadly reflects the consumer profile and connection characteristics. For example, connection characteristics for large consumers such as power factor, play a large part in network costs and therefore this cost driver is separately charged. All of these prices are published in public documents.<sup>26</sup> This delivery of standard prices is transparent.

Prices have been changed within the constraints of the maximum weighted average price cap determined under the DPP Determination 2015 except for consumers falling into the low fixed charge user category which have had their fixed charge component capped at 15 cents per day. In response to declining electricity usage by consumers, WELL has applied the reduction in price to the variable kWh tariffs as at 1 April 2015, reflecting the largely fixed cost of maintaining and renewing network assets. Aside from the reweighting between low and standard residential customers and fixed and variable tariffs, there has been no further material reweighting between tariffs, demonstrating that price setting is relatively stable from year.

#### 5.6 Pricing Principle (e)

(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.

WELL has regard to the transaction costs arising from its network tariffs, by limiting the complexity of tariff structures and the number of charging parameters within each tariff. WELL applies the same tariff structure to all retailers, excluding any non-standard contracts. A separate contractual agreement is negotiated with non-standard consumers as they have unusual connection characteristics making the tariff structure to all retailers inappropriate. WELL has not introduced any new tariffs or tariff structures in the 2015/16 disclosure year, therefore no transaction costs were incurred by stakeholders in this regard.

<sup>&</sup>lt;sup>26</sup> Namely the "Electricity Network Pricing Schedule, Module 15"

# 6 Pricing Strategy

In accordance with Clause 2.4.4 of the ID Determination 2012, WELL does not have a Pricing Strategy as defined in clause 1.4.3 of the ID Determination 2012, therefore clause 2.4.4 of the ID Determination is not relevant to WELL.

# 7 Service Areas



**Figure 2 – Industrial Service Area's**