



## **PRICING METHODOLOGY DISCLOSURE 2017/18**

**23 February 2017**

## Revision Overview

Date	Version	Changes
28/2/13	1.0	Initial publication
27/2/14	2.0	New section on tariff structure. Revisions to cost allocators; introduced new standard tariff for residential and small scale distributed generation customers; structural changes made to posted discount and merged customer groups for 400V customers with a fuse capacity above 160amps
19/1/15	3.0	Revision to 'Customer groups' section and associated illustration following changes in customer group terminology, criteria and structure; revision to cost allocators and associated tables in the 'Cost Model' section; Revision to 'Key Statistics and Assumptions', 'Price changes' and 'Consultation' section following 2015/16 price changes.
23/2/16	4.0	Revisions to section 6 to reflect the introduction of smart pricing and clarify the description of our price structure. Other minor revisions have been made throughout to adopt standard industry terms and improve readability.
23/2/17	5.0	Revision to section 6 to include the introduction of a customer nominated capacity charge and an excess demand charge for Large Customers. Update of WEL's pricing strategy in section 13 and the inclusion of WEL's Road Map for future pricing.

## EXECUTIVE SUMMARY

This Pricing Methodology sets out the approach used by WEL Networks Ltd (WEL) to formulate our price structure and set our prices for 2017/18. It has been prepared to meet the requirements of the Commerce Commission's *Commerce Act (Electricity Distribution Services Information Disclosure) Determination 2012*, and it has been prepared in accordance with the Electricity Authority's *Distribution Pricing Principles and Information Disclosure Guidelines*. In determining our prices WEL has also had regard to the requirements of the *Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004*, and the consultation requirements in the *Electricity Industry Participation Code 2010*.

WEL has set prices for the year beginning 1 April 2017 based on an allocation to customer groups of the costs of owning and operating its networks. The customer groups determined by WEL are based on the level of service received by the customer, which is in turn determined by their demand profile and associated asset requirements. WEL uses the following criteria to distinguish between levels of service received by our customers:

- The voltage at which the customer is connected;
- The customer's fuse capacity;
- For small customers (connected at 400V, with a fuse capacity of less than 110kVA) the principal use of their property and whether they have installed generation capable of exporting into WEL's network; and
- For a customer's principal place of residence, whether the customer has chosen their retailer's low user pricing plan.

Our cost allocation model uses cost drivers such as annual energy consumption and measures of peak demand to allocate costs to customer groups. These allocators were chosen based on WEL's assessment of each customer group's influences on costs, such as investment, maintenance and transmission charges. WEL has focused on matching an allocator to each of the cost categories in a manner that best reflects the Electricity Authority's pricing principle 'Prices signal the economic costs of supply', subject to the availability of information and administrative simplicity.

While our cost allocation model is an important factor in setting prices, it is not simply a mechanical exercise of applying the model annually as this could lead to instability in prices. Other factors that influence our approach to pricing include ensuring customers do not experience excessive price shocks, ensuring revenue adequacy and maintaining logical relationships between price categories. WEL also has a small number of customers with individual pricing agreements, reflecting the cost of assets used specifically by those customers.

Overall the total price increase in 2017/18 is 1.0%. This price increase reflects an increase in Transpower's transmission charges (including Avoided Cost of Transmission charges 'ACOT'), an increase in our own operating costs along with our continued investment to future-proof our 6,499 kilometre Waikato lines network. Price increases for individual customers and each customer group vary according to individual consumption profiles and different cost drivers for serving each customer group.

A number of changes have been made to the Pricing Methodology effective 1 April 2017. The changes are listed below; further information on the changes is detailed in section 4.

- Change to the Peak metric for Large Customers;
- Introduction of Customer Nominated Capacity charges and associated excess demand charges for Large Customers;
- Updated Pricing Strategy; and
- Inclusion of WEL's future pricing Road Map.

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## 1. Background

The core business of WEL is the provision of electricity distribution services in the Waikato region. As an electricity distribution company, we own and maintain the electricity network of lines, cables, substations and associated infrastructure. Our network connects 87,700 customers (a small number of whom are generators) to the national transmission and generation facilities and includes more than 6,499 kilometres of lines and has an annual throughput of over 1,219GWh. WEL has assets totalling in excess of \$676 million. Hamilton City is at the centre of our coverage area which extends to Maramarua in the north and across to the west coast. The townships of Huntly, Raglan, Te Kauwhata and Ngaruawahia are incorporated.

As well as providing a distribution service to our traditional network area WEL has competitively tendered for electricity distribution services in major subdivisions in New Zealand. We supply subdivisions in Auckland, Cambridge and Warkworth.

The company is locally owned with one shareholder: the WEL Energy Trust. The capital beneficiaries are the region's local councils: Hamilton City Council, Waikato District Council and Waipa District Council.

This Pricing Methodology sets out the approach used by WEL to formulate our price structure and set our prices for distribution services for 2016/17. WEL has prepared this document to meet the requirements of the Commerce Commission's *Commerce Act (Electricity Distribution Services Information Disclosure) Determination 2012* (the ID Determination) and it has been prepared in accordance with the Electricity Authority's *Distribution Pricing Principles and Information Disclosure Guidelines*. In determining our prices WEL has also had regard to the requirements of the *Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004* (as at 1 April 2009), and the consultation requirements in the *Electricity Industry Participation Code 2010*.

The Commerce Commission's ID Determination requires WEL to publicly disclose, before the start of each financial year, a pricing methodology which:

- describes the methodology used to calculate the prices payable or to be payable (sections 6, 7 & 8);
- explains the rationale for customer groupings (section 5);
- describes any changes in prices and target revenues (sections 4, 8 & 9);
- explains the approach taken with respect to pricing in non-standard contracts and distributed generation (sections 10 & 11);
- describes the consistency of the approach taken with the pricing principles and explains WEL's pricing strategy (sections 12 & 13); and
- explains whether and if so how, the views of customers were sought, including their expectations in terms of price and quality, and reflected those views in calculating the prices payable or to be payable (section 14).

This document describes the allocation of costs, and the resulting structure and level of WEL's prices for electricity distribution and transmission services. These prices form only a part of overall electricity prices paid by customers to their electricity retailer. Queries about customer prices should be addressed to your retailer.

## 2. Definitions

Term	Definition
ACOT	Avoided cost of transmission – a payment made by WEL to distributed generators who are able to demonstrate they are assisting WEL to avoid additional transmission costs.
Advanced metering infrastructure	Meter that records electricity used in half-hourly values (rather than a cumulative record). Advanced meters have communication features, eliminating the need for physical meter reading. Also known as a ‘smart meter’.
AMD	Anytime maximum demand, the maximum demand of a customer or group of customers recorded at anytime.
CMD	Coincident maximum demand, a customer’s or group of customers’ demand at the time total demand on the network is at its peak
Code	The Electricity Industry Participation Code
DPP	Default Price Path – price-quality regulation set by the Commerce Commission for non-exempt suppliers of electricity lines services
EA	Electricity Authority
EDB	Electricity distribution business
External network	An electricity network owned by WEL located outside WEL’s traditional network, they are located in Auckland, Cambridge and Warkworth.
GWh	Gigawatt hour
GXP	Grid exit point – a point of connection to the transmission network
ICP	Installation control point – the customer’s point of connection to WEL’s network. There is generally a meter at each ICP.
ID Determination	Commerce Act (Electricity Distribution Services Information Disclosure) Determination 2012
kVA	Kilovolt ampere
kWh	Kilowatt hour
MWh	Megawatt hour
Parent network	The distribution network (owned by another EDB) to which WEL’s external network is connected.
Pricing principles	The Electricity Authority’s Distribution Pricing Principles
Small scale distributed generation	Generation installation connected to the distribution network with a nameplate capacity of 10kW or less.
TOU	Time of Use – consumption of electricity based on the time of consumption

### **3. Overview of pricing influences**

WEL's cost allocation model is an important factor in setting prices; however it is not simply a mechanical exercise of applying the modelled outcome annually as this could lead to instability in prices. Other factors that influence our approach to pricing include ensuring customers do not experience price shocks, ensuring revenue adequacy and maintaining logical relationships between price categories.

Given these considerations, the level of target revenue that is actually collected from a customer group will not necessarily be identical to the level of costs the model attributes to that group. It is WEL's intention that through the pricing revision each year WEL's prices and pricing structure will approximate the modelled revenue allocation, over time, in a way that is consistent with the pricing principles.

WEL has used the following interpretation and application of the pricing principles in its pricing methodology. In section 12 we describe the extent to which we consider the resulting pricing methodology is consistent with the pricing principles.

#### **1. Prices Signal the Economic Costs of Supply**

- a. Prices should reflect the level of service available, including the capacity of the customer's connection and the associated demand on the network as these are the primary drivers of WEL's costs.
- b. Prices should take into account present and future investment costs.
- c. Arbitrage opportunities are to be minimised.
- d. Notwithstanding the above, regulatory impediments to reflecting the economic costs of supply to customers will be fully complied with, i.e. low fixed charge regulations

#### **2. Prices Encourage Efficient Demand Response**

- a. WEL will continue to reward controllable load from customers.
- b. Prices should encourage efficient conservation during peak times.
- c. WEL will reward customers for demand response through the use of peak time demand (for Large customers) and time of use (for Residential, Small Scale Distributed Generation and General Customers) prices.

#### **3. Prices are Responsive to Stakeholders' Requirements and Circumstances**

- a. WEL's price design will include customised prices where appropriate, e.g. asset based pricing for a specific customer's requirements.

#### **4. Prices are Transparent, Stable and Provide Certainty**

- a. Our customers have access to clear information on WEL's pricing strategies, price design, cost allocation methodologies, and price changes well in advance of them applying.
- b. Our customers can identify the prices that apply to them.
- c. Customers do not experience excessive price shocks. This will be achieved through the adoption of a phased approach to price adjustments over a number of years.

#### **5. Prices are Non-discriminatory Across Retailers**

- a. All retailers are to be treated homogenously.
- b. WEL will consult with retailers and encourage alignment of retailer pricing plans that reflect WEL's prices.

## **4. Changes to the previous Pricing Methodology**

A number of changes have been made to the Pricing Methodology effective 1 April 2017. These changes and the rationale for them, including an explanation of their consistency with the pricing principles are:

### **4.1. Change to the Peak metric for Large Customers**

The unit of measure for the Large Customer Charges (Peak Demand & Transformer rebate) has been amended from kW to kVA. The amendment has been made to ensure more cost reflective pricing; the kVA metric takes into account a customer's individual power factor and better reflects the actual cost of supply and an individual customer's impact on WEL's network. This is consistent with pricing principle (a) as it reflects the cost of service provision.

### **4.2. Introduction of Customer Nominated Capacity charges and an associated Excess Demand charge for Large Customers**

A customer nominated capacity charge will charge individual customers for their share of network assets made available to them at any time whether for current or future use. To ensure accurate capacity nominations are made, and customers are charged reflecting their use of the network, there will be an excess demand charge applied if a customer exceeds their nominated capacity at any time in the billable period. The Capacity charge will be offset by a reduction in the Uncontrolled supply (kWh) charge for Large Customers. This is consistent with pricing principle (a) as it reflects the cost of service provision.

### **4.3. Updated Pricing Strategy**

WEL's Pricing Strategy (originally developed in 2012) has been updated to more closely align to WEL's future direction for pricing whilst still including our commitment to innovation, improving our pricing structure to reflect the economic value of services and create customer benefits.

### **4.4. WEL's Future Pricing Road Map**

WEL is undertaking further work to improve the cost reflectivity of Residential, General and Small Scale Distributed Generators (SSDG) price structures and has included what work has been undertaken to date along with a Road Map of work to be undertaken over the following years. Further detail on specific timings and pricing structures will be known after stakeholder engagement.

## **5. Customer Groups**

WEL determines customer groups based on the level of service received by the customer. The criteria used for allocating customers to these groups are chosen as proxies for the service level and reflect groupings with distinct demand profiles and associated asset requirements:

- The voltage at which the customer is connected;
- The customer's fuse capacity;
- For small customers (connected at 400V, with a fuse capacity of less than 110 kVA) the principal use of their property and whether they have installed generation capable of exporting into WEL's network; and
- For a customer's principal place of residence, whether the customer has chosen their retailer's low user pricing plan.

WEL considers that these criteria reflect its cost drivers and regulatory constraints. WEL's rationale for distinguishing between residential, general and small-scale distributed generation customers, despite setting the same prices for these, is to prepare for a future when these groups may need to be priced differently because of differences in load profile, services and customer legislation or regulation. This is consistent with the pricing principles of prices signalling the economic costs of supply (principle a) and prices being transparent, stable and providing certainty (principle d).



The diagram below illustrates the characteristics of each customer group. In addition, the following definitions apply:

A **residential customer** (price category 1153/1154, 1153SP/1154SP) is a customer with a fuse capacity less than 110 kVA and connection voltage of 400V and that the connection is for the purpose of supplying electricity to premises that are used or intended for occupation principally as a place of residence, and excludes those premises described in paragraphs (a) to (i) of section 90 of the Electricity Industry Reform Act 1998. These criteria reflect the typical characteristics of a household; customers with larger fuse capacity or higher connection voltage typically require electricity for some other purpose than residential use

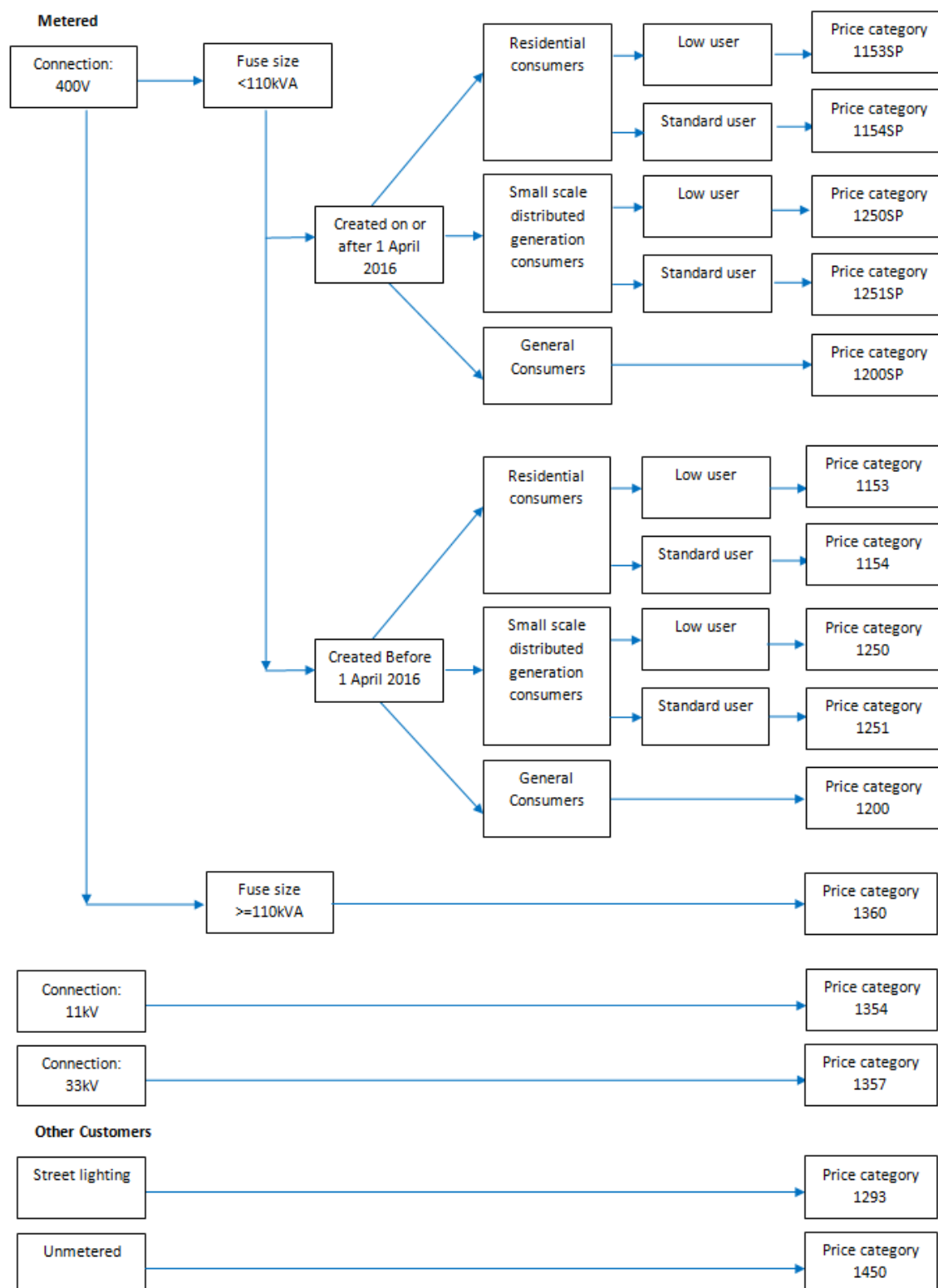
A **small scale distributed generation customer** (price category 1250/1251, 1250SP/1251SP) is a customer with a fuse capacity less than 110 kVA and connection voltage of 400V and that has a generation installation capable of exporting typically up to 10kW of electricity into WEL's Waikato network.

A **general customer** (price category 1200, 1200SP) is a customer with a fuse capacity less than 110 kVA, connection voltage of 400V and is not a residential customer or a small scale distributed generation customer.

A **low user customer** (price category 1153/1153SP/1250/1250SP) is a residential or small scale distributed generation customer who has nominated the retailer's low user pricing plan and the premises must be the customer's principal place of residence. For the avoidance of doubt, eligibility for low user pricing options excludes holiday homes and buildings that are ancillary to a customer's principal place of residence.

A **standard user** plan (price category 1154/1154SP/1251/1251SP) applies to all other residential and small scale distributed generation customers.

**Figure 1 Customer groups**



### 5.1. Low Fixed Charge Tariff Regulations

The Low Fixed Charge Tariff Regulations require that electricity distributors provide a residential fixed price of not more than 15 cents per day (excluding GST)<sup>1</sup>. WEL has standard fixed price options in addition to the low fixed price options. The variable price for customers on a low user option is such that a customer who consumes 8,000kWh pays no more in total per year on this option than the same customer would on any alternative option that is available to them.

It is a requirement of WEL's price group category criteria that an ICP must be a principle place of residence and the customer must also have nominated the retailer's corresponding low user price plan to be eligible for the WEL low user price category.

## 6. Price Structure

WEL's price structure is designed to reflect the economic costs of providing services to its customers, recognising the varying patterns of consumption from each of the different groups of customers within the network. Some of the costs are fixed, that is they do not vary with the level of output in the short term, and are based on the level of installed capacity; some costs vary depending on consumption patterns.

WEL's price structure is similarly split into fixed and variable prices. The fixed price is levied on either a per day or per month basis. Variable prices are typically based on the volume of electricity used by the customer and for large customers their highest demand each month during peak time periods and their nominated capacity. These prices reflect the economic costs pertaining to the customer's time of consumption and demand profile in terms of level of consumption. WEL's smart, advanced, and peak demand prices reward behaviour (through lower prices at off-peak times) that will help reduce network costs.

WEL uses a selection of variable prices for each customer group based on the characteristics of the group that create network costs:

- **Uncontrolled Supply Prices:** are prices that apply to electricity supply that is continuously available under normal operating circumstances. Prices may be time of day dependent. The price is multiplied by the volume of energy used, measured in kilowatt hours (kWh), in the corresponding time periods. This is applicable to anytime or across peak, shoulder and off-peak prices. Where prices are applied based on peak, shoulder and off-peak time periods, WEL offers lower prices for consumption when there is expected to be spare capacity on the network (i.e. off-peak).
- **Controlled Supply Prices:** are prices that apply to the electricity supply that is capable of being interrupted (switched off) by WEL using remote technology for up to seven hours a day. The price is multiplied by the volume of energy used, measured in kilowatt hours (kWh). The ability for WEL to reduce peaks by controlling load (i.e. switching off supply) is valuable to WEL, and this is reflected in lower prices for supply to controllable load. This type of supply is typically connected to hot water cylinders and other appliances nominated by the customer. To be eligible, this supply must be metered separately from any uncontrolled supply. Combined metered supplies (uncontrolled and controlled) will be charged at the uncontrolled price.
- **Generation Export Price:** Small-scale distributed generation customers are expected to drive long-run incremental costs in WEL's network through increased demand for capacity (to export surplus generation) in the low voltage network. This is reflected in a small price for these exports. To minimise transaction costs for retailers and customers, and allow customers to understand the price more readily, this is currently structured as a kWh price.
- **Peak Demand Price:** A price that is applied based on the highest rate of consumption (kVA) recorded by the customer in a single half hour during WEL's peak hours each month. There is a

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<sup>1</sup> Regulation 14 (1) (b) Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004.

price for the winter months (1 May to 30 September) and a price for the summer months (1 October to 30 April).

- **Reactive Energy Price:** The reactive energy price is applied to large customers with low, medium and high voltage connections and non-standard contracts. It is charged on the volume of reactive energy (kVARh) used when the customer's power factor is less than 0.95 within a half hour time period. A low power factor requires a greater supply of reactive energy, which increases the need for network capacity.
- **Capacity Charge:** A capacity charge is applied to the Nominated Capacity (kVA) for Large Customers with low, medium, high voltage connections and Non-Standard contracts. Customers with higher capacities represent a larger requirement for investment in network assets to ensure the stability of the network. The capacity charge is designed to ensure equitable distribution of this extra investment cost.
- **Excess Demand Charge:** An excess demand charge is applied where a Large Customer exceeds their nominated capacity in any half hour during the billable month. The excess demand charge is to ensure customers nominate accurately and customers are charged reflecting their use of the network.
- **Transformer Rebate:** A transformer rebate is paid to medium and high voltage customers who own their own transformer to reflect the reduced cost to WEL to supply that customer. This rebate is applied to demand recorded in a meter and is represented as a rebate (\$) per kVA per month.

## 7. Cost model

The key purpose of the cost allocation and design model is to ensure that the prices for each customer group reflect the economic cost of serving that group. This section outlines this allocation process and the rationale for the choice of cost allocators.

The model allocates each cost category (Table 3) to customer groups based on the chosen allocator (Table 2). These costs are aggregated to give modelled revenue for each customer group. This is used to derive a set of model prices for each customer group (comprising fixed and variable prices). WEL uses these prices as the basis for final prices.

WEL reviews the price changes as indicated by the cost model against the pricing principles taking into account the undesirability of price shocks, the need to ensure revenue adequacy (and mitigate revenue risk) for WEL, and the desire to maintain logical relationships between price categories prior to settling on the final price changes.

The final prices and forecast volumes are then combined to derive target revenue for each customer group (Table 5).

### 7.1. Method of Cost Allocation

The choice and application of cost allocators involves a degree of judgment. The cost allocation and price design model allocates costs to customer groups based on WEL's assessment of customer influences on investment, maintenance, service and Transpower costs. WEL also monitors prices of other EDBs to ensure that WEL's prices are broadly aligned with industry norms.

Utilisation of assets provides a useful basis for allocating many of our costs. Assets are allocated to different customer groups depending on their point of connection to the network. So, for example the low voltage asset costs are not allocated to high voltage customers.

WEL focuses on matching an allocator to each of its cost categories in a manner that best reflects the pricing principle that prices should reflect the economic costs of supply, subject to the availability of information and administrative simplicity.

The table below describes the allocators that WEL uses in its cost allocation and price design model. Anytime maximum demand (AMD) and coincident maximum demand (CMD) are both measures of asset utilisation. AMD provides information about the capacity of assets required by a specific customer group at any time, while CMD measures the customer group's contribution to the network peak – it is this coincident peak demand that typically drives investment in capacity.

**Table 1 Description of Cost Allocators**

Allocator	Description	Formula
Energy	The annual consumption of all customers in that group as a proportion of the total.	$\frac{MWh_c}{MWh_{total}}$
AMD	Measures the anytime maximum demand (AMD) of a customer group as a proportion of the total. AMD may occur in different time periods for different customer groups. An allocation is made to customer groups based on the design capacity of the network.	$\frac{AMD_c}{AMD_{total}}$
CMD	The proportion of total demand related to a group of customers at times of coincident maximum demand (CMD). CMD is based on the average of the 12 highest total demands within a half hour time period on the network over one year. Contribution to CMD is measured for large and asset specific customers at each GXP and the residual measured demand at each GXP is allocated to mass market and unmetered customers.	$\frac{CMD_c}{CMD_{total}}$

Note: c = customer group

The table below outlines each cost category, the allocator used by WEL to allocate that cost to customer groups and the rationale for choosing that allocator. The allocator with the strongest relationship to cost causation has been used.

**Table 2 Rationale for the choice of cost allocator for each key component of revenue**

Key component	Allocator used in cost model	Rationale
Net profit after tax	CMD	Net profit after tax is allocated on the basis of the investment caused by each customer group (their contribution to the network peak). This reflects the significance of the assets on which a return is sought.
Maintenance	AMD	WEL considers that the incidence of maintenance costs is best represented through customers' contribution towards the assets' overall utilisation. Maintenance costs are first attributed to the low, medium and high voltage network, then the cost of each part of the network is allocated based on AMD.
Depreciation	CMD	Depreciation accounts for the cost of assets. These costs are therefore allocated based on the investment driven by each customer group (their contribution to the network peak). Depreciation costs are first attributed to the low, medium and high voltage network, then the cost of each part of the network is allocated based on CMD.
Operating expenditure	CMD	WEL's operating expenditure includes staff and lease costs, printing postage, rates and motor vehicle expenses. These

		costs are allocated based on CMD as WEL's cost structure is largely fixed and related to network capacity. Costs are then allocated based on the customer group's contribution to the annual maximum demand on the network.
Tax & Interest	CMD	Allocated on the same basis as net profit after tax, as tax is directly related to profit.
Electricity Authority and Commerce Commission levies	Energy	These levies are based on the volume of energy distributed; this allocator therefore reflects the basis of the charge.
Transpower – interconnection and avoided transmission	CMD	Allocating this cost based on the share of coincident peak demand is similar to the basis on which Transpower sets its interconnection costs – which is regional coincident peaks.
Transpower – excl. interconnection and avoided transmission	AMD	Transpower levies connection charges on the basis of anytime maximum demand at a connection location. WEL has chosen to use the same allocator.

## 7.2 Posted Discount

WEL operates a customer discount scheme. In terms of the ID Determination, a posted discount is considered to be part of WEL's prices, and therefore part of the pricing methodology.

The rationale for the discount scheme is that WEL Energy Trust (the owner of WEL Networks) asked WEL to investigate options for reducing the cost of electricity for customers in its area (the Waikato network area). The discount scheme was the selected option and applies to every active non-vacant connection to a WEL network (including our Auckland based networks).

The discount is paid on the basis of the total price charged for the connection in a 12 month period, regardless of whether the account holder changed during the year. The electricity account holder for that connection at 5pm on 31 March is eligible for the discount; this timing corresponds to the end of WEL's financial year. The discount appears as a credit on the power bill of the electricity account holder for each metered connection annually in April or May depending on the billing cycle of the account.

The posted discount is a percentage discount on the total annual lines charges for each eligible customer. This is set based on the total target annual discount as determined by WEL's Board.

A cap of \$1,650 (excl. GST) is also applied to the total discount to which each individual customer is eligible.

## 8. Key Statistics and Assumptions

The tables below represent the breakdown of WEL's Target Revenue for 2017/18 into key cost components, by customer groups and by each of the price components as published in the 2017/18 price schedule.

WEL's target revenue is based on achieving a return on investment over the medium term (five years) that is based on the 67<sup>th</sup> percentile estimate of WACC determined by the Commerce Commission for the default price-quality path.

Note – The data in the tables below represents the information used at the time of setting the prices for 2017/18 pricing year.

**Table 3 Target Revenue by key cost components (\$000)**

Key Cost Component	\$000
Net profit after tax (before discount) <sup>3</sup>	26,323
Tax	7,779
Interest	1,029
Maintenance	2,349
Depreciation	23,144
Operating expenditure	30,886
Transmission – interconnection	20,815
Transmission – connection	5,192
Avoided transmission	5,426
Electricity Authority and Commerce Commission levy	320
<b>Gross Revenue</b>	<b>123,263</b>
Posted Discount	-17,063
<b>Total Target Revenue</b>	<b>106,199</b>

**Table 4 Share of allocators by customer group**

Connection	Energy	AMD	CMD
400V <110 kVA	59.1%	75.0%	63.1%
400V >= 100kVA	14.4%	10.2%	12.4%
11kV	22.3%	11.5%	21.9%
33kV	1.4%	1.8%	0.7%
Street lighting	0.7%	0.1%	0.2%
Unmetered	0.2%	0.3%	0.0%
Non-Standard	2.1%	1.1%	1.6%

<sup>3</sup> NPAT is the net profit after the payment of interest and tax

**Table 5 Target Revenue by price component and customer group (\$000)**

Price Component (\$000)	Smart Pricing					Traditional and Advanced Pricing					Low Voltage	Medium Voltage	High Voltage	Street lights	Unmetered	Non-standard contacts	Total Target Revenue
	Residential Low User	Residential Standard User	General	SSDG Low User	SSDG Standard User	Residential Low User	Residential Standard User	General	SSDG Low User	SSDG Standard User							
Fixed	16	458	287	-	-	2,353	13,824	5,173	19	146	907	290	3	1,303	10	237	25,027
Uncontrolled Supply	-	-	-	-	-	23,432	19,888	18,322	205	416	3,746	4,587	125	-	6	410	71,136
Controlled Supply	5	40	6	-	-	3,450	1,514	347	14	10	-	-	-	-	-	-	5,386
Off Peak	14	64	44	-	-	-	-	13	-	-	-	-	-	-	-	-	135
Shoulder	44	207	143	-	-	-	-	19	-	-	-	-	-	-	-	-	414
Peak	29	136	94	-	-	-	-	10	-	-	-	-	-	-	-	-	270
Generation Export	-	-	-	-	-	-	-	-	10	9	-	-	-	-	-	-	20
Nominated Capacity	-	-	-	-	-	-	-	-	-	-	399	647	12	-	-	56	1,113
Summer Peak	-	-	-	-	-	-	-	-	-	-	3,852	4,694	108	-	-	328	8,982
Winter Peak	-	-	-	-	-	-	-	-	-	-	4,549	5,267	111	-	-	309	10,237
Reactive	-	-	-	-	-	-	-	-	-	-	251	312	-	-	-	0.2	563
Transformer rebate	-	-	-	-	-	-	-	-	-	-	-	15	4	-	-	-	19
Posted discount	2	63	47	-	-	5,281	6,198	4,171	39.82	77	861	298	7	23	5	10	17,063
<b>Total Target Revenue</b>	<b>108</b>	<b>842</b>	<b>529</b>	<b>-</b>	<b>-</b>	<b>23,953</b>	<b>29,027</b>	<b>19,712</b>	<b>209</b>	<b>504</b>	<b>12,843</b>	<b>15,484</b>	<b>349</b>	<b>1,281</b>	<b>10</b>	<b>1,349</b>	<b>106,199</b>



## 9. Price Changes

This section describes the key changes to prices between those that were applied from 1 April 2016 and those that will apply from 1 April 2017. The rationale for these changes is provided along with a measure of the significance of the change.

Effective 1 April 2017, WEL will pass on an increase in network charges of on average 1.0% to our customers. Our price reset reflects increases in Transpower's transmission charges (including ACOT), and increases in our own operating costs along with our continued investment to future-proof our 6,499 kilometre lines network. The total increase is comprised of:

- 0.47% increase in prices due to an increase in transmission charges by Transpower, including ACOT; and
- 0.53% increase in prices due to an increase in WEL's underlying costs, driven principally by inflation.

**Table 6 Average price changes on consumer groups**

Connection	Price Change
400V <110 kVA	1.0%
400V >= 100kVA	1.0%
11kV	1.1%
33kV	1.3%
Street lighting	1.0%
Unmetered	1.0%
Non-standard	1.0%

### 9.1. Change in Target Revenue

WEL is forecasting its target revenue to increase by 1.9% in 2017/18 compared to the forecast for the 2016/17 pricing year. This reflects the 1.0% increase in network prices described above, along with our forecasts for growth and changes to the posted discount over the 2017/18 pricing year.

## 10. Non-standard Contracts

Asset-specific pricing is available to large customers on a case-by-case basis. We currently have two customers (5 ICPs) who have asset-specific pricing agreements. The agreements are generally established when a customer approaches WEL to connect to the network. Where a large capital contribution would be required to install the connection, WEL may negotiate with the individual customer to determine a price (such as a monthly fixed price) that is economically equivalent to the capital contribution that would otherwise be required. This approach allows the customer to pay for the asset over a longer period that better reflects the value that they derive from it. Also, where there is a risk of an uneconomic bypass, WEL will negotiate pricing arrangements that reflect the customer-specific cost of supply.

This approach is consistent with the pricing principles as the price reflects both the economic cost of service (principle a), the economic value of the service (principle b) and is responsive to the requirements and circumstances of stakeholders (principle c).

WEL does not offer non-standard terms on service interruption to any customers.

## **11. Distributed generation**

WEL has a range of distributed generation connected to its network. Applications to connect distributed generation are treated in accordance with Part 6 of the Electricity Industry Participation Code.

WEL does not charge the prescribed fee (as allowed under the Code) for distributed generation connection applications.

WEL does charge the incremental cost of any initial connection to the owner of the distributed generation. For small scale distribution (defined as generation with a name plate of 10kW or less) WEL also levies an export price that is designed to recover the long term incremental cost impacts on WEL's network. WEL anticipates that the increasing prevalence of exporting distributed generation will drive long run incremental costs in its network. The primary cost driver is expected to be the demand for additional capacity in the low voltage network. Overseas experience with higher density small-scale distributed generation indicates that this will be the case.

WEL has chosen to apply this price on a kWh basis rather than a capacity basis at this stage, because it was apparent in discussion with retailers that this would impose much lower transaction costs on them and be more readily understood. This is consistent with the pricing principles that prices signal the economic costs of supply (a) and are transparent, stable and provide certainty (d).

Larger distributed generation is considered on a case-by-case basis. WEL rewards large scale generators who are able to demonstrate on an annual basis that they are assisting WEL to avoid additional transmission costs. The compensation paid is equal to the costs avoided and is commonly referred to as an avoided cost of transmission payment (ACOT). There are currently only two connections that are consistently entitled to payments under this scheme. The compensation is calculated using Transpower's current interconnection charges, but is based on the generator's performance in the immediately preceding year. During 2017/18 payments of approximately \$5.4 million (excluding GST) are forecast.

## 12. Consistency with the Electricity Authority's Distribution Pricing Principles

WEL's pricing methodology is based on its interpretation of the Authority's pricing principles and other factors outlined in section 3. We have highlighted through the methodology, where and how the pricing principles have influenced the choices WEL has made. This section sets out the Authority's principles (in the boxes), reiterates WEL's interpretation and application of them, and outlines the extent to which the price design and cost allocation methodology are consistent with the pricing principles. WEL's purpose in simplifying the pricing principles is to aid our customers' understanding. This simplified statement of the principles is not intended to reduce their scope in any way.

- (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;
  - 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.

WEL has simplified this principle to 'prices signal economic costs of supply'. We interpret this to mean that:

- WEL's prices should reflect the level of service available, including the capacity of the customer's connection and the associated demand on the network which are the primary drivers of WEL's costs. The cost allocators have been chosen on the basis that they are a good reflection of this pricing principle. WEL uses demand, capacity and consumption measures as cost allocators (see section 7.1) and these (demand and capacity in kVA, and consumption in kWh) are the basis of WEL's variable prices.
- Prices should take into account both present and future investment costs. WEL applies a price to exports of distributed generation. The purpose of this price is to signal to customers considering installing small scale distributed generation that as the density of this increases it will create costs for WEL and that these will be passed onto users.
- Arbitrage opportunities are to be minimised.
- Current regulatory impediments to reflecting the economic costs will be complied with, i.e. the low fixed charge tariff requirements.

The incremental cost of a customer group is the cost of the additional capacity required to serve that group given that all other customers on the network are already being served. Incremental costs provide a lower bound to prices as WEL would be better off to stop supplying customers who are not meeting their incremental cost. A price below incremental cost also encourages an inefficiently high level of consumption. In times of spare capacity on the network short-run average incremental cost is close to zero.

Standalone costs provide the upper bound to prices as this is the total cost of providing a service to a customer group assuming no other customers are being served. If prices exceed standalone costs the customers would be better off bypassing the network. The incentives attached to pricing outside these bounds (uneconomic supply on one hand and loss of customers who bypass the network on the other) ensure that WEL's prices remain between these costs.

- (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 customers' demand responsiveness, to the extent practicable.

WEL has simplified this principle to ‘prices encourage efficient demand response’. This principle is intended to direct the recovery of WEL’s fixed costs toward the least price responsive customers. In meeting this principle, WEL will continue to reward controllable load from customers and provide advanced pricing for mass market customers. These initiatives will tend to result in lower prices for more price sensitive customers.

- (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 non-standard arrangements 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

WEL’s simplified statement of this principle is that ‘prices should be responsive to stakeholder requirements and circumstances’. Where a new connection requires a large capital investment, WEL may negotiate an asset-specific price with the customer. This non-standard arrangement allows the customer to pay for the asset over a period that reflects the value they derive from it, and is consistent with this pricing principle. WEL’s price structure also reflects the economic costs of small customers’ actions (e.g. through the use of an export price for small scale distributed generation and advanced pricing) as well as the economic costs for larger commercial and industrial users through the use of peak demand prices.

- (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.

WEL considers that to achieve “prices that are transparent, stable and provide certainty” customers should know WEL’s strategies, price design, cost allocation methodologies, and any price changes in advance of them applying, and should be able to identify the price(s) that apply to them. WEL considers that the publication of this document and our price schedules contributes to this. WEL is committed to continuing to improve our communication of our pricing design to customers.

A notable aspect of this pricing methodology is the adoption of targeted and glide path (i.e. phased) adjustments. WEL considers this approach to be consistent with (d), as it provides customers both clarity as to the direction of prices over time and time to adjust to any changes. For example:

- The separation of general and residential customers transparently signals to stakeholders our intention to separately price these in future to reflect their different economic costs;
- the price for export from small scale distributed generators provides transparency and signals to customers that there are network costs associated with these activities;

WEL has chosen to unbundle its costs into broad categories, and use a limited number of allocators to allocate the cost categories to customer groups. This ensures that our approach is relatively easy to understand, and administrative costs are kept in check, reflecting this principle.

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

WEL considers transaction costs in the process of price development. As noted in section 11, WEL applies the SSDG export price on a kWh basis to lower transaction costs to retailers.

WEL is committed to ensuring that its prices are non-discriminatory across retailers. WEL is working with retailers to ensure alignment of pricing structures and incentives are maintained.

### 13. Pricing Strategy

WEL's pricing strategy (originally developed in 2012) was updated in 2016 to more closely reflect WEL's future direction for pricing whilst still showing our commitment to innovation and improving our pricing structure to reflect the economic value of services and create customer benefits; it is:

*Prices and price structure changes shall incorporate WEL's Pricing Principles and improve cost reflectivity whilst taking into account customer impact. Prices should provide consumers with options, enhancing utilisation of new technologies and efficient use of the electricity system. WEL is committed to customer and stakeholder engagement including consultation and education.*

#### 13.1. Changes to the Pricing Strategy

Various changes were made; the changes and reasons are detailed below:

1. Removal of reference to signalled in advance
  - a. signalling in advance (other than the regulatory timeframes) may create perverse effects which are not desirable. WEL, through its Pricing Strategy, will take into account the impacts on customers of any changes and also through pricing principle (d) "transparent, stable and provide certainty".
2. Removal of reference to introduced gradually
  - a. introducing a change gradually may not be possible due to differing circumstances. WEL will take into account the impacts on customers of any changes and also on stakeholders through pricing principle (c), responsive to stakeholder requirements and circumstances.
3. Removal of reference to stakeholder support
  - a. whilst stakeholder support is highly desirable it should not be a necessity for WEL to make pricing decisions. WEL believes this is covered through our consultation process with retailers on any structural changes and WEL also covers elements of this through pricing principle (c), responsive to stakeholder requirements and circumstances.
4. Removal of reference to predictable and stable
  - a. predictable and stable are covered through WEL's commitment to pricing principle (d) transparent, stable and provide certainty.
5. Addition of reference to customer engagement and education
  - a. WEL plans to engage more with customers on pricing and pricing design including education of customers on pricing.
6. Addition of reference to new technologies
  - a. new technologies could impact WEL's network, pricing design should endeavour to enhance their efficiency and cost reflective of their utilisation on the network.

### 13.2. Key Objectives of WEL's Pricing Strategy

Key objectives of WEL's Pricing Strategy are listed below; these objectives are consistent with the pricing principles.

1. **Cost reflective pricing:** ensure that pricing and pricing design reflect the cost drivers of supply e.g. increase the utilisation of capacity, time of use or demand based charges over time subject to public education and communication plans. This is consistent with signalling the economic cost of service provision (principle a);
2. **Clear pricing structure:** pricing should be simple and easy to understand by customers. This is consistent with transparent pricing (principle d);
3. **Customer focus:** engagement with customers including education on pricing and pricing plans, management of price shocks in the transition to new price structures. This is consistent with having regard to the impact of price structure changes on customers (principle e); and
4. **Incentivise efficient adoption of new technologies:** pricing and price structures should encourage the efficient adoption of new technologies. This is consistent with signalling the economic cost of service provision (principle a).

### 13.3. Road Map – Future Pricing for Residential, Generation and SSDG customers

#### Work undertaken to date

On 1 April 2016 WEL implemented mandatory TOU pricing for new ICP's on Residential, General and SSDG price plans, referred to as 'Smart Pricing'. WEL's Smart Pricing consists of 3 parts (Peak, Shoulder and Off-Peak) with peak timeframes aligning to WEL's system peak times.

With the recent publications from the EA (Variable charges under the low fixed charge Regulations) and ENA (New Pricing Options for Electricity Distributors) WEL has started a further piece of work around the future price structure of Residential, General and SSDG customers.

In September 2016 WEL engaged with Retailers on potential future pricing options (detailed in the ENA's New Pricing Options for Electricity Distributors) for Residential, General and SSDG customers. This was to gather initial retailer opinion on the options, system capabilities, transition strategies and associated customer communications.

#### Upcoming Work

WEL is undertaking customer focus groups on the future pricing options in March 2017 to gain their feedback. WEL will then refine our potential future pricing option(s). Further consultation with retailers will occur to gain their feedback on our future pricing option(s).

A high level overview of WEL's Road Map can be found below in Table 7.

**Table 7 WEL Future Pricing Road Map**

Stages	Activities	Timeline (Calendar Year)					Resource Requirements
		2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 onwards	
<b>Initial investigation</b>							
Customer Consultation	Customer Focus Groups on potential future pricing options	x					EDB/Professional Research Firm
Initial pricing	Prioritising future pricing option(s) based on customer focus groups feedback and retailer feedback sought in September 2016		x				EDB
Identify challenges	Billing Systems, AMI penetration, data		x				EDB
Analytics	Analysis of potential customer impacts, risk management		x				EDB
Retailer Consultation	Preliminary Retailer Consultation, discussion of participant and potential customer impacts, system limitations, transition strategies, mitigation strategies		x				EDB/Retailers
<b>Detailed Future Pricing Work</b>							
Detail plan	After preliminary feedback, detail what future pricing WEL are looking to implement, customer impacts, transition strategies, challenges and how to overcome, desired timeframes			x			EDB
Retailer Consultation	Retailer Consultation, more focussed discussion based on more refined WEL future pricing including participant and potential customer impacts, system limitations, transition strategies, mitigation strategies				x		EDB/Retailers
Analytics	Analysis and consideration of feedback received, risk management				x		EDB
<b>Finalisation of Future Pricing</b>							
<b>Release of Future Pricing</b>	Dependant on stakeholder feedback WEL will release the final future pricing plan, including specific implementation dates and transition strategies that will form part of the release.				x		EDB
Communication	Develop Communication Plan with retailers on future pricing and customer education					x	EDB/Retailers
Monitor	Review and monitor progress and usage profiles					x	EDB
On-going communication	Review and monitor stakeholder feedback					x	EDB

## **14. Consultation**

### **14.1. Customer Consultation**

WEL has a strong customer focus as it is owned 100% by the WEL Energy Trust, on behalf of the community. In addition to the WEL Energy Trust representing the views and interests of customers, WEL regularly consults with major customers and periodically (biennially) conducts surveys of customers' expectations on its pricing and quality of service. The survey results are a key input into both WEL's Asset Management Plan (AMP) and our Pricing Methodology.

A key finding from the most recent customer survey undertaken in June 2015 was that the majority of the customers (99%) are satisfied with the current level of reliability of supply. Only a small number (22%) of customers would like to see further improvement in reliability of supply with relatively few (8% of that 22%) being prepared to pay slightly more.

WEL is undertaking customer focus groups during March 2017 to discuss potential future pricing options for Residential, SSDG and General customers. Information gained from these focus groups will help form future pricing work.

### **14.2. Retailer Consultation**

Clause 12A.7 of the Code requires WEL to consult with traders prior to making a change to its price structure. WEL consulted retailers on its proposed price structure changes in September-December 2016.

The Code does not specify when consultation must commence or how long it should take, but the Electricity Authority has prepared *Guidelines for Consulting on Distributor Tariff Structure Changes* (2012) that set out a recommended approach. WEL was guided by this document in determining its process. Key features of our process consistent with the guidelines were:

- WEL provided opportunities for both oral and written feedback on its proposals, presenting the proposal in a workshop in September 2016, and in a written consultation paper.
- Two weeks were allowed for feedback on the proposals, and a timeline for the process was provided to all retailers with key dates.
- WEL outlined the rationale for its proposed price design changes including the extent to which they were consistent with the Electricity Authority's pricing principles both in the workshop and the written consultation paper.
- WEL approached the consultation with an open mind, prepared to make changes to its proposed price structure.

Feedback was received from several retailers. The feedback was generally supportive of all the proposals. WEL also took the opportunity to have an open discussion on a range of potential future pricing options for Residential, SSDG and General customer price categories. Retailer feedback, along with customer feedback will help form future pricing work.

WEL released its final price schedule effective from 1 April 2017 to retailers in December 2016. This is consistent with pricing principle (d) by promoting transparency and certainty for stakeholders.



## 15. Certification

### SCHEDULE 17 – Certification for Year-beginning Disclosures

(Pursuant to section 2.9.1 of the Electricity Distribution Information Disclosure Determination 2012)

We, Margaret Devlin and Paul McGilvary, being directors of WEL Networks Limited, certify that, having made all reasonable enquiry, to the best of our knowledge-

- a) The following attached information of WEL Networks Limited prepared for the purposes of clause 2.4.1 of the Electricity Distribution Information Disclosure Determination 2012 in all material respects complies with that determination.
- b) The prospective financial or non-financial information included in the attached information has been measured on a basis consistent with regulatory requirements or recognised industry standards.



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Margaret Devlin  
**Director**



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Paul McGilvary  
**Director**

Date: 23 February 2017