

Wellington Electricity Lines Limited

2016/17 Pricing Methodology Disclosure

2 March 2016

2016/17 PRICING METHODOLOGY DISCLOSURE

Glossary

| Abbreviation | Definition or description | | |
|------------------------------|---|--|--|
| 2016/17 Disclosure of Prices | Wellington Electricity Lines Limited's 2016/17 Disclosure of Prices | | |
| АСОТ | Avoided cost of transmission – an amount payable to large distributed generators within Wellington Electricity's network in recognition that these generators may cause WELL to avoid Transpower charges. | | |
| Capacity | The maximum amount of energy that a part of the network is able to carry at any point in time | | |
| Commerce Commission | New Zealand Commerce Commission (NZCC) | | |
| Consumer | A person, residential or business that uses electricity or acquires electricity lines services | | |
| Consumer Group | The category of consumer used by the EDB for the purpose of setting prices | | |
| Controlled Load | An amount of electrical load which a consumer makes available to the distributor to turn off during periods of network congestion or to assist in restoring supply | | |
| СРІ | Consumer Price Index inflation | | |
| Delivery price | The total delivery price for both distribution and transmission services (also known as lines charges). | | |
| Demand | Electricity use 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, which is capable of injecting electricity into the 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 | | |
| GXP | A point of supply to Wellington Electricity Lines Limited's distribution network from Transpower's national transmission grid | | |

2016/17 PRICING METHODOLOGY DISCLOSURE

| Abbreviation | Definition or description | | | |
|-----------------------|---|--|--|--|
| HV | High Voltage – equipment or supplies at voltages of 11kV, 22kV or 33kV | | | |
| ID Determination 2012 | Electricity Distribution Information Disclosure Determination 2012, 22 March 2015 | | | |
| ID Guidelines 2010 | The Electricity Authority's Distribution Pricing Principles and Information Disclosure Guidelines, February 2010 | | | |
| IM Determination 2012 | Electricity Distribution Services Input Methodologies Determination 2012, 30 March 2015 | | | |
| LFC Regulations | Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulation 2004 | | | |
| Lines Charges | Refer to Delivery price | | | |
| LRMC | Long Run Marginal Costs | | | |
| LV | Low Voltage – equipment or supply at a voltage of 220V single phase or 415V three phase | | | |
| Network | The electricity distribution network owned by Wellington Electricity Lines Limited for the conveyance of electricity. Network assets include substations, lines, poles, transformers, circuit breakers, switchgear, cabling etc. | | | |
| Point of Connection | A point at which a consumer's fittings interconnect with the Network as described by diagrams 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 | Wellington Electricity Lines Limited's Pricing Methodology Disclosure Document | | | |
| RAB | Regulated Asset Base – is the regulated value of the distribution assets that Wellington Electricity uses to provide line function services. | | | |
| WELL | Wellington Electricity Lines Limited | | | |

2016/17 PRICING METHODOLOGY DISCLOSURE

Contents

| Gloss | ary | | 2 |
|-------|-----------------|--|-----------|
| 1 | Introdu | ction | 6 |
| | 1.1 | Summary | 6 |
| | 1.2 | Regulatory Requirements | 7 |
| | 1.3 | Related Pricing documents | 8 |
| 2 | Summar | ry of changes to pricing | 9 |
| | 2.1 | Compliance with DPP Determination | 9 |
| | 2.2 | Pricing names | 9 |
| | 2.3 | 3 phase residential price plans | 10 |
| | 2.4 | Industrial price plans | 10 |
| | 2.5 | Electric Vehicle pricing | 10 |
| | 2.6 | Rebalancing fixed and variable charges | 10 |
| | 2.7 | Small Scale Distributed Generation Charge (SSDG) | 10 |
| | 2.8 | Cost of Supply Model | 11 |
| 3 | Pricing | Review | 12 |
| 4 | Consum | er Groups | 14 |
| | 4.1 | Defining Consumer Groups | 14 |
| 5 | Target H | Revenue | 17 |
| | 5.1 | Cost components | 17 |
| 6 | Cost All | ocation | 19 |
| | 6.1 | COSM summary | 19 |
| | 6.2 | Application to prices | 21 |
| 7 | Setting of | of Prices | 23 |
| | 7.1 | Changes to standard prices | 23 |
| | 7.2 | Impact of price changes on consumer groups and individual Price Pla | ans 25 |
| | 7.3 | Non-standard contracts | 25 |
| | 7.4 | Obligations and responsibilities to consumers on Non Standard Contracts | 26 |
| | 7.5 | Distributed Generation | 26 |
| | 7.6 | Service Charges (previously Other Charges) | 28 |
| | 7.7 | Consumer views on pricing | 29 |
| Appe | ndix A: I | Pricing Methodology - Information Disclosure Requirements | 31 |
| Appe | endix B: (| Consistency with Pricing Principles | 33 |
| Appe | endix C: H | Restructure of Prices | 38 |
| Appe | ndix D – | Directors' Certification | 41 |

WELLINGTON ELECTRICITY LINES LIMITED 2016/17 PRICING METHODOLOGY DISCLOSURE

List of tables

| Table 1– Change in delivery charge per price element | 7 |
|---|----|
| Table 2 – Key changes to consumer group codes | 10 |
| Table 3 – Consumer group and load characteristics | 15 |
| Table 4 – Key cost components to cover provision of electricity line services | 17 |
| Table 5 – Key cost components to cover provision of electricity line services | |
| Table 6 – Key cost components to cover provision of electricity line services | |
| Table 7 - COSM allocators by consumer group | 21 |
| Table 8 - COSM allocations of costs to consumer groups | 21 |
| Table 9 – revenue from prices relative to cost of supply (excl. Non-Standard) | |
| Table 10 – Change in Delivery Charge by Price Component | 24 |
| Table 11 – Average 2016/17 Price Changes by Price Plan | 25 |
| Table 12 – Non Standard Contract Statistics | |
| Table 13 – Service Charges | |
| Table 14 – Survey Questions | |
| Table 15 – Proportion of Target Revenue by price component | |
| | |

1 Introduction

This document describes WELL's pricing methodology and outlines how costs are allocated to and recovered from the consumer groups connected to and taking line function services from the Wellington network for the 2016/17 pricing year commencing 1 April 2016.

1.1 Summary

WELL owns and operates the electricity distribution network for the Wellington region, covering Wellington, Porirua, Lower and Upper Hutt cities. Together with Transpower (owner and operator of the national Transmission grid network), WELL's revenue comes from the delivery charges paid by Consumers as part of their electricity bill paid to retailers. Consumer bills are packaged up differently by different retailers and as such WELL's prices are not directly comparable to a consumer bill, rather they are part of the bill. WELL's delivery charges make up around 40% of the total electricity bill paid by consumers.

WELL sets its prices for each of its consumer groupings annually from 1 April in accordance with the DPP Determination (DPP). The DPP allows WELL to increase its distribution prices annually by consumer price index (CPI) inflation. In addition it may recover 'Pass-through' and 'recoverable' costs, which includes council rates, levies, transmission costs, and other DPP allowances and adjustments.

We have made a number of changes to our pricing this year to:

- Recover permitted costs under the DPP Determination 2015;
- Align the pricing methodology more closely with the Electricity Authority's Pricing Principles;
- Align pricing more closely with common pricing structures applied across the industry;
- Simplify and streamline pricing structures to reduce the complexity and increase the transparency of our prices;
- Minimise revenue volatility and under-recovery; and
- Move to better reflect the different cost inputs of supplying different consumer groups whilst avoiding price shocks during costs reapportionment and mandatory compliance with the LFC Regulations.

The impact of these changes is discussed in more detail through this document. WELL is seeking to better align its individual tariff prices with the cost of supply and will progressively move towards this over time to mitigate the risk of price shocks occurring. WELL is also re-balancing fixed and variable prices for standard users (> 8,000 kWh) and streetlighting. The fixed daily price for standard users is being increased from \$1.00 to \$1.10 per day to reflect the increased capacity used by these consumers. Streetlights, which are unmetered are moving to a solely fixed charge basis. This fixed charge better reflects the nature of WELL's investment in the infrastructure to support streetlights and provides a better price signal for streetlight owners.

WELL also seeks to support the uptake of electric vehicles in Wellington and we have reviewed the electric vehicle (EV) price offered to our residential consumers. A

2016/17 PRICING METHODOLOGY DISCLOSURE

consumer with an EV can apply to be on WELL's 'EV night only' price plan which provides the night price for consumption during an extended night period from 9pm -7am. This creates an incentive for EV owners to charge their vehicle during off-peak periods. The extended night period provides EV owners longer home charging periods which encourages efficient low energy charging options at cheaper network cost periods. Price signals for efficient use of new technology is an important aspect of forward looking pricing methodologies. Consumers who would like to take advantage of this price plan will need to contact their energy retailer.

WELL has increased its distribution component of prices by CPI of 0.46% and is passing through the increases in the cost of transmission and other costs in accordance with the DPP Determination 2015.

The overall change in WELL's delivery prices for 2016/17 is expected to result in an increase in the <u>average consumer's</u> annual network delivery charges of 4.15%, when fixed and variable price components are combined as summarised in the table below.

| Price change element | Contribution to total average change in delivery charges |
|---|--|
| Consumer Price Index (CPI) – 0.46% | 0.28% |
| Transpower transmission charges | 1.75% |
| Distributed generation avoided transmission costs | 1.46% |
| Rates, levies, other recoverable costs | 0.66% |
| Total weighted average price adjustment | 4.15% |

Table 1– Change in delivery charge per price element

The above table highlights the average change in the network delivery charge component of a consumer's electricity bill. As noted above delivery charges represent around 40% of the total electricity bill paid by consumers. However, consumers should be aware that energy retailers will package up our prices into their own retail offerings and the actual impact on consumer electricity bills will vary according to price plans, consumption and the extent to which energy retailers pass through WELL's network price changes. WELL's individual price changes are outlined in section 7.2 and the annual average individual consumer group price change ranges from an increase of 0.07% to 5.96% (excluding a small number of consumers who receive an average decrease of 9.03% due to the amalgamation of the industrial consumer group into the General transformer consumer group). Consumers should check with their energy retailer if they wish to further understand the actual impact on their total electricity bill

1.2 Regulatory Requirements

This document has been prepared in accordance with clause 2.4 of the ID Determination 2012 and is consistent with the ID Guidelines 2010.

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

2016/17 PRICING METHODOLOGY DISCLOSURE

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

WELL's ability to earn revenue is regulated under the DPP. The DPP allows WELL to increase its prices by the consumer price index (CPI) inflation. In addition it may recover 'Pass-through' and 'recoverable' costs, which includes council rates, levies, and transmission costs and other DPP allowances and adjustments.

We are also subject to information disclosure regulations under Part 4^1 . 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. The requirements of the ID Determination 2012 relating to pricing methodologies are set out in Appendix A.

Additionally, the Electricity Authority's ID Guidelines 2010 set out voluntary principles and guidelines for information disclosure relating to EDBs pricing methodologies. We demonstrate consistency with the pricing principles in Appendix B.

Other regulatory requirements directly applicable to this pricing methodology are:

- the LFC Regulations this requires EDBs to offer a pricing plan to domestic consumers that use less than 8,000kWh per annum, which has a fixed daily price of no more than 15 cents per day. Other variable charges must be set such that residential low users are no worse off than residential standard users when consumption is at 8,000kWh per annum.
- Schedule 6.4 of Part 6 of the Code sets out pricing principles for distributed generation.

1.3 Related Pricing documents

In addition to this Pricing Methodology Disclosure document, the following pricing related material applicable for the 2016/17 year will be available on WELL's website:²

- Disclosure of Prices;
- Line Charge Notice;
- Electricity Network Pricing Schedule;
- Transmission Pass Through Methodology; and
- Customer Contributions Policy.

¹ Section 54F of the *Commerce Act 1986*

² Available at: <u>http://www.welectricity.co.nz/disclosures/pricing/2016-pricing/</u>

2 Summary of changes to pricing

We have made a number of changes to our pricing this year to:

- Recover permitted costs under the DPP Determination 2015;
- Align the pricing methodology more closely with the Electricity Authority's Pricing Principles;
- Align pricing more closely with common pricing structures applied across the industry;
- Simplify and streamline pricing structures to reduce the complexity and increase the transparency of our prices;
- Move to better reflect the different cost inputs of supplying residential, commercial and industrial consumer groups whilst avoiding price shocks during costs reapportionment and maintaining compliance with the Low Fixed Charge Regulations.

The changes are outlined in the subsections below.

2.1 Compliance with DPP Determination

We have increased prices on average by 4.15%. This increase reflects the recovery of the allowable costs identified under the Commerce Commission's DPP Determination 2015, including:

- Increases in CPI inflation of 0.46%;
- Increases in Transpower and recognition of avoided transmission charges;
- Increases in pass-through costs, which include rates and levies;
- Other recoverable costs, including the capex wash up adjustment; and
- Under-recovery of 2015/16 pass-through and recoverable costs

2.2 Pricing names

We have sought to align our residential consumer group plans with the Electricity Network Association's Distribution Pricing Guidelines (August 2015) to simplify pricing structures and make them easier to understand. These guidelines suggest standardised pricing names and definitions which seek to align price plans across EDBs.

We have changed the consumer group codes for all consumer groups except for unmetered consumers.

| Consumer group | Previous consumer group code | New consumer group code | |
|---------------------------|------------------------------|-------------------------|--|
| Residential Low User | G100-G103 & G108 | "RLU" | |
| Residential Standard User | G104-G107 & G109 | "RSU" | |
| General Low Voltage | "GV" | "GLV" | |
| General Transformer | "GX"; "GC"; "GU"& "GR" | "GTX" | |

2016/17 PRICING METHODOLOGY DISCLOSURE

Table 2 – Key changes to consumer group codes

We have also renamed the commercial consumer group to align to the upper limit of each capacity band for each commercial group. For example, the GV99/GX99 consumer group plans, for a capacity connection of between 300kVA and 1500kVA, has been renamed GLV1500 and GTX1500, respectively.

Appendix C maps the old price codes to the new price codes.

2.3 3 phase residential price plans

We have discontinued the 3 phase residential consumer group plan for low users and standard users and have moved consumers on these plans to the equivalent residential low user (RLU) and residential standard user (RSU) price plan. Discontinuing these plans is part of the simplification of the residential consumer group structure.

2.4 Industrial price plans

The industrial consumer group (G60) have been incorporated into the 'General Transformer Connection' consumer group; given these consumers are all connected to dedicated transformers.

We have also removed the CBD, urban, and rural distinctions from the G60 consumer group to simplify pricing structures. This level of disaggregation was no longer considered necessary, after weighing up the benefits of cost reflectivity and pricing simplicity. For instance, there were only two consumers on rural industrial plan. The new pricing plan is GTX1501.

2.5 Electric Vehicle pricing

We have reviewed the electric vehicle (EV) plan offered to our residential consumers. A residential consumer with an EV can apply to be on WELL's 'EV night only' price which provides the night price for consumption during an extended night period from 9pm - 7am. Consumers who would like to take advantage of this price will need to contact their energy retailer.

2.6 Rebalancing fixed and variable charges

From 1 April 2016, all revenue for streetlight connections will be recovered from fixed charges, with no charge for energy usage. This fixed charge better reflects the nature of WELL's investment in the infrastructure to support streetlights and provides a better price signal for streetlight owners considering the impact and benefits from the introduction of more energy efficient street lighting and ongoing network maintenance requirements.

We have also increased the fixed component of prices for other consumer groups. In particular, we have increased the daily fixed price from \$1.00 to \$1.10 per day for RSU consumers to reflect the increased capacity used by these consumers.

2.7 Small Scale Distributed Generation Charge (SSDG)

We have introduced a SSDG price within each pricing plan. The price is set at \$0.00/kWh for injection for the 2016/17 price year. The primary reason these prices have been introduced is to record the volume of SSDG on the network. In the future, these connections may incur charges.

2.8 Cost of Supply Model

We have updated our cost of supply model (COSM) as part of WELL's aim to have a more cost reflective approach to our prices. We have made adjustments to the distribution component of prices to better align charges with the cost of supplying distribution services to the different consumer groups. Further information on the COSM and its impact on pricing is included in section 6.

3 Pricing Review

In 2015, WELL initiated an in-depth review of its distribution pricing structures and approaches. The objective of WELL's pricing review is to develop electricity delivery prices that:

- Are more cost reflective better signalling to consumers the impact of their usage on future expenditure;
- Are consumer and retailer centric, such that prices:
 - are logical and simple to understand;
 - allow consumers to manage their usage and bills;
 - can be passed on transparently by retailers
- Minimise revenue volatility and under-recovery;
- Seek to reduce price shock to consumers;
- Are forward looking, being robust to changes in technology and regulation;
- Are practical and achievable to implement within the next 1-5 years; and
- Are not inconsistent with pricing structures used by other EDBs.

For the 2016/17 pricing period, WELL focused on areas where changes could be easily implemented, which included:

- Rationalisation of pricing structures;
- Simplification and standardisation of pricing plans; and
- Further alignment of prices to the cost of supply.

Looking forward, WELL intends to investigate and develop pricing structures which better signal the cost of investing in the network as well as signal the cost impacts of consumer behaviour. Our plan is to review and, where practicable, introduce the following price changes over the next 1-5 years:

- **Demand/TOU pricing:** We will investigate and introduce demand or time of use (e.g. peak pricing) based pricing options across the residential and commercial consumer groups. With time of use metering in the Wellington region now covering approximately 70% of all connections, there is an opportunity for WELL to consider transitioning to time and/or demand based pricing. This will provide consumers with the ability to reduce electricity charges by reducing usage during peak demand periods and may allow WELL to reduce or defer investment in the network. Demand/TOU pricing may also help us respond to the impact of evolving energy technologies (including solar, batteries, EVs) and alternative energy supplies (e.g. gas);
- **Rationalise commercial pricing plans** by merging some existing price categories and aligning pricing structures. In particular, we are considering

adopting similar maximum demand based pricing structures across all large commercial load;

- Merge standard residential and small commercial groups: we will consider the merits of rationalising the standard residential (RSU) and small general low voltage (i.e. GLV15) consumer groups. This recognises that these consumers have similar load sizes as well as the increasing difficulty in distinguishing residential and commercial activities; and
- **Rationalise non-standard prices**, where possible. This will include reviewing the criteria for entering into non-standard contracts and consideration of moving some non-standard connections to standard pricing, where appropriate.

Some of these pricing areas will take some time to develop and implement because more data and analysis is required (i.e. demand based pricing), or there are regulatory barriers, and/- or further smart meter roll out is necessary.

We will consider introducing these changes as soon as practicable to address our pricing objectives and where there is a clear benefit from doing so. For any such changes we plan to develop a transition plan to avoid significant price shock for consumers.

We plan to consult with consumer advocacy groups and retailers on any significant price changes, and will provide further updates as our review progresses.

4 Consumer Groups

This section sets out the rationale and criteria for our consumer groups.

4.1 Defining Consumer Groups

WELL has adopted the following consumer groups for pricing purposes:

- Standard contracts:
 - Residential Low User (RLU);
 - Residential Standard User (RSU);
 - General Low Voltage Connection (GLV);
 - General Transformer Connection (GTX); and
 - Unmetered (G).
 - Non Standard Contracts.

Consumers are grouped by voltage level connection, end use, and utilisation of electricity assets. As an example, the General Transformer Connection group does not make use of the low voltage (LV) reticulation network, as it connects directly to the high voltage network via a dedicated transformer.

Our Price Schedule³ sets out prices for the 2016/17 pricing year for the Standard contract consumer groups. Non-standard contract connection consumers are notified directly of their pricing.

The following paragraphs set out the criteria used by WELL to allocate consumers to consumer groups.

Residential

The Residential consumer group is consistent with the definition of "Domestic consumer" in the LFC Regulations, where the primary use of the point of connection is a home not normally used for any business activity. Consumers in this group almost exclusively are connected to the LV Network, place similar capacity demands on the network, and can use 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 fixed charge retail pricing plan. The LFC Regulations require EDBs to offer a pricing plan to domestic low users with a fixed price of no more than 15 cents per day.

A standard user is a residential consumer who consumes more than 8000 kWh per year.

General Low Voltage Connection

The General Low Voltage Connection group is connected to the LV network with a connection capacity of up to 1500kVA, where the premises is a non-residential site used for business activity (e.g. a shop or a farm).

General Transformer Connection

³ Available at: <u>http://www.welectricity.co.nz/disclosures/pricing/2016-pricing/</u>

The General Transformer Connection group includes consumers who receive supply from a transformer, owned by WELL and dedicated to supplying a single consumer, where the premises is a non-residential site used for business activity.

As at 1 April 2016, the industrial consumer group has been incorporated into the General Transformer Connection consumer group. These are identified as consumers with a dedicated transformer connection.

Voltage and asset distinctions

The following table depicts the relationship between consumer groups, load and asset utilisation characteristics.

| Connection Asset Characteristics | Unmetered | Residential | General Low Voltage | General Transformer | Non Standard |
|-------------------------------------|----------------|--------------|------------------------|------------------------|----------------|
| <1kVA | √ | | | | |
| <=15kVA | | \checkmark | √ | \checkmark | |
| >15kVA & <=69kVA | | | √ | \checkmark | |
| >69kVA & <=138kVA | | | √ | \checkmark | |
| >138kVA & <=300kVA | | | √ | \checkmark | |
| >300kVA & <=1500kVA | | | | \checkmark | |
| >1500kVA | | | | \checkmark | ✓ |
| Low voltage | √ | √ | ~ | | |
| High voltage | | | | 1 | √ |
| Dedicated assets | \checkmark^4 | | | √ ⁵ | √ ⁶ |

Table 3 – Consumer group and load characteristics

Distributed Generation

From 1 April 2016, we have introduced a distributed generation (DG) price. While not classified specifically as a consumer group in the Price Schedule, we have created a zero charge against each plan. The primary reason these charges are introduced is to record the volume of generation on the network for market reconciliation purposes. This information will also be used to monitor uptake of DG connections on the network to assess their impact on network infrastructure and operations.

Non-standard contracts

The non-standard contracts group is made up of consumers who have atypical connection characteristics. For non-standard consumers, a confidential agreement exists between WELL and the individual consumer which sets out the terms and conditions for the supply of the electricity lines services and price.

⁴ Streetlight circuits

⁵ Transformers

⁶ Dedicated network assets

In accordance with its Customer Contributions Policy⁷, 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
- Any other unusual circumstances that WELL, at its discretion, considers to warrant the use of a non-standard rather than standard contract.

Unmetered

The Unmetered consumer group includes consumers who do not have any metering because the cost of metering is prohibitive relative to their consumption. This includes streetlights, bus shelters, traffic lights etc.

⁷ Available at: <u>http://www.welectricity.co.nz/disclosures/customer-contributions/</u>

5 Target Revenue

The target revenue for the 2016/17 pricing year is \$170 million. Target revenue is determined in accordance with the DPP Determination 2015 published by the Commission, being the amount which WELL can collect through prices to cover costs and to provide the allowable return on investment.

The table below outlines key cost components required to cover the costs and return on capital for the 2016/17 year associated with WELL's provision of electricity lines services.

| Cost components | 2016/17 (\$m) |
|--------------------------------------|---------------|
| Opex | 30.7 |
| Depreciation | 31.3 |
| Return on capital ⁸ | 34.4 |
| Transpower Charges | 65.7 |
| Avoided Costs of Transmission (ACOT) | 2.5 |
| Other recoverable costs | 1.6 |
| Pass-through costs | 3.8 |
| Target revenue | 170.0 |

Table 4 – Key cost components to cover provision of electricity line services⁹

5.1 Cost components

WELL uses the DPP determination 2015 to determine total target revenue in each disclosure year. The following table describes the cost components of target revenue.

⁸ Pre-tax, net of revaluations and other income

⁹ Sourced from WELL's forecasts and notifications.

| Cost component | Description | | |
|-------------------------|--|--|--|
| Opex | Opex includes forecast costs associated with operating and maintaining the network and managing day to day business activities. | | |
| Depreciation | Reduction in the value of WELL's asset base over time due in particular to wear and tear. | | |
| Return on capital | A pre-tax return on WELL's regulatory asset base. | | |
| Transpower charges | Charges payable to the national electricity grid operator, Transpower, to transport energy from generators to the WELL network. This includes connection charges, interconnection charges and new investment agreement charges. WELL passes these charges onto its consumers at cost. | | |
| ΑСОТ | ACOT payments are payable to large distributed generators in recognition that local generation may cause WELL to avoid Transpower charges. See section 7, for further detail on how ACOT is calculated | | |
| Other recoverable costs | Recoverable costs include Transpower charges and ACOT payments (as above). In addition, the DPP Determination 2015 allows for other recoverable costs, including the recovery of capex wash up adjustment and pass-through balances. | | |
| Pass-through costs | This includes Local Council rates, Commerce Commission levies, Electricity Authority levies, and Electricity and Gas Complaints Commission levies. WELL passes on these charges to consumers at cost. | | |

2016/17 PRICING METHODOLOGY DISCLOSURE

Table 5 – Key cost components to cover provision of electricity line services

6 Cost Allocation

WELL is working towards better aligning prices to the cost of supply.

We plan to more closely align prices to the distribution cost of supply over the next 2-3 years. To do this, we have updated our Cost of Supply Model (COSM) to estimate the allocation of distribution costs between consumer groups.

Transmission costs have historically been reflected in prices based on the relative demand of each consumer group.

We have undertaken stand-alone and incremental cost analysis to check that prices are free from economic cross-subsidy¹⁰ (as discussed in Appendix B).

6.1 COSM summary

The COSM allocates the various expenditure components of WELL's target revenue to consumer groups and pricing categories.





Revenue from non-standard consumers is initially removed from target revenue, as these consumers are typically priced based on recovery of actual costs. Allocators and other inputs are also adjusted to remove non-standard consumers.

The remaining cost components of target revenue are allocated to consumer groups as follows:

- Costs are directly attributed to consumer groups where known (e.g. streetlight maintenance)
- Any remaining shared costs are allocated as set out in the following table.

¹⁰ Except where subsidies arise from compliance with other regulations such as the DPP.

2016/17 PRICING METHODOLOGY DISCLOSURE

| Consumer Gr | roup Cost allocator | Cost Components | Rationale |
|-------------|---|--|--|
| Demand | Coincident maximum demand is calculated based on an average of WELL's highest half-hourly peaks which generally aligns to Transpower's RCPD peaks. Actual TOU meter records are used where available. For groups with limited meter data, analysis of feeder demand and sampling of consumers with TOU meters is undertaken. | Transpower chargesACOT | This recognises that Transpower charges and ACOT payments are based on providing supply capacity, determined by the capacity of the GXP and core grid assets. |
| RAB | A composite RAB allocator is created by allocating regulatory asset base values to consumer groups as follows: Connection assets: by ICPs Streetlight assets: directly attributed to streetlights LV network assets are allocated to non-metered, residential, LV and streetlights by proportion of their demand All other assets: demand This seeks to directly attribute asset costs to consumers where possible | ROI Network Depreciation Revaluations Tax Opex (Routine and asset replacement) | RAB costs are allocated to consumer groups based on that consumer group's utilisation (share of demand) of the network assets. |
| ICPs | Consumer connections | Opex (Service interruptions and emergencies & vegetation management) | A general allocator that recognises that all consumers benefit from expenditure to prevent and respond to interruptions to supply. |
| kWh | kWh consumption | Opex (System operations and network support) Non-network depreciation | A general allocator to recognise that consumers benefit from operation of the network in proportion to their use of the network. |
| ICPs:kWh | A 50:50 weighting of ICPs and kWhs | Opex (Business Support) Pass-through costs | This weighting recognises that larger consumers create relatively higher costs per connection, and that levies are incurred in proportion to ICPs and kWhs. |

 Table 6 – Key cost components to cover provision of electricity line services

The resulting allocators are applied as follows to each consumer group:

| Consumer group | Demand (%) | RAB (%) | ICPs (%) | kWh (%) | Weighted ICPs & kWh (%) |
|---------------------|---------------|------------|-------------|------------|----------------------------------|
| Residential | 64.8 | 66.2 | 84.8 | 45.2 | 65.0 |
| General Low Voltage | 22.3 | 21.9 | 9.3 | 30.2 | 19.7 |
| General Transformer | 11.9 | 9.4 | 0.2 | 23.5 | 11.9 |
| Non-metered | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 |
| Streetlights | 0.9 | 2.3 | 5.6 | 0.9 | 3.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

2016/17 PRICING METHODOLOGY DISCLOSURE

Table 7 - COSM allocators by consumer group

The key COSM outputs at the consumer group level are detailed below. They express the cost of supply for each consumer group as a proportion of costs.

| Consumer group | Transmission Distribution | | Total |
|---------------------|---------------------------|---------------------|--------|
| | | % of target revenue | |
| Residential | 64.78 | 65.91 | 65.47 |
| General Low Voltage | 22.16 | 21.34 | 21.65 |
| General Transformer | 11.93 | 9.65 | 10.53 |
| Non-metered | 0.16 | 0.15 | 0.15 |
| Streetlights | 0.97 | 2.95 | 2.18 |
| Total | 100.00 | 100.00 | 100.00 |

Table 8 - COSM allocations of costs to consumer groups

6.2 Application to prices

For the purpose of setting prices this year, WELL has only sought to align distribution prices to the distribution component of the cost of supply. WELL will consider alignment of transmission prices to the transmission component of the cost of supply in the future.

The focus of our COSM analysis is on the proportion of target revenue to recover from each consumer group, rather than the dollar amount to recover. This reflects the inherent volatility in some allocator metrics (e.g. demand) and costs (e.g. maintenance). We have also not sought to apply the COSM at the price level as there is significant complexity in doing so. The chance of volatility and/or mis-specification in the COSM outputs also rises at this level.

2016/17 PRICING METHODOLOGY DISCLOSURE

The following table shows the extent of alignment between prices and the cost of supply. The proposed difference represents the under/(over) recovery of costs. WELL is progressively moving to align current prices to the cost of supply over the next few years to mitigate the risk of price shocks occurring. In 2016/17 WELL has closed up to half the gap between revenue received from current prices and the cost of supply.

| Consumer group | Implied COSM allocation2016/17 Pricing (Applied) | | Difference |
|---------------------|--|---------------------|------------|
| | | % of target revenue | |
| Residential | 65.91 | 65.01 | 0.90 |
| General Low Voltage | 21.34 | 23.04 | -1.71 |
| General Transformer | 9.65 | 9.67 | 0.02 |
| Non-metered | 0.15 | 0.23 | -0.08 |
| Streetlights | 2.95 | 2.05 | 0.90 |

Table 9 – revenue from prices relative to cost of supply (excl. Non-Standard)

7 Setting of Prices

Prices for all consumers are set in accordance with the DPP Determination 2015, which allows WELL to increase the distribution component of its prices by CPI inflation and the recovery of pass-through and recoverable costs.

2016/17 prices are based on 2015/16 prices adjusted for the impact of changes in:

- The Consumer Price Index $(CPI)^{11}$;
- Transpower Transmission Charges;¹²
- Other Pass Through and Recoverable Costs;¹³
- Cost of supply allocations; and
- The balance between fixed and variable charges for standard users.

In addition, individual price adjustments have been made to reflect price restructuring and alignment of prices to costs of supply. Prices for residential consumers are also adjusted to comply with the LFC Regulations.

7.1 Changes to standard prices

Consumer Price Index (CPI) adjustment:

The distribution component of prices has increased in line with CPI inflation of 0.46%.

Transpower Transmission Charges

Transpower charges have increased by 4.44%. WELL passes these charges on to consumers at cost.

ACOT

WELL pays ACOT charges to large sized distributed generators. These distributed generators reduce WELL's reliance on Transpower's transmission grid at peak times as peak demand is partly served through these distributed generators. Over time, WELL should incur lower Transpower charges as a result.

WELL recognises these Transpower savings by paying an avoided transmission payment to the local distributed generator and WELL in turn pass these charges on to consumers at cost.

2016/17 prices include a one off recovery of the Mill Creek wind farm for ACOT payments relating to 2015/16 which were not recovered by WELL's 2015/16 prices.

Mill Creek is the largest distributed generator on WELL's network. WELL currently have four large distributed generators receiving ACOT payments.

¹¹ As defined in the DPP Determination 2015

¹² As defined in the DPP Determination 2015

¹³ As defined in the DPP Determination 2015

2016/17 PRICING METHODOLOGY DISCLOSURE

Pass through and other Recoverable costs

Pass-through costs have increased by 11.1%, reflecting increases in rates and industry levies. Other recoverable costs include a capex wash up adjustment of \$434k, which is provided for in the DPP Determination 2015. Pass through and other Recoverable costs are passed through to consumers at cost.

Balance between fixed and variable prices for users

WELL's prices are set to comply with the LFC Regulations. Residential low user prices are applicable for residential consumers who use less than 8,000 kWh per annum and residential standard user prices apply to residential consumers who use more than 8,000 kWh per annum.

Residential standard users have a higher fixed daily price to reflect the increased capacity used by these consumers. As at 1 April 2016, the fixed daily price for residential standard users has increased from \$1.00 per day to \$1.10 per day. Whilst these consumers will have a higher fixed daily price, they will generally have lower variable prices (\$/kWh) than residential low users. WELL has reduced the standard user variable price (\$/kWh) by an average 3.7%, partly to compensate for the increased fixed daily charge.

Summary of price changes

The change in delivery charges for 2016/17 is expected to result in an increase in the average consumer's annual network delivery charges of 4.15%, when fixed and variable price components are combined.

| Price change element | Contribution to total average change in Delivery Charges |
|---|--|
| Consumer Price Index (CPI) – 0.46% | 0.28% |
| Transpower transmission charges | 1.75% |
| Distributed generation avoided transmission costs | 1.46% |
| Rates, levies, other recoverable costs | 0.66% |
| Total weighted average price adjustment | 4.15% |

Table 10 – Change in Delivery Charge by Price Component

The above table highlights the average change in the delivery charge component of a consumers' electricity bill. Our delivery charges represent around 40% of the total electricity bill paid by consumers. However, consumers should be aware that energy retailers will package up our prices into their own retail offerings and the actual impact on consumer electricity bills will vary according to price plans, consumption and the extent to which energy retailers pass through WELL's network price changes. Consumers should check with their energy retailer if they wish to further understand the actual impact on their total electricity bill.

2016/17 PRICING METHODOLOGY DISCLOSURE

7.2 Impact of price changes on consumer groups and individual Price Plans

The impact of the above price changes on pricing plans is detailed as follows:

| Price plan | Price code | Average |
|----------------------------------|---------------------------------------|------------------|
| | | price change (%) |
| Residential Low User | RLU-24UC | 5.89 |
| | RLU-CTRL | 5.95 |
| | RLU-AICO | 5.87 |
| | RLU-AICO (Previously 3phase) | 4.88 |
| Residential Standard | RSU-24UC | 5.74 |
| User | RSU-CTRL | 5.88 |
| | RSU-AICO | 5.97 |
| | RSU-AICO (Previously 3phase) | 2.65 |
| General Low Voltage | GLV15 | 0.37 |
| | GLV69 | 0.28 |
| | GLV138 | 0.60 |
| | GLV300 | 1.45 |
| | GLV1500 | 0.66 |
| General Transformer | GTX15 | No consumers |
| | GTX69 | 2.19 |
| | GTX138 | 0.07 |
| | GTX300 | 2.20 |
| | GTX1500 | 1.18 |
| | GTX1501 (Previously Industrial CBD) | 5.96 |
| | GTX1501 (Previously Industrial Urban) | 2.75 |
| | GTX1501 (Previously Industrial Rural) | (9.03) |
| Unmetered (non- streetlights) | G001 | 1.75 |
| Unmetered (streetlights) | G002 | 5.91 |
| Individual | Ind | 0.46 |
| Average | | 4.15 |

 Table 11 – Average 2016/17 Price Changes by Price Plan

7.3 Non-standard contracts

For consumers on non-standard contracts WELL changed the distribution price component from 2015/16 in accordance with conditions of the non-standard contracts.

2016/17 PRICING METHODOLOGY DISCLOSURE

Total delivery charges are the sum of the distribution and transmission prices. Transmission prices were increased this year to reflect changes in transmission costs.

For non-standard contracts established prior to the transfer of ownership of the network in 2009, WELL continued previously agreed connection policies and prices (reviewed annually). For non-standard contracts established under WELL's ownership, WELL has applied the methodology in accordance with WELL's Customer Contributions Policy.¹⁴

The table below shows the number of contracts and connections covered under nonstandard agreements.

| Non Standard Contract Statistics | Total |
|----------------------------------|--------|
| Number of Non Standard Contracts | 6 |
| Number of ICPs | 36 |
| 2016/17 Target Revenue | \$2.9m |

Table 12 – Non Standard Contract Statistics¹⁵

7.4 Obligations and responsibilities to consumers on Non Standard Contracts

All of WELL's non-standard contracts contain the same commitments to supply security or restoration priority as WELL's standard Use of Network Agreement, with some special conditions:

- One non-standard contract commits 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 contracts were established prior to 2009, WELL will honour the previously agreed connection policy and price.

7.5 Distributed Generation

Distributed generators may be on either standard or non-standard contracts depending on the circumstances.

A \$0/kWh-injection price applies for standard DG connections. This is done so that billing information can be recorded for these connections for monitoring purposes.

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

WELL may also pay a distributed generator that injects into its network an ACOT payment if the distributed generator:

¹⁴ Available at: <u>http://www.welectricity.co.nz/disclosures/customer-contributions/</u>

¹⁵ Target Revenue includes transmission and pass through cost recovery

2016/17 PRICING METHODOLOGY DISCLOSURE

- 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.

The benefit to WELL's network which arises as a result of distributed generators supplying into its network is approximated by the direct avoidance of Transpower¹⁶ 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 way 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.¹⁷

The distributed generator must invoice WELL on a monthly basis from 1 April following submission of the data.

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:

$$\operatorname{RCPD}_{G} * \operatorname{IR}_{CF} - (\operatorname{RCPD}_{WELL} * (\operatorname{IR}_{A} - \operatorname{IR}_{CF})) * (1 - \operatorname{Admin})$$

- Where: $RCPD_G$ 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_A The interconnection rate published by Transpower for the relevant 12 month period commencing 1 April.
 - $\label{eq:RCF} IR_{CF} \qquad \qquad The counterfactual interconnection rate (IR_{CF}) is calculated as: \\ = IC Revenue / (RCPD_{TP} + RCPD_G)$
 - RCPD_{WELL} The average of the sum of demand across all Wellington

¹⁷ 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.

Electricity GXPs coincident with the 100 Lower North Island Peaks for the relevant 12 month period commencing 1 April.

- RCPD_{TP} 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_{WELL}) 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.

7.6 Service Charges (previously Other Charges)

A service charge relates to work performed for a consumer by WELL's approved contractors. These charges are set to recover incremental costs which include external contractor rates and a margin to recover WELL's processing costs (e.g. updating network records and registry information etc.). WELL has not undertaken a detailed review of its service charges in over four years. WELL has also recently renewed its contract with its field service provider. These two factors prompted WELL to perform a full review of its service charges. The table below sets out the charges applicable.

| Description | Unit | Charge Effective 1 April 2015 | Charge Effective 1 April 2016 |
|--|-------------------|-------------------------------------|-------------------------------------|
| New connection fee – single phase connection | per connection | \$117 | \$160 |
| New connection fee – two or three phase connection | per connection | \$365 | \$400 |
| Site visit fee | per site visit | \$152 | \$160 |
| Permanent disconnection fee | per disconnection | \$233 | \$300 |
| Late, incorrect or incomplete consumption fee data | per hour | \$122 | \$122 |

Table 13 – Service Charges

WELL's 2016/17 Pricing Schedule¹⁸ provides further descriptions of these charges.

¹⁸ Available at: <u>http://www.welectricity.co.nz/disclosures/pricing/2016-pricing/</u>

7.7 Consumer views on pricing

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 about consumers' expectations of price and quality is reflected in Table 14.

| 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 14 – 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.

2016/17 PRICING METHODOLOGY DISCLOSURE

Proportion of target revenue by price component

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

| Consumer group | Consumer plan code | Fixed (FIXD) per day | Demand (DAMD) kVA/mont h | Capacity (CAPY) kVA/day | On-Pk Demand (DOPC) kW/month | Pwr Factor (PWRF) kVAr/mth | Uncontrolled (24UC) kWh | Night (NITE) kWh | Electric Vehicle (EVNITE) kWh | Controlled (CTRL) kWh | All Inclusive (AICO) kWh | Non- standard contracts (IC) total | Total Revenue \$ pa |
|---------------------------------|--------------------------|-------------------------|-----------------------------------|-------------------------------|---------------------------------------|----------------------------------|-------------------------------|------------------------|--|-----------------------------|-----------------------------------|--|---------------------------|
| | | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| Residential low user | RLU | 4,809,108 | 0 | 0 | C | 0 | 14,534,986 | 102,738 | 0 | 581,749 | 29,498,478 | 0 | 49,527,059 |
| Residential standard user | RSU | 24,915,451 | 0 | 0 | C | 0 | 10,796,103 | 133,207 | 0 | 263,206 | 20,152,925 | 0 | 56,260,892 |
| General low voltage | GLV15 | 1,140,360 | 0 | 0 | 0 | 0 | 2,516,258 | 0 | 0 | 0 | 0 | 0 | 3,656,618 |
| General low voltage | GLV69 | 5,824,626 | 0 | 0 | 0 | 0 | 12,619,124 | 0 | 0 | 0 | 0 | 0 | 18,443,750 |
| General low voltage | GLV138 | 1,245,733 | 0 | 0 | 0 | 0 | 2,468,349 | 0 | 0 | 0 | 0 | 0 | 3,714,082 |
| General low voltage | GLV300 | 1,509,168 | 0 | 0 | 0 | 0 | 1,671,009 | 0 | 0 | 0 | 0 | 0 | 3,180,177 |
| General low voltage | GLV1500 | 3,030,475 | 4,166,869 | 0 | 0 | 0 | 1,461,551 | 0 | 0 | 0 | 0 | 0 | 8,658,895 |
| General transformer | GTX15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| General transformer | GTX69 | 6,037 | 0 | 0 | 0 | 0 | 13,324 | 0 | 0 | 0 | 0 | 0 | 19,361 |
| General transformer | GTX138 | 301 | 0 | 0 | 0 | 0 | 83,234 | 0 | 0 | 0 | 0 | 0 | 83,535 |
| General transformer | GTX300 | 395,361 | 0 | 0 | 0 | 0 | 827,205 | 0 | 0 | 0 | 0 | 0 | 1,222,566 |
| General transformer | GTX1500 | 2,246,860 | 6,059,112 | 1,077,776 | 0 | 0 | 2,345,037 | 0 | 0 | 0 | 0 | 0 | 11,728,785 |
| General transformer | GTX1501 | 811 | 0 | 993,684 | 4,884,604 | 276,468 | 245,823 | 0 | 0 | 0 | 0 | 0 | 6,401,390 |
| Unmetered – non-street lighting | G001 | 2,511 | 0 | 0 | 0 | 0 | 547,683 | 0 | 0 | 0 | 0 | 0 | 550,194 |
| Unmetered – street lighting | G002 | 3,632,203 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,632,203 |
| Non-standard Contracts | IC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,880,435 | 2,880,435 |
| Total Network Revenue | | 48,759,005 | 10,225,981 | 2,071,460 | 4,884,604 | 276,468 | 50,129,686 | 235,945 | 0 | 844,955 | 49,651,403 | 2,880,435 | 169,959,942 |

Table 15 – Proportion of Target Revenue by price component

Appendix A: Pricing Methodology - Information Disclosure Requirements

- 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.
- 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.

Appendix B: Consistency with Pricing Principles

The Electricity Authority's Pricing Principles are contained in the Distribution Pricing Principles and Information Disclosure Guidelines 2010. WELL understands that the Pricing Principles consist of well accepted, high level principles and were introduced on a voluntary compliance basis.

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 consumer group is within the range established by stand-alone and incremental costs, hence they are subsidy free.

This is shown in the figure below, alongside our COSM outputs:



Figure 2 - Comparison of Distribution Avoided Costs, Standalone Costs, COSM outputs, and prices by Consumer Group¹⁹

¹⁹ Excludes Pass through and Recoverable costs, including transmission charges.

Definition of Stand-alone and Incremental cost

WELL's definition of stand-alone cost and incremental cost is as follows:

The *Stand-alone cost* of providing services to a consumer group is the cost of developing and operating distribution infrastructure which benefits that consumer group. Stand-alone cost 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, this means that an alternative supplier may enter the market and supply that particular consumer group. Prices above the stand-alone cost could not be sustained in a competitive market (due to the threat of undercutting prices) and may create the possibility of efficient bypass of the existing infrastructure; and

The *incremental cost* for a consumer group is the cost that would be incurred, should the distribution business no longer serve that specific consumer group (whilst supplying all other groups). If a consumer group were to be charged below the incremental cost, it would be economically beneficial for the business to stop supplying that consumer group as revenue obtained from the consumer would not cover costs. Further, where incremental costs are higher than revenue recovered, the associated tariff levels may also result in inefficient levels of consumption, hence the rationale for having incremental costs as a lower bound.

Methodology of calculating Stand-alone and Incremental costs

Stand-alone costs

Stand-alone costs include both the capital and operating costs of service provision. The stand-alone network capital cost for each consumer group was derived from an estimate of the cost of providing network infrastructure required to service their corresponding load, if the other tariff classes were no longer required to be supplied. The stand-alone operating costs for a consumer class have been estimated as the total of all operating cost less the incremental operating costs of serving all the other tariff classes.

Incremental costs

The incremental costs associated with each of the consumer groups were derived from an estimate of the long run average incremental cost (LRAIC).

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 price structure as follows:

Load Management

WELL has a day and night price signal which incentivises use in off-peak periods. WELL provides discounted pricing to domestic consumers that offer up controlled loads. This price differential signals to consumers the benefits of shifting use away from congestion periods. Typically these opportunities are taken up through the timing of heating of electric hot-water, which has the cylinders charged by electricity between 11pm and 7am, or by offering interruptible load.

WELL has also introduced an electric vehicle night tariff (EVNITE) which is similar to the current night tariff (NITE). The EVNITE option allows the use of the night tariff over a longer night period 9pm to 7am for consumers who are eligible to use this tariff. This creates an incentive for EV owners to charge their vehicle during off-peak periods. The extended night period provides EV owners longer home charging periods which encourages efficient low energy charging options at cheaper network cost periods. Price signals for efficient use of new technology is an important aspect of forward looking pricing methodologies.

Demand (kW)

The demand charge applied to GTX1500 and GTX1501 pricing plans provides a strong price signal by incentivising larger consumers to reduce their demand at high network congestion periods. 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 General Transformer Connections greater than 1500 kVA (GTX1501) who fail to correct inductive loads. This signals to the consumer the need to manage power factor and mis-management will result in a charge to them.

Looking Forward

WELL is also currently reviewing its pricing structures, and is considering further demand or TOU based pricing options that incentivise efficient use of network capacity. This will align prices more closely to the cost of investing in service capacity.

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.

This principle sets out the economic concept of "Ramsey Pricing". This asserts it is economically efficient to charge higher prices to those consumers that have a higher willingness to pay, relative to the LRMC of each consumer group. This is considered economically efficient as consumers that demand a service the most, pay the most.

There are a number of issues associated with developing Ramsey based pricing which makes it impractical for us to apply. In particular, there is a lack of information on price elasticities (i.e. a measure of willingness to pay) specific to different consumer groups in the New Zealand electricity sector.

2016/17 PRICING METHODOLOGY DISCLOSURE

However, WELL consider this willingness to pay principle can be practically applied by offering consumers price plans that balance their willingness to pay with the quality of supply they receive. For instance, uncontrolled pricing plans have higher prices recognising the higher willingness to pay for consumers that do not want their hot-water load interrupted. Similarly, the night and controlled prices are targeted to consumers that are willing to shift their demand to the off peak. Demand/TOU pricing will also allow consumers to self-select the capacity service they require, consistent with their willingness to pay.

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 non-standard 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 above, prices above the standalone cost could not be sustained in a competitive market and may create the possibility of efficient bypass of the existing infrastructure. As WELL's prices are below the stand alone costs, bypassing the network is discouraged.

WELL utilises standard charges but has in place a policy to negotiate connection costs and pricing with non-standard consumers (see table 2). WELL considers this policy to better reflect consumer opportunities to vary service and price standards and enable consumers to make efficient decisions between transmission and distribution alternatives.

WELL operates under a regulatory framework that requires ongoing information disclosure including the Asset Management Plan. The Asset Management Plan sets out capital and operating requirements for the Network, which imposes a discipline on the network businesses to design their networks efficiently.

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 providing transparency of prices charged.

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. These consumers have had their fixed price component capped at 15 cents per day. WELL is seeking to better align its individual tariff prices with the cost of supply. However, in order to mitigate the risk of price shocks occurring, WELL will

progressively move to achieve this over the next few years. WELL is also rebalancing fixed and variable charges for standard users and Street lighting.

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 control over the transaction costs arising from its network charges, by limiting the complexity of charges and structures and the number of charging parameters within each charge. WELL applies the same charging 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 simplified and consolidated pricing structures in the 2016/17 and has aligned pricing codes and names to the ENA's distribution pricing guidelines. This should reduce transaction costs incurred by stakeholders in this regard.

Appendix C: Restructure of Prices

Residential Low User and Residential Standard User

| Previous | New |
|-----------|------------|
| Code | Code |
| G100-EIXD | RI U-FIXD |
| G100-24UC | RLU-24UC |
| G100-NITE | RLU-NITE |
| G101-FIXD | RLU-FIXD |
| G101-24UC | RLU-24UC |
| G101-CTRL | RLU-CTRL |
| G101-NITE | RLU-NITE |
| G102-FIXD | RLU-FIXD |
| G102-AICO | RLU-AICO |
| G102-NITE | RLU-NITE |
| G103-FIXD | RLU-FIXD |
| G103-24UC | RLU-24UC |
| G104-FIXD | RSU-FIXD |
| G104-24UC | RSU-24UC |
| G104-NITE | RSU-NITE |
| G105-FIXD | RSU-FIXD |
| G105-24UC | RSU-24UC |
| G105-CTRL | RSU-CTRL |
| G105-NITE | RSU-NITE |
| G106-FIXD | RSU-FIXD |
| G106-AICO | RSU-AICO |
| G106-NITE | RSU-NITE |
| G107-FIXD | RSU-FIXD |
| G107-24UC | RSU-24UC |
| G108-FIXD | RLU-FIXD |
| G108-24UC | RLU-24UC |
| G108-CTRL | RLU-CTRL |
| G108-NITE | RLU-EVNITE |
| G109-FIXD | RSU-FIXD |
| G109-24UC | RSU-24UC |
| G109-CTRL | RSU-CTRL |
| G109-NITE | RSU-EVNITE |

2016/17 PRICING METHODOLOGY DISCLOSURE

General Low Voltage Connections

| Previous Code | New Code |
|------------------|--------------|
| GV02-FIXD | GLV15-FIXD |
| GV02-24UC | GLV15-24UC |
| GV07-FIXD | GLV69-FIXD |
| GV07-24UC | GLV69-24UC |
| GV14-FIXD | GLV138-FIXD |
| GV14-24UC | GLV138-24UC |
| GV30-FIXD | GLV300-FIXD |
| GV30-24UC | GLV300-24UC |
| GV99-FIXD | GLV1500-FIXD |
| GV99-24UC | GLV1500-24UC |
| GV99-DAMD | GLV1500-DAMD |

General Transformer Connections

| Previous | New |
|-----------|--------------|
| Code | Code |
| | |
| GX02-FIXD | GTX15-FIXD |
| GX02-24UC | GTX15-24UC |
| GX07-FIXD | GTX69-FIXD |
| GX07-24UC | GTX69-24UC |
| GX14-FIXD | GTX138-FIXD |
| GX14-24UC | GTX138-24UC |
| GX30-FIXD | GTX300-FIXD |
| GX30-24UC | GTX300-24UC |
| GX99-FIXD | GTX1500-FIXD |
| GX99-24UC | GTX1500-24UC |
| GX99-CAPY | GTX1500-CAPY |
| GX99-DAMD | GTX1500-DAMD |
| GC60-FIXD | GTX1501-FIXD |
| GC60-24UC | GTX1501-24UC |
| GC60-CAPY | GTX1501-CAPY |
| GC60-DOPC | GTX1501-DOPC |
| GC60-PWRF | GTX1501-PWRF |
| GU60-FIXD | GTX1501-FIXD |
| GU60-24UC | GTX1501-24UC |
| GU60-CAPY | GTX1501-CAPY |
| GU60-DOPC | GTX1501-DOPC |
| GU60-PWRF | GTX1501-PWRF |
| GR60-FIXD | GTX1501-FIXD |
| GR60-24UC | GTX1501-24UC |
| GR60-CAPY | GTX1501-CAPY |
| GR60-DOPC | GTX1501-DOPC |
| GR60-PWRF | GTX1501-PWRF |

2016/17 PRICING METHODOLOGY DISCLOSURE

Unmetered

| Previous Code | New Code |
|------------------|-------------|
| G001-FIXD | G001-FIXD |
| G001-24UC | G001-24UC |
| G002-FIXD | G002-FIXD |
| G002-24UC | G002-24UC |

Small Scale Distributed Generation (New Codes)

| Previous | New |
|----------|--------------|
| Code | Code |
| | |
| NEW CODE | RLU-DGEN |
| NEW CODE | RSU-DGEN |
| NEW CODE | GLV15-DGEN |
| NEW CODE | GLV69-DGEN |
| NEW CODE | GLV138-DGEN |
| NEW CODE | GLV300-DGEN |
| NEW CODE | GLV1500-DGEN |
| NEW CODE | GTX15-DGEN |
| NEW CODE | GTX69-DGEN |
| NEW CODE | GTX138-DGEN |
| NEW CODE | GTX300-DGEN |
| NEW CODE | GTX1500-DGEN |
| NEW CODE | GTX1501-DGEN |

Appendix D – Directors' Certification

Schedule 17 Certification for Year-beginning Disclosures

Clause 2.9.1

We, Richard Pearson and Andrew Hunter, being directors of Wellington Electricity Lines Limited certify that, having made all reasonable enquiry, to the best of our knowledge-

- a) the following attached information of Wellington Electricity Lines Limited prepared for the purposes of clauses 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 the basis consistent with regulatory requirements or recognised industry standards.

Richard Pearson Chairman Andrew Hunter Director

25 February 2016

Schedule 17 Certification for Year-beginning Disclosures

Clause 2.9.1

We, Richard Pearson and Andrew Hunter, being directors of Wellington Electricity Lines Limited certify that, having made all reasonable enquiry, to the best of our knowledge-

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- b) the prospective financial or non-financial information included in the attached information has been measured on the basis consistent with regulatory requirements or recognised industry standards.

Richard Pearson Chairman

Andrew Hunter Director

25 February 2016