



PRICING METHODOLOGY DISCLOSURE 2013/14

28 February 2013

Revision overview

Date	Version	Changes
28/2/13	1.0	

SUPERSEDED

Executive Summary

This Pricing Methodology sets out the approach used by WEL Networks Ltd (WEL) to formulate our tariff structure and set our tariff rates for 2013/14. 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 tariff rates 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*.

WEL has set tariffs for the year beginning on 1 April 2013 based on an allocation of the costs of owning and operating its networks to consumer groups. The consumer groups are determined based on the level of service received by the customer and largely depend on two criteria, being the voltage at which the customer is connected; and for low voltage customers, the consumer's annual consumption.

The cost allocation model uses cost drivers such as the number of customers, annual energy consumption and measures of peak demand to allocate costs to consumer groups. These allocators are chosen based on WEL's assessment of customer influences on costs, such as investment, maintenance and Transpower costs. WEL has focused 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.

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 price shocks, ensuring revenue adequacy (and mitigating revenue risk) for WEL, and maintaining logical relationships between price categories.

WEL will pass on an increase in network charges of 6.3% to our customers from 1 April 2013. This price change is consistent with recent price changes determined by the Commerce Commission for non-exempted electricity distribution businesses under Part 4 of the Commerce Act, and reflects increases in Transpower transmission costs, increases in our own operating costs along with our continued investment to future-proof our 5,000 kilometre Waikato lines network.

A number of changes have been made to the consumer groups used by WEL effective 1 April 2013. These changes and the rationale for them, including the link with the Electricity Authority's pricing principles are:

- Disaggregation of the mass market consumer group into residential, business and small-scale distributed generation customers. This change reflects pricing principle (a) as it will allow WEL to more closely signal the economic cost of supply. WEL is preparing for a future when these groups may need to be priced differently because of differences in load profile, services and consumer legislation or regulation. This is consistent with pricing principle (d): ensuring a transparent development of prices.
- A new tariff code for electricity exports from small-scale distributed generation has been introduced. WEL anticipates that the increasing presence of exporting distributed generation will drive long run incremental costs in its network; overseas experience indicates that this will

be the case. Introducing this charge now is consistent with pricing principle (a) by signalling the impact of additional usage on future investment costs.

- Advanced Pricing for non-time-of-use customers, incorporating peak, shoulder and off-peak tariffs. This tariff structure is intended to encourage and support retailers in the adoption of advanced pricing structures where these are consistent with the usage patterns on WEL's network. This is consistent with the pricing principles.
- External network tariffs have been rationalised, so all external networks are now subject to the same tariff and the night rate has been discontinued as no customers received this tariff. These changes are consistent with pricing principle (d) that prices should be transparent, stable and provide certainty.
- Street light tariffs are now levied at a fixed monthly rate per lamp, rather than on a per kWh basis. This simpler charge more accurately reflects the fixed cost nature of these connections and is consistent with pricing principles (a) and (d).

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1. BACKGROUND

This Pricing Methodology sets out the approach used by WEL Networks Limited (WEL) to formulate our tariff structure and set our tariff rates for 2013/14.

The core business of WEL Networks is the provision of electricity distribution services to the Waikato. As an electricity distribution company, we own, and maintain the electricity network of lines, cables, substations and associated infrastructure. Our network connects 84,000 customers (a small number of whom are generators) to the national transmission and generation facilities and includes more than 5,200 kilometres of lines and has an annual throughput of over 1,180 GWh. WEL has assets totalling in excess of \$516 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 towns 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 the electricity reticulation services in major subdivisions throughout New Zealand. These subdivisions are operational in Auckland, Taupō, Wellington and Tauranga. WEL is also constructing an ultrafast broadband network in several cities and towns throughout the central North Island. WEL continues to monitor potential renewable energy options for our network and customers to help achieve the national target of 90% renewable energy by 2025.

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.

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 tariff rates 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;
- describes any changes in prices and target revenues;
- explains the approach taken with respect to pricing in non-standard contracts and distributed generation, and;
- explains whether and if so how, the views of consumers were sought, including their expectations in terms of price and quality, and reflected those views in calculating the prices payable or to be payable.

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

2. DEFINITIONS

Term	Definition
ACOT	Avoided cost of transmission – a payment made by WEL to large distributed generators who are able to demonstrate they are assisting WEL 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 consumer or group of consumers recorded at anytime.
CMD	Coincident maximum demand, a consumer's or group of consumers' demand at the time total demand on the network is at its peak.
Code	The Electricity Industry Participation Code
EA	Electricity Authority
EDB	Electricity distribution business
External network	A network outside WEL's traditional footprint in the Waikato
GWh	Gigawatt hour
GXP	Grid exit point
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
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, which may be found at www.ea.govt.nz/dmsdocument/1944
Small scale distributed generation	Generation installation connected to the distribution network with a nameplate capacity of 10kW or less.

3. OVERVIEW OF PRICING INFLUENCES

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 price shocks, ensuring revenue adequacy (and mitigating revenue risk) for WEL, and maintaining logical relationships between price categories.

WEL has used the following interpretation and application of the pricing principles in its pricing methodology. In section 11 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 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 conservation during peak times.

3. Prices are responsive to stakeholders' requirements and circumstances

- a. WEL's tariff design should 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 should know WEL's strategies, tariff design, cost allocation methodologies, and any price changes well in advance of them applying.
- b. Our customers should be able to identify the charges that apply to them.
- c. Customers should not experience price shocks – to be achieved through the adoption of targeted and glide path (phased) price adjustments.

5. Prices are non-discriminatory across retailers

- a. All retailers are to be treated homogenously.
- b. WEL will work with retailers to encourage alignment of pricing structures and incentives are maintained rather than bundled and therefore possibly diluted.

4. CHANGES TO THE PREVIOUS PRICING METHODOLOGY

4.1. Changes to consumer groups

A number of changes have been made to the price categories (consumer groups) used by WEL effective 1 April 2013, specifically:

- Price category 1153 (non-time-of-use customers) has been disaggregated into residential (1153), business (1200) and small-scale distributed generation (1250) customers.
- A new tariff code 901 has been introduced for electricity exports from small-scale distributed generation. This is a variable price per kWh.
- Advanced pricing has been introduced for non-time-of-use customers (price categories 1153, 1200 and 1250) involving off-peak, shoulder and peak tariffs.
- All external networks (i.e. outside WEL's traditional footprint) are now subject to the same tariffs, which have been rationalised to remove the night tariff, as it did not apply to any ICPs.
- Street lights tariffs are now levied at a fixed monthly rate per lamp, rather than on a per kWh basis.

These changes, and the rationale for implementing them, are described below.

4.2. Disaggregation of mass market consumer group

The 1153 (mass market) price category was previously applied to all consumers who did not have a time-of-use meter, used less than 250MWh/year and had a connection of 160 amps or less. This category covered the majority of WEL's connections, estimated at 81,109 ICPs in our 2012 disclosure. Within this category were three distinct types of user, with different patterns of demand and therefore different costs to supply: residential users, business users, and users with small-scale distributed generation. In order for prices to more closely signal the economic cost of supply (the first pricing principle), WEL has defined separate tariff codes for these distinct consumer groups.

The tariffs effective 1 April 2013 for each of these new customer groups are not differentiated. WEL intends to work with retailers and customers to allow time to implement the proposed definitions. WEL expects to implement different prices for these consumer groups at a future time. The only exception to this implementation phasing is the immediate introduction of an export price for small-scale distributed generation, discussed in the next section.

WEL will initially rely on retailers nominating the appropriate price group and selecting the appropriate tariff code based on their customer records and existing definitions for retailer pricing categories. WEL understands and accepts that retailers generally rely on information provided by customers to determine a retail price category and that the definitions for residential usage generally rely on a combination of 'domestic' and 'primary or principle usage' concepts. WEL has defined a residential customer based on the terms 'domestic consumers' and 'domestic premises' in the Electricity Industry Act 2010.

New price category definitions

A residential customer (price category 1153) is a customer with a fuse capacity less than 160 amps, connection voltage of 400V and consumes less than 250MWh of electricity on an annualised basis and 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 are not normally used for any business activity. Business activities include, but are not limited to, any:

- Hospital, home or other institution for the care of sick, disabled, or aged persons;
- police barracks, or police cells and lock-ups;
- barracks conducted by the Armed Forces for the accommodation of persons subject to the Armed Forces Discipline Act 1971;
- barracks, hostel or dormitory or other similar type of premises providing accommodation;
- premises occupied by a club and used by the club for the provision of temporary or transient accommodation to members of the club;
- hotel in respect of which an on-licence is in force under the Sale of Liquor Act 1989; or
- hotel, motel, boarding house, lodging house, camping ground, motor camp, marina or other similar type of premises providing temporary or transient accommodation.

A business customer (price category 1200) is a customer with a fuse capacity less than 160 amp, connection voltage of 400V and consumes less than 250MWh of electricity at any time, on an annualised basis and is not a residential customer or a small scale distributed generation customer.

A small scale distributed generation customer (price category 1250) is a customer with a fuse capacity less than 160 amps, connection voltage of 400V and consumes less than 250MWh of electricity, at any time, on an annualised basis and has a generation installation capable of exporting up to 10kW of electricity into WEL's Waikato network.

WEL's rationale for distinguishing between these three consumer groups is to prepare for a future when these groups may need to be priced differently because of differences in load profile, services and consumer legislation or regulation. Introducing these groupings now 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).

4.3. Exports from small-scale distributed generation

WEL has introduced a price for exports from small-scale distributed generation. The reason for this charge is that WEL anticipates that the increasing presence of exporting distributed generation will drive long run incremental costs in its network. Overseas experience with higher density small-scale distributed generation indicates this will be the case.

The primary cost driver from distributed generation is expected to be the demand for additional capacity in the low voltage network. This suggests the desirability of structuring this charge along the lines of a capacity or demand charge. However, in discussions with retailers it became apparent that a kWh charge would, at this stage, create much lower transactions costs for them and consumers, and be more readily understood, than some form of capacity charge. WEL has therefore decided to apply this charge on a kWh basis. The introduction of this tariff now, in the early stages of the deployment of distributed generation, is consistent with the pricing principles that prices signal the economic costs of supply and are transparent, stable and provide certainty.

4.4. Advanced pricing

WEL has introduced an advanced pricing option (off-peak, shoulder and peak) for residential, business and small-scale distributed generation customers who meet certain criteria, conditional upon acceptance by WEL. Advanced pricing is available to customers who have a meter that is capable of recording kWh consumption in the time periods specified, and who choose a similar pricing structure from their retailer.

WEL's existing controlled supply tariff is not affected by the introduction of advanced pricing. It remains available to customers who provide WEL with control over this supply and a customer is able to enjoy the benefits from both: that is the controlled rate is available for both 24H and advanced tariff options.

The pricing periods WEL has defined, are based on our load profile and are set out in the table.

Table 1 Advanced pricing time periods

	Time Periods		
	Peak	Shoulder	Off-peak
Workdays	07.00 - 09.30 17.30 - 20.00	09.30 - 17.30 20.00 - 22.00	22.00 - 07.00
Weekends and public holidays (including Waikato regional holidays only)	No peak period	07.00 - 22.00	

In setting these time periods, WEL considered:

- The length of the peak time period, with the intention that it adequately reflect the peaks in load profile, while being short enough to enable customers to shift some demand to avoid the peaks;
- the number of time periods, which was chosen to balance the effectiveness of the signal against the pricing principle of simplicity, and
- the alignment and simplification of weekend time periods.

WEL would prefer that retailers adopt the same or similar time periods, however to be eligible for the advanced tariff, as a minimum the customer's chosen retailer must offer a tariff that meets these criteria:

- It has at least two time periods for weekdays, and
- at least two hours of the retailer's highest price period correspond with WEL's peak periods.

The rationale for the introduction of Advanced Pricing is to encourage and support retailers in the adoption of advanced pricing structures where those pricing structures are consistent with the usage patterns on the WEL network. The advanced price tariff option signals to customers the approximate difference in the economic cost of supply in different time periods. This is consistent with the pricing principles.

4.5. Rationalisation of external network tariffs

WEL previously had separate tariff rates for its network in Taupō. This rate has been removed and Taupō customers are now in the same tariff group as other external networks.

The night rate tariff was an historical feature which reflected the use by some customers in these areas of night store heaters. WEL has no customers receiving this tariff and so it has been discontinued.

These changes are consistent with the pricing principle that prices should be transparent, stable and provide certainty.

4.6. Street light tariffs are now fixed

Unmetered street lights were previously levied on a per kWh basis, where the charge was based on the number and capacity of the lamps and night-time hours. WEL considers this charging regime to have been unnecessarily complicated and not aligned with the true driver of the economic cost to reticulate the street lights, which is the fixed cost to provide sufficient capacity to this lighting network.

The new unmetered street light tariff is based on a fixed price per lamp per month. This more accurately reflects the fixed cost nature of these connections to the distribution network.

5. CONSUMER GROUPS

WEL determines consumer groups based on the level of service received by the customer, largely from two key criteria being:

- The voltage at which the consumer is connected, and
- for low voltage consumers, the consumer's annual consumption.

For small consumers, the differing load profile of business and residential customers has led to the creation of separate groups for these customers from 1 April 2013 (see section 4.1). WEL considers that these criteria reflect its cost drivers. The diagram below sets out the criteria for each consumer group. In addition, the following definitions apply:

A **residential customer** (price category 1153) is a customer with a fuse capacity less than 160 amp, connection voltage of 400V and consumes less than 250MWh of electricity on an annualised basis and 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 are not normally used for any business activity. Business activities include, but are not limited to, any:

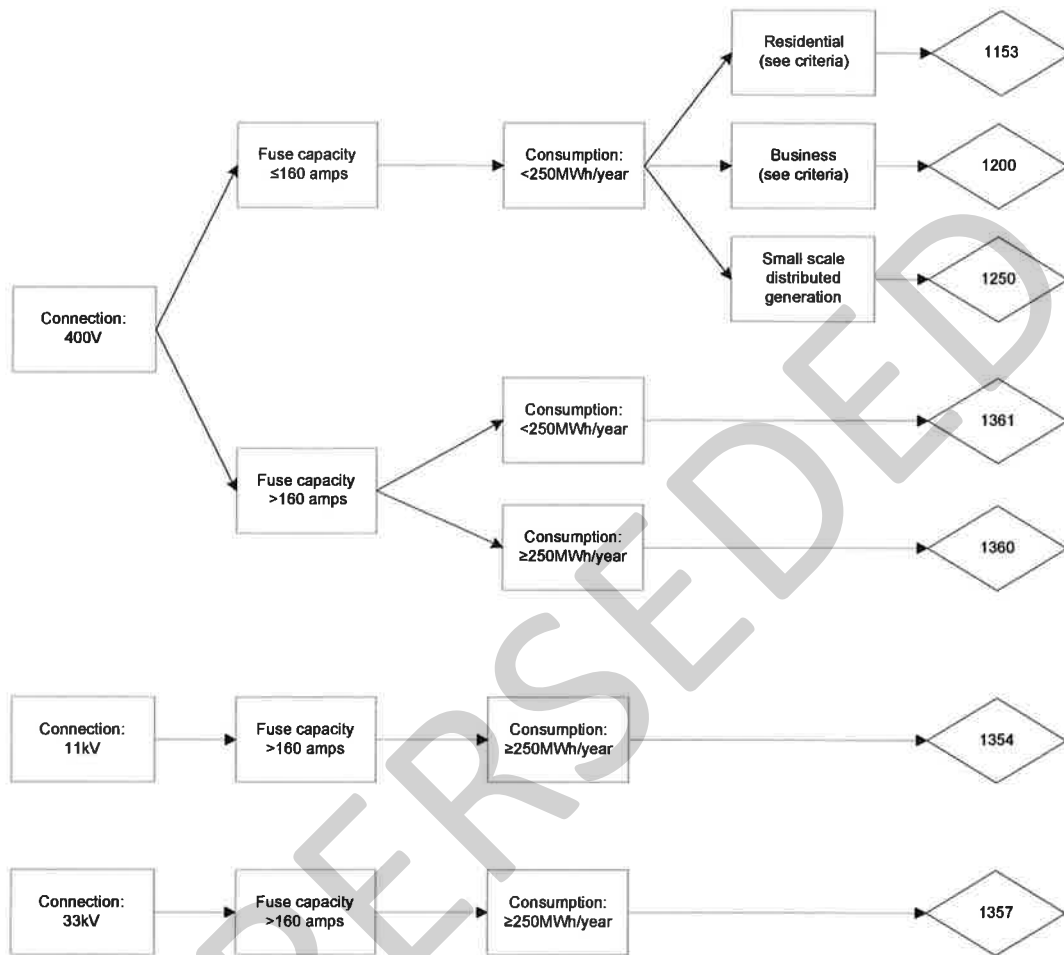
- hospital, home or other institution for the care of sick, disabled, or aged persons;
- police barracks, or police cells and lock-ups;
- barracks conducted by the Armed Forces for the accommodation of persons subject to the Armed Forces Discipline Act 1971;
- barracks, hostel or dormitory or other similar type of premises providing accommodation;
- premises occupied by a club and used by the club for the provision of temporary or transient accommodation to members of the club;
- hotel in respect of which an on-licence is in force under the Sale of Liquor Act 1989; or
- hotel, motel, boarding house, lodging house, camping ground, motor camp, marina or other similar type of premises providing temporary or transient accommodation.

A **business customer** (price category 1200) is a customer with a fuse capacity less than 160 amp, connection voltage of 400V and consumes less than 250MWh of electricity at any time, on an annualised basis and is not a residential customer or a small scale distributed generation customer.

A **small scale distributed generation customer** (price category 1250) is a customer with a fuse capacity less than 160 amp, connection voltage of 400V and consumes less than 250MWh of electricity, at any time, on an annualised basis and has a generation installation capable of exporting up to 10kW of electricity into WEL's Waikato network.

Figure 1 Consumer group criteria

Waikato Network - Metered



Waikato Network - Unmetered



External network



5.1. Low fixed charge tariff regulations

The Low Fixed Charge Tariff Regulations require that electricity distributors provide a residential tariff of not more than 15 cents per day (excluding GST).¹ The variable charge for customers on the low fixed charge tariff must be such that a customer who consumes 8,000kWh pays no more than the same customer would on any alternative tariff option. For administrative simplicity, WEL has chosen to only implement residential tariffs with a daily fixed charge of 15 cents or less. The Low Fixed Charge Tariff Regulations therefore determine the relative balance of fixed and variable charges for this consumer group.

SUPERSEDED

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

6. COST MODEL

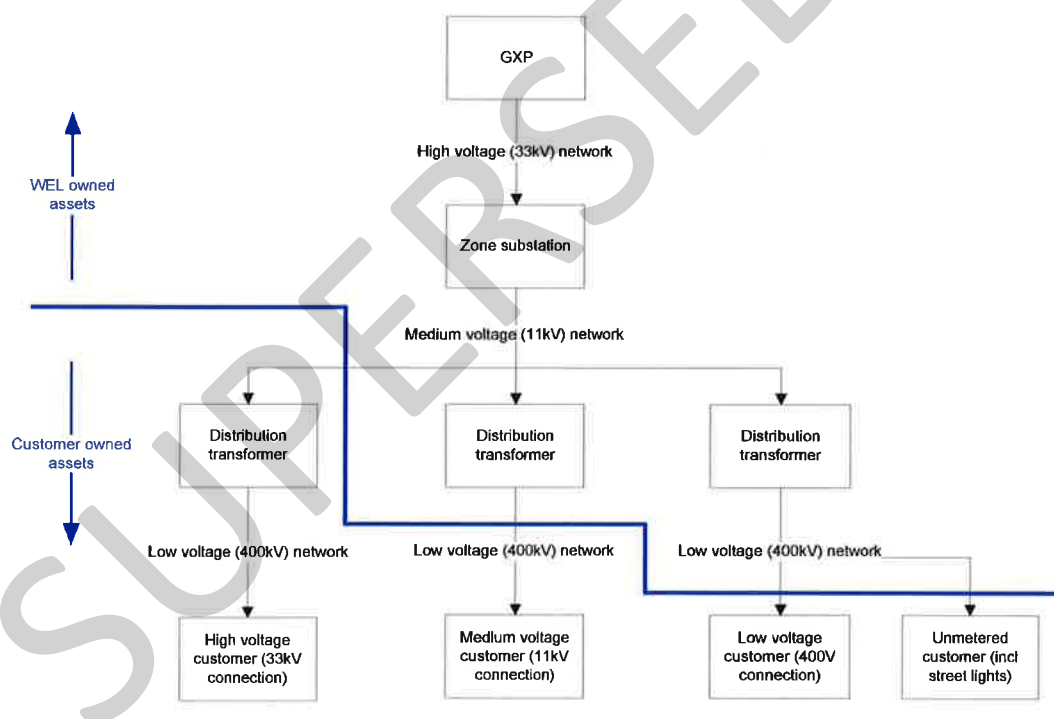
The key purpose of the cost allocation and design model is to ensure that the tariffs for each consumer group reflect the economic cost of serving that group. To do this WEL allocates the costs of owning and operating its networks to different consumer groups. This section outlines this allocation process and the rationale for the choice of cost allocators.

6.1. Method of cost allocation

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

Utilisation of assets provides a useful basis for allocating many of our costs. The diagram below illustrates that assets are allocated to different consumer 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.

Figure 2 Electricity distribution network diagram



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 consumer group at any time, while CMD measures the consumer group's contribution to the network peak – it is this coincident peak demand that typically drives investment in capacity.

WEL has focused on matching an allocator(s) 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 our cost allocation and design model, and Table 3 describes which allocator is matched to each cost category and the rationale for doing so.

Table 2 Description of cost allocators

Allocator	Description	Formula
Customer numbers	The number of ICPs within each consumer group as a proportion of the total.	$\frac{ICP_c}{ICP_{total}}$
Energy	The annual consumption of all customers in that group.	$\frac{MWh_c}{MWh_{total}}$
AMD	Anytime maximum demand (AMD) is based on the measured average AMD for the highest 200 half hours over two years for large and asset specific customers at each GXP. An allocation is made to other consumer groups based on the design capacity of the network.	$\frac{AMD_c}{AMD_{total}}$
CMD	Proportion of total demand for groups of consumers at the times of coincident maximum demand (CMD). Based on the average of the 200 highest total demand half hours on the network over two years. 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.	$\frac{CMD_c}{CMD_{total}}$
AMD/CMD	Weighted sum of AMD and CMD cost allocators. The weights are based on asset values, with AMD weighted by the ratio of low voltage asset values to the total asset value; CMD is weighted by the ratio of the value of high voltage assets to the total.	$\frac{AMD_c * \frac{Asset\ value_{LV}}{Asset\ value_{total}} + CMD_c * \frac{Asset\ value_{HV}}{Asset\ value_{total}}}{\sum_c \left(AMD_c * \frac{Asset\ value_{LV}}{Asset\ value_{total}} + CMD_c * \frac{Asset\ value_{HV}}{Asset\ value_{total}} \right)}$

c = consumer group; LV = low voltage (400V); HV = high voltage (>400V)

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

Table 3 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	AMD/CMD	The return on investment is apportioned based on the ratio of AMD/CMD for each consumer group relative to the total AMD/CMD of consumer groups using that asset class. In effect, this means that the net profit after tax is allocated based on capacity of assets used by each consumer group. This reflects the significance of the assets on which a return is sought.
Maintenance	AMD/CMD	This is an asset related cost. It is allocated based on a measure of asset 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/CMD.
Depreciation	AMD/CMD	This is an asset related cost. It is allocated based on a measure of asset utilisation. 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 AMD/CMD.
Operations	AMD/CMD	WEL has split its operational expenses into two categories (operations and overheads), the 'operations' category includes expenses that are related to the volume of throughput of the business, such as staff and lease costs. This is the reason that these expenses are allocated based on capacity of assets utilised by customer category.
Overheads	Customer numbers	WEL has split its operational expenses into two categories (operations and overheads), the 'overhead' category includes expenses that scale with the number of customers, but are relatively static to the size of those customers. This category includes printing, postage, rates and vehicle expenses. These costs are allocated based on customer numbers.
Tax	AMD/CMD	Allocated on the same basis as net profit after tax, as tax is directly related to profit.
Electricity Authority levies	Energy	The Electricity Authority levy paid by WEL is 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 reflects the basis on which Transpower charges for its interconnection costs – which is regional coincident peaks.
Transpower – excl.interconnection and avoided	Energy	Transpower levies connection charges on the basis of anytime maximum demand at a connection location. While this allocator does not directly reflect the costs imposed on

transmission		the network by the consumer group, it does reflect the value of consumption, which is in turn correlated with the cost of serving that consumer group.
External network costs	External network consumer group	This cost is allocated solely to customers connected outside the Waikato Network area, as it reflects the cost paid to the parent network in which the external network is located.

6.2. Posted discount

WEL operates a customer discount scheme. The discount comprises a posted discount and a discretionary discount. In terms of the ID Determination, the posted discount is considered to be part of WEL's prices, and therefore part of the pricing methodology. The discretionary discount (if any) is subject to separate disclosure requirements under 2.4.23 at the time it is distributed, which is at the end of the financial year.

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 applies to every metered and lived-in connection within the traditional WEL Networks Area in the Waikato.

The discount is paid on the basis of the charges for the connection, regardless of whether the account holder changed during the year. The electricity account holder for that metered 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, May or June depending on the billing cycle of the account.

The posted discount comprises two components:

- 100% discount on the daily fixed charge for residential, small business, and small scale distributed generation customers, as well as large customers. Asset specific customers are eligible for the same value of discount as large customers.
- A variable discount on continuous and controlled supply tariffs. This is set based on the target total annual discount.

A cap is also applied to the total discount to which each individual customer is eligible.

7. KEY STATISTICS AND ASSUMPTIONS

For the purposes of these tables, WEL has not differentiated the residential, business and small-scale distributed generation consumer groups. The rationale for this is that although these consumer groups have been defined, there is currently very limited information on the number of ICPs and energy consumption of these separate groups. This presentation also reflects that the tariffs for these groups are all the same, and they were modelled as a single Waikato Network mass market group. This is consistent with principle (d) that the development of prices should be transparent.

Table 4 Revenue by key components (\$000)

Key revenue component	\$ 000
Net profit after tax	28,318
Tax	7,072
Maintenance	7,953
Depreciation	22,922
Operating expenditure	18,422
Transmission – interconnection	18,030
Transmission – excl interconnection	4,472
Avoided transmission	3,674
External network 'transmission' costs	851
Electricity Authority levy	240
Posted Discount	17,589
Total target revenue	94,365

Table 5 Revenue by consumer group (\$000)

Consumer group	\$000
Waikato Network mass market	64,064
External network customers	1,500
Low voltage, low energy customers	2,968
Low voltage, high energy customers	7,397
Medium voltage customers	14,930
High voltage customers	833
Unmetered street lights	1,280
Other unmetered customers	32
Non-standard customers	1,361
Total target revenue	94,365

Table 6 Revenue by price component (\$000)

Price Component	Waikato Network mass market	External network	Low voltage, low energy	Low voltage, high energy	Medium voltage	High voltage	Unmetered street lights	Other unmetered	Asset Specific	Total target revenue
Fixed	4,495	96	182	190	144	2	1,280		289	6,678
Continuous Supply	57,621	1,393	1,595	3,613	6,874	391		32	462	71,981
Controlled Supply	4,543	11								4,554
Off Peak	3,347									3,347
Shoulder	8,076									8,076
Peak	2,451									2,451
Generation Export	1									1
Summer Peak			618	1,719	3,914	232			220	6,703
Winter Peak			833	1,933	3,917	211			182	7,076
Reactive			131	341	413	11			13	909
Transformer rebate					-20	-9				-29
Posted Discount	-16,470		-391	-399	-312	-5			-12	-17,589
Asset specific									207	207

8. PRICE CHANGES

This section describes the key changes to prices between those that applied from 1 April 2012 and those that will apply from 1 April 2013. The rationale for these changes is provided along with a measure of the significance of the change.

8.1. Waikato Network area – all prices

Effective 1 April 2013, WEL will pass on an increase in network charges of 6.3% to our customers. Our price reset is consistent with recent price changes determined by the Commerce Commission for non-exempted electricity distribution businesses under Part 4 of the Commerce Act and reflects increases in Transpower transmission costs, increases in our own operating costs along with our continued investment to future-proof our 5,000 kilometre Waikato lines network. The total increase includes:

- 1.8% increase in transmission costs by Transpower.
- 2.2% increase in WEL's underlying costs, such as salaries, and interest on debt.
- A further increase in costs due to forecast inflation of 1.3% for 2013/14 financial year.
- A 1% increase in costs to fund continued capital investment initiatives including smart networks, new substations, safety and quality improvements.
- A reallocation of total revenue has been made with the proportion to be collected from unmetered street lights increasing by 10% (relative to that collected from this service in 2012/13). This reflects WEL's cost modelling that shows that unmetered street light tariffs were not covering the incremental cost of their service. This increase was offset by a reduction in the revenue to be collected from all other Waikato Network customers (of 0.13%). WEL will continue to adjust prices gradually in future where current tariffs do not reflect costs.

8.2. Waikato Network area – advanced prices

Advanced prices were set based on the total revenue required for mass market (i.e. residential, business and small-scale distributed generation) customers calculated as described above. The following additional parameters and assumptions were used:

- Peak prices are 1.5 times off-peak prices. Although this relationship is a matter for judgement, commercially confidential research suggested a wider margin was acceptable. WEL chose this lesser margin as a transition to test consumers' responsiveness to this price structure.
- A range of assumptions about the proportion of customers who would switch were tested. A value of 20% was used as the 'mid-point' estimate and will be refined as actual responsiveness to this new price structure is revealed.
- A range of assumptions about the peakiness of switching customers' load profiles was tested. A value was chosen as the 'mid-point' estimate, specifically that switching customers had an average profile equivalent to the 20% least peaky mass market customer (based on a sample of customers).² This estimate will be refined as consumers' responsiveness to this new price structure is revealed.

² The least peaky customers are those whose consumption is relatively stable throughout a typical workday. A peaky customer in this category would, in contrast, typically consume a proportionately large amount of electricity between 7-9.30am and 5.30-8pm compared to their consumption at other times.

8.3. External networks

Prices for external networks were set in a similar manner to the Waikato Area network, with two key differences:

- The transmission cost component of these prices is bundled with the parent network's charges. We assumed that this bundled cost comprised 50% transmission costs and 50% distribution costs. We further assumed that the cost increases facing WEL were a reasonable estimate of those facing the parent network. In other words, a 50:50 weighted price increase of the transmission cost and WEL cost adjustment was applied to the previous year's parent network charge.
- The street light adjustment has not applied to external network prices as they are not relevant to these areas.

WEL's own costs were increased by the same proportions as for the Waikato Area network.

9. NON-STANDARD CONTRACTS

WEL offers asset-specific pricing to large customers on a case-by-case basis. We currently have seven customers 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. This approach is consistent with the pricing principles as the price reflects both the economic cost of service (principle a) and the economic value of the service (principle b).

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

SUPERSEDED

10. DISTRIBUTED GENERATION

WEL has a range of distribution generation connected to its Network. Applications to connect distributed generation are treated in accordance with Part 6 of the Electricity Industry Participants 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 has introduced an export charge designed to recover the long term incremental cost impacts on WEL network (this is further described in section 4.3). This charge is consistent with signalling the impact of additional usage on future investment costs (principle a).

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 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 three connections that are consistently entitled to payments under this scheme. The compensation is calculated using Transpower's current connection charges, but is based on the generator's performance in the immediately preceding year. During 2013/14 payments of approximately \$3.7 million (excluding GST) are forecast.

11. 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 tariff 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 capacity of the customer's connection and the associated demand on the network which are the primary drivers of WEL's costs. WEL uses capacity and demand measures as cost allocators (see section 6.1) and these (capacity/kW, plus throughput/kWh) are the bases of WEL's variable tariffs.
- Prices should take into account both present and future investment costs. WEL has introduced a charge for exports of distributed generation this year. The purpose of this charge 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 changes to our tariff design introduced this year reflect this goal:

- The mass market consumer group has been separated into three groups to prepare for a future when these groups may be priced differently to reflect their different economic costs;
- the introduction of a price for exports of electricity from small scale distributed generation signals the economic cost (including future investment cost) of this activity;
- the advanced price tariff option signals to customers the different economic cost of supply in different time periods.

The cost allocators have been chosen on the basis that they are a good reflection of this pricing principle.

(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.

WEL has simplified this principle to 'prices encourage efficient demand response'. In meeting this principle, WEL will continue to reward controllable load from customers. WEL has also introduced advanced pricing for mass market consumers. The structure of prices for industrial and commercial consumers is such that it rewards conservation during peak times, through the use of peak pricing.

(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 is moving to a tariff structure that better reflects the economic costs of small consumers' actions (e.g. through the introduction of an export price for small scale distributed generation and advanced pricing) to complement the existing peak demand tariffs for larger commercial and industrial users.

(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, tariff design, cost allocation methodologies, and any price changes in advance of them applying, and should be able to identify the tariff(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. We consider this approach is consistent with (d), as it provides customers both clarity as to the direction of charges over time and time to adjust to any changes.

Many of the changes made to our tariff design this year reflect this principle:

- The separation of business and residential customers transparently signals to stakeholders our intention to separately price these in future to reflect their different economic costs;

- the establishment of a price for exports from small scale distributed generation provides transparency and signals to customers that there are network costs associated with these activities;
- the rationalisation of the external network tariff options improves transparency and means that the tariff schedule is easier for customers to understand.

WEL has chosen to unbundle its costs into broad categories, and use a limited number of allocators to allocate the cost categories to consumer 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, consumers and other stakeholders and should be economically equivalent across retailers.

WEL is committed to ensuring that its prices are non-discriminatory across retailers, i.e. all retailers are treated homogenously.

WEL chose not to implement a proposed change when it became aware of the transaction cost implications for retailers.

WEL works with retailers to ensure alignment of pricing structures and incentives are maintained rather than bundled and possibly diluted. One example of this is the consultation WEL undertook with retailers this year around the introduction of advanced pricing. Working with retailers influenced our views on the timing of the peak periods, and the type of metering required. WEL is working with retailers to encourage them to introduce similar pricing structures for customers.

12. PRICING STRATEGY

WEL's Board has adopted a new pricing strategy this year. This change reflects WEL's commitment to innovation and improving our tariff design to reflect the economic value of services and create customer benefit. WEL's strategy is:

Future prices and tariff design innovations are to be signalled in advance, introduced gradually and provide highly predictable and stable revenues creating benefits for WEL and its community. Prices should provide consumers with options, including conservation and the efficient utilisation of the electricity system, to reduce customers' total electricity costs where this also enables WEL and retailers to avoid current and future costs. All changes should be transparent and only made where it is equitable to do so with customer and stakeholder support.

WEL's Board has committed to seven actions to implement its pricing strategy. These actions are consistent with the pricing principles.

1. Improve consumer groupings to remove arbitrage opportunities and further differentiate between and better align consumer groupings with the costs to supply that group. This action will improve the signal of the economic cost of service provision (pricing principle a).
2. Improve the tariff design to reflect the cost drivers of supply e.g. moderately increase the utilisation of capacity and demand based charges over time subject to public education and communication plans. This action will improve the signal of the economic cost of service provision (principle a) and is consistent with setting prices in a way that has regard to consumers' demand responsiveness (principle b).
3. Utilise advanced metering technologies to increase the accuracy and assessment methods of network utilisation e.g. the introduction of time-based charges to the residential and small business customers. This is consistent with setting prices in a way that encourages efficient demand response (principle b) and signalling the economic costs of supply (principle a).
4. Increase the attractiveness of controlled load to consumers, e.g. low priced off-peak usage. This is consistent with setting prices in a way that encourages demand response (principle b) and signalling the economic costs of supply (principle a).
5. Introduce asset based pricing, i.e. tailor pricing and design to our larger customers. This action discourages uneconomic bypass, and allows for negotiation to better reflect the economic cost of services (principle c).
6. Implement transitional measures to manage changes over time enabling consumers to adjust and manage their electricity costs. This action reflects principles (d) and (e) – providing transparent price development, with regard given to the impact on stakeholders.
7. Gain stakeholder feedback and support by conducting consultation and providing appropriate education and communication programmes. This action reflects principles (d) and (e) – providing transparent price development, with regard given to the impact on stakeholders.

13. CONSULTATION

13.1. Customer consultation

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

A key finding from the most recent customer survey undertaken February 2012 was that 25% of customers would like to see further improvement in reliability of supply with 8% (of that 25%) being prepared to pay more. A full summary of the survey is included in WEL's AMP published on its website. Given the key finding WEL has concluded that targeted service improvements are required at the lowest possible cost. WEL pricing is reflective of this conclusion as the 2013/14 price increase includes a modest amount for targeted quality improvements.

13.2. Retailer consultation

Clause 12A.7 of the Code requires WEL to consult with traders prior to making a change to its tariff structure. WEL consulted retailers on its proposed tariff structure changes in November-December 2012.

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 that are consistent with the guidelines were:

- WEL approached the consultation with an open mind, prepared to make changes to its proposed tariff structure. One proposed change was not implemented, and design details of others were altered as a result of consultation.
- WEL provided opportunities for both oral and written feedback on its proposals, presenting the proposal in a workshop in early November 2012, and in a written consultation paper.
- Three weeks was allowed for feedback on the proposals, and a timeline for the process was provided to all traders with key dates.
- WEL outlined the rationale for its proposed tariff design changes including the extent to which they were consistent with the Authority's pricing principles both in the workshop and the written consultation paper.

Feedback was received from several retailers. This feedback was generally supportive. Some implementation issues were raised around the proposals; these have now been resolved. One proposal was abandoned after feedback that the transaction cost and complexity for retailers would be too high relative to the benefit. This is consistent with pricing principle (e).

WEL released its final price schedule effective from 1 April 2013 to retailers in December 2012. This is consistent with pricing principle (d) by promoting transparency and certainty for stakeholders.