



April 2010 Public Disclosure of Pricing Methodology - WEL Networks

This document relates to WEL Networks Limited's (WEL's) obligations under the Electricity (Information Disclosure) Regulations to disclose the methodology used to determine line charges by WEL.

1. General Approach

WEL's pricing philosophy is based on the following pricing principles:

- Long-term stability and price reductions in real terms;
- Aim to manage price adjustments to manage underperforming tariffs through targeted rebalancing.;
- Keep the charges in line with industry norms so that charges are not out of alignment with industry averages; and
- Ensure that increased costs are fairly allocated across all customers.

This was undertaken through:

- a) The development of a Cost Allocation Model that is designed to determine the returns from individual tariffs. This model allocates costs to those tariffs that are driving investment, maintenance and Transpower costs.
- b) A review of the proposed tariffs against industry tariffs is undertaken to ensure that the proposed changes will not take WEL out of alignment with standard industry charges.
- c) The use of discounts to reduce prices in order to meet our owner's strategic directive to reduce electricity prices. Our discount is a visible sign of our price reduction, which otherwise would be absorbed into the electricity retailers overall charges.

2. Consumer Groups Used

Four load groups are defined in the methodology. These groups relate to consumers taking supply at:

- 33kV
- 11kV
- 400/230V with demand metering
- 400/230V without demand metering (mass market)

The rationale for these consumer groups is:

- The network is designed around a 33kV sub-transmission and 11kV distribution system that steps down to a low voltage (400V) distribution system. Customers who connect to the 33kV sub-transmission system do not utilise the low voltage network components and so are not charged for this infrastructure. These customers tend to be large industrial sites with significantly different load profiles to WEL's 11kV customers;
- 11kV customers do not use the low voltage network and so are only charged for the high voltage network;
- Customers on the 400V (low voltage network) are charged for the low and high voltage networks.
- Customers with half-hourly metering are charged on a basis that more truly represents the cost they impose on the network.
- Customers without half-hourly metering are generally small business and residential customers.

3. Methodology of WEL's Cost Allocation Model

A cost model was developed to ensure the required returns were obtained from each tariff group. This was accomplished by allocating costs to tariffs by way of cost drivers.

a) Cost Drivers

Cost drivers are defined as the underlying factors that result in WEL incurring costs. These costs can be related to additional assets or operation costs. These underlying costs were determined after internal discussions and analysis, discussions with other lines companies, analysis of Transpower costs, and a review of industry best practice. These cost drivers have been used to determine the allocations in section 6.

b) Network Costs

Only those network costs and assets relating to the regulated line business were considered in the cost allocation model. These costs included administration, maintenance, return on capital, Transpower charges and depreciation. Costs shared between the regulated line business and other businesses are allocated in accordance with WEL's regulatory disclosure accounts.

c) Allocation of Costs to Tariffs

All the costs were broken down by type and then allocated to one or more cost drivers. Allocation of the cost drivers was based upon the nature and or service that a particular cost provided. Costs are then allocated to tariffs based on each customer group's proportion of the cost driver.

4. WEL Discount

WEL paid out \$20.3M of discount for 2009/10 and is forecasting to pay out a lesser discount of \$18.0M this 2010/11 year. This discount is forecast to be a \$7.4M increase on the \$10.6M discount that WEL has posted and as presented in the attached tariff schedule.

The discount consists of two parts, a proportion comprising 100% of fixed charges plus a proportion of the variable charge.

5. The 2010/11 Budget Statistics Related to the Consumer Groups

Tariff Group	MWh	kW _{CMD}	Year ending ICP No.s
33KV	38,659	4,977	4
11KV	269,803	44,968	186
400V	84,095	14,815	216
Demand	34,845	6,381	196
Std TOU	3,604	618	32
Un-metered & Street lights	11,124	1,608	271
Mass Market	707,094	172,234	82,373
Totals	1,149,225	245,601	83,277

6. Allocation of Key Revenue Components

a) Allocation of Asset Related Costs

The asset related costs include:

- Total value of assets
- Network maintenance
- Depreciation on assets

These costs are allocated as laid out in the table below.

Asset Group	Allocated to Customer Groups Based on the following allocation of costs		
	kWh	kVA	Other
33kVA Sub-transmission Network	50%	50%	
Zone Substations	40%	60%	
11kV Distribution Network	30%	70%	
Low Voltage Distribution Network	0%	100%	
SCADA and Communications	100%	0%	
Customer connection assets			100% allocated to customers numbers
Street Light Equipment			100% allocated to street light customers
Other Non-network Assets Plant And Equipment	100%		

Note: this table represents a summary page of an allocation of 35 asset groups.

The principle in allocating the asset related costs to the customer groups is that High Voltage customers do not pay for the low voltage network.

b) Allocation of Transpower Costs

Transpower costs are split and allocated as follows:

- Connection costs are allocated on the basis of kWh. The connection costs are allocated by kWh as the Transpower Points of Supply are fixed cost and this method ensures a fair recovery of the costs over all customers.
- Peak demand charges are allocated on the basis of the customer groups contribution to WEL's 12-month rolling average peaks.

c) Allocation of Administration and Operational Costs

Administration and operational costs are allocated based upon each load groups distributed volumes (kWh) across WEL's traditional network.

d) Return on Capital

Return on capital relates to the return required by WEL having regard to past investment and future capital expenditure requirements.

7. Components of Revenue Required to Cover Costs and Profits and Allocation of Costs to Consumer Groups

	33kV	11kV	400V TOU	Mass Market	Total
Capital	\$6.7M	\$51.4M	\$40.6M	\$332.3M	\$431.1M
Components of WEL's Revenue Requirement for 2010/11 FY					
Depreciation	\$0.3M	\$2.3M	\$1.7M	\$13.3M	\$17.5M
Maintenance	\$0.1M	\$0.8M	\$0.5M	\$5.1M	\$6.6M
Transpower Charges	\$0.5M	\$3.9M	\$1.8M	\$14.2M	\$20.4M
Administration and Operations	\$0.4M	\$2.7M	\$1.1M	\$6.6M	\$10.8M
Return on Capital	\$0.1M	\$2.7M	\$2.7M	\$16.7M	\$22.1M
Total	\$1.4M	\$12.4M	\$7.8M	\$55.8M	\$77.4M

Note: The revenue shown above has been adjusted for the \$10.6M discount published in the tariff schedule. These figures do not include any additional (non-posted) discount that may be provided to customers.

If allowance were to be made for a target discount of \$18.0M, the overall return on assets is 2.4% post tax.

8. Variable to Fixed Split

WEL's discount covers 100% of all fixed charges so that all WEL customers effectively pay no fixed costs. The WEL discount will be paid back to all customers connected to the WEL network on 31 March 2011.

For load groups with demand meters, approximately half the variable revenue is recovered over the maximum monthly demand in peak time hours and half over energy delivered.

For low voltage consumers not paying on a demand option, customers are charged a variable rate and a fixed rate. The fixed charges to this customer group are effectively zero when the network discount is applied.

9. WEL External Embedded Networks

WEL external embedded networks are priced using the same methodology but are priced separately from WEL's traditional network, as they are subject to different cost drivers and risks. Future tariffs on these networks are likely to be adjusted to reflect the incumbent line company transmission charges and the return on the WEL capital investment of each embedded network. The external embedded networks represent less than 1.1% of WEL's total line revenue.

10. Miscellaneous

A charge for reactive energy where power factors are below 0.95 is levied to encourage power factor correction investment.

A rebate reflecting the average cost of investment avoided is given where consumers own the transformers on their premises.

WEL Networks' line charges effective from 1-April-2010 (excl gst)

Codes	Description	Units	Effective from 1-April-2010		
			Total Charge	Transmission Charge	Distributor Charge

1. WEL Internal (Traditional) Networks' Non-TOU Customers (under 250 MWh/year)

(1153) Standard Line Service Continuous plus Controlled					
501	Fixed Charge Standard	(c/day)	15.00	0.00	15.00
502	Continuous Supply	(c/kWh)	10.16	2.55	7.61
503	Controlled Supply	(c/kWh)	2.71	0.88	1.83

2. All WEL Networks' TOU Customers (under 250 MWh/year)

(1364) Standard TOU Line Service plus Reactive					
501	Fixed Charge Standard	(c/day)	15.00	0.00	15.00
502	Continuous Supply	(c/kWh)	10.16	2.55	7.61
507	Reactive Energy	(c/kVARh)	2.50	0.00	2.50

(1361) Demand TOU Line Service plus Reactive					
504	Fixed Charge Demand	(\$/mth)	56.86	0.00	56.86
505	Peaktime Demand Weekday Summer	(\$/kW/mth)	8.54	2.50	6.04
605	Peaktime Demand Weekday Winter	(\$/kW/mth)	11.71	3.43	8.28
506	Continuous Supply	(c/kWh)	3.27	0.39	2.88
507	Reactive Energy	(c/kVARh)	2.50	0.00	2.50

3. All WEL Networks' TOU Customers (equal to or over 250 MWh/year)

(1360) 400v TOU Line Service plus Reactive					
508	Fixed Charge Major Customers 400V	(\$/mth)	56.86	0.00	56.86
514	Peaktime Demand Weekday Summer 400V	(\$/kW/mth)	9.14	2.97	6.17
614	Peaktime Demand Weekday Winter 400V	(\$/kW/mth)	12.53	4.07	8.46
515	Continuous Supply 400V	(c/kWh)	2.77	0.39	2.38
507	Reactive Energy	(c/kVARh)	2.50	0.00	2.50

(1354) 11kV TOU Line Service plus Reactive					
516	Fixed Charge Major Customers 11kV	(\$/mth)	56.86	0.00	56.86
512	Peaktime Demand Weekday Summer 11kV	(\$/kW/mth)	7.48	3.20	4.28
612	Peaktime Demand Weekday Winter 11kV	(\$/kW/mth)	10.34	4.42	5.92
513	Continuous Supply 11kV	(c/kWh)	1.97	0.39	1.58
507	Reactive Energy	(c/kVARh)	2.50	0.00	2.50
518	Transformer Rebate	(\$/kW/mth)	0.23	0.00	0.23

(1357) 33kV TOU Line Service plus Reactive					
517	Fixed Charge Major Customers 33kV	(\$/mth)	56.86	0.00	56.86
509	Peaktime Demand Weekday Summer 33kV	(\$/kW/mth)	6.20	2.94	3.26
609	Peaktime Demand Weekday Winter 33kV	(\$/kW/mth)	9.34	4.42	4.92
510	Continuous Supply 33kV	(c/kWh)	1.55	0.39	1.16
507	Reactive Energy	(c/kVARh)	2.50	0.00	2.50
518	Transformer Rebate	(\$/kW/mth)	0.23	0.00	0.23

4. All WEL Networks' Unmetered Customers

(1293) Unmetered Street lighting					
520	Street lighting	(c/kWh)	9.01	1.62	7.38

(1450) Other Unmetered Load					
529	Communication Kiosks, Bus shelters	(c/kWh)	10.16	2.55	7.61

5. Annual Discount Terms for Waikato Network Customers

Standard Line Service Continuous plus Controlled					
501D	Annual Fixed Discount applying to Code 501	(c/day)	-14.45	0.00	-14.45
502D	Annual Continuous Supply Discount applying to Code 502	(c/kWh)	-1.02	0.00	-1.02
503D	Annual Controlled Supply Discount applying to Code 503	(c/kWh)	-0.27	0.00	-0.27
504D	Annual Fixed Discount applying to Code 504	(\$/mth)	-52.44	0.00	-52.44
508D	Annual Fixed Discount applying to Code 508	(\$/mth)	-52.44	0.00	-52.44
516D	Annual Fixed Discount applying to Code 516	(\$/mth)	-52.44	0.00	-52.44
517D	Annual Fixed Discount applying to Code 517	(\$/mth)	-52.44	0.00	-52.44

6. WEL External (Embedded) Networks' Non-TOU Customers (under 250 MWh/year)

(1651) Standard Line Service Continuous plus Controlled					
601	Fixed Charge Standard	(c/day)	10.50	0.00	10.50
602	Continuous Supply	(c/kWh)	8.81	5.90	2.48
603	Controlled Supply	(c/kWh)	1.12	0.78	0.31

(1662) Taupo Low User Standard Line Service Continuous plus Controlled					
710	Low User Fixed Charge Standard	(c/day)	15.00	11.24	3.76
711	Low User All Inclusive	(c/kWh)	6.92	4.77	1.79
712	Low User Controlled	(c/kWh)	4.64	3.33	1.19
713	Low User Night	(c/kWh)	4.64	3.33	1.19

(1663) Taupo High User Standard Line Service Continuous plus Controlled					
715	High User Fixed Charge Standard	(c/day)	58.30	43.67	14.63
716	High User All Inclusive	(c/kWh)	4.97	3.43	1.28
717	High User Controlled	(c/kWh)	2.65	1.90	0.68
718	High User Night	(c/kWh)	2.65	1.90	0.68