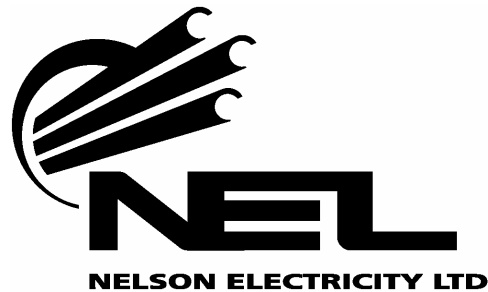


Nelson Electricity Ltd



Pricing Methodology Disclosure 2005

Nelson Electricity Limited

Pricing Methodology Disclosure

1 April 2005

The following information is disclosed in accordance with the Electricity Information Disclosure Requirements 2004 – Sections 22 & 23.

The Derivation of charges is described in the following sections.

- Identification of Costs
- Customer Groups
- Customer Group Statistics
- Allocation and Recovery of Network and Transmission Charges
- Pricing Schedules

Identification of Costs

Network costs are broken into 2 main categories as per Information Disclosure Regulations:

Direct Operating Costs – Includes operations, maintenance, transmission costs, depreciation and a fair return on assets. The direct operating costs are broken down and split into the following asset groups and allocated to the customer groups based on their utilization of those assets.

- 33kV Lines
- Zone Substations
- 11kV Lines
- 11kV/400V Substations
- 400V Lines

Indirect Operating Costs – Includes all overhead costs attributable to managing the business. These costs are allocated to customer groups with a proportion of the consumer charges being fixed and the remaining as a variable component.

Customer Groups

Customer Groups are based on typical load patterns, fuse size and annual kWh consumption. Customers are grouped into 7 categories.

- Load Group 1
Domestic consumers – Connections that are a domestic home that exhibit a typical domestic load profile. The connection has to be 15kVA or less.
- Load Group 2a
Small Business consumers – Connections that are 100kVA or less and use less than 100,000kWh per year. Domestic consumers greater than 15kVA are in this group.
- Load Group 2b
Consumers with capacity supplied of greater than 100kVA or annual consumption of greater than 100,000kWh with supply from the 400V network.
- Load Group 3
Consumers with capacity supplied of greater than 100kVA or annual consumption of greater than 100,000kWh with dedicated 400V supply from an 11kV/400V substation.

- Load Group 4
Consumers with capacity supplied of greater than 100kVA or annual consumption of greater than 100,000kWh with supply from a dedicated 11kV/400V substation.
- Load Group 5
Consumers with capacity supplied of greater than 1500kVA with supply from a dedicated 11kV/400V substations.
- Load Group 6
Consumers with capacity supplied of greater than 3000kVA with supply from a dedicated 11kV/400V substations.

Customer Group Statistics

Statistics are collected and analysed as per the customer groupings as described in the previous section. Information is as follows:

- Number of Connections per group.

Number of Connections	
Load Group	Connections
1	7,270
2a	1,305
2b	106
3	17
4	23
5	1
6	1
Total	8,723

- Anytime Peak per group.

Anytime Peak	
Load Group	Peak kVA
1	18,414
2a	8,377
2b	5,104
3	1,875
4	4,647
5	1,234
6	3,487
Total	43,138

- Winter Demand Peak per group.

**Control Period Demand (Winter Demand)
kVA**

Load Group	8:30 am - 11:30 am	5:00 pm - 6:00 pm	CPD Allocation
1	9,897	15,870	11,092
2a	7,568	4,773	7,009
2b	4,861	3,134	4,516
3	1,667	924	1,518
4	4,342	3,736	4,221
5	1,216	643	1,101
6	2,741	2,741	2,741
Total	32,292	31,822	32,198

Nelson Electricity has a winter load that peaks between 8:30 am - 11:30 am and 5:00 pm - 6:00 pm. The morning load is predominantly business load and the evening peak is typically influenced by the domestic. The statistics required are to ensure the right pricing signals are sent to each group and that charges are as fair and equitable as possible to all connections. The Winter Demand is a critical part to the allocation of Transmission Costs between groups.

- GWh per group.

GWh

Load Group	Winter	Summer	Total
1	29.321	29.597	58.918
2a	11.798	12.352	24.150
2b	8.881	7.938	16.819
3	3.467	3.422	6.889
4	9.786	8.391	18.176
5	2.125	1.950	4.075
6	9.748	7.859	17.607
Total	75.125	71.510	146.635

These figures are raw meter figures with no loss allocation back to GXP. Winter months are May - September, Summer months are October - April.

- ODRC per group allocation

ODRC	Load Group							Total
	1	2a	2b	3	4	5	6	
Asset Group								
33kV Lines	\$450,974	\$262,697	\$145,121	\$56,905	\$158,204	\$30,171	\$102,756	\$1,206,828
Zone Sub	\$289,214	\$168,470	\$93,068	\$36,494	\$101,458	\$19,349	\$65,899	\$773,951
11kV Lines	\$2,164,073	\$1,120,226	\$560,113	\$356,436	\$560,113	\$127,298	\$203,677	\$5,091,936
11kV/400V Sub	\$1,744,247	\$990,560	\$473,746	\$344,543	\$516,814	\$107,670	\$129,203	\$4,306,782
400V Lines	\$4,840,935	\$1,142,998	\$470,646	\$268,941	\$0	\$0	\$0	\$6,723,520
Other	\$456,149	\$280,737	\$180,881	\$60,813	\$169,068	\$32,243	\$109,813	\$1,289,704
Total	\$9,945,591	\$3,965,689	\$1,923,575	\$1,124,131	\$1,505,656	\$316,730	\$611,348	\$19,392,721

- Cost of Capital

Cost of Capital

Factor	Rate
Company Tax Rate on Debt	33%
Investor Tax Rate on Equity	28%
Cost of Debt, before Tax	8.05%
Risk Free Rate of Return	7.05%
Asset Beta	0.45
Equity Beta	0.90
Debt Ratio	50%
Market Risk Premium	8%

The above parameters are based on advice from Marlborough Lines Ltd, a shareholder of Nelson Electricity Ltd.

On the basis of the above input parameters, the Nelson Electricity Ltd Weighted Average Cost of Capital (WACC) is 8.9%.

Allocation and Recovery of Network and Transmission Charges

Network Charges are set to recover indirect operating costs, direct operating costs, depreciation and cost of capital. The setting of the charges also takes into account historical charging practices and methodologies.

The company annual revenue requirements for 2005 are:

Operating Costs (Network R&M)	\$498k
Transmission Costs	\$1,815k
Overhead Costs	\$1,015k
Depreciation	\$1,059k

With the Nelson Electricity being a small predominantly urban network there was no need to sectionalize it into separate pricing areas.

Cost Recovery per Load Group

The proportion of charges that are fixed and variable have been set based on the historical pricing methodologies. Nelson Electricity has maintained a pricing mix that has been consistent for over ten years and as the previous pricing methodology was working, there was no compelling reason to change to proportions. The only major variation has been the provision of a low daily fixed charge option for domestic consumers. This introduces a cross subsidization, which the pricing structures of previous years had been designed to remove.

- **Load Group 1 - Domestic Consumers**

Network costs are broken down into the following:

- Fixed Daily Charge
- Variable kWh Charge. This charge value depends on whether the load is controlled by ripple control or uncontrolled.

For the average Group 1 customer, fixed charges recover approximately 43% of total network costs.

- **Load Group 2a - Small Business Consumers**

Network costs are broken down into the following:

- Fixed Daily Charge.
- Variable kWh Charge. This charge value depends on whether the load is controlled by ripple control or uncontrolled.

For the average Group 2a customer, fixed charges recover approximately 25% of total network costs.

- **Load Groups 2b, 3, 4, 5, 6 - Time of Use Consumers**

These charges are for the larger installations on the network. These sites have Time of Use metering installed. Nelson Electricity can set network charges based on the individual sites configuration and usage pattern accurately. Network Costs are broken down into four categories.

- Installation Charge - This is a fixed per installation charge.
- Capacity Supply Charge - Based on the installations fuse size or transformer size.
- Winter Demand - This is the installations maximum half hour demand in the Winter Demand time zones as described earlier.
- kWh Charge - A variable charge based on the kWh consumption.
- Power factor penalty charge for sites that have a pf < 0.95

Pricing Schedules

		Line Charges from 1 April 2005		
Price Option	Unit Charges	Local Line	National Line	Total Line
<u>RESIDENTIAL</u>				
STANDARD				
<i>Fixed</i>	cents/day	63.000	0.000	63.000
<i>Variable</i>				
General	cents/kWh	2.035	1.715	3.750
Controlled	cents/kWh	1.102	1.048	2.150
Night Rate	cents/kWh	0.696	0.604	1.300
ECONOMY				
<i>Fixed</i>	cents/day	15.000	0.000	15.000
<i>Variable</i>				
General	cents/kWh	4.735	1.715	6.450
Controlled	cents/kWh	2.502	1.048	3.550
Night Rate	cents/kWh	1.296	0.604	1.900
<u>BUSINESS</u>				
STANDARD				
<i>Fixed</i>	cents/day	100.000	0.000	100.000
<i>Variable</i>				
General	cents/kWh	2.035	1.715	3.750
ECONOMY				
<i>Fixed</i>	cents/day	63.000	0.000	63.000
<i>Variable</i>				
General	cents/kWh	3.735	1.715	5.450
NIGHT SAVER				
<i>Fixed</i>	cents/day	100.000	0.000	100.000
<i>Variable</i>				
Day	cents/kWh	2.435	1.715	4.150
Night	cents/kWh	0.696	0.604	1.300
CONTROLLED				
Controlled	cents/kWh	1.102	1.048	2.150
Priority Control	cents/kWh	1.352	1.048	2.400
Night rate	cents/kWh	0.696	0.604	1.300

All prices are GST exclusive

Time of Use Prices

TOU Site > 150kVA or > 100,000 kWh

NETWORK CHARGES:

Prices From 1 April 2004			
	Total	NEL Network	Transpower
Metered Installation (\$/Metered Installation/Yr)	479.93	479.93	0.00
Energy (c/kWH)	1.340	0.459	0.881
Winter Demand - 2 Options			
Power Factor > 0.95			
Winter Demand (\$/WD kW/Yr)	56.83	35.78	21.05
or			
Power Factor < 0.95 or with kVA metering			
Winter Demand (\$/WD kVA/Yr)	53.98	33.98	20.00
Capacity Supplied			
	Total	NEL Network	Transpower
Charge \$/Yr		Charge \$/Yr	Charge \$/Yr
Group3 15kVA - 42kVA	613.83	613.83	0
Group4 43kVA - 69kVA	1008.43	1008.43	0
Group5 70kVA - 110kVA	1,607.65	1,607.65	0
Group6 111kVA - 138kVA	2,016.87	2,016.87	0
Group7 139kVA - 218kVA	3,186.07	3,186.07	0
Group8 219kVA - 300kVA	4,384.50	4,384.50	0
Group9 301kVA - 500kVA	7,307.50	7,307.50	0
Group10 501kVA - 750kVA	10,961.25	10,961.25	0
Group11 751kVA - 1000kVA	14,615.00	14,615.00	0
Group12 1001kVA - 1500kVA	21,922.50	21,922.50	0

TOU Site > 2000kVA

NETWORK CHARGES:

Prices From 1 April 2004			
	Total	NEL Network	Transpower
Fixed (\$/Yr)	0.000	0.000	0.000
Winter Demand (\$/Winter Demand kVA/Yr)	79.005	25.005	54.000
Energy (c/kWH)	0.147	0.000	0.147
Capacity Supplied (\$/kVA/Yr)	13.490	13.490	0.000

