



Nelson Electricity Limited
Pricing Methodology Disclosure
For the period beginning 1 April 2016

The following information is disclosed in accordance with the Electricity Distribution Information Disclosure Determination 2012 under Part 4 of the Commerce Act 1986.

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Glossary & Abbreviations

Advanced Meter	A meter with the ability to measure energy use at various time intervals and with operational two way remote communications capability. Installed at a Category 2 ICP or lower ($\leq 500\text{Amps}$).
Connection	A point of connection to an electricity distribution network as identified by an installation control point (ICP) identifier.
Controlled Meter	A meter that measures load where there is functionality to control the energy provided to permanently wired appliances (e.g. a hot water cylinder) that are connected to the meter.
Customised price-quality path (CPP)	Regulatory limits on the average prices and the quality standards of non-exempt electricity distribution businesses, derived from business specific assumptions and information, following application by the business to the Commerce Commission.
Distributor	A company that owns or operates the power lines that transport electricity on local networks. Terms also used are 'distribution company', 'lines company' and 'network company'.
Default price-quality path (DPP)	Regulatory limits on the average prices and the quality standards of non-exempt electricity distribution businesses, derived from default industry methods, information and assumptions.
Electricity Industry Act 2010 (Act)	An Act that regulates the operation of the New Zealand electricity industry.
Electricity Industry Participation Code (Code)	The Code sets out the duties and responsibilities that apply to industry participants and the Electricity Authority.
Electricity Information Exchange Protocol (EIEP)	EIEPs provide a set of standardised formats for business-to-business information exchanges.
Information Disclosure (ID)	Electricity Distribution Information Disclosure Determination 2012.
Input Methodology (IM)	Electricity Distribution Services Input Methodologies Determination 2012.
Kilowatt hour (kWh)	A kilowatt hour is also known as a unit of electricity and is the basis of retail sales and reconciliation of electricity in the market.
Legacy meter	A meter that measures cumulative energy consumption (kWh) and does not have remote communications capability. Installed at a Category 2 ICP or lower ($\leq 500\text{Amps}$).
LFC Regulations	Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004.
Low Fixed Charge (LFC)	Low Fixed Charge.

Meter register	An energy measurement device on a meter.
Pass through cost	A cost defined in clause 3.1.2(1) of the IMs that a distributor can pass through to end-consumers in its prices, and includes territorial authority rates and industry levies.
Pass through price	Means the portion of an electricity distribution business' prices that are designed to recover pass-through costs and recoverable costs.
Peak Load	Peak half hourly demand, measured in kW or kVA.
Pricing Principles	The distribution pricing principles as published by the Electricity Commission in March 2010, adopted by the Electricity Authority.
Recoverable costs	A cost defined in clause 3.1.3(1) of the IMs that a distributor can pass through to end-consumers in its prices, including transmission costs, distributed generation allowances, and other regulatory allowances, wash-ups and incentives.
Time-of-use meter	A meter with the ability to measure energy use at various time intervals. Installed at a Category 3 ICP or higher (>500Amps).
Transmission	Conveyance of electricity at high voltages through the national grid.
Transmission network	New Zealand's national transmission network (national grid) owned by Transpower New Zealand Limited.
Uncontrolled Meter	A meter that measures load where there is no load control functionality.

The Electricity Authority also publishes a glossary of key industry terms on their website.

1. Introduction

The Nelson Electricity network comprises approximately 9,200 connections in a concentrated area of 24 square kilometres in the central Nelson city area. The connections are largely CBD, industrial and dense urban. Nelson Electricity has a peak loading of 33.3MW, during winter months and distributes 145GWh annually through the network.

Nelson Electricity derives its transmission services via Transpower's Stoke substation which is 7km from Nelson Electricity's only zone substation at Haven Road.

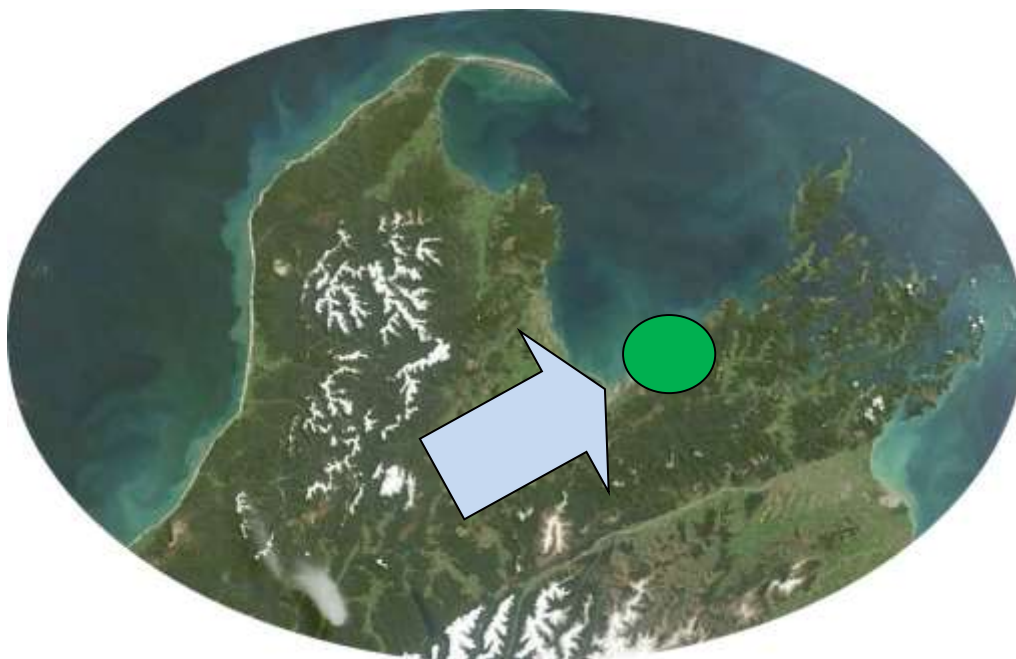
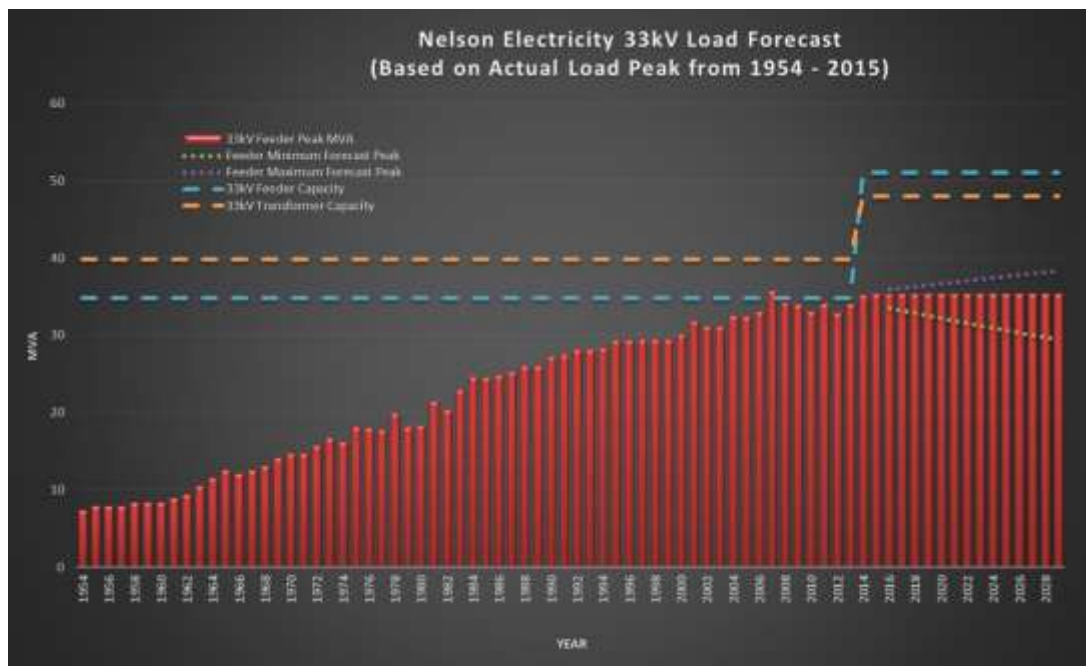


Figure 1 Nelson Electricity is located in Nelson city at the top of the South Island.

Nelson Electricity is owned by Network Tasman and Marlborough Lines, each holding a 50% shareholding.

Nelson Electricity, up until 2008, had consistent kWh growth of approximately 1.0% - 1.5% per year. Since then kWh consumption has been reducing at approximately 1.0% per year. The global financial crisis may have started the change in 2008 but it has continued due to a mixture of energy efficient appliances, LED lighting, improvements in home insulation, energy conservation due to higher electricity prices and the installation of solar PV. At the same time peak demand was increasing at the same rate of approximately 1.0% - 1.5% but since 2008 has flattened off and not decreased, which means that electricity use at peak times has not materially changed.

This has ramifications due to the cost to manage the network is the same but there is a downward trend in kWh consumption of which Nelson Electricity derives 48% of its revenue.



On top of this change is the predicted increases in solar PV installations, introduction of battery storage devices and electric vehicles as their prices fall in the coming years. There is an increased uncertainty as to the effect these technologies will have and the role the electricity network will play in the future as the key infrastructure that supports the Nelson community and economy.

The electricity consumer is likely to dictate the network's future with their decisions on uptake and utilisation of these technologies. Nelson Electricity is, therefore, having to review its pricing structure to ensure it is fit for the upcoming changes and ensure that the network is sustainable for the long term. Nelson Electricity is developing a form of service-based pricing that will meet the changing landscape and ensure flexibility for the customer while ensuring prices cater to the electricity consumer and being able to make rational choices when investing in new technologies. This new pricing will likely be introduced 1 April 2017.

2. Regulatory Requirements

Nelson Electricity is a natural monopoly and is not directly exposed to the competitive forces that drive other markets to deliver improved efficiency and service. To this extent Nelson Electricity is classed as non-exempt from the control regime under the regulations for electricity network owners under the Commerce Act 1986. This means that Nelson Electricity has to comply with the Electricity Distribution Services Default Price-Quality Path Determination 2015 (DPP) administered by the Commerce Commission.

Nelson Electricity also has to comply with the Electricity Distribution Information Disclosure Determination 2012 under Part 4 of the Commerce Act 1986 of which includes the disclosure of its Pricing Methodology.

Recent changes also require the pricing methodology to demonstrate how the Nelson Electricity pricing is in line with the Electricity Authority Distribution Pricing Principles.

Nelson Electricity has taken all requirements into account in the preparation of this document.

2.1 Electricity Distribution Services Default Price-Quality Path Determination

Nelson Electricity has to comply with the Electricity Distribution Services Default Price-Quality Path Determination 2015 (DPP). The Commerce Commission reset the Price-Quality path every five years. The 2016/17 year will be the second of the current five year path from 1 April 2015 – 31 March 2020. Actual prices multiplied by actual quantities of two years previous must not exceed the price path.

2.2 Electricity Distribution Information Disclosure Determination

The key requirements in complying with the disclosure of pricing methodologies is outlined in 2.4.1 – 2.4.5 of the Electricity Distribution Information Disclosure Determination 2012. The requirements outline the framework to demonstrate to the “Interested Person” how Nelson Electricity allocates costs to different Load Groups and the basis on how prices are set.

2.3 Electricity Authority Distribution Pricing Principles

The Commission’s final pricing principles are as follows:

Electricity Authority Pricing Principles
(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.
(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.
(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.
(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.
(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.

Nelson Electricity Commentary on compliance with Electricity Authority Pricing Principles.

Nelson Electricity has prepared this pricing methodology in accordance with, or as close as possible to, the Electricity Authority Pricing Principles. It has to be recognised that consumer behaviour as a response to network pricing is limited. The line prices represent approximately 30% of the total electricity invoice they receive from electricity retailers so unless a network can significantly amplify or exaggerate the pricing differential levels then the consumer behaviour will be based on what the electricity retailer wants to achieve. In addition to that, in the setting of controllable line charges, any incentives in these areas are often reduced further through the interface the customer has with their electricity retailer. Additional meter costs for measuring controllable loads are typically loaded onto the controllable price further reducing the pricing incentive for the line price option.

Prices are set attempting to minimise cross subsidisation and price discrimination between load groups. A key success has been in the mass market with the combining of business and residential tariffs, excluding those who qualify and have opted to be on the low fixed charge option as per the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004. This has reduced published pricing options for the mass market consumers, also simplifying the pricing for electricity retailers to apply to their customers.

Upon completion of the new Zone Substation at Haven Road and installation of the new 33kV feeder in 2014, there have been changes in cost allocation given the reduced requirement for utilisation of ripple control for network related constraints or operational requirements. Ripple is now principally for minimising transmission related constraints so reducing transmission costs for consumers. Notwithstanding any material changes in growth forecasts or transmission pricing levels or transmission pricing methodology, it is expected that line prices will remain around similar levels but there is potential for transmission costs to lower if the targeted use of ripple control is effective.

Nelson Electricity does not have any other significant expenditure projects in the coming years that will materially affect line charges.

Nelson Electricity currently offers a line price option for larger consumers to be on Time of Use (above 150kVA is compulsory). This option is of benefit if those consumers can manage their load during peak winter demand times and also incentivises the reduction of fused capacity. The consumer can choose what level of supply they require and will be charged accordingly. Noting that the winter demand charges are set in the winter and applied for the following 12 months from 1 October each year.

The Nelson Electricity pricing structure has remained stable for a number of years. The structure promotes stability and certainty. This does also minimise the transaction costs for retailers. The pricing is transparent and all retailers have access

to and are charged the same line charges for each different classification of consumer. Nelson Electricity has also taken into account retailer feedback into line charges. An example is the removal of a ripple control charge which was not part of the consumer's line charge and was charged on a per retailer basis. The charge was rolled into the consumer line charges. This assisted retailers in reducing transaction costs.

Overarching the network pricing is that Nelson Electricity take into account the requirements of its stakeholders. These are as follows:

Stakeholder	Interests
Electricity Customers and Retailers	Delivery of a safe, reliable, efficient and sustainable supply of electricity at minimum cost. Surveys across the board say that most consumers do not want to pay more for a more reliable network.
Government (Ministry of Innovation and Economic Development, Commerce Commission, Electricity Authority)	Legislate and control compliance of statutory requirements and economic efficiency.
Landowners	Landowners with Nelson Electricity assets on their property have interests in safety, easements and access requirements.
Property Developers	Property developers wish to ensure that connection policies and costs are fair and that network expansion plans are timely.
Shareholders	Achievement of an adequate return on investment and good corporate citizenship.
Territorial Local Authorities	Territorial authorities have interests in minimising environmental impacts, development of underground power systems, local economic development and in the control of assets in road reserves.
Transit NZ	Transit NZ are interested in controlling assets in road reserves.
Transpower	Nelson Electricity relies on the Transpower grid to deliver electricity through to the Nelson Electricity network and Transpower relies on the Nelson Electricity network to deliver the electricity to end use customers.

Stakeholder interests have been identified and accommodated in the pricing of Nelson Electricity line charges through the following processes:

- The Nelson Electricity Board of Directors agrees to an annual Statement of Corporate Intent which details corporate strategy with respect to pricing.
 - To operate as a successful business in the distribution of electricity and other related activities;
 - To have regard among other things the desirability of ensuring the efficient use of electricity;
 - To ensure that all services and responses to maintenance and fault requirements are provided with an appropriate standard of customer service;
 - To maintain existing reliability and efficiency levels;
 - To adopt non-discriminatory pricing and network access policies for all users of the Nelson Electricity network;
 - To ensure that all resources, financial, physical, and human are utilised efficiently and economically;
 - To seek to provide an appropriate rate of return to shareholders not less than WACC and to seek to maximise the longer term value of shareholders' funds;
 - To provide for future development of the network through investigation and the acquisition of land and physical assets as is appropriate;
 - To ensure the company complies with all legislative requirements including health and safety legislation, and all industry initiatives in respect of safety in the workplace;
 - To be a good employer providing;
 - ✦ Remuneration consistent with performance,
 - ✦ A safe, satisfying and stimulating work environment,
 - ✦ Equal employment opportunities.
- Corporate organisational goals and objectives support the pricing methodology consistent with the corporate mission.
- Regular surveys of residential, commercial and large user customers provide valuable feedback on pricing, security and reliability of supply which assists in network planning and on the price-quality trade-off. The key outcome is that majority of consumers are happy with current quality and don't want to pay any more for improved quality.
- Government and territorial authority legislation provides a key input into the way pricing is set.

Any conflicting stakeholder interests are managed by systems that ensure that appropriate levels of separation, accountability and authority are in place. Pricing decisions are ultimately made at Board level with appropriate supporting evidence and recommendations from the General Manager.

3. Distribution Network Characteristics

Nelson Electricity is supplying the following types of connections:

- Unmetered - 50 connections
- Residential – 7,659
- Small/Medium business – 1,398
- Larger Business (Time of Use) – 93

The Nelson Electricity pricing combines the residential and small/medium businesses (Load Group 2) for the purpose of pricing as the characteristics are similar. The imposition of the Low User Fixed Charge Option has forced Nelson Electricity to introduce the low fixed charge option for residential consumers using less than 8,000kWh per year (Load Group 1), which does result in some cross subsidisation between the two groups 1 and 2.

The network is centred on the business district of Nelson City and also the Port area. It has a larger proportion of business connections compared to most other networks in New Zealand. As a result the network peaks are typically experienced in the morning instead of early evenings. The Nelson Electricity network peaks are highest during the colder winter mornings when business load is increasing to start the day and residential is dropping off after the morning breakfasts and showers. There is also a considerable level of electrical heating load as well.

Nelson Electricity is a small network and, as such, there is no benefit in segmenting into different pricing areas. The prices are applied evenly across the whole network.

The Nelson Electricity network is surrounded geographically by the Network Tasman network to the north and south. There is the ability for a very small number of consumers to bypass the Nelson Electricity network where the neighbouring electrical infrastructure is nearby. The cost to bypass, in almost all situations, is uneconomic given the cost to install network infrastructure versus the payback through any potential reduced line charges. Nelson Electricity would review any instance of potential uneconomic bypass and if necessary look at a non-standard pricing arrangement.

4. Discussion on the existing pricing regime

The existing Nelson Electricity pricing has been developed and modified to cater to the changing dynamics of the Nelson Electricity network and to ensure there is a fair allocation of costs applied to all consumers where possible. Given the network is small geographically, there is no real benefit to have multiple pricing regions. Nelson Electricity sells capacity the ability for electricity retailers to supply consumers with electricity. The consumer capacity limit is based on the fuses at the network connection point. The larger the fuse the greater the capacity available to the consumer at any time which potentially leads to higher capacity network infrastructure requirement to supply the network connection point.

4.1 Time of Use

The Time of Use pricing regime has not been materially changed since its introduction in the early 1990s. The line prices are split in to five separate categories and priced accordingly so to ensure there is minimal cross subsidisation between consumers. The pricing is transparent and the prices should incentivise the consumer to alter behaviour to minimise its line charges.

For Time of Use consumers the pricing is centred on the connection capacity (size of fuse or transformer) and contribution to the network and transmission peak demand. The consumer has the ability to change both of these to reduce their overall line charges and also assist in making the Nelson Electricity network more efficient. Most of the efficiency gains have already been achieved in this group given the pricing has been in place for a long period of time.

The weighting of the pricing has been modified between the categories over time to cater to the changing pricing signals required for the load group to match changing costs.

4.2 Mass Market

All business and residential consumers (except consumers on the low fixed charge tariff option) have been grouped together to optimise the Nelson Electricity mass market pricing. There used to be a pricing differential between business and residential consumers and over time this differential was reduced and was finally removed in 2009. It finally made it possible to link the two consumer groups together as it is also now extremely difficult to differentiate between the two groups where often there are businesses operating from home or bed and breakfasts as examples. The linking of the groups also reduced the number of published line prices and simplified the pricing to be disclosed making it easier for retailers to administer Nelson Electricity prices and consumers easier to understand.

Nelson Electricity also wanted to incentivise larger mass market consumers to optimise their electrical consumption and capacity. This was achieved by changing the daily fixed line charge which was a one size fits all to a charge based on actual

fuse size. This means that the larger mass market consumers pay a fixed line price based on their connected fuse size which is their ability to consume a higher electrical demand. They also have the ability to reduce their fuse size (free of charge) if they can change their load consumption behaviour. This line price option has proven successful with many consumers having their fuse sizes reduced which then provides for reserved network capacity to be utilised elsewhere.

Larger consumers in this group can also opt to go on to the Time of Use tariff if there is a benefit for them to manage their load further. This option is, however, seldom taken up. There is more of a migration from Time of Use tariff to mass market and this is a result of the retail pricing options rather than the Nelson Electricity network pricing.

4.3 Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004

One complication in this new capacity based fixed line charge is the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 which has meant that residential consumer using less than 8,000kWh must have access to a fixed line charge price of at most 15 cents per day. To comply with this regulation and to minimise price options, Nelson Electricity has had to set all residential consumers fuse capacity at 15kVA. Currently a residential consumer with a larger fuse size is only paying the standard price of the typical 15kVA connection.

The compounding effect is that the average residential consumer on the Nelson Electricity network currently uses approximately 6,750 kWh per year (based on 2015 consumption analysis) compared to 7,400kWh per year in 2008. This is 15% lower than the deemed average consumer as determined under this regulation. This exposes Nelson Electricity to more cross subsidisation as more consumers switch to this tariff. Of concern to Nelson Electricity is currently up to 70% of all residential consumers would benefit from being on the Low Fixed Charge option (Group 1).

Nelson Electricity is exploring options to remedy this issue to minimise the cross subsidisation that this Regulation has created as it undermines the ability to adapt prices for changes in the network utilisation characteristics. Currently consumers on Group 2 and Group 3 are subsidising the consumers on Group 1. This situation will not improve unless there is a change to the Regulations.

5. Changes to the 1 April 2016 Pricing

The Nelson Electricity line charges will be changing 1 April 2016. There are no new prices being introduced or deleted from the delivery price schedule. There has been some terminology changes as described in section 10 due to Nelson Electricity preparing this disclosure document to be in line with the Electricity Networks Association – Distribution Pricing Guidelines 2015.

The last line price change was introduction of a distributed generation price of 0.5 cents per kWh for energy injected onto the network in 2014. This was introduced to capture some of the incremental costs of these installations like safety audits at the network connection points. The site is checked to ensure the voltage is within the regulatory limits and that the site does not inject into network when street supply is lost.

In round terms, the delivered line prices will be increasing by approximately 2.0% overall. The balance of the split between fixed and variable between the local network and transmission has altered as is described in the Fixed versus Variable section of this document.

6. Derivation of Line Prices

The Derivation of Line Prices are described in the following sections.

- Customer Groups
- Customer Group Statistics
- Allocation and Recovery of Network and Transmission Charges
- Cost Recovery per Load Group
- Fixed v's Variable Charges

6.1 Consumer Groups or Load Groups

Nelson Electricity has split its consumers into five distinct consumer groups/load groups to assist in the fair allocation of costs and setting line price levels. The Groups are based on the type of connection which considers typical load patterns, fuse size and annual kWh consumption. The number of groups is set at five as a balance between minimising complexity and ensuring costs are appropriately apportioned between consumers. The groupings are relatively in line with other electricity networks in New Zealand.

- **Load Group 0**
Unmetered Load or Metered Builders Temporaries. This group is for the smaller/lower fused connections (under 15kVA) either metered or unmetered that do not fall into the other groups as listed below. Most of the connections are either metered builders temporary supplies or small unmetered supplies to telephone boxes and streetlights. This group has smaller connections with differing load characteristics so a fair allocation of costs is difficult to demonstrate but the overall revenue of this group is only 0.05% of total revenue (excluding local council streetlights) so they are grouped together.
- **Load Group 1**
Residential consumers Low Fixed Charge Option – Connections that are a residential home that exhibit a typical residential load profile using less than 8,000kWh per year as defined by the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004. The connection size is set at 15kVA. The Nelson Electricity Limited (NEL) Network Code allows for single phase 60amp, two phase 40 amp or three phase 30 amp supplies to be classed as a residential connection. A residential type load profile not on the Low Fixed Charge option is typically categorised as Load Group 2.
- **Load Group 2**
Residential and Small Business consumers – Connections that are 15kVA up to 150kVA. Residential consumers not on Low User Option are also in this group. The residential and small business consumers are grouped together as much as Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004 allow. Electricity networks key costs are driven based on capacity (the ability for a consumer to take as much electricity up to the fused

capacity at the Nelson Electricity network connection point). While there is a difference in load profiles from a typical business and a domestic connection it is proving more difficult, as time goes on, to differentiate between the two as many connections are a mixture of the two. To avoid complications in grouping allocations and number of tariffs, Load Group 2 joins the two consumer types together. By doing this it has removed any price discrimination that existed when business and residential were grouped separately.

- **Load Group 3**
Time of Use consumers with supply up to 2,400kVA. This group is for any connection with a supply up to 2,400kVA that wants to be on a Time of Use tariff. Time of Use tariffs were first offered to consumers in the early 1990s and the early rationale for the consumer being in this Group was if they used greater than 50,000kWh per year. The kWh requirement has since been removed and a mandatory requirement of connections with a capacity of greater than 150kVA to be Time of Use introduced. Those below that limit can opt to be on Load Group 2 or Load Group 3. This group is ideal for consumers that have the ability to manage their peak demand to minimise line charges as the line charge regime for this group more accurately reflects the consumer's fair allocation of costs.
- **Load Group 4**
Consumers with capacity supplied of greater than 3,000kVA with supply from a dedicated 11kV/400V substation. This group is for the larger consumers on the network that also receive a supply from dedicated substations and 11kV infrastructure.

6.2 Consumer Group Statistics

Statistics are collected and analysed as per the customer groupings as described in the previous section. This information is used as a base to NEL's pricing allocations as described further in this report. Information used for the 2016/2017 year is as follows:

- Number of Connections per group.

Number of Connections	
Load Group	Connections
0	54
1	3350
2	5729
3	92
4	1
Total	9,226

- Anytime Peak per group.

Anytime Peak	
Load Group	Peak kVA
0	320
1	11,390
2	22,916
3	14,500
4	3,350
Total	52,476

- 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
0	20	306	134
1	5,000	5,600	5,240
2	14,000	12,300	13,320
3	12,376	11,800	12,146
4	2,629	2,629	2,629
Total	34,005	32,329	33,469

NEL has a winter load that peaks between 8:30am - 11:30 am and 5:00 pm - 6:00 pm. The morning load is predominantly business load with the morning residential load dropping off and the evening peak is typically influenced by the residential load with the business load dropping off. 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. It is also important when allocating costs for local network in allocating costs based on load group contribution to peak demand and maximum loading on assets.

- GWh per group.

GWh			
Load Group	Winter	Summer	Total
0	0.59	0.60	1.19
1	8.82	7.98	16.79
2	32.51	32.34	64.86
3	19.61	24.37	43.98
4	6.12	7.41	13.53
Total	67.65	72.69	140.34

These figures are estimated consumption per Load Group with no loss allocation back to GXP. Winter months are May – September, summer months are October – April.

- Regulatory Value of System Fixed Assets as at 31 March 2015 per group allocation

	Regulatory Value of System Fixed Assets					
Asset Group	0	1	2	3	4	Total
33kV Lines	\$38,264	\$770,335	\$2,501,404	\$1,909,471	\$511,526	\$5,731,000
Zone Sub	\$67,842	\$1,365,795	\$4,434,962	\$3,385,470	\$906,930	\$10,161,000
11kV Lines	\$45,001	\$905,960	\$2,941,801	\$2,245,652	\$601,585	\$6,740,000
11kV/400V Sub	\$37,717	\$840,448	\$2,631,781	\$1,882,150	\$252,104	\$5,649,000
400V Lines	\$64,751	\$1,546,342	\$6,562,778	\$1,551,680	\$0	\$9,698,000
Other	\$24,637	\$495,993	\$1,610,571	\$1,229,445	\$329,355	\$3,690,000
Total	\$278,213	\$5,924,874	\$20,683,296	\$12,203,867	\$2,601,499	\$41,669,000

Regulatory Asset Base Valuation allocation is assessed on each load group's utilisation of assets. As an example, Group 4 does not utilise any of the 400V lines so there is no value assigned.

- Cost of Capital

For the financial year commencing 1 April 2016 Nelson Electricity, being a price controlled EDB, has used the Commerce Commission's WACC for the 5 year DPP price control period 1 April 2015 -31 March 2020. This 7.19% set at the 67th percentile (midpoint 6.72%).

The parameters used by the Commission in setting WACC are:

Parameters used to calculate vanilla WACC for EDB DPP and Transpower IPP (for the period commencing from 1 April 2015)

Parameter	Estimate
Risk-free rate	4.09%
Debt premium	1.65%
Leverage	44%
Equity beta	0.61
Tax adjusted market risk premium	7.0%
Average corporate tax rate	28%
Average investor tax rate	28%
Debt issuance costs	0.35%
Cost of debt	6.09%
Cost of equity	7.21%
Standard error of debt premium	0.0015
Standard error of WACC	0.011
Mid-point vanilla WACC	6.72%

Note: The cost of debt is calculated as the risk-free rate + debt premium + debt issuance costs. The cost of equity is calculated as the risk-free rate \times (1- investor tax rate) + the equity beta \times the tax adjustment market risk premium. The mid-point vanilla WACC is calculated as the cost of equity \times (1 - leverage) + the cost of debt \times leverage.

On the basis of the above input parameters, the NEL Weighted Average Cost of Capital (WACC) is 7.19% of Regulatory Asset Base = \$2,996k.

6.3 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 2016/2017 are:

Operating Costs (Network R&M)	\$710k
Transmission Costs	\$3,457k
Overhead Costs	\$1,865k
Depreciation	\$1,573k
Target Return (before tax)	\$2,688k

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

6.4 Cost Recovery per Load Group

Following is a table outlining the cost recoveries per load group.

Load Group	Operating	Transmission	Overhead	Depreciation	Target Return	Total
0	\$45,165	\$22,137	\$11,144	\$11,442	\$28,608	\$118,495
1	\$99,503	\$339,510	\$540,995	\$198,294	\$412,489	\$1,590,791
2	\$437,616	\$1,745,772	\$986,265	\$781,219	\$1,778,216	\$5,729,088
3	\$104,171.43	\$1,107,955	\$266,964	\$463,418	\$445,279	\$2,387,787
4	\$23,544.32	\$241,627	\$59,631	\$118,627	\$23,409	\$466,839
Total	\$710,000	\$3,457,000	\$1,865,000	\$1,573,000	\$2,688,000	\$10,293,000

The methodology used for the above cost apportionment is as follows:

- Operating Costs – Operating costs is the Operational Expenditure Budget that covers both the planned and unplanned network R&M expenditure on the network. The Operational Expenditure Budget is split into the different asset types as per the Regulatory Asset Value of System Fixed Assets table groups. The asset group expenses are then allocated to each load group first based on whether the Group utilises that class of asset (eg; Group 4 does not utilise the 400V network so does not contribute towards those associated costs) then through the assessed balance of each groups kWh consumption (60%) and Winter Demand contribution (40%). This percentage allocation attempts to provide a balance between a Groups peak demand utilisation and overall usage. Some re-balancing is required for load group specific costs, eg; Group 0 where actual Council streetlighting associated maintenance costs of \$40,000 are directly allocated to the associated tariff.

Group 1 example of how this is applied is as follows:

K%	-	kWh Consumption = 11.97% of total kWh
W%	-	Winter Demand = 15.70% of total demand
A	-	Group re-allocation = \$10,000
Total	-	Total Operating Cost
G1 Op	-	Group 1 Operating Cost
G1 Op	=	Total x ((60% x K%) + (40% x W%)) + A
\$99,503	=	\$710,000 x ((60% x 11.97%) + (40% x 15.70%)) + 10,000

- **Transmission Costs** – Transmission costs are an unavoidable cost. It covers the upstream costs from our sub-transmission connection point at STK0331. The major component in transmission costs is the Interconnection charge - Regional Coincident Peak Demand (RCPD) of the Top of the South. Transmission peaks are typically encountered during the winter period. Transmission costs are apportioned based on each group's influence. This is achieved through peak demand analysis of each group as is being applied through transmission pricing. Groups 0, 1 and 2 recover transmission costs 100% via the kWh charge and for Groups 3 and 4 via a mixture of winter control period demand charge (45%) and a kWh charge (55%).
- **Overhead Costs** – Are apportioned by using two measures; the number of network connections and the maximum demand of the load group. This gives a balance of spreading overhead costs between the business of selling capacity and the number of consumers connected.
- **Depreciation** – This is apportioned by using the assessed depreciation using the NEL Regulatory Asset Base model as a base and follows the same rationale as Operating Costs (except without re-allocation of costs).
- **Target Return** - This is apportioned to load groups as per the Regulatory Asset Base % split per load group as per the rationale of the operating costs. It is, however, important to note that the Regulatory Asset Base valuation for assets installed prior to 2004 still undervalues the underground network value and so the target return takes this into account.

6.5 Fixed versus Variable Charges

The proportion of charges that are fixed and variable have been set based on the historical pricing methodologies. NEL 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 Residential consumers as required under the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004. This introduces a cross subsidisation, which the pricing structures of previous years had been designed to remove.

Currently overall the proportions between fixed and variable line charges are 52% Fixed and 48% Variable. Groups 1 and 2 have a higher variable proportion while groups 3, 4, and 5 have a higher fixed proportion. Refer to the table below.

Fixed V's Variable	Fixed		Variable		Total
	%	\$	%	\$	\$
Group 0	97%	\$115,303	3%	\$3,192	\$118,495
Group 1	12%	\$183,915	88%	\$1,406,881	\$1,590,796
Group 2	49%	\$2,790,356	51%	\$2,938,749	\$5,729,105
Group 3	76%	\$1,824,870	24%	\$562,924	\$2,387,794
Group 4	100%	\$466,840	0%	\$0	\$466,840
Total	52%	\$5,381,284	48%	\$4,911,746	\$10,293,031

It has to be recognised that consumer behavior as a response to network pricing is limited. The line charges are only 30% of the total electricity invoice consumers receive from electricity retailers so unless a network can significantly amplify or exaggerate the pricing differential levels then the consumer behavior will be based on what the electricity retailer wants to achieve.

NEL is in the business of selling electrical capacity to consumers and most of its costs as identified in section 6.4 are fixed. If the true proportion of fixed and variable costs were charged in the same proportions to all consumers, the fixed charge proportion of groups 0, 1 and 2 consumers would increase significantly with the variable charges reduced. The incremental cost of any consumer using more kWh's, while not increasing their peak demand, is extremely low compared to a consumer wanting more capacity which there is a cost associated with the increases in peak demand.

For further breakdown on the revenue influence of specific tariffs, refer to Section 12 Price / Quantity / Revenue Schedule.

- **Load Group 0 – Unmetered and Builders Temporary**

Builders Temporary (metered) - Network costs are broken down into the following:

- Fixed Daily Charge
- Variable kWh Charge

For the average Builders Temporary, fixed charges recover approximately 60% of total network costs.

Unmetered Supply – Network costs are fully fixed with no variable.

Load Group 0 charges are predominantly fixed given the low consumption not making metering worthwhile for retailers in most cases. The only metered load in Group 0 is for builder's temporary connections, this type of connection is in this group as the fuse size is low limited to single phase 30 amps, the consumption is typically low, the load characteristics don't fit other load groups and the revenue impact is low.

- **Load Group 1 – Residential Consumers (Low Fixed Charge Option)**

Network costs are broken down into the following:

- Fixed Daily Charge based on connection capacity of 15kVA
- Variable kWh Charge. This charge value depends on whether the load is controlled by ripple control or uncontrolled. The controlled tariff rates are lower than the uncontrolled rate as Nelson Electricity can ensure they are turned off at peak times reducing peak demand associated costs. The main peak time cost is the transmission which ultimately accounts for 33.6% of the total line charge revenue. There are two controlled options:
 - a. Hot water – This is a key network control option to control supply to all hot water cylinders on the network. This can manage up to 10% of network load at peak demand times approximately 3MW. Typically supply is only controlled during the winter peak demand times to minimise transmission costs. Also used for other emergency load management purposes.
 - b. Night Rate - This is an option for consumers that can utilise electricity in off peak times between 11:00 pm and 7:00 am, typically used for larger hot water cylinders and night storage heaters.

For the average Group 1 customer, fixed prices recover approximately 12% of total network costs.

This Group exists to comply with the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004. Any eligible residential consumer can opt to be in this group. There are approximately 200 - 300 consumers per year shifting from Group 2 to Group 1. The average annual residential consumption is also reducing and for Nelson Electricity it is now approximately 6,750 kWh per year and still reducing.

- **Load Group 2 – Connections from 15kVA – 150kVA (Non Time of Use)**

Network costs are broken down into the following:

- Fixed Daily Charge (based on fuse capacity (in kVA))
- Variable kWh Charge. This charge value depends on whether the load is controlled by ripple control or uncontrolled. The controlled tariff rates are lower than the uncontrolled rate as Nelson Electricity can ensure they are turned off at peak times, reducing peak demand associated costs. The main peak time cost is the transmission, which ultimately accounts for 33.6% of the total line charge revenue. There are two controlled options:
 - a. Hot water – This is a key network control option to control supply to all hot water cylinders on the network. This can manage up to 10% of network load at peak demand times approximately 3MW. Typically supply is only controlled to minimise transmission costs

during the winter times. Also used for other emergency load management purposes.

- b. Night Rate - This is an option for consumers that can utilise electricity in off peak times between 11:00 pm and 7:00am, typically used for larger hot water cylinders and night storage heaters.

For the average Group 2 customer, fixed charges recover approximately 49% of total network costs. All residential and business consumers are eligible from 15kVA up to 150kVA. It is designed so that the larger the fuse at the network connection point then the higher the fixed charges. The variable charges remain unchanged.

This Group has a tariff design to encourage consumers to manage their electricity use by providing an incentive to lower fused capacity. There is one current limitation with this design due to the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004. The Regulation ensures that for every pricing option a residential consumer can be eligible for, there must be a pricing option they can shift to that meets the requirements of the regulations eg; fixed daily charge of no greater than 15 cents per day. To meet the Regulation Nelson Electricity would require a significant increase in line pricing options by 40 (one set of four for each of the 10 potential fuse sizes). To comply with the requirements and remove the potential complexity the residential consumers in Group 2 currently have their fused capacity set at 15kVA while non-residential have capacity based on actual fuse size. Nelson Electricity is keen to find ways to limit those eligible to shift to the low fixed charge option.

- **Load Groups 3 – Time of Use Consumers**

These charges are designed for the larger installations on the network. These sites have Time of Use metering installed. NEL can set network charges based on the individual sites configuration and usage pattern more 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 charge for sites that have a pf < 0.95.

The overall proportion of fixed versus variable charges for Time of Use consumers varies greatly due to the differing types of consumers. This pricing methodology attempts to ensure every Time of Use consumer pays its fair share of line charges and is not subsidised by other Time of Use consumers. The average consumer will have approximately 76% charges as fixed charges.

- **Load Group 4 – Large Time of Use Site**

The line charges for this group are split into two areas fixed and power factor charge if $pf < 0.95$.

There is no variable component to this group. A total annual charge is assessed based on the infrastructure on site and also a share of the upstream network (including transmission) and divided into the 12 months.

6.6 Chargeable Capacity

Fuse Rating Table

No. of Phases	Fuse size (Amps)	kVA Rating
3	30	15
2	40	15
3	40	28
1	60	15
2	60	30
3	60	45
1	80	20
2	80	40
3	80	60
1	100	23
2	100	46
3	100	69
3	125	87
3	150	105
3	160	110
3	200	138

The two phase 40 amp and three phase 30 amp supplies are assessed at the minimum capacity of 15kVA.

7. Future Changes

Nelson Electricity is mindful that in the coming years advanced meters (or smart meters) will be rolled out in the Nelson area. This means there will be the potential for an increased ability for consumers to react to differing pricing signals. Nelson Electricity has undertaken some work with regard to pricing structures and will be looking to implement changes when appropriate. There will be the complication of an increase in the number of line price options available to consumers. Through this process Nelson Electricity will work to minimise any potential additional cross subsidisation or price discrimination that may occur with the two types of metering (half hour and non-half hour) with the consumer potentially being able to opt for one or other. The increased information available to Nelson Electricity will help in the future planning of the network and also the fair allocation of costs for line prices.

The development of a form of service-based pricing to ensure a fair allocation of costs will likely keep a fixed daily charge based on fuse size or capacity but shift away from kWh charges to a methodology that will focus on demand at critical times. This will be compatible with the changing landscape and ensure flexibility for the customer. Demand based pricing will cater to the electricity consumer being able to make rational choices when investing in new technologies. Nelson Electricity is also working with other networks to ensure whatever methodology is introduced that it is along similar lines as other networks to minimise issues with retailers being able to manage and pass on to their customers.

In the meantime Nelson Electricity will also be looking to change the fixed charge for all Group 2 consumers and also confine the definition of a residential consumer eligible for the Group 1 Low User Option to residential consumers with a fuse size no greater than 15kVA. The existing fixed price will be based on actual fuse size greater than or equal to 15kVA. Currently all residential consumers have fuse size assessed at 15kVA (for line charge purposes). Making this change removes the cross subsidisation or price discrimination of larger capacity residential consumers with the smaller capacity consumers. It will ensure larger capacity connections contribute a higher level of line charges and also encourage them to modify their behavior and reduce their fuse size.

Any changes to the Nelson Electricity pricing structure will be discussed with all retailers as per the current Use of System Agreement well in advance of the change. Nelson Electricity has always welcomed any suggestions and has in the past modified line charge structures to accommodate retailer concern or suggestions. Nelson Electricity will also advise all consumers if there is a fundamental change to their line charge pricing. The potential fixed line charge change for Group 2 consumers will be advertised to those affected and promote their ability to downgrade capacity to as low as 15kVA to minimise their fixed line charges. Any fuse downgrade would be undertaken at no charge to the consumer.

Consumption Trends

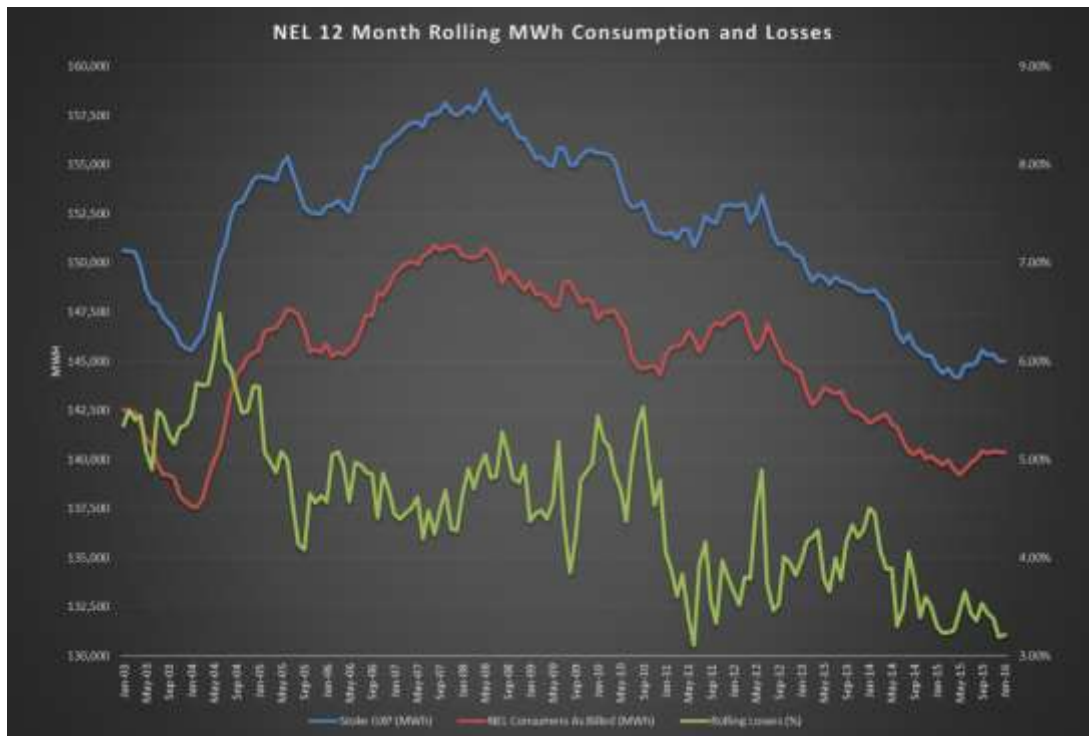
Overarching the future changes is that electricity consumption on the Nelson Electricity network has been declining since 2008. Analysis of all consumer groups gives some indications as to where the changes are taking effect. There is still a slow shift of residential consumers to the low user fixed charge option. Analysis of billing reports have shown that the average residential consumption, on a per consumer basis, has decreased 8.8% since 2008 to approximately 6,750kWh per consumer. Other load groups are also showing a noticeable reduction in consumption. In total it is a reduction of 10GWh or 1.0% per year over eight years.

This reduction in consumption is real as the GXP consumption is reducing and network losses remain stable. Any previous uncertainty about the continued decline in consumption has disappeared. It is clear that consumers across all load groups are using less electricity. There is a revenue impact with reduction of consumption and this is complicated by the DPP regime with allowable revenues being based on growth forecasts which may differ from reality.

Some of this decrease in consumption in the consumer groups has been offset in part by the small increase of consumer numbers over the four year period but this is only approximately 0.5% growth in connections per year. This does not make up for the declining kWh consumption.

Typically peak demand follows consumption trends. While consumption has been decreasing in recent years, peak demand has not dropped by a corresponding amount. Peak demand has remained around the 33MW level. While there is no peak capacity growth, the trends are showing that electricity usage at peak times is still occurring but not necessarily for the same duration.

Given that the costs associated with operating an electricity network are predominantly fixed and not linked to kWh consumption, to maintain a revenue neutral position for Nelson Electricity in principle (excluding any ability to change prices as part of the DPP) it is likely that these costs may be apportioned over less kWh. The impact on total annual line charges paid for the average consumer should be neutral as a result.



The uncertainty on the kWh consumption trends does influence the long term pricing for Nelson Electricity. To continue with the potential ongoing declining kWh consumption will undermine the ability to derive an appropriate return (based on current pricing mix) that meets the requirements for Nelson Electricity. It makes sense to protect the revenue under the current pricing regime by rebalancing over time the fixed versus variable charges in Group 2 by loading more local network charges into the fixed charge. This may be seen as a departure from the Electricity Authority pricing principles but is considered necessary for Nelson Electricity to protect its ongoing revenue. This is also a key reason to look at introducing a demand type pricing regime for the mass market.

In 2014 a new 33kV feeder to Transpower and a new Zone Substation at Haven Road, replacing the old substation on the same site, was commissioned and taking load on the network at a total cost of over \$11 million. The maximum available transmission Zone Substation capacity, with a security of supply level at n-1, was increased from 35MVA up to 48MVA. The new 33kV feeder was primarily to increase feeder capacity to the network from 35MVA to 48MVA and the Zone Substation rated at 48MVA replaced as the equipment was reaching the end of its economic life. Nelson Electricity will have excess capacity for the network for the foreseeable future as a result of these long term investments.

Use of load control has changed since 2014 when the new Zone Substation was completed. Nelson Electricity only controls load using ripple control for minimising transmission peaks to reduce the following year transmission charges. The effect is that load control is not used as frequently as in previous years which can mean that the network peak demand can be as high as previous years. The current pricing takes into consideration these investments.

8. Non-Standard Contracts

Nelson Electricity will consider offering a non-standard contract to consumers that can demonstrate and show benefit for both parties to do so. The key consideration would be if the consumer is large enough, typically over 1,000kVA connected capacity, and can manage peak load for the benefit of minimising any peak demand times. Either transmission or network related.

The management of peak load could be through load shedding or utilisation of distributed generation.

Currently there are two non-standard contracts in place and all other consumers are charged as per the pricing schedule attached to this document. The expected revenue to be received in the upcoming year is \$324k from the two non-standard contracts.

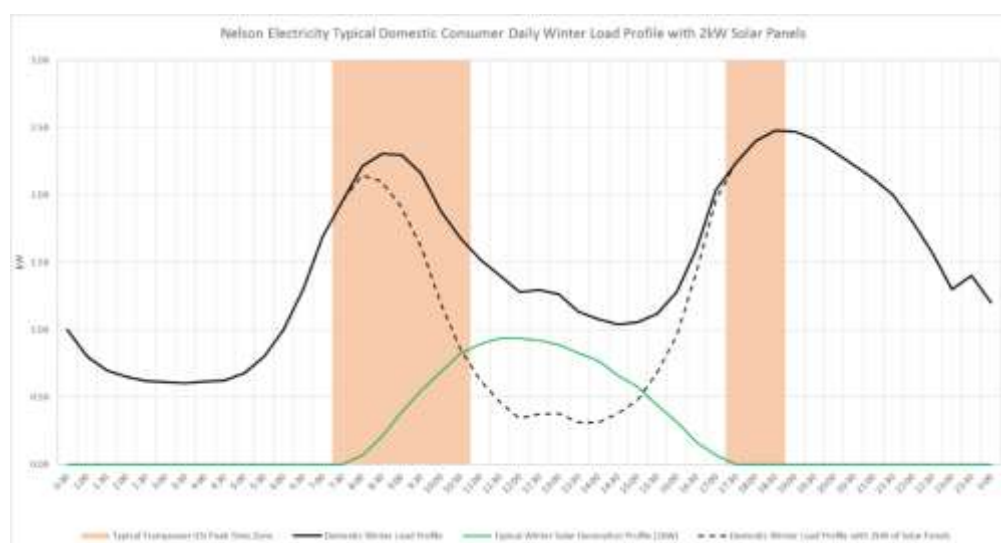
In determining a non-standard contract line charge, Nelson Electricity would determine the potential reduction in costs associated with a consumer connection if they were able to manage their load in a particular way. An example is a consumer being able to manage load in the transmission upper South Island peak demand times with greater accuracy than the current Time of Use pricing allows. This may result in a lowering of transmission charges for Nelson Electricity which the consumer could benefit from.

Nelson Electricity will consider any application from a consumer for a non-standard contract if it can be demonstrated that there is a benefit for both parties to do so, whether it be due to load management, distributed generation or bypass potential.

9. Distributed Generation

Nelson Electricity allows the connection of distributed generation to its network. There are additional requirements for these connections to satisfy Nelson Electricity and show these connections are safe. The requirements are posted on the Nelson Electricity website www.nel.co.nz.

While these connections can inject electricity back into the Nelson Electricity network the timing of this, if through solar, is not at a time when Nelson Electricity would benefit and assist in reducing network costs. Nelson Electricity infrastructure is designed to meet the peak capacity of the network which is on the coldest winter mornings when there is high level of cloud cover. The benefit of any solar distributed generation is negligible.



For this reason, Nelson Electricity does not offer any pricing benefit for distributed generation connections for either local line or transmission charges. Analysis of existing installations is being undertaken to ensure that any exported electricity is within the related voltage limits and of appropriate quality.


Nelson Electricity has been reviewing the costs associated with processing new distributed connections and auditing of the connections as there are additional costs associated with managing these connections to ensure they comply with appropriate standards. A new tariff was created from 1 April 2014 for the exporting of kWh on to the NEL network for Groups 1 and 2. Although the level of the charge is only 0.5 cents per kWh, this is designed to capture some of the safety auditing costs of distributed generation sites. As an example the annual auditing costs is approximately \$15 per year and the 0.5 cents per year will only recover \$10 per year at 2,000kWh per site.

10. Electricity Networks Association – Distribution Pricing Guidelines 2015

The Electricity Networks Association in New Zealand in 2015 completed a Distribution Pricing Guideline for the purpose of the assisting electricity distribution businesses to describe and present their distribution prices in a consistent manner.

This Pricing Methodology as far as practical has been written to be in line with the guidelines to provide increased consistency with other networks. It is expected that over time as the guidelines get developed further, this pricing methodology be improved further.

11. Pricing Schedule

<div>Nelson Electricity Ltd</div> <div>Delivery Price Schedule</div> <div>From 1 April 2016</div>				<div></div> <div>NELSON ELECTRICITY LTD</div>					
Nelson Electricity Ltd is adjusting delivery prices effective 1 April 2016.									
The prices in this schedule are used to charge electricity retailers for the delivery of electricity to the central Nelson city region serviced by our electricity network. Electricity retailers determine how to allocate this cost together with energy, metering and other retail costs when setting the retail prices that appear in your power account.									
Nelson Electricity delivers electricity to connections in the central Nelson city including most of the Port, Port Hills, Vanguard/St Vincent Street, Hospital, Brook, Wood and CBD areas.									
				New Delivery Prices from 1 April 2016			Existing Delivery Prices		
Price Code	Description	Consumer Numbers	Units	Distribution Price	Transmission Price	Delivery Price	Distribution Price	Transmission Price	Delivery Price
Load Group 0									
Builders Temporary (7kVA)									
0-BT	Builders Temp - Fixed	20	cents/day	65.00	0.00	65.00	60.00	0.00	60.00
0-BT	Builders Temp - Anytime		cents/kWh	6.60	3.00	9.60	6.30	2.90	9.20
Unmetered Connection (< 1kW)									
0-UM	Unmetered - Fixed	31	cents/day	6.20	0.00	6.20	6.00	0.00	6.00
0-UM	Maximum Demand		cents/kW/day	62.00	52.00	114.00	59.37	50.63	110.00
Streetlighting									
0-SL	Streetlight	1	\$/day	232.00	64.00	296.00	222.88	62.12	285.00
Load Group 1									
Domestic Low User (15kVA)									
1-Fixed	Fixed	3069	cents/kVA/day	100	0.00	1.00	100	0.00	1.00
1-24hr	Anytime		cents/kWh	6.60	3.00	9.60	6.30	2.90	9.20
1-Water	Controlled (Hot Water)		cents/kWh	4.00	1.70	5.70	3.80	1.70	5.50
1-Night	Night Rate (11pm-7am)		cents/kWh	2.50	1.00	3.50	2.50	1.00	3.50
1-DG	Distributed Generation		cents/kWh	0.50	0.00	0.50	0.50	0.00	0.50
Load Group 2 (from 15kVA to 150kVA)									
Domestic and Business									
2-Fixed	Fixed	6000	cents/kVA/day	6.46	0.00	6.46	6.00	0.00	6.00
2-24hr	Anytime		cents/kWh	2.10	3.00	5.10	2.20	2.90	5.10
2-Water	Controlled (Hot Water)		cents/kWh	1.40	1.70	3.10	1.40	1.70	3.10
2-Night	Night Rate (11pm-7am)		cents/kWh	1.10	1.00	2.10	1.10	1.00	2.10
2-DG	Distributed Generation		cents/kWh	0.50	0.00	0.50	0.50	0.00	0.50
Load Group 3 LARGE BUSINESS (up to 2400kVA)									
TIME OF USE									
	Metered Installation	94	cents/day	125.00	0.00	125.00	120.00	0.00	120.00
	Winter Demand (kVA)		cents/kVA/day	12.80	10.20	23.00	12.30	10.00	22.30
	Energy		cents/kWh	0.20	1.40	1.60	0.20	1.40	1.60
	Capacity Supplied								
T-03	15kVA – 42kVA		\$/day	2.18	0.00	2.18	2.10	0.00	2.10
T-04	43kVA – 69kVA		\$/day	3.59	0.00	3.59	3.45	0.00	3.45
T-05	70kVA – 100kVA		\$/day	5.72	0.00	5.72	5.50	0.00	5.50
T-06	101kVA – 138kVA		\$/day	7.18	0.00	7.18	6.90	0.00	6.90
T-07	139kVA – 218kVA		\$/day	11.34	0.00	11.34	10.90	0.00	10.90
T-08	219kVA – 300kVA		\$/day	15.60	0.00	15.60	15.00	0.00	15.00
T-09	301kVA – 500kVA		\$/day	26.00	0.00	26.00	25.00	0.00	25.00
T-10	501kVA – 750kVA		\$/day	39.00	0.00	39.00	37.50	0.00	37.50
T-11	751kVA – 1000kVA		\$/day	52.00	0.00	52.00	50.00	0.00	50.00
T-12	1001kVA – 1500kVA		\$/day	78.00	0.00	78.00	75.00	0.00	75.00
T-13	1501kVA – 2000kVA		\$/day	104.00	0.00	104.00	100.00	0.00	100.00
T-15	2400kVA		\$/day	124.80	0.00	124.80	120.00	0.00	120.00
	Power Factor <0.95		\$/kVA/mth	6.50	0.00	6.50	6.50	0.00	6.50
All prices exclude GST. All prices are also available from our website www.nel.co.nz									
Pricing Methodology - Full details on how prices are applied are included in our Pricing Methodology which is available from our website.									
Load Group 0 - Unmetered loads that meet Electricity Authority Unmetered Load Guidelines and Builders Temps (Builders Temp > 7kVA use Load Group 2)									
Load Group 1 - Domestic households (principal place of residence only) with connection capacity of 15kVA using less than 8,000kWh per year as required to comply with the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004									
Load Group 2 - Available to all domestic and business connections with capacity from 15kVA to 150kVA.									
Load Group 1 & 2 - All current domestic households have an assessed connection capacity of 15kVA.									
Load Group 1 & 2 - Distributed Generation charge is for electricity exported into the Nelson Electricity network.									
Load Group 3 - Available to any Time of Use connections up to 2400kVA									
Any questions about the delivery prices, please email us at enquiry@nel.co.nz or phone (03)546-0486.									

12. Price / Quantity / Revenue Schedule

Revenue Table using 31 March 2017 Prices and 2016/2017 Quantities

Number of Days:	365									
Tariff or Fee	Number of ICPs at 31/03/2017	kWh at 31/3/2017	kVA at 31/3/2017	Distribution Charges				Notional Distribution Revenue (\$)		Total Revenue (\$) P ₂₀₁₇ Q ₂₀₁₇
				Fixed			Variable (c/kWh)	Fixed	Variable	
				\$/day	c/kVA/day	Other				
Group 0										
Streetlights	1	1,155,738		296.000	0.000	0.000	0.000	108,336	-	108,336
Unmetered Fixed	33			0.062	0.000	0.000	0.000	749	-	749
Unmetered Capacity	0		3.500	0.000	114.000	0.000	0.000	1,460	-	1,460
Builders Temp	20			0.650	0.000	0.000	0.000	4,758	-	4,758
BT-kWh		33,251		0.000	0.000	0.000	9.600	-	3,192	3,192
								115,303 97%	3,192 3%	118,495
Group 1										
Fixed	3350		50,250	0.000	1.000	0.000	0.000	183,915	-	183,915
Anytime		11,357,111		0.000	0.000	0.000	9.600	-	1,090,283	1,090,283
Controlled		5,255,010		0.000	0.000	0.000	5.700	-	299,536	299,536
Nightrate		473,152		0.000	0.000	0.000	3.500	-	16,560	16,560
DG		100,500		0.000	0.000	0.000	0.500	-	503	503
								183,915 12%	1,406,881 88%	1,590,796
Group 2				0.000	0.000	0.000	0.000			
Fixed	5729		118,017	0.000	6.460	0.000	0.000	2,790,356	-	2,790,356
Anytime		50,967,275		0.000	0.000	0.000	5.100	-	2,599,331	2,599,331
Controlled		10,136,127		0.000	0.000	0.000	3.100	-	314,220	314,220
Nightrate		1,157,060		0.000	0.000	0.000	2.100	-	24,298	24,298
DG		180,000		0.000	0.000	0.000	0.500	-	900	900
								2,790,356 49%	2,938,749 51%	5,729,105
Group 3 - Time of Use				0.000	0.000	0.000	0.000			
Metered Installation Charge	93			1.250	0.000	0.000	0.000	42,548	-	42,548
Energy		33,937,308		0.000	0.000	0.000	1.600	-	542,997	542,997
Winter Demand			10,635	0.000	23.000	0.000	0.000	895,254	-	895,254
Capacity Supply Group 3	3			2.180	0.000	0.000	0.000	2,394	-	2,394
Capacity Supply Group 4	1			3.590	0.000	0.000	0.000	1,314	-	1,314
Capacity Supply Group 5	10			5.720	0.000	0.000	0.000	20,935	-	20,935
Capacity Supply Group 6	9			7.176	0.000	0.000	0.000	23,638	-	23,638
Capacity Supply Group 7	32			11.336	0.000	0.000	0.000	132,767	-	132,767
Capacity Supply Group 8	12			15.600	0.000	0.000	0.000	68,515	-	68,515
Capacity Supply Group 9	13			26.000	0.000	0.000	0.000	123,708	-	123,708
Capacity Supply Group 10	7			39.000	0.000	0.000	0.000	99,918	-	99,918
Capacity Supply Group 11	3			52.000	0.000	0.000	0.000	57,096	-	57,096
Capacity Supply Group 12	0			78.000	0.000	0.000	0.000	-	-	-
Capacity Supply Group 13	0			104.000	0.000	0.000	0.000	-	-	-
Capacity Supply Group 15	0			124.800	0.000	0.000	0.000	-	-	-
Power Factor			659	0.000	0.000	80.340	0.000	52,944	-	52,944
DG				0.000	0.000	0.000	0.500			
Group 3 - Non-Standard				0.000	0.000	0.000	0.000			
Energy		9,225,445		0.000	0.000	0.000	0.216	-	19,927	19,927
Installation	2			1.246	0.000	0.000	0.000	912	-	912
Winter Demand			1,741	0.000	12.810	0.000	0.000	81,626	-	81,626
Capacity Supplied			3,900	0.000	5.200	0.000	0.000	74,225	-	74,225
Power Factor			39	0.000	0.000	80.340	0.000	3,133	-	3,133
Transpower Cold Storage				0.000	0.000	28,248.000	0.000	28,248	-	28,248
Transpower NMDHB				0.000	0.000	115,695.000	0.000	115,695	-	115,695
DG				0.000	0.000	0.000	0.500	-	-	-
								1,824,870 76%	562,924 24%	2,387,794
Group 4				0.000	0.000	0.000	0.000			
Fixed	1	13,555,223		0.000	0.000	466,839.978	0.000	466,840	-	466,840
Power Factor			-	0.000	0.000	158.340	0.000	-	-	-
				0.000	0.000	0.000	0.000	466,840 100%	- 0%	466,840
Σ P ₂₀₁₇ Q ₂₀₁₇	9226	137,533,200						5,381,284 52%	4,911,746 48%	10,293,031