

### Annual Price Review Electricity distribution network

From 1 April 2016

Pursuant to: The Electricity Distribution Information Disclosure Determination 2012

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### 1. PURPOSE OF THIS DOCUMENT

Vector has published this document to help consumers understand how we have set electricity distribution prices. The document explains the reasons for changes in Vector's electricity prices from 1 April 2016, provides an updated schedule of prices and includes a comparison of the prices applying prior to, and after, 1 April 2016.

Parts of this document also meet the Electricity Distribution information Disclosure Determination 2012 (consolidated 2015) requirements for Vector to publicly disclose prices.

### 2. ABOUT VECTOR

Vector is focused on meeting the energy needs of more than 700,000 customers across the country. We keep the lights on, the gas flowing and provide many other essential services crucial to New Zealand's economic success.

Vector's electricity distribution network supplies more than 540,000 houses and businesses in the greater Auckland region. Our network extends from just north of Wellsford to Papakura in the south, covering the Auckland Central region, Waiheke Island, North Shore, Waitakere, Rodney, Manukau and parts of the Papakura region. Part of our network (the Northern Network) was acquired from UnitedNetworks Limited in 2002. The remaining part of our network has historically been owned by Vector since the reforms to the electricity industry in the 1990's. Figure 2 shows a map of Vector's Auckland and Northern electricity distribution networks.



### Figure 2: Auckland and Northern electricity distribution networks

### 3. HOW WE SET PRICES

Vector owns and operates the electricity distribution network in the greater Auckland region and delivers electricity to more than 540,000 homes and businesses. We recover the cost of owning and operating the network through a combination of standard (published) and nonstandard prices for electricity lines services, and capital contributions for new connections.

A key feature of an electricity distribution system is that it is a network of interconnected assets. Many consumers on the network share assets and it is difficult to identify precisely who benefits from which assets. While this means that the allocation of costs between consumers or groups of consumers can be made in many different ways, it also means that the cost of providing the network is shared widely and therefore the cost of network services is generally low for each consumer.

The way the network of assets has been built up over time is something that Vector now has limited ability to change, however Vector is able to influence present and future investment decisions in the electricity distribution network.

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Objective	Rationale
Cost recovery	Ensure Vector recovers its costs, including the allowed return on and of investment. A key aspect of cost recovery is the predominantly sunk and fixed nature of the costs.
Meet regulatory obligations	Comply with the Price-Quality Path Determination, Low User Regulations and the Pricing Principles.
Clear pricing structure	Pricing should be simple and easily understood by consumers therefore making it attractive to stay connected and for new consumers to connect.
Coherent overall price structure	There should not be incentives for consumers to switch consumer groups or price categories to take advantage of anomalies in the pricing structure.
Cost reflective pricing	Ensure that all consumers face prices that reflect the cost of providing them with service; that prices to all new consumers at least cover the incremental costs of connecting them to the network (including costs associated with upstream reinforcement); and that charges to recover overhead costs and the cost of the shared network are allocated between consumers in a manner that is least likely to distort decisions.
Consumer-centric outcomes	Take account of the value of the service to consumers; provide pricing stability; and manage price shock effectively in the transition to new price structures.
Incentivise efficient usage	Encourage/discourage more utilisation of electricity assets to ensure that sunk investments are not inefficiently by-passed and new investments are efficient.

Vector has developed a high-level framework to guide the development of its Pricing Methodology. The overarching objectives for the Pricing Methodology include:

Vector uses a cost of supply model (COSM) to determine costs and allocate costs to consumer groups allowing for a stable allocation of costs over time. Vector has developed consumer groups based on their utilisation of the network and the nature of the network service they receive. Due to the physical nature of distribution networks and the information that is available on consumer demand characteristics, these consumer groups are defined at a relatively high level. Vector allocates consumers to consumer groups based on their point of connection to the network, their capacity, metering type and end usage. To recognise the key differences and proportional use of our network assets, we separate customers into the following consumer groups for cost allocation<sup>1</sup>:

- High voltage (HV) consumers have a Primary connection type and are supplied directly from Vector's high voltage or sub-transmission (6.6kV or higher) network;
- Transformer (TX) consumers have a Secondary connection type and are supplied from a transformer(s) owned by Vector and which supplies the consumer's low voltage (400V three phase or 230V single and two phase) network;
- Low voltage (LV) consumers have a Tertiary connection type and are supplied from Vector's low voltage (400V three phase or 230V single and two phase) network with a connection capacity of greater than 69 kVA;
- Unmetered consumers have a Tertiary connection type and are supplied from Vector's low voltage network and have capacity less than 1 kVA; and
- Mass market consumers have a Tertiary connection type and are supplied from Vector's low voltage network with a connection capacity less than 69 kVA.
- Non-standard customers.

Mass market consumers are further split into Residential and General consumers for the application of the Low User Fixed Charge Regulations.

To determine the amount of regulated revenue to recover from each customer group, Vector considers each group's use of Vector's electricity distribution network assets. Further information on our approach is available in Vector's annual Pricing Methodology Disclosure<sup>2</sup>.

<sup>&</sup>lt;sup>1</sup> Full criteria for allocation of customers to price categories can be found in the pricing schedules further below.

<sup>&</sup>lt;sup>2</sup> Available at http://vector.co.nz/disclosures/electricity/pricing-methodology

### 4. REASONS FOR PRICE CHANGES

Vector has set prices from 1 April 2016 to ensure that the revenue from Vector's electricity distribution prices meet the requirements of the regulations from the Commerce Commission. These regulations set the weighted average prices that Vector is able to charge (in aggregate) each year and also allows Vector to recover a number of costs outside of our control (pass-through and recoverable costs) which include Auckland Council rates, transmission charges from Transpower for the national grid and levies payable by Vector to the Electricity Authority, the Electricity and Gas Complaints Commission and the Commerce Commission.

Vector's delivery prices consist of a 'distribution' price component for the recovery of distribution related costs and a 'pass-through' price component for the recovery of pass-through and recoverable costs. From 1 April 2016, Vector has increased the average distribution component of prices by 0.8%. Revenue from pass-through prices is forecast to decrease by 0.5%. This results in an overall weighted average price increase in lines charges of 0.3%.

Vector has applied this overall price change in conjunction with adjustments between consumer groups to ensure the revenue from each consumer group reflects the costs incurred by that group. We have limited the extent of these price increases so that consumers generally face lines charge increases of no more than 10%. Changes to individual prices may vary from the weighted average price increase. This follows a number of changes in prices to:

- a. Adhere to regulatory pricing principles;
- b. Align prices with COSM outcomes;
- c. Move towards aligning commercial and industrial Auckland and Northern prices; and
- d. Adhere with Low Fixed Charge Regulations.

Our electricity distribution prices are set out in the following price schedules. The schedules include prices for each of our distribution networks including the Auckland and Northern electricity networks, and for each consumer group, including Residential, General, Low voltage, Transformer and High voltage. Further information on our electricity pricing methodology can be found at:

http://vector.co.nz/disclosures/electricity/pricing-methodology.

### **Electricity prices effective from 1 April 2016**

### For Vector's Northern electricity network (North Shore, Waitakere and Rodney)

Pricing Disclosure pursuant to Electricity Distribution Information Disclosure Determination 2012

RESIDENTIAL									
Price category	Number of	Code	Units		Previous prices		Prices from 1 April 2016		
The category	consumers	couc	Onics	Distribution price	Pass-through price	Delivery price	Distribution price	Pass-through price	Delivery price
		FIXD	\$/day	0.1500	-	0.1500	0.1500	-	0.1500
WRUL uncontrolled low fixed price	8,100	24UC	\$/kWh	0.0630	0.0380	0.1010	0.0638	0.0380	0.1018
		INJT	\$/kWh	-	-	-	-	-	-
		FIXD	\$/day	0.1500	-	0.1500	0.1500	-	0.1500
WRCL controlled low fixed price (CLOSED)	87,200	AICO	\$/kWh	0.0630	0.0300	0.0930	0.0638	0.0300	0.0938
		INJT	\$/kWh	-	-	-	-	-	-
		FIXD	\$/day				0.1500	-	0.1500
WRGL gas low fixed price	8,100	24UC	\$/kWh	N/A, WRGL is a n	ew price category from	n 1 April 2016	0.0638	0.0300	0.0938
		INJT	\$/kWh				-	-	-
		FIXD	\$/day	0.1500	-	0.1500	0.1500	-	0.1500
WRHL time of use low fixed price	4	OFPK	\$/kWh	0.0630	-	0.0630	0.0638	-	0.0638
	1	PEAK	\$/kWh	0.0630	0.1253	0.1883	0.0638	0.1000	0.1638
		INJT	\$/kWh	-	-	-	-	-	-
		FIXD	\$/day	0.9800	-	0.9800	0.9900	-	0.9900
WRUS uncontrolled standard price	8,400	24UC	\$/kWh	0.0252	0.0380	0.0632	0.0255	0.0380	0.0635
		INJT	\$/kWh	-	-	-	-	-	-
		FIXD	\$/day	0.9800	-	0.9800	0.9900	-	0.9900
WRCS controlled standard price (CLOSED)	76,300	AICO	\$/kWh	0.0252	0.0300	0.0552	0.0255	0.0300	0.0555
(CLOSED)		INJT	\$/kWh	-	-	-	-	-	-
		FIXD	\$/day				0.9900	-	0.9900
WRGS gas standard price	8,400	24UC	\$/kWh	N/A, WRGS is a n	ew price category from	n 1 April 2016	0.0255	0.0300	0.0555
		INJT	\$/kWh				-	-	-
		FIXD	\$/day	0.9800	-	0.9800	0.9900	-	0.9900
		OFPK	\$/kWh	0.0252	-	0.0252	0.0255	-	0.0255
WRHS time of use standard price	3	PEAK	\$/kWh	0.0252	0.1253	0.1505	0.0255	0.1000	0.1255
		INJT	\$/kWh	-	-	-	-	-	-

GENERAL									
	Number of	Carda	Units		Previous prices		Pri	ices from 1 April 2016	
Price category	consumers	Code	Units	Distribution price	Pass-through price	Delivery price	<b>Distribution price</b>	Pass-through price	Delivery price
	22,100	FIXD	\$/day	0.9800	-	0.9800	0.9900	-	0.9900
WBSN general <69kVA		24UC	\$/kWh	0.0252	0.0380	0.0632	0.0255	0.0380	0.0635
		INJT	\$/kWh	-	-	-	-	-	-
	20	FIXD	\$/day	0.9800	-	0.9800	0.9900	-	0.9900
WBSH general <69kVA		OFPK	\$/kWh	0.0252	-	0.0252	0.0255	-	0.0255
half hourly metering	20	PEAK	\$/kWh	0.0252	0.1253	0.1505	0.0255	0.1000	0.1255
		INJT	\$/kWh	-	-	-	-	-	-
WBSII gonoral <69kVA upmotorod	430	FIXD	\$/day	0.1400	-	0.1400	0.1500	-	0.1500
WBSU general <69kVA unmetered		24UC	\$/kWh	0.0372	0.0380	0.0752	0.0320	0.0380	0.0700

#### LOW VOLTAGE

D. in a start start	Number of	<b>C</b>			Previous prices		Prices from 1 April 2016		
Price category	consumers	Code	Units	Distribution price	Pass-through price	Delivery price	Distribution price	Pass-through price	Delivery price
	800	FIXD	\$/day	5.5000	-	5.5000	5.5000	-	5.5000
WLVN low voltage >69kVA non half hourly metering		24UC	\$/kWh	0.0237	0.0204	0.0441	0.0237	0.0204	0.0441
		CAPY	\$/kVA/day	0.0266	-	0.0266	0.0298	-	0.0298
non nan nourry metering		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917
		INJT	\$/kWh	-	-	-	-	-	-
		FIXD	\$/day	10.3800	-	10.3800	10.3800	-	10.3800
		24UC	\$/kWh	0.0057	-	0.0057	0.0057	-	0.0057
WLVH low voltage >69kVA half hourly metering	210	CAPY	\$/kVA/day	0.0266	-	0.0266	0.0298	-	0.0298
		DAMD	\$/kVA/day	0.0339	0.2480	0.2819	0.0339	0.2480	0.2819
		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917
		INJT	\$/kWh	-	-	-	-	-	-

TRANSFORMER									
Price category	Number of	Code	Units		Previous prices		Prices from 1 April 2016		
Price category	consumers	coue	Offics	Distribution price	Pass-through price	Delivery price	Distribution price	Pass-through price	Delivery price
	140	FIXD	\$/day	4.9500	-	4.9500	4.9500	-	4.9500
		24UC	\$/kWh	0.0193	0.0204	0.0397	0.0193	0.0204	0.0397
WTXN transformer >69kVA non half hourly metering		CAPY	\$/kVA/day	0.0261	-	0.0261	0.0292	-	0.0292
non nan nourly metering		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917
		INJT	\$/kWh	-	-	-	-	-	-
		FIXD	\$/day	9.3400	-	9.3400	9.3400	-	9.3400
		24UC	\$/kWh	0.0056	-	0.0056	0.0056	-	0.0056
WTXH transformer >69kVA	250	CAPY	\$/kVA/day	0.0261	-	0.0261	0.0292	-	0.0292
half hourly metering	250	DAMD	\$/kVA/day	0.0283	0.2480	0.2763	0.0283	0.2480	0.2763
		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917
		INJT	\$/kWh	-	-	-	-	-	-

HIGH VOLTAGE										
Price category	Number of	Code	Units		Previous prices			Prices from 1 April 2016		
Price category	consumers	Coue	Units	Distribution price	Pass-through price	Delivery price	Distribution price	Pass-through price	Delivery price	
		FIXD	\$/day	4.8000	-	4.8000	4.8000	-	4.8000	
	0	24UC	\$/kWh	0.0181	0.0204	0.0385	0.0181	0.0204	0.0385	
WHVN high voltage >69kVA non half hourly metering		CAPY	\$/kVA/day	0.0253	-	0.0253	0.0283	-	0.0283	
		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917	
		INJT	\$/kWh	-	-	-	-	-	-	
		FIXD	\$/day	9.0600	-	9.0600	9.0600	-	9.0600	
		24UC	\$/kWh	0.0054	-	0.0054	0.0054	-	0.0054	
		CAPY	\$/kVA/day	0.0253	-	0.0253	0.0283	-	0.0283	
WHVH high voltage >69kVA half hourly metering	20	DAMD	\$/kVA/day	0.0200	0.2480	0.2680	0.0200	0.2480	0.2680	
		DEXA	\$/kVA/day	0.6700	-	0.6700	0.6226	-	0.6226	
		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917	
		INJT	\$/kWh	-	-	-	-	-	-	

The apportionment of the Delivery Price into Distribution Price and Pass-through Price is indicative and provided for consumer information only.

All prices are exclusive of GST.

Transmission charges are recovered through the pass-through component of prices only. The amount of each pass-through price attributable to transmission charges is 95%.

These price tables are a summary of Vector's Northern electricity network prices. For a full description of prices and how they are applied, see <a href="http://vector.co.nz/electricity/residential/pricing">http://vector.co.nz/electricity/residential/pricing</a> and <a href="http://wector.co.nz/electricity/residential/pricing">www.vector.co.nz/electricity/residential/pricing</a> and <a href="http://wector.co.nz/electricity/residential/pricing">www.vector.co.nz/electricity/residential/pricing</a> and <a href="http://wector.co.nz/electricity/residential/pricing">www.vector.co.nz/electricity/residential/pricing</a> and <a href="http://wector.co.nz/electricity/business-pricing">www.vector.co.nz/electricity/residential/pricing</a> and <a href="http://wector.co.nz/electricity/business-pricing">www.vector.co.nz/electricity/business-pricing</a>.

### **Electricity prices effective from 1 April 2016**

For Vector's Auckland electricity network (Auckland Central, Waiheke Island, Manukau and parts of Papakura)

Pricing Disclosure pursuant to Electricity Distribution Information Disclosure Determination 2012

RESIDENTIAL										
	Number of	Code	Units		Previous prices		Prices from 1 April 2016			
Price category	consumers	Code	Units	Distribution price	Pass-through price	Delivery price	Distribution price	Pass-through price	Delivery price	
		FIXD	\$/day	0.1500	-	0.1500	0.1500	-	0.1500	
ARUL uncontrolled low fixed price	20,100	24UC	\$/kWh	0.0630	0.0380	0.1010	0.0638	0.0380	0.1018	
		INJT	\$/kWh	-	-	-	-	-	-	
		FIXD	\$/day	0.1500	-	0.1500	0.1500	-	0.1500	
ARCL controlled low fixed price	123,900	AICO	\$/kWh	0.0630	0.0300	0.0930	0.0638	0.0300	0.0938	
		INJT	\$/kWh	-	-	-	-	-	-	
		FIXD	\$/day				0.1500	-	0.1500	
ARGL gas low fixed price	20,100	24UC	\$/kWh	N/A, ARGL is a n	ew price category from	1 April 2016	0.0638	0.0300	0.0938	
		INJT	\$/kWh							
	2	FIXD	\$/day	0.1500	-	0.1500	0.1500	-	0.1500	
ARHL time of use low fixed price		OFPK	\$/kWh	0.0630	-	0.0630	0.0638	-	0.0638	
		PEAK	\$/kWh	0.0630	0.1253	0.1883	0.0638	0.1000	0.1638	
		INJT	\$/kWh	-	-	-	-	-	-	
		FIXD	\$/day	0.9800	-	0.9800	0.9900	-	0.9900	
ARUS uncontrolled standard price	12,300	24UC	\$/kWh	0.0252	0.0380	0.0632	0.0255	0.0380	0.0635	
		INJT	\$/kWh	-	-	-	-	-	-	
		FIXD	\$/day	0.9800	-	0.9800	0.9900	-	0.9900	
ARCS controlled standard price	98,300	AICO	\$/kWh	0.0252	0.0300	0.0552	0.0255	0.0300	0.0555	
		INJT	\$/kWh	-	-	-	-	-	-	
		FIXD	\$/day				0.9900	-	0.9900	
ARGS gas standard price	12,300	24UC	\$/kWh	N/A, ARGS is a n	ew price category from	1 April 2016	0.0255	0.0300	0.0555	
		INJT	\$/kWh				-	-	-	
		FIXD	\$/day	0.9800	-	0.9800	0.9900	-	0.9900	
A DUC time of the standard size	1	OFPK	\$/kWh	0.0252	-	0.0252	0.0255	-	0.0255	
ARHS time of use standard price	1 P	PEAK	\$/kWh	0.0252	0.1253	0.1505	0.0255	0.1000	0.1255	
		INJT	\$/kWh	-	-	-	-	-	-	

GENERAL										
Price category	Number of	Code	Units		Previous prices		Prices from 1 April 2016			
Price category	consumers	Code	Units	Distribution price	Pass-through price	Delivery price	Distribution price	Pass-through price	Delivery price	
		FIXD	\$/day	0.9800	-	0.9800	0.9900	-	0.9900	
ABSN general <69kVA	36,300	24UC	\$/kWh	0.0252	0.0380	0.0632	0.0255	0.0380	0.0635	
		INJT	\$/kWh	-	-	-	-	-	-	
	40	FIXD	\$/day	0.9800	-	0.9800	0.9900	-	0.9900	
ABSH general <69kVA		OFPK	\$/kWh	0.0252	-	0.0252	0.0255	-	0.0255	
half hourly metering	40	PEAK	\$/kWh	0.0252	0.1253	0.1505	0.0255	0.1000	0.1255	
		INJT	\$/kWh	-	-	-	-	-	-	
ABSU <69kVA unmetered	1,900	FIXD	\$/day	0.1400	-	0.1400	0.1500	-	0.1500	
ABSO <69KVA unmetered		24UC	\$/kWh	0.0372	0.0380	0.0752	0.0320	0.0380	0.0700	

LOW VOLTAGE										
Price category	Number of	Code	Units		Previous prices			Prices from 1 April 2016		
Price category	consumers	Coue	Onits	Distribution price	Pass-through price	Delivery price	Distribution price	Pass-through price	Delivery price	
		FIXD	\$/day	1.5600	-	1.5600	1.5800	-	1.5800	
ALVN low voltage >69kVA non half hourly metering	2,100	24UC	\$/kWh	0.0424	0.0204	0.0628	0.0429	0.0204	0.0633	
		CAPY	\$/kVA/day	0.0365	-	0.0365	0.0370	-	0.0370	
non nun nourry metering		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917	
		INJT	\$/kWh	-	-	-	-	-	-	
		24UC	\$/kWh	0.0164	-	0.0164	0.0166	-	0.0166	
	1,500	CAPY	\$/kVA/day	0.0365	-	0.0365	0.0370	-	0.0370	
ALVT low voltage >69kVA half hourly metering		DAMD	\$/kVA/day	0.0583	0.2480	0.3063	0.0590	0.2480	0.3070	
han houry including		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917	
		INJT	\$/kWh	-	-	-	-	-	-	

TRANSFORMER									
Drice estagen	Number of	Code	Previous prices				Prices from 1 April 2016		
Price category	consumers	Code	Units	Distribution price	Pass-through price	Delivery price	Distribution price	Pass-through price	Delivery price
		FIXD	\$/day	1.5100	-	1.5100	1.5300	-	1.5300
	160	24UC	\$/kWh	0.0411	0.0204	0.0615	0.0416	0.0204	0.0620
ATXN transformer >69kVA non half hourly metering		CAPY	\$/kVA/day	0.0358	-	0.0358	0.0362	-	0.0362
non nan nourly metering		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917
		INJT	\$/kWh	-	-	-	-	-	-
		24UC	\$/kWh	0.0161	-	0.0161	0.0163	-	0.0163
		CAPY	\$/kVA/day	0.0358	-	0.0358	0.0362	-	0.0362
ATXT transformer >69kVA half hourly metering	870	DAMD	\$/kVA/day	0.0522	0.2480	0.3002	0.0528	0.2480	0.3008
		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917
		INJT	\$/kWh	-	-	-	-	-	-

HIGH VOLTAGE										
Price category	Number of	Code	Units		Previous prices		Pric	Prices from 1 April 2016		
Price category	consumers	coue	Units	Distribution price	Pass-through price	Delivery price	Distribution price	Pass-through price	Delivery price	
		FIXD	\$/day	1.4600	-	1.4600	1.4800	-	1.4800	
		24UC	\$/kWh	0.0393	0.0204	0.0597	0.0398	0.0204	0.0602	
AHVN high voltage >69kVA non half hourly metering	9	CAPY	\$/kVA/day	0.0347	-	0.0347	0.0351	-	0.0351	
non nan nourly metering		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917	
		INJT	\$/kWh	-	-	-	-	-	-	
		24UC	\$/kWh	0.0156	-	0.0156	0.0158	-	0.0158	
		CAPY	\$/kVA/day	0.0347	-	0.0347	0.0351	-	0.0351	
AHVT high voltage >69kVA	130	DAMD	\$/kVA/day	0.0432	0.2480	0.2912	0.0437	0.2480	0.2917	
half hourly metering	130	DEXA	\$/kVA/day	0.7280	-	0.7280	0.7722	-	0.7722	
		PWRF	\$/kVAr/day	0.2917	-	0.2917	0.2917	-	0.2917	
		INJT	\$/kWh	-	-	-	-	-	-	

The apportionment of the Delivery Price into Distribution Price and Pass-through Price is indicative and provided for consumer information only.

All prices are exclusive of GST.

Transmission charges are recovered through the pass-through component of prices only. The amount of each pass-through price attributable to transmission charges is 95%.

These price tables are a summary of Vector's Northern electricity network prices. For a full description of prices and how they are applied, see http://vector.co.nz/electricity/residential/pricing and

www.vector.co.nz/electricity/business-pricing.

## Northern electricity distribution network



### **Price schedule for residential consumers**

### Applicable from 1 April 2016

This schedule describes Vector's standard prices for providing electricity distribution services in respect of residential consumers on the Northern network. Vector offers eight price categories for residential consumers on the Northern network depending on the consumer's annual usage, metering type, whether the consumer has gas installed and whether the consumer makes some of their load available to Vector for load management.

### **Residential consumer definitions**

A residential consumer is where the consumer's metered point of connection is for a home, not normally used for any business activity.

The network that consumers are supplied from is determined by Vector from time to time based on the physical location of the point of connection of the consumer's electrical installation. The approximate area covered by the Northern electricity distribution network is shown in green on the following map.



## Distribution prices and pass-through and recoverable cost prices

In the following pricing tables the "Delivery Price" column represents the Tariff Rate for Distribution Services and is the sum of the following components:

• "Dist. Price" is an indicative value for the distribution component of prices. These relate to

Vector's costs of owning and operating our network; and

 "Pass. Price" is an indicative value for the passthrough and recoverable component of prices which relates to the costs from third parties including but not limited to: Council rates, Electricity Authority, Commerce Act and Electricity and Gas Complaints Commissioner levies, and transmission charges from Transpower.

## Residential uncontrolled low fixed price category WRUL

The WRUL price category is available to all residential consumers at their principal place of residence, but is typically suitable for consumers who use less than 8,000kWh per annum.

Price category WRUL									
Description     Code     Units     Dist.     Pass.     Deliver       Price     Price     Price     Price     Price     Price									
Fixed	WRUL-FIXD	\$/day	0.1500	-	0.1500				
Volume, uncontrolled	WRUL-24UC	\$/kWh	0.0638	0.0380	0.1018				
Volume, injection	WRUL-INJT	\$/kWh	-	-	-				

- The fixed price (WRUL-FIXD) applies to the number of days each WRUL residential consumer's point of connection is energised.
- The volume uncontrolled price (WRUL-24UC) applies to all electricity distributed to each WRUL residential consumer.
- The volume injection price (WRUL-INJT) applies to all electricity injected into the network by each WRUL residential consumer.

## Residential controlled low fixed price category WRCL

The WRCL price category is closed to all consumers, except those specified by Vector as qualifying for this price category. For consumers in this price category with load connected to Vector's load control system, Vector may control this load at any time for a maximum of 5 hours in any 24 hour period.

Price category WRCL										
Description	Code	Units	Dist.	Pass.	Delivery					
	Code	UTILS	Price	Price	Price					
Fixed	WRCL-FIXD	\$/day	0.1500	-	0.1500					
Volume, controlled	WRCL-AICO	\$/kWh	0.0638	0.0300	0.0938					
Volume, injection	WRCL-INJT	\$/kWh	-	-	-					

- The fixed price (WRCL-FIXD) applies to the number of days each WRCL residential consumer's point of connection is energised.
- The volume controlled price (WRCL-AICO) applies to all electricity distributed to each WRCL residential consumer.
- The volume injection price (WRCL-INJT) applies to all electricity injected into the network by each WRCL residential consumer.

### Residential gas low fixed price category WRGL

The WRGL price category is available to residential consumers at their principal place of residence who are also connected to Vector's Auckland gas distribution network and is typically suitable for consumers who use less than 8,000kWh per annum.

Price category WRHL									
Description	Code	Units	Dist.	Pass.	Delivery				
Description	COUE	UTIILS	Price	Price	Price				
Fixed	WRHL-FIXD	\$/day	0.1500	-	0.1500				
Volume, off-peak	WRHL-OFPK	\$/kWh	0.0638	-	0.0638				
Volume, peak	WRHL-PEAK	\$/kWh	0.0638	0.1000	0.1638				
Volume, injection	WRHL-INJT	\$/kWh	-	-	-				

- The fixed price (WRHL-FIXD) applies to the number of days each WRHL residential consumer's point of connection is energised.
- The volume off-peak price (WRHL-OFPK) applies to electricity distributed to each WRHL residential consumer during off-peak periods.
- The volume peak price (WRHL-PEAK) applies to electricity distributed to each WRHL residential consumer during peak periods.
- The volume injection price (WRHL-INJT) applies to all electricity injected into the network by each WRHL residential consumer.

## Residential uncontrolled standard price category WRUS

The WRUS price category is available to all residential consumers, but is typically suitable for consumers who use more than 8,000kWh per annum.

Drico cotogon (WPC)							Price ca	ategory	WRUS		
Price category WRGL						Dist.	Pass.	Delivery			
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price	Description	Code	Units	Price	Price	Price
			THEE	THEE	THEE	Fixed	WRUS-FIXD	\$/day	0.9900	-	0.9900
Fixed	WRGL-FIXD	\$/day	0.1500	-	0.1500	Volume, uncontrolled	WRUS-24UC	\$/kWh	0.0255	0.0380	0.0635
Volume, uncontrolled	WRGL-24UC	\$/kWh	0.0638	0.0300	0.0000			\$/kWh		_	-
Volume, injection	WRGL-INJT	\$/kWh	-	-	-	volarno, injootion		<i><b>φ</b></i> ,			

- The fixed price (WRGL-FIXD) applies to the number of days each WRGL residential consumer's point of connection is energised.
- The volume controlled price (WRGL-24UC) applies to all electricity distributed to each WRGL residential consumer.
- The volume injection price (WRGL-INJT) applies to all electricity injected into the network by each WRGL residential consumer.

## Residential half hourly low fixed price category WRHL

The WRHL price category is available to residential consumers at their principal place of residence who are on a qualifying retail price option with metering capable of recording half hourly data. This price category is typically suitable for consumers who use less than 8,000kWh per annum.

- The fixed price (WRUS-FIXD) applies to the number of days each WRUS residential consumer's point of connection is energised.
- The volume uncontrolled price (WRUS-24UC) applies to all electricity distributed to each WRUS residential consumer.
- The volume injection price (WRUS-INJT) applies to all electricity injected into the network by each WRUS residential consumer.

## Residential controlled standard price category WRCS

The WRCS price category is closed to all consumers, except those specified by Vector as qualifying for this price category. For consumers in this price category with load connected to Vector's load control system, Vector may control this load at any time for a maximum of 5 hours in any 24 hour period.

Price category WRCS									
Description     Code     Units     Dist.     Pass.     Delivery       Price     Price     Price     Price     Price									
Fixed	WRCS-FIXD	\$/day	0.9900	-	0.9900				
Volume, controlled	WRCS-AICO	\$/kWh	0.0255	0.0300	0.0555				
Volume, injection	WRCS-INJT	\$/kWh	-	-	-				

- The fixed price (WRCS-FIXD) applies to the number of days each WRCS residential consumer's point of connection is energised.
- The volume controlled price (WRCS-AICO) applies to all electricity distributed to each WRCS residential consumer.
- The volume injection price (WRCS-INJT) applies to all electricity injected into the network by each WRCS residential consumer.

### Residential gas standard price category WRGS

The WRGS price category is available to residential consumers who are also connected to Vector's Auckland gas distribution network and is typically suitable for consumers who use more than 8,000kWh per annum.

Price category WRGS									
Description	Code	Units	Dist.	Pass.	Delivery				
Description	Code	UTILS	Price	Price	Price				
Fixed	WRGS-FIXD	\$/day	0.9900	-	0.9900				
Volume, uncontrolled	WRGS-24UC	\$/kWh	0.0255	0.0300	0.0555				
Volume, injection	WRGS-INJT	\$/kWh	-	-	-				

- The fixed price (WRGS-FIXD) applies to the number of days each WRGS residential consumer's point of connection is energised.
- The volume controlled price (WRGS-24UC) applies to all electricity distributed to each WRGS residential consumer.
- The volume injection price (WRGS-INJT) applies to all electricity injected into the network by each WRGS residential consumer.

## Residential half hourly standard price category WRHS

The WRHS price category is available to residential consumers who are on a qualifying retail price option with metering capable of recording half hourly data. This price category is typically suitable for consumers who use more than 8,000kWh per annum.

	Price category WRHS									
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price					
Fixed	WRHS-FIXD	\$/day	0.9900	-	0.9900					
Volume, off-peak	WRHS-OFPK	\$/kWh	0.0255	-	0.0255					
Volume, peak	WRHS-PEAK	\$/kWh	0.0255	0.1000	0.1255					
Volume, injection	WRHS-INJT	\$/kWh	-	-	-					

- The fixed price (WRHS-FIXD) applies to the number of days each WRHS residential consumer's point of connection is energised.
- The volume off-peak price (WRHS-OFPK) applies to electricity distributed to each WRHS residential consumer during off-peak periods.
- The volume peak price (WRHS-PEAK) applies to electricity distributed to each WRHS residential consumer during peak periods.
- The volume injection price (WRHS-INJT) applies to all electricity injected into the network by each WRHS residential consumer.

## Peak and off-peak periods for half hourly price categories

Peak periods occur on:

 Weekdays (Monday to Friday including public holidays) from 07:00 to 11:00 (time periods 15 to 22) and 17:00 to 21:00 (time periods 35 to 42).
Off pack periods accur and

Off-peak periods occur on:

- Weekdays (Monday to Friday including public holidays) from 11:00 to 17:00 (time periods 23 to 34) and 21:00 to 07:00 (time periods 43 to 14) the following day; and
- Weekends (Saturday and Sunday).

The following chart shows the times on weekdays to which the peak and off-peak volume prices apply for the WRHL and WRHS price categories:



### Qualifying retail price options for half hourly price categories

Vector will determine whether a retail price option qualifies for Vector's half hourly price categories,

following an application by a retailer, based on the extent that Vector's distribution price signals are incorporated into the retail option and the number of consumers affected.

### **Extent of prices**

Vector's prices published in this schedule relate to the cost of owning, operating and maintaining the distribution network as it currently exists but do not include amongst other things, energy charges for the electricity consumers use, metering equipment charges, load control equipment located at the point of connection to the network, the cost of reading meters and the cost of consumer electrical installations or fittings.

In order for Vector to supply any new or changed distribution service, including but not limited to; changes to service standards, distributed generation, the connection to the network of additional points of connection and the modification, increased capacity, relocation or removal of current points of connection, Vector may apply non-standard prices other than those outlined in this schedule, or require a capital contribution on a case by case basis.

Vector's prices do not include ancillary service charges and loss constraint excess payments from the system operator and transmission provider respectively. These costs may be passed through by Vector directly to electricity retailers.

Should Vector forecast a potential price breach under the regulated price path, then Vector may provide a refund or rebate of electricity distribution charges directly to the electricity retailer in order to avoid such a breach.

All prices are exclusive of GST.

### **Provision of billing information**

The consumer's retailer must provide Vector with consumption data for each residential consumer and for each price as described in this schedule.

Where more than one meter at a point of connection is in use, but a single volume price applies, consumption data must be aggregated by the retailer before submitting to Vector.

Where a half hourly meter is fitted, consumption data must be aggregated by the retailer to match the appropriate prices and time periods before submitting the data to Vector.

## Northern electricity distribution network



### Price schedule for general consumers

### Applicable from 1 April 2016

This schedule describes Vector's standard prices for providing electricity distribution services in respect of general consumers on the Northern network. Vector offers three price categories for general consumers on the Northern network depending on the consumer's metering type.

### **General consumer definitions**

A general consumer is where the consumer is not a residential consumer (as defined in Vector's price schedule for residential consumers) and the consumer's point of connection has a capacity less than or equal to 69kVA.

The network that consumers are supplied from is determined by Vector from time to time based on the physical location of the point of connection of the consumer's electrical installation. The approximate area covered by the Northern electricity distribution network is shown in green on the following map.



## Distribution prices and pass-through and recoverable cost prices

In the following pricing tables the "Delivery Price" column represents the Tariff Rate for Distribution Services and is the sum of the following components:

• "Dist. Price" is an indicative value for the distribution component of prices. These relate to

Vector's costs of owning and operating our network; and

• "Pass. Price" is an indicative value for the passthrough and recoverable component of prices which relates to the costs from third parties including but not limited to: Council rates, Electricity Authority, Commerce Act and Electricity and Gas Complaints Commissioner levies, and transmission charges from Transpower.

### **General metered price category WBSN**

The WBSN price category is available to general consumers where the consumer has a metered point of connection.

	Price category WBSN										
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price						
Fixed	WBSN-FIXD	\$/day	0.9900	-	0.9900						
Volume	WBSN-24UC	\$/kWh	0.0255	0.0380	0.0635						
Volume, injection	WBSN-INJT	\$/kWh	-	-	-						

- The fixed price (WBSN-FIXD) applies to the number of days each WBSN general consumer's point of connection is energised.
- The volume price (WBSN-24UC) applies to all electricity distributed to each WBSN general consumer.
- The volume injection price (WBSN-INJT) applies to all electricity injected into the network by each WBSN general consumer.

### General metered half hourly price category WBSH

The WBSH price category is available to general consumers who are on a qualifying retail price option with metering capable of recording half hourly data.

Price category WBSH										
Description	Code	Units	Dist.	Pass.	Delivery					
Description	Code	UTILS	Price	Price	Price					
Fixed	WBSH-FIXD	\$/day	0.9900	-	0.9900					
Volume, off-peak	WBSH-OFPK	\$/kWh	0.0255	-	0.0255					
Volume, peak	WBSH-PEAK	\$/kWh	0.0255	0.1000	0.1255					
Volume, injection	WBSH-INJT	\$/kWh	-	-	-					

- The fixed price (WBSH-FIXD) applies to the number of days each WBSH general consumer's point of connection is energised.
- The volume off-peak price (WBSH-OFPK) applies to electricity distributed to each WBSH general consumer during off-peak periods.
- The volume peak price (WBSH-PEAK) applies to electricity distributed to each WBSH general consumer during peak periods.
- The volume injection price (WBSH-INJT) applies to all electricity injected into the network by each WBSH general consumer.

## Peak and off-peak periods for half hourly price categories

Peak periods occur on:

 Weekdays (Monday to Friday including public holidays) from 07:00 to 11:00 (time periods 15 to 22) and 17:00 to 21:00 (time periods 35 to 42).

Off-peak periods occur on:

- Weekdays (Monday to Friday including public holidays) from 11:00 to 17:00 (time periods 23 to 34) and 21:00 to 07:00 (time periods 43 to 14) the following day; and
- Weekends (Saturday and Sunday).

The following chart shows the times on weekdays to which the peak and off-peak volume prices apply for the WBSH price category:



## Qualifying retail price options for half hourly price categories

Vector will determine whether a retail price option qualifies for Vector's half hourly price categories, following an application by a retailer, based on the extent that Vector's distribution price signals are incorporated into the retail option and the number of consumers affected.

### **General unmetered price category WBSU**

The WBSU price category applies to general consumers where the consumer's point of connection does not have a meter measuring consumption, has a capacity less than 1kVA and consists of fixed wired equipment with a predictable annual electricity usage. Where any of these criteria are not met, the consumer will be required to install a meter and will be placed on the appropriate metered price category.

Price category WBSU										
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price					
Fixed	WBSU-FIXD	\$/day/fitting	0.1500	-	0.1500					
Volume	WBSU-24UC	\$/kWh	0.0320	0.0380	0.0700					

- The fixed price (WBSU-FIXD) applies to the number of days each WBSU unmetered consumer's unmetered point of connection or fitting is energised.
- The volume price (WBSU-24UC) applies to all electricity distributed to each WBSU unmetered consumer's point of connection or fitting.
- Consumption for WBSU non-streetlight unmetered consumers is determined by Vector based on load profile and fitting input wattages. A minimum load factor of 1.1 is applied to the input wattage for non-streetlight appliances and 1.0 for streetlight appliances.
- Consumption for WBSU streetlight unmetered consumers is determined by multiplying the input wattage of each fitting in a database administered by Vector, with the load factor, the number of days in each month and the night hours per day stated in the following table:

Month	Night hours per day
January	9.61
February	10.57
March	11.61
April	12.87
May	13.81
June	14.33
July	14.13
August	13.29
September	12.17
October	11.00
November	9.93
December	9.32

### **Consumer capacity**

The capacity used to allocate consumers to a price category is based on the nearest standard capacity of each consumer's point of connection as determined by Vector subject to the following conditions:

- Vector may require the consumer's demand not to exceed the capacity of their point of connection at any time;
- Changes to the capacity of the consumer's point of connection may be requested by the retailer;
- Any change to the consumer's capacity requires the current limiting device (such as a fuse or transformer) to be changed by Vector to the nearest standard capacity;
- Vector may pass some or all of the costs associated with the change in capacity on to the retailer (including removal of stranded assets such as transformers); and
- Changes to the consumer's capacity are subject to the agreement of Vector and the availability of spare capacity on Vector's network and may be subject to additional charges (such as capital contributions).

#### **Extent of prices**

Vector's prices published in this schedule relate to the cost of owning, operating and maintaining the distribution network as it currently exists but do not include amongst other things, energy charges for the electricity consumers use, metering equipment charges, load control equipment located at the point of connection to the network, the cost of reading meters and the cost of consumer electrical installations or fittings.

In order for Vector to supply any new or changed distribution service, including but not limited to; changes to service standards, distributed generation, the connection to the network of additional points of connection and the modification, increased capacity, relocation or removal of current points of connection, Vector may apply non-standard prices other than those outlined in this schedule, or require a capital contribution on a case by case basis.

Vector's prices do not include ancillary service charges and loss constraint excess payments from the system operator and transmission provider respectively. These costs may be passed through by Vector directly to electricity retailers.

Should Vector forecast a potential price breach under the regulated price path, then Vector may provide a refund or rebate of electricity distribution charges directly to the electricity retailer in order to avoid such a breach.

All prices are exclusive of GST.

### **Provision of billing information**

The consumer's retailer must provide Vector with consumption data for each general consumer and for each price as described in this schedule.

Where more than one meter at a point of connection is in use, but a single volume price applies, consumption data must be aggregated by the retailer before submitting to Vector.

Where a half hourly meter is fitted, consumption data must be aggregated by the retailer to match the appropriate prices and time periods before submitting the data to Vector.

## Northern electricity distribution network



### Price schedule for low voltage consumers

### Applicable from 1 April 2016

This schedule describes Vector's standard prices for providing electricity distribution services in respect of low voltage consumers on the Northern network. Vector offers two price categories for low voltage consumers on the Northern network depending on the consumer's metering type.

### Low voltage consumer definitions

A low voltage consumer is where the consumer is not a residential consumer (as defined in Vector's price schedule for residential consumers) and the consumer's metered point of connection has a capacity greater than 69kVA connected to Vector's low voltage (400V three phase or 230V single phase) network.

The network that consumers are supplied from is determined by Vector from time to time based on the physical location of the point of connection of the consumer's electrical installation. The approximate area covered by the Northern electricity distribution network is shown in green on the following map.



## Distribution prices and pass-through and recoverable cost prices

In the following pricing tables the "Delivery Price" column represents the Tariff Rate for Distribution Services and is the sum of the following components:

- "Dist. Price" is an indicative value for the distribution component of prices. These relate to Vector's costs of owning and operating our network; and
- "Pass. Price" is an indicative value for the passthrough and recoverable component of prices which relates to the costs from third parties including but not limited to: Council rates, Electricity Authority, Commerce Act and Electricity and Gas Complaints Commissioner levies, and transmission charges from Transpower.

### Low voltage price category WLVN

The WLVN price category is available to low voltage consumers where the consumer's metered point of connection has a capacity less than or equal to 345kVA.

	Price category WLVN											
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price							
Fixed	WLVN-FIXD	\$/day	5.5000	-	5.5000							
Volume	WLVN-24UC	\$/kWh	0.0237	0.0204	0.0441							
Capacity	WLVN-CAPY	\$/kVA/day	0.0298	-	0.0298							
Power factor	WLVN-PWRF	\$/kVAr/day	0.2917	-	0.2917							
Volume, injection	WLVN-INJT	\$/kWh	-	-	-							

- The fixed price (WLVN-FIXD) applies to the number of days each WLVN low voltage consumer's point of connection is energised.
- The volume price (WLVN-24UC) applies to all electricity distributed to each WLVN low voltage consumer.
- The capacity price (WLVN-CAPY) applies to the capacity of each WLVN low voltage consumer connected to Vector's network.
- The power factor price (WLVN-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (WLVN-INJT) applies to all electricity injected into the network by each WLVN low voltage consumer.

### Low voltage price category WLVH

The WLVH price category is available to low voltage consumers with metering capable of recording half hourly data.

Price category WLVH								
Description	Code	Units	Dist.	Pass.	Delivery			
	COUE	UTILS	Price	Price	Price			
Fixed	WLVH-FIXD	\$/day	10.3800	-	10.3800			
Volume	WLVH-24UC	\$/kWh	0.0057	-	0.0057			
Capacity	WLVH-CAPY	\$/kVA/day	0.0298	-	0.0298			
Demand	WLVH-DAMD	\$/kVA/day	0.0339	0.2480	0.2819			
Power factor	WLVH-PWRF	\$/kVAr/day	0.2917	-	0.2917			
Volume, injection	WLVH-INJT	\$/kWh	-	-	-			

- The fixed price (WLVH-FIXD) applies to the number of days each WLVH low voltage consumer's point of connection is energised.
- The volume price (WLVH-24UC) applies to all electricity distributed to each WLVH low voltage consumer.
- The capacity price (WLVH-CAPY) applies to the capacity of each WLVH low voltage consumer connected to Vector's network.
- The demand price (WLVH-DAMD) is a daily price applied to the average of each WLVH low voltage consumer's ten highest kVA demands (twice the kVAh half hourly reading) between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays in any one month.
- The power factor price (WLVH-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (WLVH-INJT) applies to all electricity injected into the network by each WLVH low voltage consumer.

### **Power factor prices**

Vector's distribution code requires consumers to maintain a power factor of greater than 0.95 lagging. If the consumer's power factor is below 0.95 lagging, Vector may apply power factor prices. Where the consumer's metering equipment does not record power factor, Vector may install power factor monitoring equipment and monitor the consumer's power factor.

The power factor amount is determined each month where a consumer's power factor is less than 0.95 lagging. This power factor amount (kVAr) is represented by twice the largest difference between the consumer's kVArh recorded in any one half-hour period and the kWh demand divided by three recorded in the same half-hour period, during each month. The price is applicable between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays.

### **Consumer capacity**

The capacity used to allocate consumers to a price category and for calculating the consumer's charges is based on the nearest standard capacity of each consumer's point of connection as determined by Vector subject to the following conditions:

- Vector may require the consumer's demand not to exceed the capacity of their point of connection at any time;
- Changes to the capacity of the consumer's point of connection may be requested by the retailer;
- Any change to the consumer's capacity requires the current limiting device (such as a fuse or transformer) to be changed by Vector to the nearest standard capacity;
- Vector may pass some or all of the costs associated with the change in capacity on to the retailer (including removal of stranded assets such as transformers); and
- Changes to the consumer's capacity are subject to the agreement of Vector and the availability of spare capacity on Vector's network and may be subject to additional charges (such as capital contributions).

### **Extent of prices**

Vector's prices published in this schedule relate to the cost of owning, operating and maintaining the distribution network as it currently exists but do not include amongst other things, energy charges for the electricity consumers use, metering equipment charges, load control equipment located at the point of connection to the network, the cost of reading meters and the cost of consumer electrical installations or fittings.

In order for Vector to supply any new or changed distribution service, including but not limited to; the connection to the network of additional points of connection and the modification, increased capacity, relocation or removal of current points of connection, Vector may apply non-standard prices other than those outlined in this schedule, or require a capital contribution on a case by case basis.

Vector's prices do not include ancillary service charges and loss constraint excess payments from the system operator and transmission provider respectively. These costs may be passed through by Vector directly to electricity retailers. Should Vector forecast a potential price breach under the regulated price path, then Vector may provide a refund or rebate of electricity distribution charges directly to the electricity retailer in order to avoid such a breach.

All prices are exclusive of GST.

### **Provision of billing information**

The consumer's retailer must provide Vector with consumption data for each low voltage consumer and for each price as described in this schedule.

Where more than one meter at a point of connection is in use, but a single volume price applies, consumption data must be aggregated by the retailer before submitting to Vector.

Where a half hourly meter is fitted and the consumer's price category requires half hourly data, the consumer's retailer must submit half hourly consumption information.

Half hourly data provided by the retailer should contain the following channels; kWh, kVArh and kVAh, but must contain no less than two of these.

## Northern electricity distribution network



### Price schedule for transformer consumers

### Applicable from 1 April 2016

This schedule describes Vector's standard prices for providing electricity distribution services in respect of transformer consumers on the Northern network. Vector offers two price categories for transformer consumers on the Northern network depending on the consumer's metering type.

### **Transformer consumer definitions**

A transformer consumer is where: the consumer is not a residential consumer (as defined in Vector's price schedule for residential consumers); the consumer's metered point of connection has a capacity greater than 69kVA; and the consumer's low voltage (400V three phase or 230V single phase) network is supplied directly from transformers owned by Vector.

The network that consumers are supplied from is determined by Vector from time to time based on the physical location of the point of connection of the consumer's electrical installation. The approximate area covered by the Northern electricity distribution network is shown in green on the following map.



## Distribution prices and pass-through and recoverable cost prices

In the following pricing tables the "Delivery Price" column represents the Tariff Rate for Distribution Services and is the sum of the following components:

- "Dist. Price" is an indicative value for the distribution component of prices. These relate to Vector's costs of owning and operating our network; and
- "Pass. Price" is an indicative value for the passthrough and recoverable component of prices which relates to the costs from third parties including but not limited to: Council rates, Electricity Authority, Commerce Act and Electricity and Gas Complaints Commissioner levies, and transmission charges from Transpower.

### **Transformer price category WTXN**

The WTXN price category is available to transformer consumers where the consumer's metered point of connection has a capacity less than or equal to 345kVA.

Price category WTXN								
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price			
Fixed	WTXN-FIXD	\$/day	4.9500	-	4.9500			
Volume	WTXN-24UC	\$/kWh	0.0193	0.0204	0.0397			
Capacity	WTXN-CAPY	\$/kVA/day	0.0292	-	0.0292			
Power factor	WTXN-PWRF	\$/kVAr/day	0.2917	-	0.2917			
Volume, injection	WTXN-INJT	\$/kWh	-	-	-			

- The fixed price (WTXN-FIXD) applies to the number of days each WTXN transformer consumer's point of connection is energised.
- The volume price (WTXN-24UC) applies to all electricity distributed to each WTXN transformer consumer.
- The capacity price (WTXN-CAPY) applies to the capacity of each WTXN transformer consumer connected to Vector's network.
- The power factor price (WTXN-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (WTXN-INJT) applies to all electricity injected into the network by each WTXN transformer consumer.

### **Transformer price category WTXH**

The WTXH price category is available to transformer consumers with metering capable of recording half hourly data.

Price category WTXH								
Description	Code	Units	Dist.	Pass.	Delivery			
	Code	UTILS	Price	Price	Price			
Fixed	WTXH-FIXD	\$/day	9.3400	-	9.3400			
Volume	WTXH-24UC	\$/kWh	0.0056	-	0.0056			
Capacity	WTXH-CAPY	\$/kVA/day	0.0292	-	0.0292			
Demand	WTXH-DAMD	\$/kVA/day	0.0283	0.2480	0.2763			
Power factor	WTXH-PWRF	\$/kVAr/day	0.2917	-	0.2917			
Volume, injection	WTXH-INJT	\$/kWh	-	-	-			

- The fixed price (WTXH-FIXD) applies to the number of days each WTXH transformer consumer's point of connection is energised.
- The volume price (WTXH-24UC) applies to all electricity distributed to each WTXH transformer consumer.
- The capacity price (WTXH-CAPY) applies to the capacity of each WTXH transformer consumer connected to Vector's network.
- The demand price (WTXH-DAMD) is a daily price applied to the average of each WTXH transformer consumer's ten highest kVA demands (twice the kVAh half hourly reading) between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays in any one month.
- The power factor price (WTXH-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (WTXH-INJT) applies to all electricity injected into the network by each WTXH transformer consumer.

#### **Power factor prices**

Vector's distribution code requires consumers to maintain a power factor of greater than 0.95 lagging. If the consumer's power factor is below 0.95 lagging, Vector may apply power factor prices. Where the consumer's metering equipment does not record power factor, Vector may install power factor monitoring equipment and monitor the consumer's power factor.

The power factor amount is determined each month where a consumer's power factor is less than 0.95 lagging. This power factor amount (kVAr) is represented by twice the largest difference between the consumer's kVArh recorded in any one half-hour period and the kWh demand divided by three recorded in the same half-hour period, during each month. The price is applicable between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays.

### **Consumer capacity**

The capacity used to allocate consumers to a price category and for calculating the consumer's charges is based on the nearest standard capacity of each consumer's point of connection as determined by Vector subject to the following conditions:

- Vector may require the consumer's demand not to exceed the capacity of their point of connection at any time;
- Changes to the capacity of the consumer's point of connection may be requested by the retailer;
- Any change to the consumer's capacity requires the current limiting device (such as a fuse or transformer) to be changed by Vector to the nearest standard capacity;
- Vector may pass some or all of the costs associated with the change in capacity on to the retailer (including removal of stranded assets such as transformers); and
- Changes to the consumer's capacity are subject to the agreement of Vector and the availability of spare capacity on Vector's network and may be subject to additional charges (such as capital contributions).

### **Extent of prices**

Vector's prices published in this schedule relate to the cost of owning, operating and maintaining the distribution network as it currently exists but do not include amongst other things, energy charges for the electricity consumers use, metering equipment charges, load control equipment located at the point of connection to the network, the cost of reading meters and the cost of consumer electrical installations or fittings.

In order for Vector to supply any new or changed distribution service, including but not limited to; changes to service standards, distributed generation, the connection to the network of additional points of connection and the modification, increased capacity, relocation or removal of current points of connection, Vector may apply non-standard prices other than those outlined in this schedule, or require a capital contribution on a case by case basis.

Vector's prices do not include ancillary service charges and loss constraint excess payments from the system operator and transmission provider respectively. These costs may be passed through by Vector directly to electricity retailers. Should Vector forecast a potential price breach under the regulated price path, then Vector may provide a refund or rebate of electricity distribution charges directly to the electricity retailer in order to avoid such a breach.

All prices are exclusive of GST.

### **Provision of billing information**

The consumer's retailer must provide Vector with consumption data for each transformer consumer and for each price as described in this schedule.

Where more than one meter at a point of connection is in use, but a single volume price applies, consumption data must be aggregated by the retailer before submitting to Vector.

Where a half hourly meter is fitted and the consumer's price category requires half hourly data, the consumer's retailer must submit half hourly consumption information.

Half hourly data provided by the retailer should contain the following channels; kWh, kVArh and kVAh, but must contain no less than two of these.

## Northern electricity distribution network



### Price schedule for high voltage consumers

### Applicable from 1 April 2016

This schedule describes Vector's standard prices for providing electricity distribution services in respect of high voltage consumers on the Northern network. Vector offers two price categories for high voltage consumers on the Northern network depending on the consumer's metering type.

### **High voltage consumer definitions**

A high voltage consumer is where: the consumer is not a residential consumer (as defined in Vector's price schedule for residential consumers); the consumer's metered point of connection has a capacity greater than 69kVA and is supplied directly from Vector's high voltage (6.6kV or higher) network.

The network that consumers are supplied from is determined by Vector from time to time based on the physical location of the point of connection of the consumer's electrical installation. The approximate area covered by the Northern electricity distribution network is shown in green on the following map.



## Distribution prices and pass-through and recoverable cost prices

In the following pricing tables the "Delivery Price" column represents the Tariff Rate for Distribution Services and is the sum of the following components:

- "Dist. Price" is an indicative value for the distribution component of prices. These relate to Vector's costs of owning and operating our network; and
- "Pass. Price" is an indicative value for the passthrough and recoverable component of prices which relates to the costs from third parties including but not limited to: Council rates, Electricity Authority, Commerce Act and Electricity and Gas Complaints Commissioner levies, and transmission charges from Transpower.

### **High voltage price category WHVN**

The WHVN price category is available to high voltage consumers where the consumer's metered point of connection has a capacity less than or equal to 345kVA.

Price category WHVN								
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price			
Fixed	WHVN-FIXD	\$/day	4.8000	-	4.8000			
Volume	WHVN-24UC	\$/kWh	0.0181	0.0204	0.0385			
Capacity	WHVN-CAPY	\$/kVA/day	0.0283	-	0.0283			
Power factor	WHVN-PWRF	\$/kVAr/day	0.2917	-	0.2917			
Volume, injection	WHVN-INJT	\$/kWh	-	-	-			

- The fixed price (WHVN-FIXD) applies to the number of days each WHVN high voltage consumer's point of connection is energised.
- The volume price (WHVN-24UC) applies to all electricity distributed to each WHVN high voltage consumer.
- The capacity price (WHVN-CAPY) applies to the installed capacity of each WHVN high voltage consumer connected to Vector's network.
- The power factor price (WHVN-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (WHVN-INJT) applies to all electricity injected into the network by each WHVN high voltage consumer.

#### **High voltage price category WHVH**

The WHVH price category is available to high voltage consumers with metering capable of recording half hourly data.

Price category WHVH								
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price			
Fixed	WHVH-FIXD	\$/day	9.0600	-	9.0600			
Volume	WHVH-24UC	\$/kWh	0.0054	-	0.0054			
Capacity	WHVH-CAPY	\$/kVA/day	0.0283	-	0.0283			
Demand	WHVH-DAMD	\$/kVA/day	0.0200	0.2480	0.2680			
Excess demand	WHVH-DEXA	\$/kVA/day	0.6226	-	0.6226			
Power factor	WHVH-PWRF	\$/kVAr/day	0.2917	-	0.2917			
Volume, injection	WHVH-INJT	\$/kWh	-	-	-			

- The fixed price (WHVH-FIXD) applies to the number of days each WHVH high voltage consumer's point of connection is energised.
- The volume price (WHVH-24UC) applies to all electricity distributed to each WHVH high voltage consumer.
- The capacity price (WHVH-CAPY) applies to the nominated capacity of each WHVH high voltage consumer connected to Vector's network.
- The demand price (WHVH-DAMD) is a daily price applied to the average of each WHVH high voltage consumer's ten highest kVA demands (twice the kVAh half hourly reading) between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays in any one month.
- The excess demand price (WHVH-DEXA) is a daily price applied to the difference between the anytime maximum kVA demand (twice the maximum kVAh half hourly reading) and the nominated capacity in any one month, where the WHVH high voltage consumer's anytime maximum demand is greater than the nominated capacity.
- The power factor price (WHVH-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (WHVH-INJT) applies to all electricity injected into the network by each WHVH high voltage consumer.

#### **Power factor prices**

Vector's distribution code requires consumers to maintain a power factor of greater than 0.95 lagging. If the consumer's power factor is below 0.95 lagging, Vector may apply power factor prices. Where the consumer's metering equipment does not record power factor, Vector may install power factor monitoring equipment and monitor the consumer's power factor.

The power factor amount is determined each month where a consumer's power factor is less than 0.95

lagging. This power factor amount (kVAr) is represented by twice the largest difference between the consumer's kVArh recorded in any one half-hour period and the kWh demand divided by three recorded in the same half-hour period, during each month. The price is applicable between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays.

#### **Consumer capacity**

For high voltage consumers, the capacity used for calculating charges cannot always be determined based on physical capacity limiting devices. For this reason Vector has a process for retailers to nominate the capacity of high voltage consumer point of connections subject to the following conditions:

- Vector may require the consumer's demand not to exceed the nominated capacity of their point of connection at any time;
- Changes to the consumer's nominated capacity may be requested by the retailer;
- The nominated capacity may only be changed once in each 12 month period ending on 31 March each year;
- Nominated capacities must reasonably estimate the capacity requirement of each high voltage consumer connected to Vector's network;
- Changes to the nominated capacity are subject to the agreement of Vector and the availability of spare capacity on Vector's network;
- Vector may pass some or all of the costs associated with the change in nominated capacity on to the retailer;
- Vector does not guarantee the availability of increased nominated capacity at any time; and
- The application of excess demand prices does not imply or guarantee the availability of increased nominated capacity above the consumer's existing nominated capacity.

#### **Extent of prices**

Vector's prices published in this schedule relate to the cost of owning, operating and maintaining the distribution network as it currently exists but do not include amongst other things, energy charges for the electricity consumers use, metering equipment charges, load control equipment located at the point of connection to the network, the cost of reading meters and the cost of consumer electrical installations or fittings.

In order for Vector to supply any new or changed distribution service, including but not limited to;

changes to service standards, distributed generation, the connection to the network of additional points of connection and the modification, increased capacity, relocation or removal of current points of connection, Vector may apply non-standard prices other than those outlined in this schedule, or require a capital contribution on a case by case basis.

Vector's prices do not include ancillary service charges and loss constraint excess payments from the system operator and transmission provider respectively. These costs may be passed through by Vector directly to electricity retailers.

Should Vector forecast a potential price breach under the regulated price path, then Vector may provide a refund or rebate of electricity distribution charges directly to the electricity retailer in order to avoid such a breach.

All prices are exclusive of GST.

#### **Provision of billing information**

The consumer's retailer must provide Vector with consumption data for each high voltage consumer and for each price as described in this schedule.

Where more than one meter at a point of connection is in use, but a single volume price applies, consumption data must be aggregated by the retailer before submitting to Vector.

Where a half hourly meter is fitted and the consumer's price category requires half hourly data, the consumer's retailer must submit half hourly consumption information.

Half hourly data provided by the retailer should contain the following channels; kWh, kVArh and kVAh, but must contain no less than two of these.

## Northern electricity distribution network



### High voltage nominated capacity request form

Please provide the following information and send to <u>vector.billing@vector.co.nz</u> or directly to the consumer's Vector key account manager:

Business name:	
Contact person:	
Point of connection address:	
Postal address (if different from point of connection address):	
Email address:	Fax number:
Phone number:	ICP number:
Installed capacity (KVA):	
Nominated capacity request (kVA):	
Energy retailer (at time of application):	
Request date from which nominated capacity is to apply:	
Signed on behalf of:	
<u>_By:</u>	
Signature of Retailer:	
Name of Signatory:	
Date:	

## Auckland electricity distribution network



### **Price schedule for residential consumers**

### Applicable from 1 April 2016

This schedule describes Vector's standard prices for providing electricity distribution services in respect of residential consumers on the Auckland network. Vector offers eight price categories for residential consumers on the Auckland network depending on the consumer's annual usage, metering type, whether the consumer has gas installed and whether the consumer makes some of their load available to Vector for load management.

### **Residential consumer definitions**

A residential consumer is where the consumer's metered point of connection is for a home, not normally used for any business activity.

The network that consumers are supplied from is determined by Vector from time to time based on the physical location of the point of connection of the consumer's electrical installation. The approximate area covered by the Auckland electricity distribution network is shown in green on the following map.



## Distribution prices and pass-through and recoverable cost prices

In the following pricing tables the "Delivery Price" column represents the Tariff Rate for Distribution Services and is the sum of the following components:

- "Dist. Price" is an indicative value for the distribution component of prices. These relate to Vector's costs of owning and operating our network; and
- "Pass. Price" is an indicative value for the passthrough and recoverable component of prices

which relates to the costs from third parties including but not limited to: Council rates, Electricity Authority, Commerce Act and Electricity and Gas Complaints Commissioner levies, and transmission charges from Transpower.

## Residential uncontrolled low fixed price category ARUL

The ARUL price category is available to all residential consumers at their principal place of residence, but is typically suitable for consumers who use less than 8,000kWh per annum.

Price category ARUL							
Description	Pass. Price	Delivery Price					
Fixed	ARUL-FIXD	\$/day	0.1500	-	0.1500		
Volume, uncontrolled	ARUL-24UC	\$/kWh	0.0638	0.0380	0.1018		
Volume, injection	ARUL-INJT	\$/kWh	-	-	-		

- The fixed price (ARUL-FIXD) applies to the number of days each ARUL residential consumer's point of connection is energised.
- The volume uncontrolled price (ARUL-24UC) applies to all electricity distributed to each ARUL residential consumer.
- The volume injection price (ARUL-INJT) applies to all electricity injected into the network by each ARUL residential consumer.

## Residential controlled low fixed price category ARCL

The ARCL price category is available to residential consumers at their principal place of residence who have an electrical hot water cylinder<sup>1</sup> connected to Vector's load control system. Vector may control load connected to its load control system at any time for a

<sup>&</sup>lt;sup>1</sup> An electrical hot water cylinder must be in excess of 50 litres but may be substituted with fittings of a similar rating and load profile at Vector's discretion.

maximum of 5 hours in any 24 hour period. This price category is typically suitable for consumers who use less than 8,000kWh per annum.

Price category ARCL								
Description	Code	Units	Dist.	Pass.	Delivery			
			Price	Price	Price			
Fixed	ARCL-FIXD	\$/day	0.1500	-	0.1500			
Volume, controlled	ARCL-AICO	\$/kWh	0.0638	0.0300	0.0938			
Volume, injection	ARCL-INJT	\$/kWh	-	-	-			

- The fixed price (ARCL-FIXD) applies to the number of days each ARCL residential consumer's point of connection is energised.
- The volume controlled price (ARCL-AICO) applies to all electricity distributed to each ARCL residential consumer.
- The volume injection price (ARCL-INJT) applies to all electricity injected into the network by each ARCL residential consumer.

### Residential gas low fixed price category ARGL

The ARGL price category is available to residential consumers at their principal place of residence who are also connected to Vector's Auckland gas distribution network and is typically suitable for consumers who use less than 8,000kWh per annum.

Price category ARGL							
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price		
Fixed	ARGL-FIXD	\$/day	0.1500	-	0.1500		
Volume, uncontrolled	ARGL-24UC	\$/kWh	0.0638	0.0300	0.0938		
Volume, injection	ARGL-INJT	\$/kWh	-	-	-		

- The fixed price (ARGL-FIXD) applies to the number of days each ARGL residential consumer's point of connection is energised.
- The volume uncontrolled price (ARGL-24UC) applies to all electricity distributed to each ARGL residential consumer.
- The volume injection price (ARGL-INJT) applies to all electricity injected into the network by each ARGL residential consumer.

## Residential half hourly low fixed price category ARHL

The ARHL price category is available to residential consumers at their principal place of residence who are on a qualifying retail price option with metering capable of recording half hourly data. This price category is typically suitable for consumers who use less than 8,000kWh per annum.

Price category ARHL							
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price		
Fixed	ARHL-FIXD	\$/day	0.1500	-	0.1500		
Volume, off-peak	ARHL-OFPK	\$/kWh	0.0638	-	0.0638		
Volume, peak	ARHL-PEAK	\$/kWh	0.0638	0.1000	0.1638		
Volume, injection	ARHL-INJT	\$/kWh	-	-	-		

- The fixed price (ARHL-FIXD) applies to the number of days each ARHL residential consumer's point of connection is energised.
- The volume off-peak price (ARHL-OFPK) applies to electricity distributed to each ARHL residential consumer during off-peak periods.
- The volume peak price (ARHL-PEAK) applies to electricity distributed to each ARHL residential consumer during peak periods.
- The volume injection price (ARHL-INJT) applies to all electricity injected into the network by each ARHL residential consumer.

## Residential uncontrolled standard price category ARUS

The ARUS price category is available to all residential consumers, but is typically suitable for consumers who use more than 8,000kWh per annum.

Price category ARUS							
Description	Code	Units	Dist.	Pass.	Delivery		
			Price	Price	Price		
Fixed	ARUS-FIXD	\$/day	0.9900	-	0.9900		
Volume, uncontrolled	ARUS-24UC	\$/kWh	0.0255	0.0380	0.0635		
Volume, injection	ARUS-INJT	\$/kWh	-	-	-		

- The fixed price (ARUS-FIXD) applies to the number of days each ARUS residential consumer's point of connection is energised.
- The volume uncontrolled price (ARUS-24UC) applies to all electricity distributed to each ARUS residential consumer.
- The volume injection price (ARUS-INJT) applies to all electricity injected into the network by each ARUS residential consumer.

### Residential controlled standard price category ARCS

The ARCS price category is available to residential consumers with an electrical hot water cylinder<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> An electrical hot water cylinder must be in excess of 50 litres but may be substituted with fittings of a similar rating and load profile at Vector's discretion.

connected to Vector's load control system. Vector may control load connected to its load control system at any time for a maximum of 5 hours in any 24 hour period. This price category is typically suitable for consumers who use more than 8,000kWh per annum.

Price category ARCS							
Description	Code	Units	Dist.	Pass.	Delivery		
	COUE	UTILS	Price	Price	Price		
Fixed	ARCS-FIXD	\$/day	0.9900	-	0.9900		
Volume, controlled	ARCS-AICO	\$/kWh	0.0255	0.0300	0.0555		
Volume, injection	ARCS-INJT	\$/kWh	-	-	-		

- The fixed price (ARCS-FIXD) applies to the number of days each ARCS residential consumer's point of connection is energised.
- The volume controlled price (ARCS-AICO) applies to all electricity distributed to each ARCS residential consumer.
- The volume injection price (ARCS-INJT) applies to all electricity injected into the network by each ARCS residential consumer.

### Residential gas standard price category ARGS

The ARGS price category is available to residential consumers who are also connected to Vector's Auckland gas distribution network and is typically suitable for consumers who use more than 8,000kWh per annum.

Price category ARGS							
Description	Code	Units	Dist.	Pass.	Delivery		
	Code	UTIILS	Price	Price	Price		
Fixed	ARGS-FIXD	\$/day	0.9900	-	0.9900		
Volume, uncontrolled	ARGS-24UC	\$/kWh	0.0255	0.0300	0.0555		
Volume, injection	ARGS-INJT	\$/kWh	-	-	-		

- The fixed price (ARGS-FIXD) applies to the number of days each ARGS residential consumer's point of connection is energised.
- The volume uncontrolled price (ARGS-24UC) applies to all electricity distributed to each ARGS residential consumer.
- The volume injection price (ARGS-INJT) applies to all electricity injected into the network by each ARGS residential consumer.

## Residential half hourly standard price category ARHS

The ARHS price category is available to residential consumers who are on a qualifying retail price option with metering capable of recording half hourly data. This price category is typically suitable for consumers who use more than 8,000kWh per annum.

Price category ARHS								
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price			
Fixed	ARHS-FIXD	\$/day	0.9900	-	0.9900			
Volume, off-peak	ARHS-OFPK	\$/kWh	0.0255	-	0.0255			
Volume, peak	ARHS-PEAK	\$/kWh	0.0255	0.1000	0.1255			
Volume, injection	ARHS-INJT	\$/kWh	-	-	-			

- The fixed price (ARHS-FIXD) applies to the number of days each ARHS residential consumer's point of connection is energised.
- The volume off-peak price (ARHS-OFPK) applies to electricity distributed to each ARHS residential consumer during off-peak periods.
- The volume peak price (ARHS-PEAK) applies to electricity distributed to each ARHS residential consumer during peak periods.
- The volume injection price (ARHS-INJT) applies to all electricity injected into the network by each ARHS residential consumer.

## Peak and off-peak periods for half hourly price categories

Peak periods occur on:

 Weekdays (Monday to Friday including public holidays) from 07:00 to 11:00 (time periods 15 to 22) and 17:00 to 21:00 (time periods 35 to 42).
Off pack periods occur on:

Off-peak periods occur on:

- Weekdays (Monday to Friday including public holidays) from 11:00 to 17:00 (time periods 23 to 34) and 21:00 to 07:00 (time periods 43 to 14) the following day; and
- Weekends (Saturday and Sunday).

The following chart shows the times on weekdays to which the peak and off-peak volume prices apply for the ARHL and ARHS price categories:



## Qualifying retail price options for half hourly price categories

Vector will determine whether a retail price option qualifies for Vector's half hourly price categories, following an application by a retailer, based on the extent that Vector's distribution price signals are incorporated into the retail option and the number of consumers affected.

### **Extent of prices**

Vector's prices published in this schedule relate to the cost of owning, operating and maintaining the distribution network as it currently exists but do not include amongst other things, energy charges for the electricity consumers use, metering equipment charges, load control equipment located at the point of connection to the network, the cost of reading meters and the cost of consumer electrical installations or fittings.

In order for Vector to supply any new or changed distribution service, including but not limited to; changes to service standards, distributed generation, the connection to the network of additional points of connection and the modification, increased capacity, relocation or removal of current points of connection, Vector may apply non-standard prices other than those outlined in this schedule, or require a capital contribution on a case by case basis.

Vector's prices do not include ancillary service charges and loss constraint excess payments from the system operator and transmission provider respectively. These costs may be passed through by Vector directly to electricity retailers.

Should Vector forecast a potential price breach under the regulated price path, then Vector may provide a refund or rebate of electricity distribution charges directly to the electricity retailer in order to avoid such a breach.

All prices are exclusive of GST.

### **Provision of billing information**

The consumer's retailer must provide Vector with consumption data for each residential consumer and for each price as described in this schedule.

Where more than one meter at a point of connection is in use, but a single volume price applies, consumption data must be aggregated by the retailer before submitting to Vector. Where a half hourly meter is fitted, consumption data must be aggregated by the retailer to match the appropriate prices and time periods before submitting the data to Vector.

## Auckland electricity distribution network



### Price schedule for general consumers

### Applicable from 1 April 2016

This schedule describes Vector's standard prices for providing electricity distribution services in respect of general consumers on the Auckland network. Vector offers three price categories for general consumers on the Auckland network depending on the consumer's metering type.

### **General consumer definitions**

A general consumer is where the consumer is not a residential consumer (as defined in Vector's price schedule for residential consumers) and the consumer's point of connection has a capacity less than or equal to 69kVA.

The network that consumers are supplied from is determined by Vector from time to time based on the physical location of the point of connection of the consumer's electrical installation. The approximate area covered by the Auckland electricity distribution network is shown in green on the following map.



## Distribution prices and pass-through and recoverable cost prices

In the following pricing tables the "Delivery Price" column represents the Tariff Rate for Distribution Services and is the sum of the following components:

- "Dist. Price" is an indicative value for the distribution component of prices. These relate to Vector's costs of owning and operating our network; and
- "Pass. Price" is an indicative value for the passthrough and recoverable component of prices which relates to the costs from third parties including but not limited to: Council rates, Electricity Authority, Commerce Act and Electricity

and Gas Complaints Commissioner levies, and transmission charges from Transpower.

### General metered price category ABSN

The ABSN price category is available to general consumers where the consumer has a metered point of connection.

Price category ABSN							
Description	Code	Units	Dist.	Pass.	Delivery		
			Price	Price	Price		
Fixed	ABSN-FIXD	\$/day	0.9900	-	0.9900		
Volume	ABSN-24UC	\$/kWh	0.0255	0.0380	0.0635		
Volume, injection	ABSN-INJT	\$/kWh	-	-	-		

- The fixed price (ABSN-FIXD) applies to the number of days each ABSN general consumer's point of connection is energised.
- The volume price (ABSN-24UC) applies to all electricity distributed to each ABSN general consumer.
- The volume injection price (ABSN-INJT) applies to all electricity injected into the network by each ABSN general consumer.

## General metered half hourly price category ABSH

The ABSH price category is available to general consumers who are on a qualifying retail price option with metering capable of recording half hourly data.

Price category ABSH								
Description	Code	Units	Dist.	Pass.	Delivery			
			Price	Price	Price			
Fixed	ABSH-FIXD	\$/day	0.9900	-	0.9900			
Volume, off-peak	ABSH-OFPK	\$/kWh	0.0255	-	0.0255			
Volume, peak	ABSH-PEAK	\$/kWh	0.0255	0.1000	0.1255			
Volume, injection	ABSH-INJT	\$/kWh	-	-	-			

 The fixed price (ABSH-FIXD) applies to the number of days each ABSH general consumer's point of connection is energised.

- The volume off-peak price (ABSH-OFPK) applies to electricity distributed to each ABSH general consumer during off-peak periods.
- The volume peak price (ABSH-PEAK) applies to electricity distributed to each ABSH general consumer during peak periods.
- The volume injection price (ABSH-INJT) applies to all electricity injected into the network by each ABSH general consumer.

## Peak and off-peak periods for half hourly price categories

Peak periods occur on:

• Weekdays (Monday to Friday including public holidays) from 07:00 to 11:00 (time periods 15 to 22) and 17:00 to 21:00 (time periods 35 to 42).

Off-peak periods occur on:

- Weekdays (Monday to Friday including public holidays) from 11:00 to 17:00 (time periods 23 to 34) and 21:00 to 07:00 (time periods 43 to 14) the following day; and
- Weekends (Saturday and Sunday).

The following chart shows the times on weekdays to which the peak and off-peak volume prices apply for the ABSH price category:



## Qualifying retail price options for half hourly price categories

Vector will determine whether a retail price option qualifies for Vector's half hourly price categories, following an application by a retailer, based on the extent that Vector's distribution price signals are incorporated into the retail option and the number of consumers affected.

#### **General unmetered price category ABSU**

The ABSU price category applies to general consumers where the consumer's point of connection does not have a meter measuring consumption, has a capacity less than 1kVA and consists of fixed wired equipment with a predictable annual electricity usage. Where any of these criteria are not met, the consumer will be required to install a meter and will be placed on the appropriate metered price category.

Price category ABSU							
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price		
Fixed	ABSU-FIXD	\$/day/fitting	0.1500	-	0.1500		
Volume	ABSU-24UC	\$/kWh	0.0320	0.0380	0.0700		

- The fixed price (ABSU-FIXD) applies to the number of days each ABSU unmetered consumer's unmetered point of connection or fitting is energised.
- The volume price (ABSU-24UC) applies to all electricity distributed to each ABSU unmetered consumer's point of connection or fitting.
- Consumption for ABSU non-streetlight unmetered consumers is determined by Vector based on load profile and fitting input wattages. A minimum load factor of 1.1 is applied to the input wattage for non-streetlight appliances and 1.0 for streetlight appliances.
- Consumption for ABSU streetlight unmetered consumers is determined by multiplying the input wattage of each fitting in a database administered by Vector, with the load factor, the number of days in each month and the night hours per day stated in the following table:

Month	Night hours per day
January	9.61
February	10.57
March	11.61
April	12.87
May	13.81
June	14.33
July	14.13
August	13.29
September	12.17
October	11.00
November	9.93
December	9.32

### **Consumer capacity**

The capacity used to allocate consumers to a price category is based on the nearest standard capacity of each consumer's point of connection as determined by Vector subject to the following conditions:

- Vector may require the consumer's demand not to exceed the capacity of their point of connection at any time;
- Changes to the capacity of the consumer's point of connection may be requested by the retailer;

- Any change to the consumer's capacity requires the current limiting device (such as a fuse or transformer) to be changed by Vector to the nearest standard capacity;
- Vector may pass some or all of the costs associated with the change in capacity on to the retailer(including removal of stranded assets such as transformers); and
- Changes to the consumer's capacity are subject to the agreement of Vector and the availability of spare capacity on Vector's network and may be subject to additional charges (such as capital contributions).

### **Extent of prices**

Vector's prices published in this schedule relate to the cost of owning, operating and maintaining the distribution network as it currently exists but do not include amongst other things, energy charges for the electricity consumers use, metering equipment charges, load control equipment located at the point of connection to the network, the cost of reading meters and the cost of consumer electrical installations or fittings.

In order for Vector to supply any new or changed distribution service, including but not limited to; changes to service standards, distributed generation, the connection to the network of additional points of connection and the modification, increased capacity, relocation or removal of current points of connection, Vector may apply non-standard prices other than those outlined in this schedule, or require a capital contribution on a case by case basis.

Vector's prices do not include ancillary service charges and loss constraint excess payments from the system operator and transmission provider respectively. These costs may be passed through by Vector directly to electricity retailers.

Should Vector forecast a potential price breach under the regulated price path, then Vector may provide a refund or rebate of electricity distribution charges directly to the electricity retailer in order to avoid such a breach.

All prices are exclusive of GST.

#### **Provision of billing information**

The consumer's retailer must provide Vector with consumption data for each general consumer and for each price as described in this schedule. Where more than one meter at a point of connection is in use, but a single volume price applies, consumption data must be aggregated by the retailer before submitting to Vector.

Where a half hourly meter is fitted, consumption data must be aggregated by the retailer to match the appropriate prices and time periods before submitting the data to Vector.

## Auckland electricity distribution network



### Price schedule for low voltage consumers

### Applicable from 1 April 2016

This schedule describes Vector's standard prices for providing electricity distribution services in respect of low voltage consumers on the Auckland network. Vector offers two price categories for low voltage consumers on the Auckland network depending on the consumer's metering type.

### Low voltage consumer definitions

A low voltage consumer is where the consumer is not a residential consumer (as defined in Vector's price schedule for residential consumers) and the consumer's metered point of connection has a capacity greater than 69kVA connected to Vector's low voltage (400V three phase or 230V single phase) network.

The network that consumers are supplied from is determined by Vector from time to time based on the physical location of the point of connection of the consumer's electrical installation. The approximate area covered by the Auckland electricity distribution network is shown in green on the following map.



## Distribution prices and pass-through and recoverable cost prices

In the following pricing tables the "Delivery Price" column represents the Tariff Rate for Distribution Services and is the sum of the following components:

- "Dist. Price" is an indicative value for the distribution component of prices. These relate to Vector's costs of owning and operating our network; and
- "Pass. Price" is an indicative value for the passthrough and recoverable component of prices which relates to the costs from third parties

including but not limited to: Council rates, Electricity Authority, Commerce Act and Electricity and Gas Complaints Commissioner levies, and transmission charges from Transpower.

### Low voltage price category ALVN

The ALVN price category is available to low voltage consumers where the consumer's metered point of connection has a capacity less than or equal to 345kVA.

	Price category ALVN							
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price			
Fixed	ALVN-FIXD	\$/day	1.5800	-	1.5800			
Volume	ALVN-24UC	\$/kWh	0.0429	0.0204	0.0633			
Capacity	ALVN-CAPY	\$/kVA/day	0.0370	-	0.0370			
Power factor	ALVN-PWRF	\$/kVAr/day	0.2917	-	0.2917			
Volume, injection	ALVN-INJT	\$/kWh	-	-	-			

- The fixed price (ALVN-FIXD) applies to the number of days each ALVN low voltage consumer's point of connection is energised.
- The volume price (ALVN-24UC) applies to all electricity distributed to each ALVN low voltage consumer.
- The capacity price (ALVN-CAPY) applies to the capacity of each ALVN low voltage consumer connected to Vector's network.
- The power factor price (ALVN-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (ALVN-INJT) applies to all electricity injected into the network by each ALVN low voltage consumer.

### Low voltage price category ALVT

The ALVT price category is available to low voltage consumers with metering capable of recording half hourly data.

Price category ALVT							
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price		
Volume	ALVT-24UC	\$/kWh	0.0166	-	0.0166		
Capacity	ALVT-CAPY	\$/kVA/day	0.0370	-	0.0370		
Demand	ALVT-DAMD	\$/kVA/day	0.0590	0.2480	0.3070		
Power factor	ALVT-PWRF	\$/kVAr/day	0.2917	-	0.2917		
Volume, injection	ALVT-INJT	\$/kWh	-	-	-		

- The volume price (ALVT-24UC) applies to all electricity distributed to each ALVT low voltage consumer.
- The capacity price (ALVT-CAPY) applies to the capacity of each ALVT low voltage consumer connected to Vector's network.
- The demand price (ALVT-DAMD) is a daily price applied to the average of each ALVT low voltage consumer's ten highest kVA demands (twice the kVAh half hourly reading) between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays in any one month.
- The power factor price (ALVT-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (ALVT-INJT) applies to all electricity injected into the network by each ALVT low voltage consumer.

### **Power factor prices**

Vector's distribution code requires consumers to maintain a power factor of greater than 0.95 lagging. If the consumer's power factor is below 0.95 lagging, Vector may apply power factor prices. Where the consumer's metering equipment does not record power factor, Vector may install power factor monitoring equipment and monitor the consumer's power factor.

The power factor amount is determined each month where a consumer's power factor is less than 0.95 lagging. This power factor amount (kVAr) is represented by twice the largest difference between the consumer's kVArh recorded in any one half-hour period and the kWh demand divided by three recorded in the same half-hour period, during each month. The price is applicable between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays.

#### **Consumer capacity**

The capacity used to allocate consumers to a price category and for calculating the consumer's charges is based on the nearest standard capacity of each consumer's point of connection as determined by Vector subject to the following conditions:

- Vector may require the consumer's demand not to exceed the capacity of their point of connection at any time;
- Changes to the capacity of the consumer's point of connection may be requested by the retailer;
- Any change to the consumer's capacity requires the current limiting device (such as a fuse or transformer) to be changed by Vector to the nearest standard capacity;
- Vector may pass some or all of the costs associated with the change in capacity on to the retailer (including removal of stranded assets such as transformers); and
- Changes to the consumer's capacity are subject to the agreement of Vector and the availability of spare capacity on Vector's network and may be subject to additional charges (such as capital contributions).

### **Extent of prices**

Vector's prices published in this schedule relate to the cost of owning, operating and maintaining the distribution network as it currently exists but do not include amongst other things, energy charges for the electricity consumers use, metering equipment charges, load control equipment located at the point of connection to the network, the cost of reading meters and the cost of consumer electrical installations or fittings.

In order for Vector to supply any new or changed distribution service, including but not limited to; changes to service standards, distributed generation, the connection to the network of additional points of connection and the modification, increased capacity, relocation or removal of current points of connection, Vector may apply non-standard prices other than those outlined in this schedule, or require a capital contribution on a case by case basis.

Vector's prices do not include ancillary service charges and loss constraint excess payments from the system operator and transmission provider respectively. These costs may be passed through by Vector directly to electricity retailers.

Should Vector forecast a potential price breach under the regulated price path, then Vector may provide a refund or rebate of electricity distribution charges directly to the electricity retailer in order to avoid such a breach.

All prices are exclusive of GST.

### **Provision of billing information**

The consumer's retailer must provide Vector with consumption data for each low voltage consumer and for each price as described in this schedule.

Where more than one meter at a point of connection is in use, but a single volume price applies, consumption data must be aggregated by the retailer before submitting to Vector.

Where a half hourly meter is fitted and the consumer's price category requires half hourly data, the consumer's retailer must submit half hourly consumption information.

Half hourly data provided by the retailer should contain the following channels; kWh, kVArh and kVAh, but must contain no less than two of these.

## Auckland electricity distribution network



### **Price schedule for transformer consumers**

### Applicable from 1 April 2016

This schedule describes Vector's standard prices for providing electricity distribution services in respect of transformer consumers on the Auckland network. Vector offers two price categories for transformer consumers on the Auckland network depending on the consumer's metering type.

### **Transformer consumer definitions**

A transformer consumer is where: the consumer is not a residential consumer (as defined in Vector's price schedule for residential consumer); the consumer's metered point of connection has a capacity greater than 69kVA; and the consumer's low voltage (400V three phase or 230V single phase) network is supplied directly from transformers owned by Vector.

The network that consumers are supplied from is determined by Vector from time to time based on the physical location of the point of connection of the consumer's electrical installation. The approximate area covered by the Auckland electricity distribution network is shown in green on the following map.



## Distribution prices and pass-through and recoverable cost prices

In the following pricing tables the "Delivery Price" column represents the Tariff Rate for Distribution Services and is the sum of the following components:

- "Dist. Price" is an indicative value for the distribution component of prices. These relate to Vector's costs of owning and operating our network; and
- "Pass. Price" is an indicative value for the passthrough and recoverable component of prices which relates to the costs from third parties

including but not limited to: Council rates, Electricity Authority, Commerce Act and Electricity and Gas Complaints Commissioner levies, and transmission charges from Transpower.

### **Transformer price category ATXN**

The ATXN price category is available to transformer consumers where the consumer's metered point of connection has a capacity less than or equal to 345kVA.

	Price category ATXN								
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price				
Fixed	ATXN-FIXD	\$/day	1.5300	-	1.5300				
Volume	ATXN-24UC	\$/kWh	0.0416	0.0204	0.0620				
Capacity	ATXN-CAPY	\$/kVA/day	0.0362	-	0.0362				
Power factor	ATXN-PWRF	\$/kVAr/day	0.2917	-	0.2917				
Volume, injection	ATXN-INJT	\$/kWh	-	-	-				

- The fixed price (ATXN-FIXD) applies to the number of days each ATXN transformer consumer's point of connection is energised.
- The volume price (ATXN-24UC) applies to all electricity distributed to each ATXN transformer consumer.
- The capacity price (ATXN-CAPY) applies to the capacity of each ATXN transformer consumer connected to Vector's network.
- The power factor price (ATXN-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (ATXN-INJT) applies to all electricity injected into the network by each ATXN transformer consumer.

### **Transformer price category ATXT**

The ATXT price category is available to transformer consumers with metering capable of recording half hourly data.

Price category ATXT							
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price		
Volume	ATXT-24UC	\$/kWh	0.0163	-	0.0163		
Capacity	ATXT-CAPY	\$/kVA/day	0.0362	-	0.0362		
Demand	ATXT-DAMD	\$/kVA/day	0.0528	0.2480	0.3008		
Power factor	ATXT-PWRF	\$/kVAr/day	0.2917	-	0.2917		
Volume, injection	ATXT-INJT	\$/kWh	-	-	-		

- The volume price (ATXT-24UC) applies to all electricity distributed to each ATXT transformer consumer.
- The capacity price (ATXT-CAPY) applies to the capacity of each ATXT transformer consumer connected to Vector's network.
- The demand price (ATXT-DAMD) is a daily price applied to the average of each ATXT transformer consumer's ten highest kVA demands (twice the kVAh half hourly reading) between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays in any one month.
- The power factor price (ATXT-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (ATXT-INJT) applies to all electricity injected into the network by each ATXT transformer consumer.

### **Power factor prices**

Vector's distribution code requires consumers to maintain a power factor of greater than 0.95 lagging. If the consumer's power factor is below 0.95 lagging, Vector may apply power factor prices. Where the consumer's metering equipment does not record power factor, Vector may install power factor monitoring equipment and monitor the consumer's power factor.

The power factor amount is determined each month where a consumer's power factor is less than 0.95 lagging. This power factor amount (kVAr) is represented by twice the largest difference between the consumer's kVArh recorded in any one half-hour period and the kWh demand divided by three recorded in the same half-hour period, during each month. The price is applicable between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays.

#### **Consumer capacity**

The capacity used to allocate consumers to a price category and for calculating the consumer's charges is based on the nearest standard capacity of each consumer's point of connection as determined by Vector subject to the following conditions:

- Vector may require the consumer's demand not to exceed the capacity of their point of connection at any time;
- Changes to the capacity of the consumer's point of connection may be requested by the retailer;
- Any change to the consumer's capacity requires the current limiting device (such as a fuse or transformer) to be changed by Vector to the nearest standard capacity;
- Vector may pass some or all of the costs associated with the change in capacity on to the retailer (including removal of stranded assets such as transformers); and
- Changes to the consumer's capacity are subject to the agreement of Vector and the availability of spare capacity on Vector's network and may be subject to additional prices (such as capital contributions).

### **Extent of prices**

Vector's prices published in this schedule relate to the cost of owning, operating and maintaining the distribution network as it currently exists but do not include amongst other things, energy charges for the electricity consumers use, metering equipment charges, load control equipment located at the point of connection to the network, the cost of reading meters and the cost of consumer electrical installations or fittings.

In order for Vector to supply any new or changed distribution service, including but not limited to; changes to service standards, distributed generation, the connection to the network of additional points of connection and the modification, increased capacity, relocation or removal of current points of connection, Vector may apply non-standard prices other than those outlined in this schedule, or require a capital contribution on a case by case basis.

Vector's prices do not include ancillary service charges and loss constraint excess payments from the system operator and transmission provider respectively. These costs may be passed through by Vector directly to electricity retailers.

Should Vector forecast a potential price breach under the regulated price path, then Vector may provide a refund or rebate of electricity distribution charges directly to the electricity retailer in order to avoid such a breach.

All prices are exclusive of GST.

### **Provision of billing information**

The consumer's retailer must provide Vector with consumption data for each transformer consumer and for each price as described in this schedule. Where more than one meter at a point of connection is in use, but a single volume price applies, consumption data must be aggregated by the retailer before submitting to Vector.

Where a half hourly meter is fitted and the consumer's price category requires half hourly data, the consumer's retailer must submit half hourly consumption information.

Half hourly data provided by the retailer should contain the following channels; kWh, kVArh and kVAh, but must contain no less than two of these.

## Auckland electricity distribution network



### Price schedule for high voltage consumers

### Applicable from 1 April 2016

This schedule describes Vector's standard prices for providing electricity distribution services in respect of high voltage consumers on the Auckland network. Vector offers two price categories for high voltage consumers on the Auckland network depending on the consumer's metering type.

### **High voltage consumer definitions**

A high voltage consumer is where: the consumer is not a residential consumer (as defined in Vector's price schedule for residential consumers); the consumer's metered point of connection has a capacity greater than 69kVA and is supplied directly from Vector's high voltage (6.6kV or higher) network.

The network that consumers are supplied from is determined by Vector from time to time based on the physical location of the point of connection of the consumer's electrical installation. The approximate area covered by the Auckland electricity distribution network is shown in green on the following map.



## Distribution prices and pass-through and recoverable cost prices

In the following pricing tables the "Delivery Price" column represents the Tariff Rate for Distribution Services and is the sum of the following components:

- "Dist. Price" is an indicative value for the distribution component of prices. These relate to Vector's costs of owning and operating our network; and
- "Pass. Price" is an indicative value for the passthrough and recoverable component of prices which relates to the costs from third parties including but not limited to: Council rates,

Electricity Authority, Commerce Act and Electricity and Gas Complaints Commissioner levies, and transmission charges from Transpower.

### **High voltage price category AHVN**

The AHVN price category is available to high voltage consumers where the consumer's metered point of connection is less than or equal to 345kVA.

	Price category AHVN							
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price			
Fixed	AHVN-FIXD	\$/day	1.4800	-	1.4800			
Volume	AHVN-24UC	\$/kWh	0.0398	0.0204	0.0602			
Capacity	AHVN-CAPY	\$/kVA/day	0.0351	-	0.0351			
Power factor	AHVN-PWRF	\$/kVAr/day	0.2917	-	0.2917			
Volume, injection	AHVN-INJT	\$/kWh	-	-	-			

- The fixed price (AHVN-FIXD) applies to the number of days each AHVN high voltage consumer's point of connection is energised.
- The volume price (AHVN-24UC) applies to all electricity distributed to each AHVN high voltage consumer.
- The capacity price (AHVN-CAPY) applies to the installed capacity of each AHVN high voltage consumer connected to Vector's network.
- The power factor price (AHVN-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (AHVN-INJT) applies to all electricity injected into the network by each AHVN high voltage consumer.

### High voltage price category AHVT

The AHVT price category is available to high voltage consumers with metering capable of recording half hourly data.

Price category AHVT							
Description	Code	Units	Dist. Price	Pass. Price	Delivery Price		
Volume	AHVT-24UC	\$/kWh	0.0158	-	0.0158		
Capacity	AHVT-CAPY	\$/kVA/day	0.0351	-	0.0351		
Demand	AHVT-DAMD	\$/kVA/day	0.0437	0.2480	0.2917		
Excess demand	AHVT-DEXA	\$/kVA/day	0.7722	-	0.7722		
Power factor	AHVT-PWRF	\$/kVAr/day	0.2917	-	0.2917		
Volume, injection	AHVT-INJT	\$/kWh	-	-	-		

- The volume price (AHVT-24UC) applies to all electricity distributed to each AHVT high voltage consumer.
- The capacity price (AHVT-CAPY) applies to the nominated capacity of each AHVT high voltage consumer connected to Vector's network.
- The demand price (AHVT-DAMD) is a daily price applied to the average of each AHVT high voltage consumer's ten highest kVA demands (twice the kVAh half hourly reading) between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays in any one month.
- The excess demand price (AHVT-DEXA) is a daily price applied to the difference between the anytime maximum kVA demand (twice the maximum kVAh half hourly reading) and the nominated capacity in any one month, where the AHVT high voltage consumer's anytime maximum demand is greater than the nominated capacity.
- The power factor price (AHVT-PWRF) is a daily price applied to the power factor amount.
- The volume injection price (AHVT-INJT) applies to all electricity injected into the network by each AHVT high voltage consumer.

### **Power factor prices**

Vector's distribution code requires consumers to maintain a power factor of greater than 0.95 lagging. If the consumer's power factor is below 0.95 lagging, Vector may apply power factor prices. Where the consumer's metering equipment does not record power factor, Vector may install power factor monitoring equipment and monitor the consumer's power factor.

The power factor amount is determined each month where a consumer's power factor is less than 0.95 lagging. This power factor amount (kVAr) is represented by twice the largest difference between the consumer's kVArh recorded in any one half-hour period and the kWh demand divided by three recorded in the same half-hour period, during each month. The price is applicable between 08:00 and 20:00 (time periods 17 to 40) on weekdays including public holidays.

### **Consumer capacity**

For high voltage consumers, the capacity used for calculating charges cannot always be determined based on physical capacity limiting devices. For this reason Vector has a process for retailers to nominate the capacity of high voltage consumer point of connections subject to the following conditions:

- Vector may require the consumer's demand not to exceed the nominated capacity of their point of connection at any time;
- Changes to the consumer's nominated capacity may be requested by the retailer;
- The nominated capacity may only be changed once in each 12 month period ending on 31 March each year;
- Nominated capacities must reasonably estimate the capacity requirement of each high voltage consumer connected to Vector's network;
- Changes to the nominated capacity are subject to the agreement of Vector and the availability of spare capacity on Vector's network;
- Vector may pass some or all of the costs associated with the change in nominated capacity on to the retailer;
- Vector does not guarantee the availability of increased nominated capacity at any time; and
- The application of excess demand prices does not imply or guarantee the availability of increased nominated capacity above the consumer's existing nominated capacity.

### **Extent of prices**

Vector's prices published in this schedule relate to the cost of owning, operating and maintaining the distribution network as it currently exists but do not include amongst other things, energy charges for the electricity consumers use, metering equipment charges, load control equipment located at the point of connection to the network, the cost of reading meters and the cost of consumer electrical installations or fittings.

In order for Vector to supply any new or changed distribution service, including but not limited to; changes to service standards, distributed generation, the connection to the network of additional points of connection and the modification, increased capacity, relocation or removal of current points of connection, Vector may apply non-standard prices other than those outlined in this schedule, or require a capital contribution on a case by case basis. Vector's prices do not include ancillary service charges and loss constraint excess payments from the system operator and transmission provider respectively. These costs may be passed through by Vector directly to electricity retailers.

Should Vector forecast a potential price breach under the regulated price path, then Vector may provide a refund or rebate of electricity distribution charges directly to the electricity retailer in order to avoid such a breach.

All prices are exclusive of GST.

### **Provision of billing information**

The consumer's retailer must provide Vector with consumption data for each high voltage consumer and for each price as described in this schedule.

Where more than one meter at a point of connection is in use, but a single volume price applies, consumption data must be aggregated by the retailer before submitting to Vector.

Where a half hourly meter is fitted and the consumer's price category requires half hourly data, the consumer's retailer must submit half hourly consumption information.

Half hourly data provided by the retailer should contain the following channels; kWh, kVArh and kVAh, but must contain no less than two of these.

# Auckland electricity distribution network



### High voltage nominated capacity request form

Please provide the following information and send to <u>vector.billing@vector.co.nz</u> or directly to the consumer's Vector key account manager:

Business name:	
Contact person:	
Point of connection address:	
Postal address (if different from point of connection address):	
Email address:	Fax number:
Phone number:	ICP number:
Installed capacity (kVA):	
Nominated capacity request (kVA):	
Norminated capacity request (KVA).	
Energy retailer (at time of application):	
Request date from which nominated capacity is to apply:	
Signed on behalf of:	
_By:	
Signature of Retailer:	
Name of Signatory	
Name of Signatory:	
_Date:	