



POWERCO

Powerco Limited

Electricity Pricing Schedule

Loss Factors

Guide to Billing and Settlement Process

Effective 1 April 2013

TABLE OF CONTENTS

PART A: GENERAL TERMS AND CONDITIONS	3
1.0 INTRODUCTION	3
2.0 INTERPRETATION	3
3.0 DEFINITIONS	3
4.0 ICP STATUS	9
5.0 SELECTION OF PRICE CATEGORY	9
6.0 PRICE CATEGORIES: WESTERN AND EASTERN REGION	10
7.0 PRICE CATEGORIES: TRANSPARENT PASS THROUGH DISTRIBUTIONS	10
8.0 PRICE CATEGORIES: NEW SUBDIVISION CHARGES	10
9.0 MISCELLANEOUS MATTERS	11
10.0 PRICE CATEGORY: ADJUSTMENT REBATE DISTRIBUTION	11
11.0 PRICE CATEGORY: DISTRIBUTED/EMBEDDED GENERATION	11
12.0 PRICE CATEGORY: EMBEDDED NETWORK	12
13.0 PRICE CATEGORY: ASSET-BASED PRICING METHODOLOGY	12
14.0 PRICE CATEGORY: CUSTOMER SPECIFIC INVESTMENT – ASSET BASED 'BUILDING BLOCK' METHODOLOGY (BBM)	15
15.0 BBM ASSET BASED PRICING	15
16.0 CONTROLLED PRICE CATEGORIES AND CONTROLLED TARIFF OPTIONS	16
PART B: WESTERN REGION	19
17.0 APPLICATION	19
18.0 PRICE CATEGORY: HIGH-VOLTAGE METERING UNITS	19
19.0 PRICE CATEGORY: STREET LIGHT LIGHTING CONTROL EQUIPMENT CHARGE	19
20.0 PRICE CATEGORIES: E1C AND E1UC	19
21.0 PRICE CATEGORY: E100	20
22.0 PRICE CATEGORY: E300	21
23.0 WESTERN REGION CHARGES	23
24.0 POWER FACTOR CHARGES	26
PART C: EASTERN REGION	27
25.0 APPLICATION	27
26.0 PRICE CATEGORIES: VALLEY DISTRIBUTION NETWORK	27
27.0 VALLEY PRICE SCHEDULE	28
28.0 PRICE CATEGORIES: TAURANGA DISTRIBUTION NETWORK	29
29.0 TAURANGA PRICE SCHEDULE	30
30.0 PRICE CATEGORY: POWER FACTOR CHARGES	31
31.0 CONDITIONS: UNMETERED LOAD PRICE CATEGORIES	32
32.0 CONDITIONS: BUILDER'S TEMPORARY SUPPLY	32
33.0 CONDITIONS: LOW-USAGE PRICE CATEGORIES AND TARIFF OPTIONS	32
34.0 CONDITIONS: DESCRIPTION OF CONTROLLED OPTIONS	33
35.0 CONDITIONS: METERING REQUIREMENTS	35
36.0 CONDITIONS: METER REGISTER CODE REPORTING	35
37.0 CONDITIONS: ASSET SPECIFIC LINE CHARGES	35
38.0 DATA FILE REQUIREMENTS	36
EASTERN UNMETERED SUPPLY SCHEDULE	39
1.0 INTRODUCTION	39
2.0 UNMETERED ICP CHARGE PROCESS	39
3.0 NIGHT HOURS	40
4.0 VALLEY AND TAURANGA STREET LIGHT CHARGE CODE TABLE	40
5.0 VALLEY AND TAURANGA DAY (24 HOUR) UNMETERED LOAD CHARGE CODE TABLE	41
6.0 GLOSSARY – CHARGE CODE TABLE	41
LOSS FACTORS	43
1.0 GENERAL	43
2.0 WESTERN REGION LOSS FACTORS AS AT 1 APRIL 2013	43
3.0 EASTERN REGION LOSS FACTORS AS AT 1 APRIL 2013	44
4.0 SITE-SPECIFIC LOSSES	45
GUIDE TO BILLING AND SETTLEMENT PROCESS	47
APPENDIX 1	52
CONSUMERS WITH HV METERING UNITS (CT/VT CHARGES AS PER PARAGRAPH 18.2 APPLY)	52
CONSUMERS WITH HV METERING UNITS (CT/VT CHARGES DO NOT APPLY)	53

Part A: General Terms and Conditions

1.0 Introduction

- 1.1 This Pricing Schedule applies to the Distributor's Networks and sets the prices for use of the network effective from 1 April 2013.
- 1.2 This Pricing Schedule is made up of three parts:
Part A – Price categories applying to both the Western and Eastern regions;
Part B – Price categories for the Western Region only; and
Part C – Price categories for the Eastern Region only.
- 1.3 For any Network Agreement that is in the form of the Model Use of System Agreement, published by the Electricity Authority, this Pricing Schedule forms Schedules 10, 11 and 12 of that Network Agreement.
- 1.4 Where any provision of this Pricing Schedule conflicts with the provisions of any Network Agreement, the Network Agreement will prevail.

2.0 Interpretation

- 2.1 All charges are exclusive of GST.
- 2.2 All times stated in this Pricing Schedule are in New Zealand Daylight Saving Time.

3.0 Definitions

- 3.1 Unless the context otherwise requires, terms in the Pricing Schedule defined in the Network Agreement have those defined meanings.
- 3.2 Some additional terms are defined where required in Parts B and C of this Pricing Schedule and apply to the relevant part only.
- 3.3 **“Anytime Maximum Demand” (AMD)** means, in respect of a Western Region Consumer, on a 12-month rolling basis the highest kVA peak occurring at anytime for that Consumer. In respect of an Eastern Region Consumer, AMD means the highest kW peak occurring any time in the twelve month period from 1 January to 31 December, the result of which is applied in the subsequent Price Year commencing 1 April.
- 3.4 **“Avoided Cost of Transmission” (ACOT)** is the amount equal to the actual reduction in the interconnection charges of new investment charges that are payable by Powerco to Transpower under the relevant agreement. ACOT charges are a substitute for what otherwise would have been Transpower charges.
- 3.5 **“Connection” or “Point of Connection”** means each point of connection at which a supply of electricity may flow between the Distribution Network and the Consumer's installation, as defined by the Distributor.
- 3.6 **“Consumer”** means a purchaser of electricity from the Retailer where the electricity is delivered via the Distribution Network.

- 3.7 **“Consumption Data”** means data, provided by the Retailer to the Distributor as required under the Network Agreement, showing details of the measured electricity consumption on the Distribution Network(s) to which the Network Agreement applies.
- 3.8 **“Consumption Data Due Date”** means the date the Retailer must provide Consumption Data.
- 3.9 **“Consumption Month”** means the month to which Consumption Data relates.
- 3.10 **“Controlled Price Category” or “Controlled Tariff Option”** means a Price Category or Tariff Option allocated to an ICP where the ICP meets the criteria set out in paragraph 16.3.
- 3.11 **“Current Month”** means the month in which the charges to the Retailer are being invoiced.
- 3.12 **“Customer”** means a direct customer or a Retailer (where the Retailer is the customer).
- 3.13 **“Default Price Path (DPP)”** means Powerco’s compliance with clause 8 of the Commerce Act (Electricity Distribution Services Default Price-Quality Path Determination 2012).
- 3.14 **“Demand”** means the rate of expending electrical energy expressed in kilowatts (kW) or kilovolt amperes (kVA).
- 3.15 **“Distributed Generation” or “Embedded Generation”** means electricity generation that is connected and distributed within the Network.
- 3.16 **“Distributed Generator” or “Embedded Generator”** means an electricity generation plant producing Embedded Generation.
- 3.17 **“Distribution Network” or “Network”** means:

DISTRIBUTION NETWORK		
EASTERN NETWORK	REGION	Valley – the Distribution Network connected to the Transpower transmission system at the GXPs at: Hinuera (HIN) Kinleith (KIN) Kopu (KPU) Piako (PAO) Waihou (WHU) Waikino (WKO)
		Tauranga – the Distribution Network connected to the Transpower transmission system at the GXPs at: Tauranga (TGA) Mt Maunganui (MTM) Te Matai (TMI) Kaitimako (KMO)
WESTERN NETWORK	REGION	Wairarapa – the Distribution Network connected to the Transpower transmission system at the GXPs at: Greytown (GYT) Masterton (MST)
		Manawatu – the Distribution Network connected to the Transpower transmission system at the GXPs at:

DISTRIBUTION NETWORK	
	Bunnythorpe (BPE) Linton (LTN) Mangamaire (MGM)
	Taranaki – the Distribution Network connected to the Transpower transmission system at the GXP's at: Carrington (CST) Huirangi (HUI) Hawera (HWA) New Plymouth (NPL) Opunake (OPK) Stratford (SFD)
	Wanganui – the Distribution Network connected to the Transpower transmission system at the GXP's at: Brunswick (BRK) Marton (MTN) Mataroa (MTR) Ohakune (OKN) Wanganui (WGN) Waverley (WVY)

- 3.18 **“Distributor”** means Powerco Limited, as the operator and owner of the Distribution Networks, and includes its subsidiaries, successors and assignees.
- 3.19 **“Electricity Industry Participant Code” or “Code”** means the rules made by the Electricity Authority under Part 2 of the Electricity Industry Act 2010, as may be amended from time to time.
- 3.20 **“Electrical System”** means the Distributor’s overhead and underground electricity distribution and subtransmission power system network.
- 3.21 **“Embedded Network”** means electricity distribution network that is owned by someone other than the Distributor, where Consumers have ICPs allocated and managed by the embedded network owner (or another Code participant appointed for the purpose), that is connected to the Distribution Network and electricity traded is reconciled at the point of connection between the embedded network and the Distribution Network.
- 3.22 **“Full Replacement File” (R)** means a Consumption Data file that is intended to fully replace a previously submitted Initial File.
- 3.23 **“Grid Exit Point” (GXP)** means a point of connection between Transpower’s transmission system and the Distributor’s Network.
- 3.24 **“GST”** means Goods and Services Tax, as defined in the Goods and Services Tax Act 1985.
- 3.25 **“High-Voltage” (HV)** means voltage above 1,000 volts, generally 11,000 volts, for supply to Consumers.
- 3.26 **“High-Voltage (HV) Metering Units”** means the collective term used to describe the Voltage Potential and Current Transformers used primarily for transforming and isolating high voltages and currents into practical and readable quantities for use with revenue-metering equipment. In most instances, the meter is not Powerco-owned.
- 3.27 **“Home” or “Homes”** means a premises which:

Is used or intended for occupation mainly as a place of residence (for example, it is not mainly a business premises);

- (a) Is the principal place of residence of the residential Consumer who contracts with the Retailer to purchase electricity for the Home (for example, it is not just a holiday home);
- (b) Is a domestic premises as defined by Section 1 of the Electricity Industry Act 2010;
- (c) Is not a building ancillary to a person's principal place of residence (for example, a shed or garage) that is separately metered; and,
- (d) Is not exempted from Low-Usage Tariff Option coverage under an exemption granted under the Electricity (Low-Fixed Tariff Option for Domestic Consumers) Regulations 2004.

- 3.28 **“Initial File” (I)** means the initial Consumption Data reported for an ICP, for a specific consumption period.
- 3.29 **“Installation Control Point” (ICP)** means a Point of Connection on the Distributor's Network, which the Distributor nominates as the point at which a Retailer is deemed to supply electricity to a Consumer, and has the attributes set out in the Code.
- 3.30 **“Instructing Retailer”** means, with respect to a Distribution Network, the Retailer that supplies the majority of ICPs in a region; which are under load management unless the Retailers and Powerco otherwise agree.
- 3.31 **“Interest Rate”** means, on any given day, the rate (expressed as a percentage per annum and rounded to the nearest fourth decimal place) displayed on Reuters' screen page BKBM (or its successor page) at or about 10:45am on that day as the bid rate for three-month bank-accepted bills of exchange or, if no such rate is displayed or that page is not available, the average (expressed as a percentage per annum and rounded up to the nearest fourth decimal place) of the bid rates for three-month bank-accepted bills of exchange quoted at or around 10.45am on that day by each of the entities listed on the Reuters' screen page when the rate was last displayed or, as the case may be, that page was last available.
- 3.32 **“kVA”** means kilovolt–ampere (amp).
- 3.33 **“kVAh”** means kilovolt ampere hour.
- 3.34 **“kVAr”** means kilovolt ampere reactive.
- 3.35 **“kW”** means kilowatt.
- 3.36 **“kWh”** means kilowatt hour.
- 3.37 **“Lighting Control Equipment”** means any equipment (including meters, receivers, relays and ripple control receivers) wherever situated within a Region, designed to receive control signals for council or NZTA street lighting or under-veranda lights.

- 3.38 **“Line Charges”** means the fixed and variable charges levied by the Distributor on Customers for the use of the Distribution Network, as described in this Pricing Schedule.
- 3.39 **“Load Control Equipment”** means any equipment (including meters, receivers, relays and ripple control receivers) wherever situated within a region, designed to receive Load Management Service signals. (Equipment designed to receive signals to control street lighting is not considered to be Load Control Equipment and is defined as Lighting Control Equipment).
- 3.40 **“Load Management Service”** means providing a signal for the purpose of reducing or interrupting delivery of load to all or part of a Consumer’s premises within any Region.
- 3.41 **“Low Fixed Price Categories”** means the Low Fixed Tariff Options for Line Charges described in paragraphs 27 and 29 and subject to the conditions set out in paragraph 33 of this Pricing Schedule.
- 3.42 **“Low Fixed Tariff Options”** means the Low-Fixed Tariff options for Line Charges described in paragraphs 27 and 29 and subject to the conditions set out in paragraph 33 of this Pricing Schedule.
- 3.43 **“Low Voltage” (LV)** means voltage of value up to 1,000 volts, generally 230 or 400 volts for supply to Consumers.
- 3.44 **“Network Agreement”** means the Network Agreement, Network Services Agreement, Network Connection Agreement, Electricity Delivery Agreement, Use of System Agreement, Conveyance and Use of System Agreement or Agreement for Use of Networks and, to avoid doubt, includes any agreement in the form of the Model Use of System Agreement of which this Pricing Schedule forms a part.
- 3.45 **“MVA”** means Megavolt Ampere
- 3.46 **“Optimised Deprival Value” (ODV)** means, in respect of the Distributor’s assets, the value attributed by applying the ODV methodology, as set out in the Handbook for Optimised Deprival Valuation of System Fixed Assets of Electricity Line Businesses published by the Commerce Commission in 2004.
- 3.47 **“Optimised Replacement Cost” (ORC)** is an estimate of the current cost of replacing the asset with one that can provide the required service in the most efficient way. Under this approach, asset values are adjusted if assets exhibit excess capacity, are over-engineered, are poorly designed (compared with modern technology) or are poorly located.
- 3.48 **“Optimised Depreciated Replacement Cost” (ODRC)** is an estimate of the ORC value, less an allowance for depreciation that reflects the age of the asset.
- 3.49 **“On Peak Demand” (OPD)** is the average of Consumer’s demand during the 100 regional peak periods as notified by Transpower. The 100 regional peak periods will be between 1 September 2011 and 31 August 2012 for the Price Year effective 1 April 2013. The OPD is used in calculating the Line Charges of a Consumer on an asset-based load group such as the V40, T50, V60 and T60 load groups.

- 3.50 “**Partial Replacement File**” (X) means a Consumption Data file that adds additional ICP consumption records to a previously submitted Initial File and/or replaces specific ICPs records within the file only.
- 3.51 “**Payment Month**” means the month in which the Retailer must remit money in respect to the Current Month’s charges. For electricity Retailers, the Payment Month is the same month as the Current Month.
- 3.52 “**Point of Connection**” means the point at which electricity may flow between the Network and the Consumer’s Installation and to which an Installation Control Point is allocated.
- 3.53 “**Powerco**” means Powerco Limited and any of its subsidiaries, successors and assignees.
- 3.54 “**Price Category**” means the relevant price category selected by the Distributor from this Pricing Schedule to define the Line Charges applicable to a particular ICP.
- 3.55 “**Pricing Schedule**” means this pricing schedule.
- 3.56 “**Price Year**” means the 12-month period between 1 April and 31 March.
- 3.57 “**Reconciliation Manager**” (RM) means the person appointed from time to time as the Reconciliation Manager pursuant to the Code or such other person from time to time to whom metering data in respect of electricity is to be sent pursuant to the Code.
- 3.58 “**Recoverable Costs**” has the meaning defined in the Commerce Act (Electricity Distribution Services Default Price-Quality Path Determination 2012).
- 3.59 “**Region**” means the Eastern Region or the Western Region as the case may be.
- 3.60 “**Registry**” means the Electricity Authority central Registry.
- 3.61 “**Replacement Data**” means Full Replacement Files or Partial Replacement Files.
- 3.62 “**Retailer**” means the supplier of electricity to Consumers with installations connected to the Distribution Network.
- 3.63 “**Time of Use Meter**” (TOU) means metering that measures the electricity consumed for a particular period (usually half-hourly) and complies with Part 10 of the Code.
- 3.64 “**Tariff Option**” means the price option within a Price Category where such a Price Category provides for Retailer choice amongst two or more options, subject to a particular configuration of metering and Load Control Equipment.

- 3.65 **“Transmission Rebates”** means the economic value adjustment and the loss and constraint excesses rebated to the Distributor, in respect of a Distribution Network, by Transpower.
- 3.66 **“Uncontrolled Price Category” or “Uncontrolled Tariff Option”** means a Price Category or Tariff Option allocated to an ICP where the ICP does not meet the criteria set out in paragraph 16.

4.0 ICP Status

- 4.1 The status of an ICP, as recorded on the Registry, is managed by Distributors and Retailers. The ICP lifecycle, billing status and when charges are applicable for each status is detailed below:
- (a) New (999) – Newly created ICP. Line Charges do not apply.
 - (b) Ready (000) – Network status is livened, Line Charges applicable.
 - (c) Active (002) – Energised. Electricity is flowing, Line Charges applicable.
 - (d) Inactive (001)
 - I. 04 – De-energised – vacant. Fuse or link removed. Electricity cannot flow. Line Charges do not apply.
 - II. 05 – Reconciled elsewhere. Line Charges do not apply.
 - III. 06 – De-energised, awaiting decommission. Line Charges do not apply.
 - (e) Decommissioned (003)
 - I. 01 – Set up in error. Line Charges no longer apply.
 - II. 02 – Dismantled – supply physically dismantled, meets requirements of Powerco permanent disconnection standard. Line Charges do not apply.
 - III. 03 – Amalgamated. Line Charges no longer apply.

5.0 Selection of Price Category

- 5.1 Where different Price Categories exist within the Line Charges, the Distributor will be entitled to determine which Price Category will apply to an ICP. In determining which Price Category should apply to an ICP, the Distributor will have regard to the Consumer’s Connection, the information provided by the Consumer or their representative before application as to the expected load, the Consumer’s demand profile and capacity requirements and any other relevant factors.
- 5.2 If the Retailer reasonably considers that a Price Category has been inappropriately allocated to an ICP, the Retailer will notify the Distributor and the Distributor will advise the Retailer, within 10 working days, as to whether or not it agrees to allocate a different Price Category to that ICP. The Retailer will provide the Distributor with the reasons why it considers the Price Category has been inappropriately allocated to the ICP, and the Distributor will provide to the Retailer information relevant to its decision.
- 5.3 Where the Distributor reasonably considers that a different Price Category should be allocated to a particular ICP:
- (a) The Distributor will notify the Retailer accordingly, including the reasons why it considers the Price Category allocated to the ICP should be changed; and

- (b) Unless the Retailer is able to provide evidence to the Distributor's reasonable satisfaction within 10 working days of the Distributor's notice that the current Price Category is appropriate, the Distributor will be entitled to allocate the Price Category that it considers appropriate to that ICP and to commence charging the Retailer for Distribution Services in accordance with that Price Category after a further 40 working days; and
- (c) The Distributor will provide to the Retailer information relevant to its decision.

6.0 Price Categories: Western and Eastern Region

- 6.1 Paragraphs 8 to 12 set out the Price Categories that apply to both the Western and Eastern regions.
- 6.2 The Retailer has no choice in relation to the applicability of the Price Categories in paragraphs 8 to 12 and each Price Category is applicable to the Retailer.

7.0 Price Categories: Transparent Pass Through Distributions

- 7.1 Powerco distributes the net actual amount of Transmission Rebates (loss and constraint excess payments) received by Powerco as follows:
 - (a) **Loss Rental Rebates (LRR):** Powerco will distribute the actual amount of the losses and constraint rebates received from Transpower (TPNZ) to Customers (direct billed and Retailers) in proportion to their respective kWh volumes, by Region. LRR will be credited to Customers using the Retailer initial billing volumes that correspond with the TPNZ credit note month.
 - (b) LRR will not be subject to wash-ups if the underlying Retailer initial billing volumes change.

8.0 Price Categories: New Subdivision Charges

- 8.1 Subject to the Electricity (Low Fixed Tariff Option for Domestic Consumers) Regulations 2004, where the Distributor extends the Distribution Network to establish new Connections in a subdivision development, the Distributor may notify charges that will apply specifically to those new Connections and the dates from which such charges are to be effective.

9.0 Miscellaneous Matters

9.1 The following miscellaneous charges are payable by the Retailer:

PRICE CATEGORIES	CHARGE
<p>A Price Category or Tariff Option Change Fee: Payable by the Retailer when a current Consumer’s Price Category or Tariff Option is changed more than once in any 12-month period. The Distributor may, at its discretion, waive this fee.</p>	<p>\$30 per Point of Connection (payable for the second and each subsequent instance).</p>
<p>B Incorrect or Incomplete Consumption Data Fee: Payable where Consumption Data, to be provided by the Retailer to the Distributor, does not comply with the requirements of the Network Agreement. It will be charged on the basis of the actual time spent by a billing analyst or the cost of engaging external consultants/experts to review, correct, validate and reconcile the information. The Distributor may, at its discretion, waive this fee.</p>	<p>\$100 per hour.</p>
<p>C Late Consumption Data Fee: Payable where the Consumption Data required to be provided by the Retailer to the Distributor is received by the Distributor after the due date for the receipt of that Consumption Data. The charge is based on the Distributor’s cost of funds and the cost of using billing analysts to address the delay. The Distributor may, at its discretion, waive this fee.</p>	<p>The reasonable costs incurred by the Distributor (including costs associated with late receipt of payment due to late invoicing) as a result of the late data supply. \$100 per hour for each billing analyst’s hour required to address the late supply of data.</p>
<p>D Ad hoc Report Fee: Payable where a Retailer requests an ad hoc report that is not generally supplied by the Distributor. The Distributor may, at its discretion, waive this fee.</p>	<p>\$100 per hour or such other fee as may be agreed.</p>
<p>E Non-Network Fault Fee: All non-Electrical Systems fault work, or Retailer or Customer services not listed above, will be charged to the Customer on a time and materials basis at market rates. The Distributor may, at its discretion, waive this fee.</p>	<p>Time and materials basis at market rates.</p>

10.0 Price Category: Adjustment Rebate Distribution

10.1 The Distributor is subject to regulation of its prices in the form of the Price Path Threshold under Part 4 of the Commerce Act 1986. This imposes considerable risk to the Distributor if, due to estimation errors, its pricing exceeds the allowable threshold.

10.2 The Distributor may distribute a rebate to Customers to ensure compliance with the Default Price Path. The total dollar amount to be distributed as a rebate will be allocated between Customers in proportion to their respective kWh volumes on the Distribution Network reconciled for the period from 1 April 2012 up to the end of the month prior to the month in which the distribution is calculated.

11.0 Price Category: Distributed/Embedded Generation

11.1 Any Distributed/Embedded Generator connected to the Network will be subject to Part 6 of the Electricity Industry Participation Code 2010 and Powerco’s Distributed Generation Policy, or a separate Distributed/Embedded Generation Network Connection Agreement between the Distributor, the party wanting to connect the Distributed/Embedded Generator and, if appropriate, the Retailer.

11.2 Any person wanting to connect a Distributed/Embedded Generator to the Network must apply to the Distributor for consent to such connection. All

applications for the connection of Distributed/Embedded Generators to the Network will be assessed by the Distributor on a case-by-case basis, having regard to Part 6 of the Electricity Industry Participation Code 2010, Powerco's Distributed Generation Policy and the circumstances that apply in each case.

- 11.3 Powerco's Distributed Generation Policy is published on Powerco's website at: www.powerco.co.nz.
- 11.4 Avoided Cost of Transmission (ACOT) – For details on qualification for, and application of, ACOT to a Distributed/Embedded Generation connection, refer to Powerco's Distributed Generation Policy.
- 11.5 Power Factor – Any Distributed Generation connection with a power factor of less than 0.95 lagging may attract a power factor charge as detailed in paragraphs 24 and 30. For full details, please refer to Powerco's Distributed Generation Policy.

12.0 Price Category: Embedded Network

- 12.1 Any new Embedded Network connected to the Network will be subject to Powerco's Network Connection Standard, Embedded Network Standard, and a separate agreement between the Distributor, the party wanting to connect the Embedded Network and, if appropriate, the Retailer.
- 12.2 Any person wanting to connect a new Embedded Network to the Network must apply to the Distributor for consent to such connection and comply with Powerco's Network Connection Standard and Embedded Network Standard. All applications for the connection of an Embedded Network to the Network will be assessed by the Distributor on a case-by-case basis, having regard to the circumstances that apply in each case.
- 12.3 Pricing for new Embedded Networks will be on the basis of asset-based pricing for the Eastern Region, E300 Price Category or asset based pricing (greater than 1500 kVA) for the Western Region, utilising a minimum level of demand appropriate to the Distributor's estimate of the installed capacity of the Embedded Network and this and other terms will be the subject of the separate agreement referred to above.

13.0 Price Category: Asset-Based Pricing Methodology

- 13.1 This pricing methodology applies to large Powerco Consumers in the Eastern and Western Regions and others that opt for an asset-based price. Powerco groups its large Consumers into the following categories (termed "load groups"):
 - T50: Tauranga region, 300 kVA to 1,499kVA installed capacity;
 - T60: Tauranga region, 1,500kVA or higher installed capacity;
 - V40: Valley region, 300 kVA to 1,499kVA installed capacity;
 - V60: Valley region, 1,500kVA or higher installed capacity; and
 - SPECIAL: Western Region 1500 kVA or higher installed capacity.

Other Consumers to whom asset-based pricing may apply include;

- Generation Connections; and
- Bypass pricing.

- 13.2 The methodology for setting Line Charges under asset-based pricing comprises the following components:
- Measurement of Consumer demand;
 - Asset valuation and allocation;
 - Return of and on capital;
 - Allocation of maintenance costs; and
 - Allocation of indirect costs (fixed and variable).
- 13.3 Asset-based charges to Consumers are allocated on the basis of a full Price Year and therefore apply for the full Price Year.
- 13.4 Powerco charges Consumers according to their level of demand, which is measured in the following two ways:
- (a) Anytime Maximum Demand (AMD): This is the highest peak occurring any time in the 12 month period from 1 January to 31 December, the result of which is applied in the subsequent pricing year commencing 1 April; and
 - (b) On-Peak Demand (OPD): This is measured as the Consumer's average demand during the highest 100 regional peak periods notified by Transpower during the capacity measurement period, which is from 1 September to 31 August. The OPD result is applied to the pricing year commencing 1 April in the subsequent year.
- 13.5 Powerco's Line Charges involve valuing the assets used to supply the service, using either the ORC or ODRC methods.
- Whether the ORC or ODRC methodology is adopted depends on the Consumer load group. For load groups T50 and V40 the ODRC methodology is used. For load groups T60 and V60 the ORC methodology is used.
- 13.6 Powerco's asset-based pricing involves allocating assets into two categories, namely onsite assets and upstream assets, to different Consumers.
- (a) On-site assets are dedicated assets behind the Point of Connection and normally include transformers and switch gear. These assets are allocated fully to the Consumer to whom they relate.
 - (b) Upstream assets are the meshed assets of the network. These assets are shared between a number of Consumers and generally may be categorised as: feeder assets; substation assets; subtransmission assets; and Grid Exit Point (GXP) assets. These assets are allocated across the Consumers that they serve.
- 13.7 Powerco's charges are determined so as to allow it to obtain a return on the capital it has invested. In the asset allocation process, an annual rate of return is sought on the asset valuations attributed to each Consumer. The return is at Powerco's prevailing weighted average cost of capital (WACC), which is reviewed annually. This WACC is an estimate of Powerco's overall cost of capital, inclusive of equity and debt. For those assets valued using ORC, Powerco uses a 45 year annuity factor to obtain

a return of and on the capital it has invested (as measured by ORC). For those assets valued using ODRC, Powerco applies the WACC to the ODRC values to obtain a return on its capital invested, and uses a straight-line depreciation charge to obtain a return of its capital.

- 13.8 Maintenance costs are allocated to the load group (T50 and V40) on the basis of the load group's ODV relative to the total applicable GXP's ODV. The costs are allocated amongst the Consumers within the load group on the basis of the Consumers' AMD relative to the aggregated AMD of the load group.
- 13.9 Indirect costs are all costs of Powerco's electricity business excluding transmission, maintenance, interest and tax. Indirect costs are allocated to the load group on the basis of the load group's total ODV relative to the total applicable GXP's ODV. Seventy percent of the charges are recovered as a fixed equal charge to each Consumer in the load group. The remaining 30% of the charges are recovered on the basis of the Consumer's OPD (as measured using Transpower's methodology) relative to the aggregated OPD of the load group at each GXP.
- 13.10 Powerco's transmission service charges are based on Transpower's charges, which it determines using its Transmission Pricing Methodology (TPM), which has been approved by the Electricity Authority. The TPM is used to recover the full economic costs of Transpower's services. Transpower charges Powerco at each GXP using the TPM. The TPM includes connection and interconnection charges. Powerco allocates these charges in the following manner:
- (a) Connection charges: Powerco allocates Transpower's connection charges on the basis of the Consumer's demand which in this case is measured by AMD. Where a Consumer is both an off take Consumer and an injection Consumer at a connection location, connection charges for that location are calculated separately for that Consumer as an off take Consumer and an injection Consumer. Powerco also allocates charges from Embedded Generators to its Consumers. This charge includes a connection charge and an ACOT charge. These charges are allocated by Powerco to its Consumers on the same basis as Powerco allocates Transpower's connection and interconnection charges.
 - (b) Interconnection charges: Powerco allocates Transpower's interconnection charges to its Customers based on the Consumer's OPD by Transpower's interconnection rate.
- 13.11 When a Powerco Consumer enters an asset-based load group the following policies apply:
- Powerco will estimate the OPD and AMD for the new or upgraded site. This estimate will be based on an assessment of the plant and machinery located on the site, demand from similar sites across the industry and any estimates of demand provided by the Consumer.
 - The estimated demand will apply for the current Price Year (i.e. between the later of 1 April or the connection date for the upgraded assets and 31 March of the subsequent year).

- The estimated demand will assume full demand from the time of the installation of the asset (rather than ramping up over a period of time), unless otherwise agreed between Powerco and the Consumer, or their representative, at the time of Powerco's approval of the request for site connection or alteration.
- The estimated demand will continue to apply in the subsequent year if the upgraded site has not been connected and operational for the full duration of the applicable measurement period, unless otherwise agreed between Powerco and the Consumer or their representative, at the time of Powerco approval of the request for site connection or alteration.
- New prices will be effective from network livening (i.e. Ready status).

13.12 The following Powerco policies apply when a site exits an asset-based load group or revision to charges is requested:

- If a Consumer intends exiting a site, and the Retailer is notified of this intention, the Retailer must notify Powerco as soon as practical so that final charges can be determined and levied in the forthcoming billing run.
- Powerco, at its discretion, may allow a Consumer to exit the load group when the site downgrades its installed capacity. Alternatively, Powerco may require the site to continue to the end of the Price Year in the current load group at the current peaks, for instance if an upgrade to the site has only recently occurred.
- Powerco may leave the Consumer in the same load group and down-grade peak estimates in instances where there is no removal of on-site assets but there will be a reduction in loading on the Network.
- Where there is a bona fide change in Consumer at a premises (i.e. new entity), the Retailer may apply for, and Powerco will at its discretion undertake, a review of the asset-based charges once during the Price Year to reflect the change arising from an alternation in AMD and the expected change in OPD.

14.0 Price Category: Customer Specific Investment – Asset Based 'Building Block' Methodology (BBM)

14.1 This pricing methodology applies to very large (>4MVA) Customers in both Regions. These Customers will have a direct contractual relationship with Powerco for a defined term. BBM asset based pricing will be available primarily to Customers where:

- A step change development and consequently investment is needed but the increase in Customers demand may not be as significant; or
- For new Customer connections requiring significant investment.

The pricing is a function of a more pure and Customer specific BBM, reflective of the transmission new investment charging model.

15.0 BBM Asset Based Pricing

15.1 The BBM asset based pricing comprises the following input components:

- Return on capital investment, plus accounting depreciation in period or year;
- Subtransmission cost allocation of direct and indirect costs for subtransmission asset utilisation in period or year;
- Operating and maintenance costs;
- Tax adjustment; and
- Pass through of Recoverable Costs such as transmission charges.

16.0 Controlled Price Categories and Controlled Tariff Options

16.1 For the Western and Eastern regions (excluding Tauranga):

- (a) Consumers (the Instructing Retailers' Consumers and other Retailers' Consumers) allocated to a Controlled Price Category or Controlled Tariff Option will have their load controlled by:
 - I. The Distributor:
 - A. For the purposes of grid and network security;
 - B. For the purposes of optimising transmission charges; or
 - C. In abnormal supply or operating circumstances (e.g. a shortage or anticipated shortage of electricity); and
 - II. The Distributor acting on the instruction of Genesis Energy, as the Instructing Retailer within these areas (i.e. Western and Eastern, excluding Tauranga) for other purposes.
- (b) If the Retailer is not the Instructing Retailer and is not agreeable to its Consumers' load being controlled by the Distributor for the purposes and in the circumstances set out in paragraph 16.1(a)(I) and/or 16.1(a)(II), the Retailer must choose or request the Distributor to allocate the Consumer to an Uncontrolled Price Category or Uncontrolled Tariff Option. All Consumers in Controlled Price Categories or Controlled Tariff Options as at 1 April 2013 have via their Retailer agreed to assign to the Distributor and Genesis Energy, as Instructing Retailer, the whole of the right to control the load (for whatever purpose).

16.2 For Tauranga:

- (a) Consumers (Instructing Retailers' Consumers and other Retailers' Consumers) allocated to a Controlled Price Category or Controlled Tariff Option will have their load controlled by:
 - I. The Distributor and/or the Instructing Retailer :
 - A. For the purposes of grid and network security;
 - B. For the purposes of optimising transmission charges; or
 - C. In abnormal supply or operating circumstances (e.g. a shortage or anticipated shortage of electricity); and
 - II. The Distributor acting on the instruction of the Instructing Retailer within this area for any other purposes (if agreement between the Distributor and the Instructing Retailer is in place).
- (b) If a Retailer is not the Instructing Retailer and is not agreeable to its Consumers' load being controlled by the Distributor for the purposes and in the circumstances set out in paragraph 16.2(a)(I) and/or 16.2(a)(II), the Retailer must choose or request the Distributor to allocate the Consumer to an Uncontrolled Price

Category or Uncontrolled Tariff Option. All Consumers in Controlled Price Categories or Controlled Tariff Options as at 1 April 2013 have, via their Retailer, agreed to assign to the Distributor and the Instructing Retailer, the whole of the right to control the load (for whatever purpose).

- 16.3 To be eligible for the Controlled Price Category or Controlled Tariff Option, the Retailer must ensure that the Consumer has Load Control Equipment which:
- (a) is, and will continue to be, in working order;
 - (b) when in operation, will result in a reduction in the Consumer's demand, where such load reduction is instantaneously available at the time of load-shedding operation. For example, by controlling the supply of electricity to those of the Consumer's goods (including, without limitation, Consumer goods or capital goods) that consume or are intended to consume electricity to be controlled. By way of example, but without limitation: (1) hot water cylinders; (2) electric kilns; (3) swimming pool heaters; and (4) spa pool heaters;
 - (c) will be activated by the Distributor's load-signalling equipment (both pilot wire (cascade) and ripple control signalling equipment); and
 - (d) will not block or interfere with the Distributor's load-signalling equipment.
- 16.4 No Controlled Price Category or Controlled Tariff Option is available at those GXPs where the Distributor does not have operational Load Control Equipment. Currently there is no operational Load Control Equipment at the Waverley GXP.

Part B: Western Region

17.0 Application

17.1 This Part applies to the Western Region Network only.

18.0 Price Category: High-Voltage Metering Units

18.1 The Distributor owns a number of High-Voltage (HV) Metering Units associated with certain sites in the Western Region. Refer to Appendix One for details on Consumers’ HV Metering Units installed.

18.2 The HV Metering Unit charge for each unit is:

Daily charge per HV Metering Unit
\$8.06 dollars per HV Metering unit per day

19.0 Price Category: Street Light Lighting Control Equipment Charge

19.1 The Distributor owns Lighting Control Equipment attached to or associated with street lights in the Western Region.

19.2 The Lighting Control Equipment charge for the use of each Distributor street light Lighting Control Equipment is:

Daily charge per street light Lighting Control Equipment
11.85 cents per Lighting Control Equipment per day

19.3 The street light Load-Control Equipment charge will be charged monthly in arrears to the Retailer assigned to the ICP.

20.0 Price Categories: E1C and E1UC

20.1 Price Category E1C applies to Connections on any of the Western Region Distribution Networks that are not E300 Connections, E100 Connections or special priced Connections. Price Category E1C is available for those Connections that meet the criteria for a Controlled Tariff Option set out in paragraph 16.

20.2 Price Category E1UC applies to Connections on any of the Western Region Distribution Networks that are not E300 Connections, E100 Connections, E1C Connections or special priced Connections.

20.3 E1C and E1UC Price Categories are for the remainder of this paragraph 20, together called the “E1 Price Category”.

20.4 Connections in the E1 Price Category generally have a demand of less than 100 kVA (i.e. domestic households and small businesses).

20.5 Calculation of Charges for E1 Price Category

(a) Volume (ERD & ERN) and Demand (ERL) Charges

I. All demand and volume based quantities for the E1 Price Category will be based on reconciliation information provided by the RM for volume reconciliation purposes and will be at the GXP (i.e. installation-metered volumes adjusted by applicable local Distribution Network loss factor and unaccounted for electricity).

- II. The quantities from 20.5 (a)(I) above are used to determine the E1 Price Category volume charges (ERD and ERN) and each Retailer's share of the E1 demand charge (ERL charge) at each GXP, by subtracting the E300 and E100 half-hour loads, adjusted by the applicable Network Distribution loss factors.
- III. Should wash-ups to quantities as part of the RM wash-up cycle occur, these will be charged, or rebated, as appropriate per section 5 of schedule 12.
- IV. E1 ERD (day) and ERN (night) Volume Charge:
For the determination of the kWh volumes, the following periods are used:
Day is the 16-hour period from 07:00 hrs to 23:00 hrs daily.
Night is the eight-hour period from 23:00 hrs to 07:00 hrs daily.
- (b) E1 Fixed Charge (FDC)
A fixed daily charge will be applied to the number of ICPs a Retailer has for each day during the billing month for each of the E1UC and E1C Price Categories, as per paragraph 4.1.
- (c) Extent of Control E1C Price Category
Under normal supply circumstances, supply can be controlled at any time for a maximum of seven hours per day. Under abnormal supply or operating circumstances (e.g. where there is a shortage or anticipated shortage of electricity), control may be for greater than seven hours per day.

20.6 Unmetered Street-light Data

- (a) Powerco must receive (on a monthly basis) the street-light or other unmetered load database from the Retailer, or council / New Zealand Transport Agency (NZTA) (or both) as agreed, by the fourth working day of the calendar month.
- (b) Where Powerco has not received the street-light database as required, or no longer holds confidence in the quantities detailed by the Retailer or council / NZTA (or both), Powerco will estimate, on a reasonable endeavours basis, the light fitting quantity.
- (c) Where the data is found to not be an accurate reflection of the street-lights that are installed, Powerco may apply additional charges as per section 9.1 in recognition of the costs it incurs through the provision of inaccurate data.
- (d) The requirements of 20.6 (a) – 20.6 (c) above do not apply to lights where evidence has been provided to Powerco that all consumption is metered by certified revenue metering installations.

21.0 Price Category: E100

21.1 Price category E100 applies to an E100 Connection, being a Connection on any of the Western Region Distribution Networks with a demand of less than or equal to 300 kVA that has been approved by the Distributor and is subject to the following conditions:

- (a) The Connection must have installed TOU metering and is subject to a minimum chargeable demand of 100kVA per month, and;

- (b) The E100 Price Category is not available as a Price Category for residential premises (including homes).

21.2 Calculation of E100 Charges

- (a) E100 Network Asset Charge (E1A)
 - I. The number of E1A charges per E100 Connection will be per ICP connected (normally 1 E1A charge per ICP).
- (b) E100 Demand Charge (E1L)
 - I. The E100 E1L chargeable kVA Demands will be determined using the individual Connection's kVAh half-hour volume data plus losses, and is calculated by averaging the top 12 daily anytime maximum kVA demands (one peak per day, meaning a 24 hour period from 00:00 hours to 00:00 the next day) on a rolling, 12 months basis. The E1L chargeable kVA Demand will be 100kVA or the actual average demand, whichever is the higher. In cases where kVA measured data is not available, the kVA data will be determined from kW data using a representative power factor, as determined by the Distributor.
 - II. Where an E100 Connection changes Retailer, the load history used to calculate the chargeable kVA Demands will be transported with the Connection to the new Retailer.
 - III. For new E100 Connections, where less than 12 months' data is available, the chargeable kVA Demand for the E1L charge will be determined from available data commencing from the installation of the TOU metering. For example, if six months' TOU data history is available, then the 12 peaks in demand will be calculated using the six months' data; or if only one month's TOU data is available, then the 12 peaks in demand will be calculated using that month's data.

22.0 Price Category: E300

22.1 Price Category E300 applies to an E300 Connection, being a Connection on any of the Western Region Distribution Networks with a demand of greater than 300kVA that has been approved by the Distributor and is subject to the following conditions:

- (a) The Connection must have an installed transformer capacity (nameplate rating) of greater than 300kVA, Time of Use metering and is subject to a minimum chargeable demand of 300kVA per month. All Connections with a dedicated installed distribution transformer with a capacity (nameplate rating) of greater than 300kVA are automatically allocated to the E300 Price Category; and
- (b) The E300 Price Category is not available for residential premises (including homes).

22.2 Calculating E300 Charges

- (a) E300 Network Asset Charges (E3A)
 - I. The E300 E3A chargeable capacity shall be the greater of 300kVA or the sum of all nameplate kVA ratings of distribution transformers connected to supply the connections, irrespective of ownership of the distribution transformers.

- II. If the deliverable capacity is restricted to a lower level by an approved item of the Distributor's plant then, at the Distributor's discretion, the E3A installed transformer capacity will be the maximum deliverable capacity in kVA and shall not be less than 300kVA. (Connections subject to such a reduction will be listed as E300R on the Registry).
- (b) E300 Demand Charge (E3L)
- I. The E300 E3L chargeable kVA Demand will be determined using the individual Connection's kVAh half-hour volume data plus losses, and is calculated by averaging the top 12 daily anytime maximum kVA demands (one peak per day, meaning a 24-hour period from 00:00 hours to 00:00 on the next day) on a rolling, 12 month basis. The E3L Chargeable kVA Demand will be 300kVA or the actual average demand, whichever is the higher.
 - II. If an E300 Connection changes Retailer, the load history used to calculate the E3L Chargeable kVA Demand will be transferred with that Connection to the new Retailer. Should the new Retailer request the raw data relating to the load history, the Distributor will obtain the raw data from its agents and the Retailer will be charged all costs incurred by the Distributor associated with procuring the data.
 - III. For new E300 Connections, where less than 12 months' data is available, the chargeable kVA Demand for the E3L charge will be determined based on available data commencing from the installation of the TOU metering. For example, if six month's TOU data history is available then the 12 peaks in demand will be calculated using the six months' data, or if only one month's TOU data is available, then, the 12 peaks in demand will be calculated using that month's data.

23.0 Western Region Charges

E1 (applies to Connections less than 100kVA installed)							
GXP/Groups			Charge Codes				
			FDC		ERD	ERN	ERL
Grid Exit Point (GXP)		Region	E1CPrice Category Fixed cents/day	E1UC Price Category Fixed cents/day	Volume Charges Cents/kWh		Demand Charge \$/kW/month
					Day	Night	
Brunswick Bunnythorpe Carrington Street Huirangi Linton New Plymouth Stratford Wanganui		A	0.00	15.00	5.8400	1.1700	15.0100
Greytown Hawera Mangamaire Marton Masterton Mataroa Ohakune Opunake Waverley		B			7.8500	1.5500	18.9000

Note: GST is to be added to these prices

E 100

(applies to Connections with installed Capacity of less than or equal to 300kVA)

Grid Exit Point (GXP)		Region	Charge Codes	
			E1A	E1L
			E100 Fixed Network Assets Charge \$/ICP/month	E100 Variable Demand Charge \$/kVA/month
Carrington Street Huirangi New Plymouth Stratford	CST HUI NPL SFD	A	266.00 (applies to all groups)	15.1800
Hawera	HWA	B		27.4000
Waverley	WVY	C		24.9000
Opunake	OPK	D		24.4600
Brunswick Wanganui	BRK WGN	E		13.8300
Marton	MTN	F		15.0100
Mataroa Ohakune	MTR OKN	G		26.3800
Masterton Greytown	MST GYT	H		22.5000
Bunnythorpe Linton	BPE LTN	I		14.3800
Mangamaire	MGM	J		17.2900

Note: GST is to be added to these prices

E 300
(applies to Connections with installed Capacity of greater than 300kVA)

Grid Exit Point (GXP)		Region	Charge Codes	
			E3A	E3L
			E300 Fixed Network Assets Charge \$/kVA/month	E300 Variable Demand Charge \$/kVA/month
Carrington Street Huirangi New Plymouth Stratford	CST HUI NPL SFD	A	1.61 (applies to all groups)	10.1800
Hawera	HWA	B		13.6600
Waverley	WVY	C		20.6700
Opunake	OPK	D		20.2700
Brunswick Wanganui	BRK WGN	E		7.7000
Marion	MTN	F		9.3200
Mataroa Ohakune	MTR OKN	G		20.5900
Masterton Greytown	MST GYT	H		16.3600
Bunnythorpe Linton	BPE LTN	I		11.4200
Mangamaire	MGM	J		13.1900

Note: GST is to be added to these prices

24.0 Power Factor Charges

- 24.1 If a Consumer's power factor at a Connection is less than 0.95 lagging, the Distributor may:
- (a) On the first occasion this applies, allow the Consumer three months to correct the power factor at the Connection and then commence charging the power factor charge set out in paragraph 24.2 if the power factor is not corrected within that specified time.
 - (b) On the second and subsequent occasions this applies, either apply paragraph 24.1(a) or charge the power factor charge set out in paragraph 24.2.
- 24.2 The power factor charge for the purposes of paragraph 24 is \$7.00/kVAr/month in respect of the Consumer.
- 24.3 The kVAr chargeable quantity is the largest monthly difference between the kVAr amount recorded in any one half-hour period, and one third of the kW demand recorded in the same half-hour period. The charge is applicable only during weekdays, between 7am and 8pm.
- 24.4 The power factor charge will be applicable only for Consumers with TOU metering. For the Western Region, this will be price categories E100, E300 and SPECIAL.
- 24.5 Where the Distributor, subject to paragraph 24.1 and 24.6, elects to levy power factor charges on a particular ICP, this election will be disclosed on the Registry by appending "Power Factor" under the installation details field.
- 24.6 The Distributor, at its discretion, may elect not to levy power factor charges on a particular ICP.

Part C: Eastern Region

25.0 Application

25.1 This part applies to the Eastern Region Network only.

26.0 Price Categories: Valley Distribution Network

26.1 The Valley Distribution Network Price Categories and Tariff Options described below are subject to the conditions set out in paragraphs 16.1, 27, 30 to 36 and elsewhere in this document.

26.2 The V05C and V06C Price Categories are Controlled Price Categories and the Tariff Options within those Controlled Price Categories are Controlled Tariff Options.

26.3 A Retailer supplying a Consumer may change that Consumer from a Price Category or a Tariff Option to another Price Category or Tariff Option only once in any period of 12 consecutive months (excluding (1) a residential Consumer changing to a Low-Usage Price Category or Tariff Option from a Standard-Usage Price Category or Tariff Option or (2) a residential Consumer changing from a Low-Usage Category or Tariff Option to a Standard-Usage Price Category or Tariff Option).

27.0 Valley Price Schedule

Price Category	Price Category Description	Fixed Charge (Cents per Day)	Tariff Option	Variable Charge c/kWh
V01	Unmetered Load ¹ (Includes NZTA Streetlights)	N/a		11.4200
V02	Unmetered Streetlights ¹ (council lights only, includes 0.5 cents/light/day for relays)	15.9900		N/a
V05C	Low Usage Tariff Option – Controlled 1 & 2 Phase 60 amps and up to and including 3 Phase 60 amps	15.00	24UC AICO CTRL NITE 24DG	11.3600 10.4600 8.3500 4.9700 0.0000
V05U	Low Usage Tariff Option – Uncontrolled 1 & 2 Phase 60 amps and up to and including 3 Phase 60 amps	15.00	24UC NITE 24DG	11.3600 4.9700 0.0000
V06C	Standard – Controlled 1 & 2 Phase 60 amps and up to and including 3 Phase 60 amps	79.8900	24UC AICO CTRL NITE 24DG	8.4000 7.5000 5.3900 2.0100 0.0000
V06U	Standard – Uncontrolled 1 & 2 Phase 60 amps and up to and including 3 Phase 60 amps	79.8900	24UC NITE 24DG	8.4000 2.0100 0.0000
V24	Greater than 3 Phase 60amps to 3 phase 250 amps	1,850.00	AICO	3.6100
V28	200 - 299 kVA (TOU metering not required)	8,914.00	24UC AICO CTRL	3.3900 3.3900 2.4200
V40	300 – 1499 kVA Charges are set for a 12 month period from 1 April 2013 to 31 March 2014	POA		
V60/V601	≥ 1500 kVA Asset Based Price Charges are set for a 12 month period from 1 April 2013 to 31 March 2014	POA		
BBM	Building Block Methodology ≥ 4MVA	POA		

¹ Refer to Eastern unmetered supply schedule for additional information for unmetered ICP charges

28.0 Price Categories: Tauranga Distribution Network

- 28.1 The Tauranga Distribution Network Price Categories and Tariff Options described below are subject to the conditions set out in paragraphs 29 to 36 and elsewhere in this document.
- 28.2 The T05C and T06C Price Categories are Controlled Price Categories and the Tariff Options within those Controlled Price Categories are Controlled Tariff Options.
- 28.3 A Retailer supplying a Consumer may change that Consumer from a Price Category or a Tariff Option to another Price Category or Tariff Option only once in any period of 12 consecutive months (excluding (1) a residential Consumer changing to a Low-Usage Price Category or Tariff Option from a Standard-Usage Price Category or Tariff Options or (2) a residential Consumer changing from a Low-Usage Price Category or Tariff Option to a Standard-Usage Price Category or Tariff Option).
- 28.4 Tauranga Distribution Network Time Zone Definitions:

Tauranga Distribution Network	
Winter	1 May – 31 August
Summer	1 September – 30 April
Day	0700 – 2300
Night	2300 – 0700

29.0 Tauranga Price Schedule

Price Category	Price Category Description	Fixed Charge (Cents per Day)	Tariff Option	Variable Charge c/kWh
T01	Unmetered Load ² (Includes NZTA Streetlights)	N/a	N/a	10.3700
T02	Unmetered Streetlights ² (council lights only)	15.4600	N/a	N/a
T05C	Low Usage Tariff Option – Controlled 1 & 2 Phase 60 amps and up to and including 3 Phase 60 amps	15.00	24UC AICO CTRL NITE 24DG	10.1200 8.6200 5.2200 3.2600 0.0000
T05U	Low Usage Tariff Option – Uncontrolled 1 & 2 Phase 60 amps and up to and including 3 Phase 60 amps	15.00	24UC NITE 24DG	10.1200 3.2600 0.0000
T06C	Standard – Controlled 1 & 2 Phase 60 amps and up to and including 3 Phase 60 amps	46.5900	24UC AICO ³ CTRL NITE ⁴ 24DG	8.6800 7.1800 3.7800 1.8200 0.0000
T06U	Standard – Uncontrolled 1 & 2 Phase 60 amps and up to and including 3 Phase 60 amps	46.5900	24UC NITE ⁵ 24DG	8.6800 1.8200 0.0000
T22	Greater than 3 Phase 60 amps to 3 phase 250 amps	857.0000	24UC CTRL NITE	6.8100 3.1400 2.1100
T24	200 – 299 kVA (TOU metering not required)	2,871.00	24UC CTRL	6.3000 2.9000
T41	200 – 299 kVA (TOU metering required)	1,189.00	See Table Below	
T43	300 – 1499 kVA Closed to New Connections	145.00/kVA/month	See Table Below	
T50	300 – 1499 kVA Charges are set for a 12 month period from 1 April 2013 to 31 March 2014	POA		
T60/T601	≥ 1500 kVA Asset Based Price Charges are set for a 12 month period from 1 April 2013 to 31 March 2014	POA		
BBM	Building Block Methodology ≥ 4MVA	POA		

² Refer to Eastern unmetered supply schedule for additional information for unmetered ICP charges

³ Tariff Option only available to residential Consumers Homes

⁴ Tariff Option only available to residential Consumers Homes

⁵ Tariff Option only available to residential Consumers Homes

Tauranga Network Summer Tariffs –T41 – T43 Variable Charges (c/kWh)

Tariff Option Price Category	Summer Day		Summer Night	
	0700 -2300		2300 -0700	
	TS/1		TS/2	
T41 T43	3.5000		0.9500	

Tauranga Network Winter Tariffs T41 –T43 Variable Charges (c/kWh)

Tariff Option Price Category	Winter Day			Winter Night	Winter Morning Peak	Winter Evening Peak
	0700-0800	1100-1700	2000- 2300	2300-0700	0800-1100	1700-2000
	TW/1	TW/3	TW/5	TW/6	TW/2	TW/4
T41 T43	6.1300			1.2700	12.9500	22.3300

29.1 Some ICPs may have additional transformer charges. These charges are notified individually via the Electricity Authority Registry.

30.0 Price Category: Power Factor Charges

30.1 If a Consumer’s power factor at a Connection is less than 0.95 lagging, the Distributor may:

- (a) On the first occasion this applies, allow the Consumer three months to correct the power factor at the Connection and then commence charging the power factor charge set out in paragraph 30.2 if the power factor is not corrected within that specified time.
- (b) On the second and subsequent occasions this applies, either apply paragraph 30.1a or charge the power factor charge set out in paragraph 30.2.

30.2 The power factor charge for the purposes of paragraph 30.1 is \$7.00kVAr/month in respect of the Consumer.

30.3 The kVAr chargeable quantity represents the largest monthly difference between the kVAr amount recorded in any one half-hour period, and one third of the kW demand recorded in the same half-hour period. The charge is applicable only during weekdays, between 7 am and 8 pm.

30.4 The power factor charge will apply only to Consumers with TOU metering. For the Eastern Region this will be price categories V28, V40, V60, V601, T24, T41, T43, T50, T60 and T601.

30.5 The Distributor, subject to paragraph 30.1 and 30.6, will apply power factor charges for all Consumers with TOU metering in the price categories V28, V40, V60, V601, T24, T41, T43, T50, T60, and T601.

30.6 The Distributor, at its discretion, may elect not to levy power factor charges on a particular ICP. This election will be disclosed on Registry by appending the letter “N” to the price category recorded against an ICP. For instance an ICP with the price category of T43 will be recorded as “T43N” where no power factor charges are being levied.

31.0 Conditions: Unmetered Load Price Categories

- 31.1 The unmetered Price Categories are not available for residential premises (including homes).
- 31.2 Unmetered supply charges are allocated as:
- (a) V01 and T01 – Unmetered load such as council flow meters and small telecommunication cabinets. The Distributor will determine eligibility for this Price Category via Powerco’s connections process and policy.
 - (b) V02 and T02 – Council street lighting.
- 31.3 Street-light databases must be received as follows:
- (a) Powerco must receive monthly the street-light or other unmetered load database from the Retailer or council (or both) as agreed, by the fourth working day of the calendar month.
 - (b) Where Powerco has not received the street-light database as required, or no longer holds confidence in the quantities detailed by the Retailer or council (or both), Powerco will estimate, on a reasonable endeavours basis, the light fitting quantity.
- 31.4 Where a permanent unmetered supply’s connected capacity requirement exceeds 5kVA, single phase metering is necessary. Street lighting is excluded on approval via Powerco’s connections process and policy.

32.0 Conditions: Builder’s Temporary Supply

- 32.1 Builder’s supply Connections must only be the Price Categories “T06” or “V06”. Powerco will not accept these Connections on the Price Categories “T05” or “V05” as these Connections are not considered a Home.
- 32.2 Powerco will not accept temporary builder’s supplies Connections as unmetered Connections.

33.0 Conditions: Low-Usage Price Categories and Tariff Options

- 33.1 The Low-Usage Price Categories for the Eastern Region (T05C, T05U, V05C and V05U) are available to the Retailer only:
- (a) For residential Consumers that are supplied electricity in respect of a home;
 - (b) In conjunction with the Retailer’s Consumer Low-Usage Tariff Option that complies with the requirements of the Electricity (Low Fixed Tariff Option for Domestic Consumers) Regulations 2004;
 - (c) If the Distributor’s prior approval (that approval not to be unreasonably withheld) of the Retailer’s process for ascertaining that the relevant Consumer is eligible for the Low Usage Tariff Option has been given;
 - (d) Subject to the condition that if the Distributor becomes aware that a Low-Usage Tariff Option has been made available to, or is being applied by, a Retailer other than in accordance with this paragraph, the Distributor may remove the relevant Consumer from the Low-Usage Tariff Option to another Price Category and adjust the charges accordingly. Such adjustment to the charges may include recovery from the Retailer of any underpayment by the Retailer resulting from

the Low-Usage Tariff Option being applied other than in accordance with this Pricing Schedule, together with interest, calculated at the Interest Rate on the first day of the period during which the Low-Usage Tariff Option was incorrectly applied, until the day on which the underpayment is recovered by the Distributor.

34.0 Conditions: Description of Controlled Options

- 34.1 The eligibility criteria in paragraph 16 applies to all controlled options (including AICO and CTRL) and must be satisfied.
- 34.2 The required Consumer appliances for a Controlled Tariff Option are:
- (a) Hot water cylinders;
 - (b) Night store heaters;
 - (c) Electric kilns;
 - (d) Swimming and spa pool heaters; or
 - (e) Any appliances representing a significant proportion of the Consumer's demand that may be controlled without increasing the Consumer's uncontrolled demand.
- 34.3 For an ICP to be eligible for the night only supply (NITE) Tariff Option, the following additional eligibility criteria applies and must be satisfied:
- (a) the Consumer appliances to be controlled are permanently wired to a separate meter (the "NITE" supply meter) and such meter is connected to a ripple control relay;
 - (b) no uncontrolled appliances are connected to the NITE supply meter; and
 - (c) the Load Control Equipment when in operation must result in the reduction to zero of all load connected to the NITE supply meter.

If uncontrolled appliances are connected to the NITE supply meter, then for single meter single register configurations the load qualifies for the All-Inclusive (AICO) Tariff Option.

- 34.4 For an ICP to be eligible for the AICO Tariff Option the following eligibility criteria apply and must be satisfied:
- (a) There is only one Point of Connection;
 - (b) There is only one meter and such meter has only one register or there are two meters the second of which being the NITE supply meter;
 - (c) The Consumer goods to be controlled must include all hot water cylinders; and
 - (d) The Load Control Equipment when in operation must result in the reduction to zero of all controllable load.
- 34.5 For an ICP to be eligible for Controlled only (CTRL) Tariff Option the following eligibility criteria apply and must be satisfied:
- (a) There is only one Point of Connection at the premises;
 - (b) There is only one meter and such meter has only one register;
 - (c) All load at the premises must be controllable; and
 - (d) The Load Control Equipment when in operation must result in the reduction to zero of all controllable load.

34.6 Price Category and Tariff Option Descriptions:

Tariff Option	Meter Register Code	Extent of Control
Uncontrolled	24UC	<ul style="list-style-type: none"> A 24-hour continuous supply.
All-inclusive single meter option	AICO	<ul style="list-style-type: none"> A 24-hour supply and a mandatory additional controllable supply, as described in paragraph 34.4. Available only for single meter, single register configurations. If the single meter has two registers, then consumption must be submitted as 24UC and CTRL, or AICO-NITE provided eligibility criteria for AICO and NITE are fulfilled. Under normal supply circumstances, electricity is usually available to controlled Consumer appliances for at least 17 hours per day. Under abnormal supply or operating circumstances (e.g. where there is a shortage or anticipated shortage of electricity) control of the controllable supply may be for greater than seven hours per day (e.g. 22 hours per day). If no additional controllable supply, the ICP must be allocated as 24UC.
Controlled	CTRL	<ul style="list-style-type: none"> Electricity under normal supply circumstances is usually available for at least 17 hours per day. Under abnormal supply or operating circumstances (e.g. where there is a shortage or anticipated shortage of electricity), control may be for greater than seven hours per day (e.g. 22 hours per day).
Night supply only	NITE	<ul style="list-style-type: none"> Available only for appliances permanently wired to a separate meter. Controlled option with power between the hours of 2300 to 0700, plus a minimum “boost period” of one hour, generally between 1300 and 1530. Appliances must not draw current outside of these hours.
Distributed Generation	24DG	<ul style="list-style-type: none"> Available only to Connections that are capable of exporting onto the Distributor’s Network and do not have Time of Use Meters. This Tariff Option is to only apply to the separately metered export volumes. To be eligible for this Tariff Option the connection must comply with the Distributors Distributed Generation policy (per paragraph 11).

34.7 Meter and Register Configuration eligibility for Controlled Tariff Options;

Type	Meter and Register Configuration	Tariff Option 1	Tariff Option 2	Tariff Option 3
Uncontrolled Load only	Single meter, 1 or 2 registers or combination of separate meters	24UC	-	-
Controlled Load	Single meter 2 registers or two separate single register meters.	24UC	CTRL	-
Uncontrolled – Nite Option	Separate Meters	24UC	NITE	-
Controlled & Nite Option	Two meters totalling 3 registers or three separate meters. NITE must be separate meter	24UC	CTRL	NITE
All Inclusive Control	Single meter, single register with associated controllable load	AICO	-	-
All Inclusive Control and NITE Option	AICO must be single meter single register with hot water controllable load NITE must be separate meter with additional minimum hot water	AICO	NITE	-

Type	Meter and Register Configuration	Tariff Option 1	Tariff Option 2	Tariff Option 3
Controllable Load Only	controllable load Single meter single register. For 24 hour controllable loads only i.e. pumps	-	CTRL	-

For clarity, the following confirms treatment of multiple register consumption:

	Tariff Option Uncontrolled	Tariff Option Controlled		
Meter	Single Meter			Dual Meters (2)
Register	One	Two	Three	
Incorrect combination	AICO			NITE
Correct Allocation	24UC	CTRL	NITE	

35.0 Conditions: Metering Requirements

- 35.1 Consumers on the Valley Distribution Network with a load of greater than 300kVA must have, in the Distributor’s opinion, appropriate TOU metering.
- 35.2 Consumers on the Tauranga Distribution Network who are in the T41 price Category or with a load of greater than 300kVA must have, in the Distributor’s opinion, appropriate TOU metering.

36.0 Conditions: Meter Register Code Reporting

- 36.1 Within each Price Category or Tariff Option there may be more than one variable rate available for use. For each variable pricing component there will be a unique Price Category or Tariff Option, plus meter register code combination. For some Price Categories or Tariff Options it will be possible for a Consumer to be connected to multiple supply options, each with its own meter register. Such an ICP will have one Price Category or Tariff Option (e.g. V06C) with multiple meter register codes. Each monthly volume quantity submitted will then incorporate, for that ICP, a volume for each selected variable Line Charge category. Each volume will then be associated with a meter register code (AICO, CTRL, 24UC, NITE, TS/1, TS/2, TW/1, TW/2, TW/3, TW/4, TW/5 or TW/6).
- 36.2 Where a half-hourly TOU meter is fitted, there will be only one meter register code. Where there is no variable rate, the meter register code will still need to be included with the half hourly volume, and, in such cases, the billing process will not calculate a variable charge.
- 36.3 For the V40, V60, V601, T50, T60 or T601 Price Categories, volumes are to be submitted monthly using the meter register code “TAIC” (“Time of Use All Inclusive”).
- 36.4 Where volume is submitted for Price Categories other than V40, V60, V601, T50, T60 or T601 under the TAIC meter register code, this volume will be charged at the highest value of the available meter register codes, generally AICO or 24UC.

37.0 Conditions: Asset Specific Line Charges

- 37.1 Asset specific Line Charges apply to Consumers on the Tauranga Distribution Network who require an 11kV feeder or who have their own generation.

- 37.2 Daily charges for Price Categories V40, V60, V601, T50, T60 and T601 are subject to periodic review based on site specific information, including electricity demand and volume data.
- 37.3 Asset Specific Line Charges (V40, T60, T601, T50, V60 and V601) charged pursuant to the Network Agreement will be disclosed upon request to the Consumer to which these charges apply, or to the Consumer’s current Retailer.

38.0 Data File Requirements

- 38.1 Powerco requires data files for non-half hourly ICP’s to be provided in EIEP1 (currently version 6) and EIEP3 (currently version 6) for half hourly data.
- 38.2 Powerco prefers EIEP1 data files that are “NRM Normalised” which align to the reconciliation process, to be provided.
- 38.3 Powerco does accept “As Billed Normalised” files but this needs to be agreed with the Billing and Revenue Manager. These files are calendarised for the billing month using as billed sales volumes adjusted for the current month’s unbilled sales accrual minus the previous month’s unbilled sales accruals.
- 38.4 Where data will transition from NRM Normalised to As Billed Normalised or As Billed Normalised to NRM Normalised, a transitional settlement process will need to be formally agreed.
- 38.5 Powerco uses the tilde (~) as a file separator between the price category and the tariff option for non-half hourly data. Variable consumption should be provided to Powerco as follows:

Price Category	Tariff Option	EIEP1 Data file should contain
V05C	NITE	V05C~NITE
	24UC	V05C~24UC
	CTRL	V05C~CTRL
	AICO	V05C~AICO
	24DG	V05C~24DG
V05U	24UC	V05U~24UC
	NITE	V05U~NITE
	24DG	V05U~24DG
V06C	NITE	V06C~NITE
	24UC	V06C~24UC
	CTRL	V06C~CTRL
	AICO	V06C~AICO
	24DG	V06C~24DG
V06U	24UC	V06U~24UC
	NITE	V06U~NITE
	24DG	V06U~24DG
V24	AICO	V24~AICO
V28	AICO	V28~AICO
		V28~24UC
		V28~CTRL
T05C	NITE	T05C~NITE
	24UC	T05C~24UC
	CTRL	T05C~CTRL
	AICO	T05C~AICO
	24DG	T05C~24DG
T05U	24UC	T05U~24UC

Price Category	Tariff Option	EIEP1 Data file should contain
	NITE 24DG	T05U~NITE T05U~24DG
T06C	NITE 24UC CTRL AICO 24DG	T06C~NITE T06C~24UC T06C~CTRL T06C~AICO T06C~24DG
T06U	24UC NITE 24DG	T06U~24UC T06U~NITE T06U~24DG
T22	24UC CTRL NITE	T22~24UC T22~CTRL T22~NITE
T24	24UC CTRL	T24~24UC T24~CTRL

Eastern Unmetered Supply Schedule

1.0 Introduction

- 1.1 As referred to in Part C, paragraphs 27 and 29, this schedule provides Retailers with information relating to charging unmetered ICPs.
- 1.2 The Eastern Region is split into two distribution networks for unmetered supply:
 - (a) Valley Distribution Network.
 - (b) Tauranga Distribution Network.

2.0 Unmetered ICP Charge Process

- 2.1 Charge codes are allocated to each ICP depending on the type of installation or supply it has installed. Some ICPs may have a number of installations under the same charge code and/or a variety of charge codes associated with it.
- 2.2 Charges for unmetered street lighting (council/New Zealand Transport Agency (NZTA) lights only - V02 and T02) are determined by:
 - (a) Fixed Charge - quantity (number of light fixtures connected) multiplied by the unmetered supply Fixed Charge per day (V02 & T02); and
 - (b) Powerco will estimate street-light fitting quantities and apply a penalty in instances where street-light database information is not provided or updated as required.
- 2.3 Charges for unmetered supply (covered by V01 and T01) other than council/NZTA street lighting (covered by V02 and T02) are determined on:
 - (a) A case-by-case basis, dependent on the load profile. A load factor of 10% will be applied to the input wattage;
 - (b) The wattage for unmetered supplies (V01 and T01) is charged based on the greater of their actual input wattage or 50 watts;
 - (c) The length of time the installation is turned on for in a month; and
 - (d) The number of installations each ICP has.
- 2.4 There are three types of charge calculations for unmetered sites:

Site Description	Charging Calculation
Sites that run on night hours only	No. of installations x Monthly night hours x Units/input wattage plus the load factor x Rate
Sites that run 24-hourly	No. of Installations x Days in Month x Units/Input Wattage plus the load factor x Rate
Fixed charges using a daily rate	No. of installations x Days in month x Rate

3.0 Night Hours

3.1 The night hours published below are the benchmark “On” hours Powerco makes reference to:

Month	Night Hours in Valley and Tauranga
January	298
February	296
March	360
April	386
May	428
June	430
July	438
August	412
September	365
October	341
November	298
December	289

4.0 Valley and Tauranga Street Light Charge Code Table

Charge Calculation = No. of installations x Monthly night hours x Units/input wattage plus the load factor x Load Group Rate

Example: SL 0020 (Street Light, 20W) Consumption = No. of installations x Monthly night hours x Units/Input Wattage (0.022)

Charge Calculation = Consumption x Load Group Rate (Tauranga or Valley)

Fixed Charge Code	Description	Wattage	Units/Input Wattage
M_SL	Bus Shelter (Night Hours Only)	1392	1.531
SL 0020	20W Street Light (Night Hours Only)	20	0.022
SL 0026	26W Street Light (Night Hours Only)	26	0.029
SL 0035	35W Street Light (Night Hours Only)	35	0.039
SL 0040	40W Street Light (Night Hours Only)	40	0.044
SL 0050	50W Street Light (night hours only)	50	0.055
SL 0060	60W Street Light (night hours only)	60	0.066
SL 0065	65W Street Light (Night Hours Only)	65	0.072
SL 0070	70W Street Light (Night Hours Only)	70	0.077
SL 0076	76W Street Light (Night Hours Only)	75	0.083
SL 0080	80W Street Light (Night Hours Only)	80	0.088
SL 0090	90W Street Light (Night Hours Only)	90	0.099
SL 0100	100W Street Light (Night Hours Only)	100	0.110
SL 0125	125W Street Light (Night Hours Only)	125	0.138
SL 0135	135 W Street Light (Night Hours Only)	135	0.149
SL 0140	140W Street Light (Night Hours Only)	140	0.154
SL 0150	150W Street Light (Night Hours Only)	150	0.165
SL 0160	160W Street Light (Night Hours Only)	160	0.176
SL 0250	250W Street Light (Night Hours Only)	250	0.275
SL 0300	300W Street Light (Night Hours Only)	300	0.330
SL 0400	400W Street Light (Night Hours Only)	400	0.440
SL 0500	500W Street Light (Night Hours Only)	500	0.550
UVL	Under Verandah Lighting	115	0.127

Units/Input Wattage = Wattage + 10% (load factor) divided by 1000

5.0 Valley and Tauranga Day (24 Hour) Unmetered Load Charge Code Table

Charge Calculation = No. of installations x Days in Month x Units/input wattage plus the load factor x Load Group Rate

Example: DY 0030 (24hr, 30W)

Consumption = No. of installations x Days in Month x 0.792

Charge Calculation = Consumption x Load Group Rate (Tauranga or Valley)

New Fixed Charge Code	Description	Wattage	New Units/Input Wattage
DY 0004	4W - 24hr	4	0.106
DY 0028	28W - 24hr	28	0.739
DY 0030	30W - 24hr	30	0.792
DY 0045	45W - 24hr	45	1.188
DY 0050	50W - 24hr	50	1.320
DY 0070	70W - 24hr	70	1.848
DY 0080	80W - 24hr	80	2.112
DY 0090	90W - 24hr	90	2.376
DY 0091	91W - 24hr	91	2.402
DY 0105	105W - 24hr	105	2.772
DY 0135	135W - 24hr	135	3.564
DY 0150	150W - 24hr	150	3.960
DY 0227	227W - 24hr	227	5.993
DY 0250	250W - 24hr	250	6.600
DY 0260	260W - 24hr	260	6.864
DY 0455	455W - 24hr	455	12.012
DY 0545	545W - 24hr	545	14.388
DY 1000	1000W (1kW) - 24hr	1000	26.400
M_DY	Miscellaneous - 24hr	Miscellaneous, i.e. security camera, alarm, etc. Depending on Wattage of equipment, the Units/ Input Wattage can be calculated.	
Comms	Comms - 24hr	Communications related instruments - i.e. Radio, repeaters, etc. Depending on Wattage of equipment, the Units/ Input Wattage can be calculated.	

Units/Input Wattage Calculation used for equipment that fall under “M_DY” and “Comms” Fixed Charge Code are as follows:

Units/Input Wattage = Wattage + 10% (load factor) x 24 (hours) divided by 1000.

6.0 Glossary – Charge Code Table

Glossary	Description
SL	Street Light
M	Miscellaneous, i.e. security camera, alarm, etc.
DY	Day Light
UVT	Under Verandah Tauranga
Comms	Communications related instruments - i.e. Radio, transmission, repeaters, etc.

Loss Factors

1.0 General

- 1.1 Losses and loss factors may be reviewed and amended by the Distributor from time to time, on reasonable notice to the Retailer and not less notice than specified in the applicable Network Agreement, to ensure that they reflect total unaccounted for electricity on the Network as accurately as reasonably possible.
- 1.2 The loss factors currently applying at each GXP are described in the tables below.

2.0 Western Region Loss Factors as at 1 April 2013

- 2.1 The losses are calculated by GXP and apply to all ICPs belonging to the GXP or;
- 2.2 On the basis of supply voltage or dedicated or non dedicated assets.
- 2.3 All ICPs that relate to streetlights will be allocated a loss factor code that contains the suffix SL (as per the table below). This is to allow specific identification and allocation of volumes that relate to streetlights across the Western region.
- 2.4 There are some exceptions, mostly large industrial ICPs, to which individual loss factors apply. Please contact Powerco for further information.

GXP	CODE	400V Metering Loss Factor	CODE	11kV Metering Loss Factor
Bunynthorpe	BPE/BPESL	1.0900	BPE11	-
Brunswick	BRK/BRKSL	1.0730	BRK11	1.0250
Carrington	CST/CSTSL	1.0716	CST11	1.0251
Greytown	GYT/GYTSL	1.0800	GYT11	1.0120
Huirangi	HUI/HUISL	1.0702	HUI11	1.0149
Hawera	HWA/HWASL	1.0780	HWA11	1.0380
Linton	LTN/LTNL	1.0900	LTN11	-
New Plymouth	NPL/NPLSL	1.0716	NPL11	1.0251
Mangamaire	MGM/MGMSL	1.0950	MGM11	-
Masterton	MST/MSTSL	1.0800	MST11	1.0120
Marton	MTN/MTNSL	1.0730	MTN11	1.0250
Mataroa	MTR/MTRSL	1.0730	MTR11	1.0250
Ohakune	OKN/OKNSL	1.0730	OKN11	1.0250
Opunake	OPK/OPKSL	1.0780	OPK11	1.0380
Stratford	SFD/SFDSL	1.0702	SFD11	1.0149
Wanganui	WGN/WGNL	1.0730	WGN11	1.0250
Waverley	WVY/WVYSL	1.0730	WVY11	1.0250

CODE	Description
CPOW2	Load group 2 for ICPs supplied from BPE0331, LTN0331, MGM0331 that are >40kVA with a non-dedicated transformer Day = 1.065 Night = 1.065 Night losses are from period TP1–TP16 (0030–0800) and day losses are from period TP17–TP48 (0830–0000)

CODE	Description
CPOW3	Load group 3 for ICPs supplied from BPE0331, LTN0331, MGM0331 that are >40kVA with a dedicated transformer Day = 1.046 Night = 1.046 Night losses are from period TP1–TP16 (0030–0800) and day losses are from period TP17–TP48 (0830–0000)
CPOW4	Load group 4 for ICPs supplied from BPE0331, LTN0331, MGM0331 that are >40kVA on a general 11kV supply with a dedicated transformer Day = 1.036 Night = 1.036 Night losses are from period TP1–TP16 (0030–0800) and day losses are from period TP17 –TP48 (0830–0000)

3.0 Eastern Region Loss Factors as at 1 April 2013

3.1 Valley Distribution Network:

- (a) For ICPs supplied from GXPs at Hinuera, Kinleith, Kopu, Piako, Waihou and Waikino.

Consumer category	Metering Voltage	Code	Loss Factors
For Connection capacity of 60 Amps or less (including unmetered Connections)	Low Voltage	VYLALV	1.0804
For Connection capacity for greater than 60 Amps, up to and including 160 Amps	Low Voltage	VYMALV	1.0685
For Connection capacity 200 Amps and greater	Low Voltage	VYHALV	1.0465
For Connection capacity greater than 200 Amps	High Voltage	VYHAHV	1.0320
V60 individually priced Consumers		SPEC	Site -specific (default 1.0320)

Explanatory Note:

- (a) Loss factors applicable to V60 Consumers are calculated on a site-by-site basis. Contact Powerco for further information;
- (b) “Low Voltage” means metered at 230V single-phase or 400V three phase, or unmetered; and
- (c) “High Voltage” means metered at 6.6kV or higher voltage.

3.2 Tauranga Distribution Network:

- (a) For ICPs supplied from GXPs at Tauranga, Mt Maunganui, Te Matai and Kaitimako.

Capacity and Voltage Connection	CODE	Factor 33KV GXP	CODE	Factor 11KV GXP
Low-Voltage single-phase and three-phase Connection metered at Low Voltage	TLV3	1.070	TLV1	1.065
Transformer or High-Voltage Connection metered at Low Voltage	TXLV3	1.048	TXLV1	1.043
Transformer or High-Voltage Connection metered at High Voltage	TXHV3	1.033	TXHV1	1.028

Explanatory Note:

- (a) Loss factors applicable to T60 Consumers are calculated on a site-by-site basis. Contact Powerco for further information;

- (b) “Low Voltage” means metered at 230V single-phase or 400V three-phase, or unmetered; and
- (c) “High Voltage” means metered at 6.6kV or higher voltage.

4.0 Site-Specific Losses

4.1 The following site-specific losses replace special loss factors for certain Consumers applicable 1 April 2013. Please contact Powerco for further information on site specific losses.

Figure 1 Generation Losses

Loss Code	Loss Factor Consumption	Loss Factor Generation
POCO001	1.070	1.070
POCG002	1.038	1.038
POCG003	1.000	1.000
POCG004	1.038	1.01
POCG005	1.080	1.080
POCG006	1.080	1.080
POCG007	1.040	1.000
POCG008	1.063	1.063
POCG009	1.080	1.080
POCG010	1.080	1.080
POCG011	1.000	1.000
POCG012	1.0652	1.0652
POCG013	1.000	1.0314
POCG014	1.000	1.000
POCG015	1.000	1.000
POCG016	1.000	1.000
POCG017	1.000	1.000
POCG018	1.048	1.048
POCG019	1.070	1.070
POCG020	1.063	1.063
POCG021	1.080	1.080
POCG022	1.063	1.063
POCG023	1.0652	1.0652
POCG024	1.000	1.0169
POCG025	1.000	1.000
POCG026	1.000	1.000
POCG027	1.0652	1.000
POCG028	1.033	1.000

Figure 2 Load Losses

Loss Code	Loss Factor Consumption	Loss Factor Generation
POCO201	1.008	1.000
POCO202	1.011	1.000
POCO203	1.012	1.000
POCO204	1.014	1.000
POCO205	1.015	1.000
POCO206	1.017	1.000
POCO207	1.018	1.000

POCO208	1.020	1.000
POCO209	1.023	1.000
POCO210	1.024	1.000
POCO211	1.025	1.000
POCO212	1.026	1.000
POCO213	1.029	1.000
POCO214	1.032	1.000
POCO215	1.0864	1.000
POCO216	1.038	1.000

Guide to Billing and Settlement Process

1. General

The following is a guide to Powerco's billing and settlement processes. Both the Distributor and the Retailer recognise that the process of calculating accurate Line Charges is dependant on the prompt and accurate supply of information by the Retailer to both industry bodies and to the Distributor.

1.1 Standard monthly data provision and billing timeline:

5th working day (4:00 pm)	Retailer must provide Consumption Data in EIEP1 and EIEP3 format (Consumption Data Due Date)
6th– 7th working day	Invoices produced for direct billed Customers and sent to Retailers or direct Customers, as applicable
8th– 10th working day	Initial ICP billing/ GXP billing invoices produced for all Retailers
Last business day of the month	Revision invoices produced for ICP billing and sent to Retailers or direct Customers, as applicable

1.2 Retailer's Responsibility for Points of Connection

- (a) The Retailer must adhere to the processes set out in the Network Agreement and any relevant Powerco policy when establishing or altering the physical status of a Point of Connection;
- (b) The Distributor will maintain a database of Points of Connection, referenced by Installation Control Points, and aligned to the information held by the Registry appointed under the Code to determine which Retailer is responsible for an Installation Control Point and the status of the Point of Connection; and
- (c) The Retailer may request, for all Installation Control Points for which the Distributor has the Retailer listed as being responsible, an electronic copy of the relevant part of the database.

2. Submissions – Consumption Data

- 2.1 Each Retailer must provide Consumption Data for the Consumption Month to be billed on or before the 5th working day of the Payment Month (Consumption Data Due Date).
- 2.2 Each Retailer is to provide Consumption Data in a normalised format (which is data adjusted to reflect a start and end date that matches the start and end date of Consumption Month to be invoiced).
- 2.3 Consumption Data can be normalised using either 'As Billed' or Reconciliation Manager (RM) methodology. Retailers may not switch between submission basis without consultation with, and approval by, the Distributor.
- 2.4 Each Retailer should submit Consumption Data to the Distributor via the Distributor's online submission and file validation system. Files uploaded to the system must be compliant with the format structure of the Electricity Authority EIEP1 and EIEP3 protocols. Each Retailer must upload a single Initial File, which includes records for all ICPs on any of the Distributor's Networks.

- 2.5 The online submission system will validate a Retailer's Initial File against the specifications of the EIEP1 and EIEP3 protocols, and also the rules applicable to that Retailer's chosen submission ('As Billed' normalised or RM normalised data). If individual records fail validation, Retailers will have an opportunity to fix those records if they wish to do so.
- 2.6 If, by the Consumption Data Due Date, Retailers have not submitted an Initial File that complies with the EIEP1 and EIEP3 protocols (or have not submitted an Initial File at all) then the Initial File will not be accepted for billing and the Distributor may estimate volume for such record as detailed in paragraph 3.1 (c).
- 2.7 Consumption Data received by the Distributor after the Consumption Data Due Date may be subject to a Late Consumption Data fee set out in paragraph 9.1 of Part A.

3. Process by Billing Methodology

3.1 ICP Billing Process

- (a) The ICP based invoice issued to each Retailer will detail the ICP related variable and fixed charges that apply across the Eastern and Western Regions supplied by that Retailer.
- (b) If a Customer is contracted directly with the Distributor via a Network Agreement it will be denoted on the Registry via the installation details field. These Customers are billed directly for Line Charges by the Distributor.
- (c) The Distributor will calculate Line Charges for the Consumption Month on the basis of Consumption Data provided (or estimated) and the number of Active and Ready ICPs on the Distributor's Network. For any ICPs that were Active or Ready during the Consumption Month where Consumption Data has not been provided, is incomplete, materially incorrect or not in the specified format the Distributor may estimate consumption based on:
 - i. The Retailers average daily volume for ICPs in the relevant Price Category for the month prior to the Consumption Month, or
 - ii. For half-hour metered ICPs, the relevant ICP's consumption from the month prior to the Consumption Month (or the latest available Consumption Month).
- (d) The Distributor will provide an output file of all amounts invoiced with each invoice issued. The detail file will be in the relevant information exchange protocol (such as the existing EIEP1 format or its equivalent). Any Consumption Data estimated by the Distributor will have a status of "PR" (projection) within this output file.

3.2 GXP Based Billing

3.2.1 GXP Billing Process

- (a) The invoices issued to each Retailer will detail the volume, demand, and fixed charges in relation to Connections in the E1, E100, E300, E300R and SPECIAL Price Categories for the Western Region.

- (b) Fixed Line Charges will be based on the number of ICPs with Active or Ready status that each Retailer has during the Consumption Month.

3.2.2 Method of Determining Quantities

- (a) The method and structure of Line Charges determines what quantities are required for billing purposes.
- (b) The Distributor uses reconciled data from the Reconciliation Manager (RM) to derive the quantities necessary for monthly billing of its GXP based Line Charges for the E1 price category.
- (c) This data is deemed accurate, acceptable to all parties and readily available through the Reconciliation Manager (RM). In using data supplied by the RM, the Distributor applies the RM revision files when generated as part of the RM revision cycle. Should the data not be available from the RM, then the Distributor will produce an estimated invoice based on either the previous month's data or the data for the same month in the previous year, whichever is deemed appropriate by the Distributor (seasonally adjusted at the Distributor's discretion), and this will be adjusted when RM data becomes available.
- (d) In situations where data is not available through the RM (e.g. totally Embedded Generation that is not reconciled), the Distributor will obtain metered data through appropriate agreements and convert to GXP-based data by applying the appropriate Distribution Network loss factor(s).
- (e) To establish the quantities for the E1 Price Category, the quantities relating to the E100, E300, E300R & SPECIAL Price Categories (adjusted by the appropriate Distribution Network loss factors) are subtracted from the half-hour gross load at the GXP (gross load = busload + Embedded Generation data).
- (f) $E1 \text{ quantities} = \text{GXP gross load} - \text{sum of half hour adjusted quantities (E100 + E300(R) + SPECIAL)}$
- (g) A GXP peak waiver process may be applied as part of the calculation of the E1 group's peak demand, given that load shifting between interconnected GXPs can occur and may create an abnormal demand.
- (h) For E100, E300(R) & SPECIAL Price Categories, site-metered data provided will be adjusted to GXP-based data by adding the appropriate Distribution Network loss factors. This Time of Use (TOU) metering data should mirror the data being submitted into the RM process.
- (i) For TOU metering connections new to the E100, E300(R) & SPECIAL Price Categories, any historic TOU metering data up to 12 months previous (if available) must be provided prior to the start date. If unavailable, then metering data will need to be provided from the start date. For new ICPs, data will be applied from the date of connection.
- (j) The Retailer must provide TOU metering data in EIEP3 format to the Distributor or the Distributor's nominated agent within five business days from the end of the prior month (Consumption Data Due Date) for any Connection within the E100, E300(R) & SPECIAL Price Categories.
- (k) Where the Retailer has been unable to provide EIEP3 files for Western Region E100, E300, E300R and SPECIAL ICPs, and is

unable to provide estimated data, that volume will be invoiced within the E1 residual volume. Similarly, inaccurate data, if not corrected prior to the E1 group data file run on business day 8, will impact on and may be included in the Line Charges invoiced to the E1 Price Category. This will be subject to subsequent adjustment via the revision cycle.

- (l) TOU metering data received by the Distributor after the Consumption Data Due Date for data, may be subject to a Late Consumption Data fee set out in paragraph 9.1 of Part A.

4. Payment

- 4.1 The account for GXP based Line Charges for the Consumption Month and any revision (wash-up) amounts or credit notes will be sent to the Retailer by the 10th working day of the Payment Month, and will be payable on the 20th day of that same month.
- 4.2 The account for ICP based Line Charges for the Consumption Month will be sent to the Retailer by the 10th working day of the Payment Month, and will be payable on the 20th day of that same month. Any ICP based revision (wash-up) amounts or credit notes will be due for payment on the 20th day of the following month.
- 4.3 If the Distributor fails to send an invoice to the Retailer by the 10th working day of the Payment Month, then the due date for payment will be extended by one working day for each working day that the invoice is late.
- 4.4 A Use of Money Adjustment may be calculated as the wash-up amount multiplied by one-twelfth of the Use of Money Rate for each of the months from the due date of the original invoice to the date of settlement of the wash-up amount. The Use of Money Rate will be the Interest Rate for the first working day of the settlement month, plus two percentage points.

5. Revision Cycles and Reconciliation

- 5.1 Revision Cycles
 - (a) Both the Distributor and the Retailer recognise that the cyclical nature of meter reading makes it impractical to provide completely accurate figures for consumption for each Point of Connection within the timeframe required for payment of Line Charges. It is, therefore, necessary to provide a structure for subsequent revisions of prior billed periods.
 - (b) Each revision cycle will account for changes in fixed and variable Charges due, based on Retailer switches, status changes, and Replacement Data uploaded by Retailers.
 - (c) The Retailer may submit Replacement Data up to 14 months from the Consumption Month to which the Replacement Data relates.
- 5.2 Replacement Data
 - (a) Replacement Data can be uploaded to the Distributor's online submission system at any time up to 14 months from the Consumption Month to which the Replacement Data relates. Uploads will be subject to validation against file format and submission type business rules as applied by the Distributor from time to time and as outlined in paragraphs 2.4 and 2.5. Replacement Data submitted will be reconciled and billed when the Distributor runs its 3, 7 and 14 month revision billing cycles.

- (b) For 'As Billed' normalised submissions, the Retailer is to progressively adjust the volumes in each Retailer billing cycle. Accordingly, only Partial Replacement Files will be accepted. Full Replacement Files will not be accepted under this method.
- (c) As Billed Normalised submissions may include prior period corrections, which are not normalised. These volumes will be billed along with the normalised volumes provided in the Current Month submission. Prior period volumes that can be attributed to consumption periods outside the Distributor's revision cycle limit will be disregarded.
- (d) For RM based submissions, volumes are not progressively revised and can be replaced with Full Replacement Files or Partial Replacement Files. Replacement Data must comply with the EIEP1 protocol for full (R Files) and partial (X Files).
- (e) For GXP & ICP based billing, volumes will be progressively revised as detailed in paragraph 5.3 below.

5.3 Wash-up Schedule

Billing Month	Wash-ups			Billing Month	Wash-ups		
Jan 2013	Initial	Ri	December 2012	Jul 2013	Initial	Ri	June 2013
	3 month	R3	September 2012		3 month	R3	March 2013
	7 month	R7	May 2012		7 month	R7	November 2012
	14 month	R14	October 2011		14 month	R14	April 2012
Feb 2013	Initial	Ri	January 2013	Aug 2013	Initial	Ri	July 2013
	3 month	R3	October 2012		3 month	R3	April 2013
	7 month	R7	June 2012		7 month	R7	December 2012
	14 month	R14	November 2011		14 month	R14	May 2012
Mar 2013	Initial	Ri	February 2013	Sep 2013	Initial	Ri	August 2013
	3 month	R3	November 2012		3 month	R3	May 2013
	7 month	R7	July 2012		7 month	R7	January 2013
	14 month	R14	December 2011		14 month	R14	June 2012
Apr 2013	Initial	Ri	March 2013	Oct 2013	Initial	Ri	September 2013
	3 month	R3	December 2012		3 month	R3	June 2013
	7 month	R7	August 2012		7 month	R7	February 2013
	14 month	R14	January 2012		14 month	R14	July 2012
May 2013	Initial	Ri	April 2013	Nov 2013	Initial	Ri	October 2013
	3 month	R3	January 2013		3 month	R3	July 2013
	7 month	R7	September 2012		7 month	R7	March 2013
	14 month	R14	February 2012		14 month	R14	August 2012
Jun 2013	Initial	Ri	May 2013	Dec 2013	Initial	Ri	November 2013
	3 month	R3	February 2013		3 month	R3	August 2013
	7 month	R7	October 2012		7 month	R7	April 2013
	14 month	R14	March 2012		14 month	R14	September 2012

Appendix 1

Consumers with HV Metering Units (CT/VT charges as per paragraph 18.2 apply).

ICP	CT/VT Units	GXP	Load Group	Retailer
0000012890CPE3E	1	LTN0331	E300R	CTCT
0000017416CP1D7	1	BPE0331	E100	CTCT
0000024529CP339	1	LTN0331	E300	MEEN
0000025226CP245	1	BPE0331	E300	MERI
0000030942CP070	2	BPE0331	E300	MERI
0000032609CP04E	1	BPE0331	E300R	CTCT
0000032791CP4B9	1	BPE0331	E300R	GENH
0000033547CP3D3	1	MGM0331	E300R	MERI
0000033551CP8F1	1	LTN0331	E300	GENH
0000033561CPF09	3	BPE0331	E300	CTCT
0000067656CP3CC	2	LTN0331	E300R	CTCT
0001151792PCCE1	1	NPL0331	E300	MEEN
0001550701PC7D9	1	CST0331	E300	CTCT
0001580120PCC9E	1	NPL0331	E300	MERI
0001580760PC83D	1	CST0331	E300	CTCT
0001580990PCE21	2	CST0331	E300R	CTCT
0001582130PC573	1	CST0331	E300	MEEN
0001582400PC78E	1	CST0331	E300R	CTCT
0001582500PCE8A	1	NPL0331	E300	MERI
0001582830PCC7A	1	CST0331	E300	MERI
0001583350PC124	1	NPL0331	E300R	CTCT
0001583351PCD61	1	NPL0331	E300R	MEEN
0001585000PCFEF	2	HUI0331	E300R	MERI
0001601000PCAFE	1	CST0331	E300	CTCT
0001742362PCB91	1	CST0331	E300	CTCT
0002000055PC4B5	1	CST0331	E300	MEEN
0011003611PCABC	1	NPL0331	E300R	CTCT
0030126228PC63A	1	BRK0331	E300R	CTCT
0030320007PC3AE	1	WGN0331	E300	CTCT
0030525015PCFC1	1	WGN0331	E300	CTCT
0030525028PC762	2	WGN0331	E300	MERI
0030525042PCA03	1	WGN0331	E300	CTCT
0030525060PC7D3	1	BRK0331	E300	MEEN
0033300631PC1D9	1	MTN0331	E300	CTCT
0033301259PC19C	1	WGN0331	E300	CTCT
0036525037PCD88	1	MTN0331	E300	MERI
0036710007PC4A4	1	MTN0331	E300	CTCT
0041455804PCCF9	2	OPK0331	E300	MEEN
0041457500PCBBB	1	HWA0331	E300	CTCT
0065006500WR99C	1	MST0331	SPECIAL	GENH
0089261600PCE9E	1	SFD0331	E300	CTCT
0900088292PC172	1	BPE0331	E300R	CTCT
0900089525PC0A8	1	BPE0331	E300	MERI
0001582551PCAC7	1	NPL0331	E300	MERI
0011003441PC8B3	1	NPL0331	E300	CTCT

Consumers with HV Metering Units (CT/VT charges do not apply).

ICP	CT/VT Units	GXP	Load Group	Retailer
0000033530CPB44	1	LTN0331	SPECIAL	MERI
0000033536CPACB	1	LTN0331	SPECIAL	CTCT
0000064276CP078	1	MGM0331	SPECIAL	CTCT