

# **Electricity Pricing Methodology**

April 2024 – March 2025





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## 1. About Powerco

Powerco's electricity network supplies electricity to about 350,000 customer connections across two regions of the North Island. In terms of both supply area and network length, our network is the largest of any single distributor in New Zealand. The two network regions are referred to as Eastern (Valley and Tauranga) and Western (Taranaki, Whanganui, Manawatu and Wairarapa). Both regions contain a mix of urban and rural areas.

Figure 1: Powerco's Eastern and Western network regions and key statistics<sup>1</sup>



<sup>&</sup>lt;sup>1</sup> As at 31 March 2023.

<sup>&</sup>lt;sup>2</sup> Number of connections differs from ICP counts, because inactive ICPs are included.



### 2. Helping you understand how we set electricity prices

The purpose of this document is to help you understand how Powerco sets prices for its electricity distribution services. It demonstrates how our electricity pricing methodology (our approach) sets prices to reflect the costs of supplying distribution services in an efficient and fair way.

## We set prices to reflect costs and help customers make decisions about using our network

We set prices to reflect the costs of supplying electricity distribution services to each customer or group of customers connected to our network. For most customers, our prices are part of several components of a retail electricity bill. Retailers package our prices in different ways, which can make it difficult to distinguish them within a retail bill.

The distribution services we supply are:

- Connecting customers to our network
- Supplying electricity to and from customer connections via our network
- Upgrading/downgrading capacity for existing customers that want to take or inject more/less electricity than they currently do.

The Commerce Commission regulates our revenue which sets the amount we can recover through our prices in each year. These regulations also require us to include other costs in our prices, such as transmission prices and regulatory levies.

Our approach to setting prices can inform customer decisions about using our network. These costs are affected by a range of factors influencing the network infrastructure required to supply the distribution service. We want our prices to reflect these costs so we can plan and operate our network assets efficiently, reliably, and safely.

We review our pricing approach annually (at a minimum), so prices give customers the best possible information about the costs of supplying them. This is increasingly important as customers and their agents use our network in new ways by adopting technology and services like solar panels, electric vehicles, electric heating and cooling, and energy management systems.

#### Factors which influence our pricing approach and prices

The factors which influence our pricing approach and pricing can be grouped into three areas:

- **Customer characteristics** including consumption patterns at different locations, uptake of solar panels, electric vehicles, or other technology
- **Network characteristics** including topography, growth, system reliability and security, customer density, network use, data availability
- **Regulatory requirements** imposed by legislation about the structure and level of prices



#### **Customer characteristics**

Customer characteristics such as load profiles and connection type affect the cost of supplying the distribution service. Our pricing approach considers the following characteristics:

- **Load profiles**: Your electricity consumption can vary across the day and year for a range of reasons, e.g., weather or lifestyle. We allocate costs based on consumption profiles because it is the most important driver of fixed cost investment in network infrastructure.
- **Connection type / network use / capacity requirements**: A higher capacity connection typically requires more assets and therefore higher fixed costs. For example, a new dairy farm connection may need a dedicated transformer which cannot be utilised by other customers. We allocate dedicated costs directly where possible.
- **Location**: Customers in the Eastern and Western regions are supplied using separate networks with their own cost characteristics. Each point of connection between the national transmission grid and our network (Grid Exit Point) also has differences to reflect Transpower's charges.
- **Density**: Customer density<sup>3</sup> varies across the network and impacts on cost allocation. For example, the cost of supplying distribution services can be higher in lower density areas (typically rural areas) because the costs are shared across fewer customers.
- **Emerging customer preferences and technology choices**: Customer uptake of new technology such as solar panels and battery storage is changing the way energy markets operate. Distributors play a key role in facilitating these changes. We aim to keep our prices technology-neutral, with pricing related to impact on network costs rather than specific technology.

<sup>&</sup>lt;sup>3</sup> A measure of customer density is the number of customers per km of network length.





#### **Network characteristics**

Powerco operates over 28,000 km of electricity distribution network across the North Island of New Zealand. Our network is split into two regions, with the Eastern region covering Tauranga and Thames Valley and the Western region spanning across Taranaki, Whanganui, Manawatu, and the Wairarapa. These regions contain a range of urban and rural areas. Differences in the network requirements, population and load characteristics mean the cost of supply varies between and within our network regions.

#### Table 1: Network Characteristics as Described in our Asset Management Plan

Region	Pricing Zone	GXP(s)	<b>Regional Description</b>	Network Considerations			
Eastern - Valley	VALLEY	Arapuni (ARI1101) Hinuera (HIN0331) Kinleith (KIN0331 & KIN0112) Kopu (KPU0661) Piako (PAO1101) Waihou (WHU0331) Waikino (WKO0331)	Valley includes a diverse range of terrain, from the rugged and steep forested coastal peninsula of Coromandel to the plains and rolling country of eastern and southern Waikato. Economic activity in these areas is dominated by tourism and farming respectively. From a planning perspective, this region presents significant challenges in terms of maintaining reliability on feeders supplying sparsely populated areas in what is often remote, difficult-to-access terrain. Investment priorities have focused on improving network security and resilience, and developing better remote control and monitoring facilities.	<ul> <li>Mostly favourable terrain for network construction and maintenance, with rather temperate weather.</li> <li>Lower population density overall, when compared to the Tauranga region.</li> <li>Coromandel (Kopu GXP) and Waikino are characterised by more rugged terrain with less adequate roads for heavy vehicles.</li> <li>Seasonal fluctuations in population in the Coromandel cause holiday period peaks at certain zone substations.</li> <li>The rest of the Valley's demands are more influenced by commercial and industrial sites and permanent residents.</li> <li>Kinleith's demand is dominated by the pulp and paper plant located there, Powerco's largest industrial customer.</li> </ul>			
Eastern - Tauranga	TAURANGA	Tauranga (TGA0111 & TGA0331) Mt Maunganui (MTM0331) Te Matai (TMI0331) Kaitemako (KMO0331)	Tauranga is a rapidly developing coastal region, with horticultural industries, a port and a large regional centre at Tauranga. The principal investment activities in this zone have been associated with accommodating the rapid urban growth in Tauranga, maintaining safe and reliable supplies to the port, supplying new businesses, and supporting the horticultural industry.	<ul> <li>Steady population and demand growth in Tauranga and Mt Maunganui, which seems likely to continue.</li> <li>Growth is expected in both the horticultural and residential sectors.</li> <li>Exposure along the coast indicates future costs for the maintenance and replacement of deteriorating assets.</li> </ul>			





Region	Pricing Zone	GXP(s)	<b>Regional Description</b>	Network Considerations
Western -	А	Bunnythorpe (BPE0331) Linton (LTN0331)	Manawatu includes rural plains and high-country areas exposed to prevailing westerly winds. It is mainly	• The urban centre of Palmerston North is expected to have continued growth, while growth in the more rural Tararua area is expected to remain flat.
Manawatu	В	Mangamaire (MGM0331)	Agricultural in nature, but the large regional centre of Palmerston North has significant logistical industries, a university, and associated research facilities.	• While windy weather is common, this is more of an issue in the more rugged and less accessible Tararua (Mangamaire GXP) area.
Western - Taranaki	А	Carrington (CST0331) Huirangi (HUl0331) Stratford (SFD0331)	Taranaki, which is situated on the west coast plains, is exposed to high winds and rain. The area, which includes the large regional centre of New Plymouth, has	<ul> <li>Chances of extreme weather and corrosion of assets from exposure along the coastline.</li> <li>Population density varies considerably within the Taranaki region.</li> </ul>
	В	Hawera (HWA0331) Opunake (OPK0331)	significant agricultural activity, oil and gas production, and some heavy industry.	<ul> <li>Growth in the region is heavily influenced by the agricultural, gas and oil industries.</li> </ul>
	А	Brunswick (BRK0331) Wanganui (WGN0331)	Whanganui includes the surrounding Rangitikei and is a	• The rural areas of the Whanganui region are rugged and hilly. Flooding of the Whanganui River can occur.
Western - Whanganui	В	Marton (MTN0331) Mataroa (MTR0331) Ohakune (OKN0111) Waverley (WVY0111)	rural area exposed to westerly sea winds on the coast and snowstorms in high country areas. It is predominantly agriculture-based with some industry.	<ul> <li>Whanganui itself is experiencing growth which seems likely to continue.</li> <li>The Ruapehu district is subject to extreme weather conditions and snowfall. Ohakune's population and demands are very seasonal, as a popular winter destination.</li> </ul>
Western - Wairarapa	В	Greytown (GYT0331) Masterton (MST0331)	Wairarapa is more sheltered and is predominantly plains and hill country. It has a mixture of agricultural, horticultural and viticulture industries.	<ul> <li>Carterton and Greytown are growing and are expected to grow further.</li> <li>Weather can be extreme in coastal areas and flooding can occur.</li> </ul>

More detail of our investment plans and day-to-day asset management priorities across out network regions is in our Asset Management Plan, available at <a href="https://www.powerco.co.nz/who-we-are/disclosures-and-submissions/electricity-disclosures">https://www.powerco.co.nz/who-we-are/disclosures-and-submissions/electricity-disclosures</a>



#### **Regulatory requirements**

Our pricing approach is influenced by a range of regulatory requirements and expectations from Government, the Commerce Commission, and the Electricity Authority. The main obligations are:

- Setting prices to recover the allowable revenue the Commerce Commission approved for Powerco so we can invest in our network to improve reliability, resilience, and quality of supply.
   Sections 3, 4 and 7 describe how we do this.
- Setting prices for distributed generation connected to and using our network according to Part 6 of the Electricity Industry Participation Code 2010, relating to the pricing of distributed generation. **Section 4**, and our Distributed Generation <u>Policy</u>, describe how we do this.
- Setting efficient and cost-reflective prices consistent with the Electricity Authority's Distribution Pricing Principles of August 2019<sup>4</sup>. **Section 9** describes how our pricing approach aligns with these.
- Providing information about our pricing approach, and price-setting for the year ahead in accordance with the Commerce Commission's Electricity Distribution Information Disclosure<sup>5</sup> requirements. Section 10 describes how we meet these, along with information on our website at: <u>https://www.powerco.co.nz/who-we-are/disclosures-and-submissions</u>.
- We are required to offer household customers a low fixed charge tariff option (of 60 cents/day) by the *Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004* (the "Low Fixed Charge Regulations"). The Low Fixed Charge Regulations prevent us from setting prices which fully reflect the cost of supply.

#### **Other sources of Powerco pricing information**

Other sources of pricing information are available on our website:

- Information for customers connecting distributed generation to our network about the connection process, connection charges and our approach to procuring distributed generation for network alternatives, is available in our Distributed Generation Policy <u>here</u>
- Information for commercial and industrial customers about new connections and upgrades is available <u>here</u>
- Technical information for retailers on our pricing is available in our Pricing Policy here
- Information for customers about our annual price and revenue changes is available in our Annual Price-Setting Compliance Statements <u>here</u> and our Reasons for Change factsheet <u>here</u>

electricity-distributors

<sup>&</sup>lt;sup>4</sup> The Electricity Authority Pricing Principles are available at: <u>https://www.ea.govt.nz/industry/distribution/distribution-pricing/</u>

<sup>&</sup>lt;sup>5</sup> The Commerce Commission Information Disclosure requirements are available at https://comcom.govt.nz/regulated-industries/electricity-lines/information-disclosure-requirements-for-



## 3. Customer groups for capacity and location

Prices are set for specific customer groups because it is not practical to set individual prices, except for large commercial and industrial customers. Connections are grouped across each network, based on location and connection size or capacity. These two criteria reflect the influence on costs of network and customer characteristics such as geography, rural/urban network density, mains size, protection rating and/or transformer capacity. The location and capacity criteria combine to determine the pricing category for a customer.

#### How capacity is factored into pricing

We split connections into five capacity groups in each region, with some additional sub-groups to cater for specific types, e.g., streetlights, which allows prices to reflect costs more closely for each customer group. We continue to assess the number of customer groups, and alignment across the regions, as network usage evolves.

The table below describes each group.

#### Table 2: Customer capacity groups used for the Eastern and Western regions

#### Eastern & Western region

W01/W02, T01/T02 and V01/V02 – for **all unmetered connections** such as streetlights across the Powerco network

The unmetered nature of the load and the associated dedicated equipment, require special consideration when allocating costs

W05/W06, T05S/T06S and V05S/V06S – for **all residential customers and small commercial customers** with a fuse size of 3 Phase 60 Amps or less

Any customers with a fuse size of up to 3 Phase 60 Amps are typically considered to be residential or small commercial customers and, as such, individually place minimal demands on our network and require minimal investment in on-site and upstream assets

Providing specific eligibility criteria<sup>6</sup> are met, residential customers can choose between the low user price categories (W05/V05S/T05S) and the standard price categories (W06/V06S/T06S)

V08 – for **connections that are classified as temporary accommodation**, with an installed capacity of 15kVA or less, and supplied from Kopu GXP<sup>7</sup>

W22/T22/V22 – for **medium commercial customers** with a fuse size of greater than 3 Phase 60 Amps up to and including 3 Phase 250 Amps

Any connections with these fuse sizes are typically commercial customers with higher average volumes than the W05/W06, T05S/T06S and V05S/V06S price categories. Therefore, this group places increased demands on different components of our network and requires a slightly larger investment in on-site and upstream assets

<sup>&</sup>lt;sup>6</sup> For details on the eligibility criteria for the low user (also known as low fixed charge) prices, please see the full Pricing Policy <u>here</u>.

<sup>&</sup>lt;sup>7</sup> For details on the eligibility criteria for the Temporary Accommodation (V08) prices please see the full Pricing Policy here.



#### Eastern & Western region

W29/T28/V28 – for **medium commercial customers** with an installed capacity of 200 – 299 kVA

Any connections with this level of installed capacity are typically medium sized commercial customers with significantly higher average volumes than the T22/V22 price categories. Therefore, this group places increased demands on the upstream network assets and requires a slightly larger investment in on-site and upstream assets

\* W29 will also initially include existing Commercial TOU Connections with installed capacity of 101 – 300 kVA until they are transitioned to W22

W50/T50/V40 – for large commercial customers with an installed capacity of 300 – 1499 kVA.

Any connections with this level of installed capacity are typically large commercial customers which require dedicated transformers and associated switch gear to meet their supply requirements

W60/T60/V60 – for **large commercial customers** with an installed capacity of 1,500 kVA and greater

Any connections with this level of installed capacity are typically very large commercial/industrial customers who place increased demand on upstream network assets and require dedicated on-site transformers and dedicated feeders to meet their supply requirements

Because connections in the V40, T50, W50, T60, V60 and W60 price categories typically require dedicated on-site and, in some cases, upstream assets, they are all individually priced based on their specific on-site and upstream assets and contribution to peak demands. While these customers are charged a constant daily price, it is reviewed each year based on the customer's previous year's peak demands (as detailed in Section 4) and any changes to the relevant assets in the current year. This ensures that their prices are regularly updated to reflect their individual contribution to network costs

The granularity of the groupings for each category reflects a trade-off between practicality, fairness, and cost-reflectiveness. We have made several incremental improvements over recent years to simplify our price structure, while maintaining or increasing fairness and limiting price impacts on customers.

#### **Capacity criteria**

Customers are grouped by the capacity of their connection to the network, being either their fused capacity when connected to a shared transformer, or the size of the transformer/s dedicated to them. Powerco's prices in the Eastern and Western regions are structured to reflect different capacity bands.

#### Eastern

The Eastern customer groups have similar load characteristics, such as demand, fuse size and installed capacity, as well as those which use specific sets of assets.

Fuse size is used for most Eastern customer groups because, especially for residential and smaller commercial connections, their available capacity is limited by the size of the fuses at their installation, rather than the installed capacity of dedicated transformers. For this reason, connections typically have only one applicable price category. There are situations where customer preferences and metering can determine the price category, such as the low user (V05S/T05S) and T22 price categories.



#### Western

The four Western region customer groups have similar characteristics relating to their installed capacity and associated demand. They reflect the use by each customer group of components of the network, such as sub-transmission, high voltage (11kV), and low voltage (400V) assets, and the on-site assets at each connection such as transformers and associated switchgear.

Most residential connections in the Western region make use of all the network assets but have limited on-site assets. Industrial connections (W50 price category) often have more on-site assets and make limited use of the low voltage (400V) network assets. The use of these customer groups means prices can better reflect the costs to supply these groups.

#### How location is factored into pricing

The location groupings reflect the underlying cost of supplying distribution services to customers in specific locations. The following figure shows the pricing zones for the Eastern and Western regions. Grouping customers by location assists in recognising the relative costs of supplying customers within specific areas and allows a fairer allocation of costs.



#### Figure 2: Eastern and Western region pricing zones



The Eastern and Western regions are each split into two zones, reflecting customer density within each region (see below).



#### Figure 3: Average network density (Eastern and Western regions)



#### **Eastern region**

Customers are grouped based on connection to either the Tauranga or Thames Valley sub-regions. The Tauranga part of the network has a higher density than Thames Valley. Prices for residential customers on the Valley network are typically higher than in the Tauranga network because the lower network density and greater average system length means the costs of supply are allocated across fewer customers.

#### Western region

Customers are grouped by GXPs which have a similar network density:

- Zone A includes customers connected to GXPs supplying the high-density urban centres such as New Plymouth, Whanganui, and Palmerston North
- Zone B includes customers connected to GXPs supplying the remaining lower density areas

For residential and small commercial customers, prices for zone B are typically higher than zone A because the lower network density and greater average system length means the costs of supply are allocated across fewer customers.

Commercial and industrial customers are split between ten zones, with each zone representing a grouping of GXPs based on the structure of the network connecting them. For example, the GXPs of Huirangi, Carrington St and Stratford are grouped together into zone A, as they are interconnected at the 33kV and 11 kV level. The number of zones represents Powerco's preference for greater transparency of costs within each price category, because changes to individual customer behaviour within these groups can affect the underlying cost structure.



## 4. Price categories for each customer group

Prices for customers are set three high-level ways:

- **Standard pricing** for residential and most commercial customers supplied according to the price categories in the standard price schedule
- Non-standard, customer specific, asset-based pricing for large connections (>300kVA Western region and >299kVA Eastern region), although also some smaller customers where asset-based pricing is appropriate
- Non-standard, asset-based, building block pricing for very large (typically >4MVA) connections, typically requiring a capacity upgrade or large new connection. These customers have a direct contractual relationship with Powerco for a defined term.

We also set prices for distributed generators, including payments to distributed generators providing network support services.

#### **Standard pricing**

We set standard prices each year using the process detailed in the following table.

Activity	What's involved
Determine customer groups	• Assign customers (connections) to groups for allocating total costs. More detail on how we do this is in Section 3.
Calculate and allocate costs to customer groups	<ul> <li>Confirm the total forecast allowed revenue we can recover for the year. Forecast revenue is determined by the Commerce Commission to reflect efficient costs of supplying distribution services</li> <li>Calculate expected costs for the year. The main component costs are operating costs (including administration costs), capital costs (including return on investment) and transmission costs</li> <li>Allocate costs to each customer group to, as closely as possible, align benefit of access and use of the distribution service with the costs of supplying the distribution service</li> <li>Determine price structures for each customer group based on the required price signals, relevant cost allocations, and complying with the relevant legal requirements</li> <li>More detail on how we do this is in Section 6.</li> </ul>
Assess customer impacts of pricing variations	<ul> <li>Check the impact on customers of pricing variations, and adjust pricing as needed</li> <li>More detail on how we do this is in Section 8.</li> </ul>

#### Table 3: Standard pricing process



#### Non-standard pricing

Non-standard<sup>8</sup> pricing and individual account management is offered to industrial and large commercial customers to provide a tailored service. We offer this when the customer's needs are unique to their business need, e.g., timing and scale of investment. Our approach to non-standard pricing considers customers' individual capacity and demand to ensure, to the extent practicable, that the price is cost reflective.

We have two non-standard pricing approaches:

- Dedicated onsite assets, with demand-based allocation of *broader* upstream assets Price Categories: T50, V40, W50
- Dedicated onsite assets, with demand-based allocation of *specific* upstream assets Price Categories: T60, V60, W60

The number, size and pricing characteristics of non-standard customers are available in Appendix A. We disclose the number of new non-standard contracts each year on our website <u>here</u>.

#### **Customer-specific asset-based pricing**

Customer-specific asset-based pricing applies to large connections and others that opt for an assetbased price. Asset-based pricing may also apply to generation connections and special arrangements designed to mitigate the risk of uneconomic asset bypass. Each price is set individually using this process.

<sup>&</sup>lt;sup>8</sup> A contract is considered non-standard if the price at which the electricity line services are to be provided is not determined solely by reference to a schedule of prescribed terms and conditions that is publicly disclosed.



#### Table 4: Asset-based pricing process

Activity	What's involved
Measurement and forecasts of customer demand and connections	A customer's demand, measured by historical AMD (Anytime Maximum Demand), PCD (Peak Coincident Demand) and ADL (Average Demand Level), is used to calculate asset-based prices
Calculate value of assets supplying the connection, including allocating value of shared assets	The assets used to supply the service are valued in association with RAB values to calculate the asset-based price. Assets are categorised as dedicated on-site assets or shared upstream assets. On-site assets are generally dedicated assets, and wholly allocated to the relevant customer. Upstream assets are allocated using the site's maximum demand and the demand of the section of the network (e.g., zone substation) that the relevant upstream assets are a part of.
Calculate return of and on capital, and depreciation	An annual rate of return is recovered on the asset valuations attributed to each connection – this is based on Powerco's prevailing weighted average cost of capital (WACC). Depreciation is allocated based on the asset's calculated annual depreciation.
Allocate maintenance costs	Maintenance costs are allocated based on asset types and values where applicable, or to load groups based on the load group's RAB relative to the applicable GXP's total RAB. These costs are allocated against the assets used by each customer, using an appropriate rate.
Allocate indirect costs (fixed and variable).	Indirect costs are allocated to load groups based on total usage as a proportion of the applicable GXP's total usage. Indirect costs are all costs of Powerco's electricity business excluding transmission, asset-related costs, maintenance, interest, and tax. These costs are recovered via a fixed charge to each Consumer in the load group, and an allocation to each based on their PCD.
Allocate transmission costs	Transpower's Connection, Benefit-based, and Residual Charges are allocated to Powerco via various methods. We allocate and pass-through these charges to customers using mechanisms that reflect the TPM and the EA's Pricing Principles and TPM pass-through guidance. The Connection charge is based on the consumer's historical demand, as measured by AMD (load), being a proxy for the connection size. The Benefit-based and Residual charges are allocated based on historical usage, measured by ADL, which aligns with the Transmission Pricing Methodology's allocation method.

More information on criteria applying when a customer enters an asset-based load group is available in our Pricing Policy, available at: <u>https://www.powerco.co.nz/who-we-are/disclosures-and-submissions/electricity-pricing</u>



#### Asset-based building block method (BBM)

The asset-based building block method is to set prices for very large (typically >4MVA) customers. These customers have a direct contractual relationship with Powerco for a defined term, typically for:

- a step change upgrade is needed but the increase in the customer's demand may not be as significant; or
- a new customer connection is required that involves significant investment.

BBM asset-based pricing comprises the following input components:

- return on capital investment, plus accounting depreciation in period or year;
- sub-transmission cost allocation of direct and indirect costs for sub-transmission asset utilisation in period or year;
- operating and maintenance costs;
- tax adjustment; and
- recovery of pass-through costs and recoverable costs (e.g. transmission charges and regulator levies).

#### **Customers on non-standard contracts**

Non-standard contracted customers are generally significant commercial or industrial loads, and arrangements between the customer and Powerco may include provision for response to planned and unplanned interruptions, the management of load in the event of maximum demand levels being reached, or load managed in the event of abnormal network configurations. These arrangements have no direct effect on the determination of prices for these customers.

#### **Pricing for distributed generation**

Prices for distributed generation are set in line with Part 6 of The Code, and our Distributed Generation Policy is available <u>here</u>.

We do not currently charge distributed generation for exporting electricity via our network on a volume basis.



# 5. Our pricing structure and plans to evolve our pricing approach

Prices are set taking account of the customer, network, and regulatory characteristics relevant to each of our networks, and how that pricing can promote efficient network use. We recognise the importance of pricing to reflect evolving customer expectations, technology choices, and use of the network.

#### Network metrics and peak pricing approach

The following table highlights the diversity of the characteristics and costs within pricing zones, by displaying a range of metrics about the cost and use of the network for different locations. The metrics allow assessment of relativities across regions (i.e., there is no 'right' metric for a region).

- Direct OPEX. This is based on internal records of operational expenditure (e.g., vegetation management) matched to the GXP and applied across all connections
- RAB/km and RAB/ICP. This reflects the current value of network assets in the area to line length or ICP count. The metric combines asset age (older assets have lower value) as well as the network configuration required to meet customer needs.
- ICPs/km. This reflects network density (higher = more dense, lower = less dense)
- MWh/ICP. Reflects average annual consumption by small customers<sup>9</sup>.

Although certain GXPs may have high-cost metrics in one category, they are often balanced by being lower in another category. This provides the ability to group them into appropriate pricing zones, based on their overall cost versus usage and density.

Region	Pricing Zone	GXP(s)	Direct OPEX (\$/ICP)	RAB/km (\$/km)	ICPs/km	RAB/ICP (\$/ICP)	Small Customer Consumption (MWh/ICP)	
	VALLEY	Hinuera (HIN0331) & Arapuni (ARI1101)	\$232	\$53,671	7.4	\$7,282	10.5	
		Kinleith (KIN0331 & KIN0112)	\$480	\$68,783	9.7	\$7,080	9.1	
Valley		Kopu (KPU0661)	\$90	\$89,904	9.9	\$9,051	6.2	
vancy		VALLET	Piako (PAO1101)	\$187	\$58,613	7.0	\$8,363	10.9
		Waihou (WHU0331)	\$267	\$57,589	5.8	\$9,913	11.1	
		Waikino (WKO0331)	\$97	\$61,764	12.5	\$4,935	6.1	

#### Table 5: Network metrics by GXP

<sup>&</sup>lt;sup>9</sup> Large customers are excluded here as they can distort the metric due to the scale of their consumption and because their pricing approach is able to be more closely targeted at their network use.



Region	Pricing Zone	GXP(s)	Direct OPEX (\$/ICP)	RAB/km (\$/km)	ICPs/km	RAB/ICP (\$/ICP)	Small Customer Consumption (MWh/ICP)
		Tauranga (TGA0111 & TGA0331)	\$177	\$99,530	15.9	\$6,244	8.3
_	TAUDANCA	Mt Maunganui (MTM0331)	\$85	\$87,338	19.6	\$4,454	7.4
Tauranga	TAUKANGA	Te Matai (TMl0331)	\$196	\$73,411	9.6	\$7,638	7.5
		Kaitemako (KMO0331)	\$101	\$60,661	14.0	\$4,338	5.9
	٨	Bunnythorpe (BPE0331)	\$201	\$60,686	10.1	\$6,028	9.6
Manawatu	A	Linton (LTN0331)	\$221	\$50,069	11.6	\$4,314	9.1
	В	Mangamaire (MGM0331)	\$189	\$44,604	3.4	\$13,079	9.4
		Carrington (CST0331)	\$90	\$93,949	14.7	\$6,386	8.0
	А	Huirangi (HUl0331)	\$203	\$48,934	8.3	\$5,904	9.5
Taranaki		Stratford (SFD0331)	\$247	\$46,593	5.3	\$8,869	10.8
	В	Hawera (HWA0331)	\$215	\$52,312	6.9	\$7,617	10.0
		Opunake (OPK0331)	\$284	\$55,515	4.3	\$12,922	14.0
	٨	Brunswick (BRK0331)	\$145	\$65,958	11.3	\$5,844	7.8
	A	Wanganui (WGN0331)	\$118	\$69,499	12.3	\$5,672	8.0
Mongonui		Marton (MTN0331)	\$180	\$42,276	6.1	\$6,886	9.8
wanganui	P	Mataroa (MTR0331)	\$211	\$41,663	3.3	\$12,730	8.3
	D	Ohakune (OKN0111)	\$243	\$40,664	3.6	\$11,323	8.3
		Waverley (WVY0111)	\$472	\$34,245	3.4	\$9,944	12.3
10/	P	Greytown (GYT0331)	\$16	\$45,464	6.1	\$7,487	10.1
Wairarapa	В	Masterton (MST0331)	\$84	\$53,858	8.3	\$6,470	8.9



The table below summarises the usage characteristics, network characteristics, and resulting revenue allocation for each pricing zone. It demonstrates the alignment between allocated and forecast revenue at a regional level (the rightmost two columns), and how various metrics align with that allocation, and with each other.

Pricing Zone	ICPs	MWh	Peak Coincident Demand	Coincident Maximum Demand	Regulatory Asset Base (RAB)	COSM Allocated Revenue	Forecast Recovered Revenue
Valley	22%	27%	24%	27%	25%	26%	25%
Tauranga	26%	24%	27%	26%	23%	22%	24%
Eastern	48%	51%	51%	53%	48%	48%	<b>49</b> %
А	36%	34%	35%	33%	32%	34%	33%
В	16%	15%	14%	14%	20%	18%	18%
Western	52%	<b>49</b> %	<b>49%</b>	47%	52%	52%	51%
Total	100%	100%	100%	100%	100%	100%	100%

#### Table 6: Network summary





#### Figure 4: Alignment of network demand to Peak/Off-Peak Periods

Note: The network demands relate to the observation window for the relevant financial year, e.g., FY25 peaks are observed between September 2022 to August 2023



Figure 4 shows the top 10 network peaks at each half-hourly trading period, overlaid with the time bands that represent Powerco's time-of-use peak pricing. It illustrates that:

- The peak periods used for pricing align with the times that peak network demands occur
- The peak profile is relatively consistent between years, despite the economic and circumstantial (especially weather-based) factors that can affect any one year
- The peak/off-peak pricing approach, introduced in FY20, does not appear to have had a significant effect on usage patterns. This could reflect a range of factors, such as pass through of prices in retail bills, or relativities of electricity costs to other costs.

The merit of adjusting the time periods is always considered in the context of other factors, such as simplicity (for consumers to understand, and the industry to apply), suitability of the time bands at each network asset level, and consistency with an industry approach – if and when appropriate and efficient to do so.

Having demonstrated that the time-bands used for TOU pricing coincide with peak demands, we then look at the level of prices being signalled at peak periods. Figure 5, below, shows the prior year peak differentials, along with the differentials set for this year, being the combination of transmission and distribution prices. Adjacent to each 'actual' bar is an *indicative* level of the regions' distribution signal<sup>10</sup>, based on future investment required.

Comparing the levels of the 'actual' and 'indicative' bars shows that the overall peak pricing differential exceeds the required distribution pricing signal, which is the key metric.

<sup>&</sup>lt;sup>10</sup> There are different ways this value can be assessed. The value shown reflects the annualised value of deferring growth projects by one year, translated into a price that applies at peak times.



#### Figure 5: Alignment of pricing signals and investment costs



While the indicative 'Winter' rate is significantly higher than the 'actual' in some cases, this is based on treating all non-Winter usage as off-peak, which is not how we have structured those differentials. We also believe there are several reasons to maintain a level of stability in the signals:

- It's unclear whether the observed demand (in)elasticity is due to lack of pass through by retailers, versus consumers choosing not to alter usage patterns
- The ongoing decarbonisation initiatives, including uptake of EVs, will result in these signals becoming more important over time, and influencing customer investment into technologies such as battery storage
- Excessive volatility in the signals is likely to adversely affect customer engagement, which can take years to build

#### **Eastern Region – Tauranga and Thames Valley**

For the Eastern region our prices are set and applied at a customer's metering point. The resulting line charge is passed to the retailer. This is referred to as an Installation Control Point (ICP) approach to set prices.

An overview of the current price structure and price components for each customer group is provided in the tables below. More detail on each customer group is provided in Section 3.

#### **Residential and Small Commercial Price Structures (0 – 43kVA)**

Prices for most residential and small commercial customers in the Eastern region have a fixed daily price plus several volume-based prices, which can vary depending on the type of meter and controlled load arrangement.



#### Table 7: Eastern region residential pricing structures

				Variable price options					
Customer group	Meter type	Price categories	Fixed price	Uncontrolled	Controlled	Peak	Off- Peak		
				24UC	CTRL	PEAK	OFPK		
			\$/day	\$/kWh	\$/kWh	\$/kWh	\$/kWh		
Residential and small	Non- TOU	V05S/T05S	$\checkmark$	$\checkmark$	$\checkmark$				
commercial		100	V06S/T06S V08	$\checkmark$	$\checkmark$	$\checkmark$			
	TOU	V05S/T05S	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$		
		V06S/T06S V08	$\checkmark$		$\checkmark$	~	$\checkmark$		

#### Fixed price and variable off-peak prices

The fixed price recovers a portion of Powerco's distribution costs, and excludes any transmission charges, while the variable off-peak prices include a small portion of transmission charges. The fixed price does not fully recover fixed distribution costs for T05S/V05S due to the restrictions of the Low Fixed Charge Regulations.

#### The variable TOU peak price

The variable TOU peak price recovers part of the distribution cost, and part of Transpower's benefitbased and residual charges. The difference between Peak and Off-peak prices reflects the desired distribution pricing signal amount, which is illustrated in Figure 5: Alignment of pricing signals and investment costs and discussed there.

#### **Uncontrolled and Controlled prices**

We offer a price differential between controlled and uncontrolled load, as we use load control to manage network security. This can also support efficient grid utilisation and reduce the need for network investment. Customers who accept controlled load benefit from lower distribution prices. The options differ based on type and duration of control: Controlled (17 hrs/day), Uncontrolled (24 hrs/day). We have aligned the Controlled and Off-Peak rates as of 1 April 2022, to reflect the benefit to Powerco of being able to shift load from critical peak periods for our network to maintain system security (whether it be for distribution or wider transmission purposes such as the event on August 9, 2021).

#### **Temporary Accommodation - Coromandel (V08)**

The Coromandel area is supplied by Kopu GXP and experiences significant peaks during holiday periods, often caused by population fluctuations. This can be traced to an ICP level and indicates holiday homes are a significant contributor. Due to the extensive investment in our network required to supply and maintain this area, we are evolving a new category to appropriately reflect the costs. This category (V08) is targeting Connections that meet the definition of Temporary Accommodation11. A higher fixed charge than the standard V06S category enables more appropriate cost recovery from these customers, who would otherwise be paying less through variable charges than a standard user, while still significantly contributing to the peaks (which drive the cost of

<sup>&</sup>lt;sup>11</sup> For details on the eligibility criteria for the Temporary Accommodation (V08) prices please see the full pricing policy here.



supplying customers off of Kopu). A comparably lower Off-Peak price provides these customers the ability to shape their demand to benefit the network and save on their variable charges also.

#### **Commercial and Industrial Price Structures (43 – 1499 kVA)**

Commercial and industrial pricing has components which adjust to reflect the connected capacity of each customer group. The fixed component is cost-reflective, as it's based on the level of demand that customers place on different elements of our network such as sub-transmission, high voltage (11kV) and low voltage (400V).

Customer	Meter	Price categories	Fixe	ed price	F	Reactive Powe		Variable charge		
group	type			DIST	TRAN	PFC	24UC	CTRL	KWH	TOU
			\$/day	\$/day	\$/day	\$/kVAr/mth	\$/kWh	\$/kWh	\$/kWh	\$/kWh
Medium commercial	Non- TOU	T22 / V22	$\checkmark$				$\checkmark$	$\checkmark$		$\checkmark$
	C&I TOU	T28 / V28	~			$\checkmark$	~			
Large commercial	C&I TOU	V40 / T50		✓	$\checkmark$	$\checkmark$			√*	

#### Table 8: Eastern region commercial and industrial pricing structures

\*V40 / T50 kWh charge is \$0.00 /kWh

#### Medium commercial and industrial customers

Prices for medium commercial and industrial customers have a two-part structure comprising of a daily fixed price component and a consumption-based kWh variable price. The daily fixed price recovers fixed distribution costs. The variable capacity component recovers variable distribution and transmission costs. Customers with a substandard power factor are subject to a reactive power charge.

#### Large commercial and industrial customers

Prices vary according to the location, connection capacity, and the peak demands of the individual connection. These custom prices support efficient capacity utilisation because they reflect the capacity used. If a customer's capacity requirements change, they can request to upgrade or downgrade capacity. Customers with a substandard power factor are subject to a reactive power charge.

## Western Region – Taranaki, Whanganui, Rangitikei, Manawatu, Tararua, and Wairarapa

Prices in the Western region are set for three customer groups:

- Residential and small commercial capacity less than or equal to 43kVA
- Medium commercial capacity between 44-299kVA
- Large commercial and industrial capacity greater than or equal to 300kVA

An overview of the current price structure and price components for each customer group is provided in the tables below. More detail on each customer group is provided in Section 3.



#### **Residential and Small Commercial Pricing Structures (≤43kVA)**

The residential and small commercial group is priced using a two-part price structure comprising a fixed daily price and a variable time-of-use price with peak and off-peak components.

				Variable price options								
Customer group	Meter type	Price categories	Fixed price	Uncontrolled	Controlled	Peak	Off- Peak	Distributed Generation				
				24UC	CTRL	PEAK	OFPK	24DG				
			\$/day	\$/kWh	\$/kWh	\$/kWh	\$/kWh	\$/kWh				
Residential	Non-	W05 / W06	$\checkmark$	$\checkmark$	✓			$\checkmark$				
commercial	100		$\checkmark$	$\checkmark$	$\checkmark$			$\checkmark$				
	TOU	W05 / W06	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$				
			$\checkmark$		$\checkmark$	$\checkmark$	~	$\checkmark$				

#### Table 9: Western region residential and small commercial pricing structures

#### Fixed price and variable off-peak prices

The fixed price recovers a portion of Powerco's distribution costs, and excludes any transmission charges, while the variable off-peak prices include a small portion of transmission charges. The fixed price does not fully recover fixed distribution costs due to the Low Fixed Charge Regulations, so the variable price is higher to compensate. The fixed daily charge for ICPs with Controlled load is lower.

#### **Peak pricing**

The variable TOU peak price recovers part of the distribution cost, and part of Transpower's benefitbased and residual charges. The difference between Peak and Off-peak prices reflects the desired distribution pricing signal amount.

#### **Commercial and Industrial Price Structures**

Commercial and industrial pricing has components which adjust to reflect the connected capacity of each customer group. The fixed component is cost-reflective, as it's based on the level of demand that customers place on different elements of our network such as sub-transmission, high voltage (11kV) and low voltage (400V).

Customer	Meter	Price	Fixed price Reactive Power				Variable charge					
group	type	categories		DIST	TRAN	PFC	KWH	24UC	CTRL	PEAK	OFPK	24DG
			\$/day	\$/day	\$/day	\$/kVAr/mth	\$/kWh	\$/kWh	\$/kWh	\$/kWh	\$/kWh	\$/kWh
Medium commercial	Non- TOU	W22	~					~	~	~	~	~
	C&I TOU	W29	~	~	~	~	~					
Large commercial	C&I TOU	W50 / W60		$\checkmark$	$\checkmark$	$\checkmark$	√*					

#### Table 10: Western region commercial and industrial pricing structures

\*W50 / W60 kWh charge is 0.00 \$/kWh



#### Medium commercial and industrial customers

Prices for medium commercial and industrial customers have a structure comprising of a daily fixed price component, prices based on historical demand and a small consumption-based kWh variable price. Customers with a substandard power factor are subject to a reactive power charge.

#### Large commercial and industrial customers

Prices vary according to the location, connection capacity, and the peak demands of the individual connection. These custom prices support efficient capacity utilisation because they reflect the capacity used. Customers with a substandard power factor are subject to a reactive power charge.

#### Sharing value of deferral of investment

We see the potential for customers to help us defer network upgrades and improve quality of supply by providing network support services. This could be from demand response or distributed generation and could be directly (e.g., hot water load control) or indirectly (e.g., a third-party provider).

We share the value of deferring investment with customers providing network support services in several ways.

#### Load control

Our prices reflect the difference in long-term costs associated with investment in additional capacity in the distribution network.

- Residential customers (the W/T/V05S and W/T/V06S customer groups) offering control of their hot water, or similar load, receive discounts to the volume-based prices based on the availability and duration of load control
- The 'controlled' tariff rate has been set lower than the off-peak rate, in order to incentivise installation of controllable appliances, including from decarbonisation (consumers switching from gas to electric load), heat pumps, and home EV chargers

Configured well, load control systems are highly effective at reducing demands at peak times by deferring non-time-critical power usage. The benefits of load-control systems include more predictable peak demand magnitudes, fewer peaking generation plants and deferred transmission and distribution capacity augmentations. The benefits accrue across the entire electricity sector.

#### **Demand-based allocation**

Powerco's demand-based prices in the Western region are applicable to larger commercial and industrial customers. They are designed to reflect the relative costs of distribution and transmission for those customers groups and are further split by GXP groupings. This pricing method is an alternative to full asset-based pricing for each connection, while being more cost-reflective than using kWh-based prices.

Note: The demands are observed historically and applied as fixed charges in the following year.



#### **Standalone power systems**

We also support deferral and avoidance of investment through installation of standalone power systems where the efficient option is to provide an alternative energy supply rather than replacing network assets. In some cases, the cost of renewing these assets is greater than the present value of the line charges that would be recovered over the lives of the assets.

#### **Evolving our pricing approach and prices**

We are evolving our pricing approach and prices. You can find the detail on how we are doing this in our pricing roadmap, available <u>here</u>.

Our pricing approach had incremental changes over the last few years to improve the alignment of cost with prices, and the predictability of line charges for retailers. This provided retailers and customers with a degree of certainty when making decisions about retail pricing, and investment in energy saving and off-peak devices.

However, changing customer preferences, technology, and retail markets are influencing how our network is used, so our pricing approach may need to evolve further too. We need to balance the need for our prices to reflect the costs of supplying each customer with other considerations, like being workable and predictable for retailers, and understandable for consumers. We also need to make sure our pricing complements changes to the external environment, such as the roll out of advanced metering infrastructure, the fall in cost of photovoltaic technology, and the way transmission prices are derived.

#### Transitioning to a single pricing structure

A significant implementation in FY25 is replacing the GXP approach to pricing in the Western region with an ICP methodology (as used in the Eastern region). ICP pricing more closely reflects retailer prices and consequently makes it possible to provide a greater number of targeted price signals to specific regions, customer groups, or individual customers to promote efficient use of the network.

The transition involves significant system changes and requires access to consumption data so we can set prices accurately. It will require ongoing work with retailers to ensure a manageable transition between methodologies, including assessment of customer impacts.

#### Longer-term pricing direction

Powerco is subject to a regulated revenue allowance. A benefit of this approach is that it removes potential barriers to more cost-reflective pricing structures, such as by eliminating the risks involved with forecasting volumes. Powerco's roadmap reflects the removal of these barriers, including initiatives that will improve the alignment between costs and prices.

Issues we will continue to monitor over the next five years:

- Improving the alignment of fixed price components with fixed costs
- The impact of stronger peak demand pricing signals, both in terms of how narrowly peaks are targeted, and the actual pricing levels, on different types of customers' electricity usage



- The benefits and consequences of greater alignment of the pricing approaches used in the Eastern and Western regions
- The needs of customers when we are making price adjustments
- Customer preferences towards the way costs are allocated and reflected in prices
- Development and uptake of new technologies, such as PV and EVs, and the impacts these will have on our network
- Applying pricing signals meaningfully and only when required (i.e., using prices to signal to avoid congestion when there is a genuine cost to avoid)



## 6. Changes to our pricing in FY25

The Pricing Schedule for 2024-25 sets out the specific prices for customers connected to our networks. It is available on our website <u>here</u>. The prices reflect a total average increase in forecast revenue of 8.10% compared to last year.

The change in forecast revenue for the Eastern and Western regions is shown in the table below.

#### Table 11: Changes to Powerco's total forecast revenue

	Forecast Revenue (\$000):			
	FY24	FY25	\$ Change	% Change
Eastern region	208,158	225,278	17,120	8.2%
Western region	219,120	236,777	17,657	8.1%
Total	427,278	462,055	34,777	8.1%

The reasons for changes to forecast revenue are described in the following table.

#### Table 12: Reasons for changes to forecast revenue FY25

Change	Description
DPP movement	Powerco's forecast net allowable revenue, which excludes pass-through and recoverable costs, and any wash-up draw down, has increased by \$6.4m, to \$328.1m. This is due to adjustments to allowances for inflation.
Quality incentive adjustment	The quality incentive scheme allows Powerco additional revenue for performing better than the quality targets, and less revenue for performing below the quality targets. The overall quality incentive adjustment for FY25 is -\$3.2m, compared to -\$1.3m in FY24.
Revenue wash-up	An annual 'wash-up' of the difference between the revenue received and allowable revenue is calculated. The revenue wash-up amount for FY25 is +\$36.7m, compared to +\$14.5m in FY24.This washup largely relates to the inflation adjustment of FY23 allowable revenue, as CPI was significantly higher than assumed within the Commerce Commission's escalators. This washup includes a small allowance for replacement of aged assets due to growth or reliability requirements and is effectively the accelerated depreciation on those assets. It is referred to 'loss on disposal' in regulatory accounting terms.
Capex and Opex IRIS	The IRIS mechanisms are designed to incentivise efficient capital and operating expenditure. The net adjustment to revenue including capex wash-up is +\$0.3m for FY25, compared to -\$5.7m for FY24. This means Powerco's actual expenditure in preceding years was lower than our allowance, and we are returning a portion of that through our total pass through and recoverable costs.
Change in transmission costs	Transpower's charges have increased for FY25, mostly due to an increased revenue allowance, and minor changes on cost allocation between customers. Powerco's FY25 transmission charges are \$95.4m, up from \$93.4m in FY24.



The figure below presents these components to illustrate the impacts for each change relative to the overall change in allowable revenue.



#### Figure 6: Percentage contribution to change in allowable revenue (FY25 vs FY24)

Prices have been adjusted, after consultation with retailers, to reflect this change. There have been some other changes to our pricing approach, as described and summarised below.

#### Table 13: Changes to pricing from 1 April 2024

Change	Description
GXP-ICP pricing in the Western Region	All mass market ICPs (~180,000) in the Western region will move to ICP pricing, which will include new Price Categories to align capacity groupings with the Eastern Region. This will also introduce a 'standard user' Price Category, with a fixed charge of 90c/day
Changes in fixed charges	The electricity low fixed-charge tariff option is being phased out by the Government over five years, starting from 1 April 2022. In line with the continued removal, the daily fixed charge for low user tariffs will rise from 45 cents per day to 60 cents per day from 1 April 2024.
Introduction of Summer/Winte r differential	Having had Peak/Off-Peak charges since 2019, we have introduced a Summer/Winter split in the Peak rates, to better reflect when network peaks occur. The differential has been kept relatively small, as we assess the impact of these price signals
Consolidation of Tariff options	Tariff options such as NITE, AICO, PKIN, OPIN have been removed, with usage on these meter types now captured by other existing Tariff options. In prior years, the rates for these discontinued options were aligned with those other options, so there is no cost impact.



# 7. Calculating and allocating costs across customer groups

For the FY25 pricing year, Powerco's total forecast revenue is \$462.1m. We set prices to recover this amount by calculating and allocating costs across each customer group. The process involves:

- Calculating the total forecast revenue allowed by the Commerce Commission for the pricing year
- Identifying our major cost components, and whether the costs are fixed or avoidable
- Determining price signals required to reflect the expected costs of future investment
- Allocating costs to specific customer groups
- Checking alignment between cost types and price components

#### Prices are set to reflect major cost components

We use categories of operating and maintenance costs, depreciation, cost of capital, and recoverable costs including transmission and other pass-through costs such as local authority rates. The following table details the forecast costs for each of these categories for the FY25 pricing year.

Cost	Eastern region (\$000)	Western region (\$000)	Total (\$000)
Operating and maintenance costs	\$46,986	\$60,008	\$106,994
Depreciation	\$49,517	\$55,962	\$105,479
Cost of capital	\$76,555	\$72,814	\$149,369
Transmission costs <sup>12</sup>	\$52,220	\$47,993	\$100,213
Forecast Revenue	\$225,278	\$236,777	\$462,055

#### Table 14: Expected costs of supplying distribution services in the FY25 pricing year

More detail on each of these costs is provided below. Detailed information on Powerco's forecast and historical costs are available in Powerco's disclosures to the Commerce Commission. These disclosures include Powerco's Asset Management Plan, which contains forecasts of demand and costs for the next 10 years.<sup>13</sup>

#### **Operating costs**

Operating costs are the day-to-day costs of providing the distribution service, including:

• Network operation costs

<sup>&</sup>lt;sup>12</sup> This includes other pass-through and recoverable costs (which comprise around 5%)

<sup>&</sup>lt;sup>13</sup> Our disclosures, including Asset Management Plans, annual delivery report, and financial and technical disclosures are available here



- Network planning and asset management costs
- Network management and dispatch costs
- The cost of support services such as billing, record management, planning, contract administration, regulatory compliance, and resource costs
- Statutory charges and levies (excluding those that are pass through costs)

#### **Depreciation**

This component includes recovery of the depreciation on the network assets, which is part of our revenue allowance.

#### **Cost of Capital**

The cost of capital component includes recovery of the cost of debt and equity invested in Powerco, and the tax expense. Powerco requires large amounts of capital to maintain and develop network assets. Historical capital expenditure by type (e.g., system growth, replacement and renewal) is available on Powerco's website. Powerco's asset management plan provides a large amount of detail on the drivers of capital expenditure for the network.

#### **Transmission costs**

The transmission component includes all recoverable costs, such as Transpower's Connection, Benefitbased, Residual, and New Investment charges, as well as pass through costs such as council rates and statutory levies.

Transpower's charges are set according to the transmission pricing methodology determined by the Electricity Authority and 'passed through' to customers in our prices. More detailed information on the pass-through of transmission charges is available in Table 17 (Appendix A).

#### Aligning costs and prices across Customer groups

Firstly, costs are allocated to customer groups and pricing zones. The allocation is a function of the load characteristics of the customer groups, network use, and cost of supply. When costs are directly attributable to a group or zone, they are allocated directly to them. When they aren't, we allocate more broadly. In summary:

- Operating costs: allocated to GXPs where attributable, spread broadly otherwise.
- Transmission costs: allocated to GXPs. Within each GXP, allocated based on demand.
- Cost of capital: allocated based on the value of assets in each network region

Pricing structures for each customer group are intended to marry the cost components with the attribute that drives it. Our intention is to recover fixed costs using fixed price components and avoidable costs using avoidable cost components. For example, we want the fixed daily price for residential customers to recover fixed costs. However, it is not practicable to do so yet for several reasons, such as the LFC regulations and data quality.



#### Eastern region

Powerco's price structure in the Eastern region has been designed so that customers with higher connected capacity have a higher fixed component than those with lower connected capacity. This benefits both Powerco and customers by making line charges more predictable and more closely related to the actual cost of supply.

This approach also helps to ensure that customers have the right incentives to state their capacity requirements. Larger capacity price categories have the bulk of their line charges fixed, while lower capacity categories have a lower fixed component (as shown in the table below).

## Table 15: Eastern region target revenue requirement split by fixed and variable price components for each customer group (FY25 pricing year)

Zone Customer Group		Price Category	ICPs	Target Revenue Split			
				Fixed	Variable	Other <sup>14</sup>	Total
	Unmetered (T01/T02)	315	84.1%	15.9%	-	100%	
	0-43kVA	Low Usage (T05)	35,606	34.3%	65.7%	-	100%
		Standard (T06)	55,705	45.9%	54.1%	-	100%
Tauranga	44-299kVA	3 Phase 60 – 3 Phase 250 Amps (T22)	771	43.9%	56.1%	-	100%
		200 - 299 kVA (T28)	156	39.6%	58.7%	1.7%	100%
300 kVA + (incl. non- standard customers)	300 kVA + (incl_non-	300 – 1,499 kVA (T50)	244	97.7%	-	2.3%	100%
	standard customers)	1,500 kVA + (T60)	39	98.0%	-	2.0%	100%
	Unmetered (V01/V02)	212	89.8%	10.2%	-	100%	
	0 421474	Low Usage (V05)	37,111	32.0%	68.0%	-	100%
	0-43KVA	Standard (V06)	37,692	37.2%	62.8%	-	100%
		Temporary Accommodation (V08)	-	-	-	-	0%
Valley 44-299kVA 300 kVA + (incl. non- standard customers)	11-299KVA	3 Phase 60 – 3 Phase 250 Amps (V22)	566	33.9%	66.1%	-	100%
	HH LJJKVA	200 – 299 kVA (V28)	50	40.1%	59.3%	0.6%	100%
	300 kVA + (incl. non-	300 – 1,499 kVA (V40)	99	97.9%	-	2.1%	100%
	1,500 kVA + (V60)	30	98.7%	-	1.3%	100%	

Powerco's ability to align the price structure with costs is restricted by Low Fixed Charge Regulations which distort the balance between and levels of fixed and variable prices. Powerco determines the proportion of fixed and variable charges by reference to existing rates while recognising the largely fixed nature of the underlying costs. The regulations have a large influence on the level of the fixed and variable components for residential groups.

<sup>&</sup>lt;sup>14</sup> Including reactive power charges (where applicable).



#### Western region

As for the Eastern region, distribution costs are largely fixed rather than related to the delivered energy volumes. Again, the Low Fixed Charge Regulations affect the balance between fixed and variable prices, although this is slowly abating through the LFC phase-out. Small customers were previously in one group due to GXP billing, but for FY25 will be split in a similar way to Eastern.

Customers in the W29 and W50 price categories are typically very large commercial or industrial businesses requiring dedicated on-site and upstream assets (such as dedicated feeders and transformers) to meet their supply requirements. The fixed price component of these price categories is typically higher than the other price categories to ensure that an appropriate return on investment is earned by Powerco.

Table 16: Western region target revenue requirement by fixed and variable price components for each customer group (FY25 pricing year)

Customer	Zone	Price Category	ICPs	Target Revenue Split			
Group				Fixed	Variable	Other <sup>15</sup>	Total
		Unmetered (W01A/W02A)	294	99.0%	1.0%	-	100%
0-43 kVA	А	Low Usage (W05A)	85,811	33.8%	66.2%	-	100%
		Standard (W06A)	39,051	19.9%	80.1%	-	100%
		Unmetered (W01B/W02B)	74	96.3%	3.7%	-	100%
0-43 kVA	В	Low Usage (W05B)	34,155	28.1%	71.9%	-	100%
		Standard (W06B)	21,726	15.9%	84.1%	-	100%
	А	(W29)	73	67.7%	20.4%	12.0%	100%
B C D	(W29)	15	78.9%	21.1%	-	100%	
	С	(W29)	2	89.8%	10.2%	-	100%
	D	(W29)	1	96.2%	3.8%	-	100%
	E	(W29)	24	74.5%	25.5%	-	100%
44-299 KVA	F	(W29)	13	71.8%	28.2%	-	100%
	G	(W29)	5	88.0%	12.0%	-	100%
	н	(W29)	48	78.8%	21.2%	-	100%
I	(W29)	126	75.1%	24.9%	-	100%	
J		(W29)	4	76.9%	23.1%	-	100%
		(W22)	-	-	-	-	-
300 kVA + (incl. non- standard customers)		300 – 1,499 kVA (W50)	249	97.8%	-	2.2%	100%
		1,500 kVA + (W60)	59	98.7%	-	1.3%	100%

<sup>&</sup>lt;sup>15</sup> Including reactive power charges (where applicable).



### 8. Assessing customer impacts

We assess the impact on customers of each change to price structure and price level. We take account of:

- The scale of changes to line charges for customers or a customer group
- Whether the price structure is workable for retailers to adopt and apply
- The transaction costs associated with applying the price structure.

#### We assess the impact of price changes

The average line charge, including transmission, for residential customers is about 38%<sup>16</sup> of the total electricity bill. The demographic profile of our networks is diverse. We work hard to understand the impact of changes to our pricing on households, and to design our pricing to avoid large changes to line charges (or 'bill shocks').

A customer's line charges can vary for several reasons:

- 1. Changes to the Commerce Commission's Price-Quality path decision. For example, changes to the Weighted Average Cost of Capital that affects our allowable revenue. These changes are largely outside of our control.
- 2. Changes we make to our pricing methodology and revenue allocation between groups. These changes are largely within our control.
- 3. Changes in the way a customer is using the network be that capacity, consumption, timing of demand

#### Identifying material price changes

We use a Cost of Supply Model (COSM) to evaluate how the pricing approach recovers different categories of cost from specific customer groups, and to identify potential customer impacts.

We assess price changes for residential and commercial/industrial customers differently. For residential customers we assess the price impact by examining the average change in price for all customers (to assess the average impact on customers). We engage with retailers about how any changes might impact on their customer bills. For commercial/industrial price categories, because there are a lot fewer customers, we can assess price impacts at a more granular level. If necessary, we implement changes in phases to mitigate the risk of price shocks.

As an example, for FY25 the GXP-ICP change in the Western Region introduced the W06 'standard user' Price Categories, alongside the LFC compliant Price Categories. As the fixed charge differential between these two Categories is increased, it increases the price impact on low users. Combined with an overall increase in allowable revenue, and LFC phase-out, the effect on the average low user approached 20%. Due to this, we chose to limit the standard user fixed charge to 90c/day, compared to the low-user rate of 60c/day, to avoid amplifying the price shocks.

<sup>&</sup>lt;sup>16</sup> Based on <u>https://www.ea.govt.nz/your-power/bill/</u>



#### Checking price outcomes are subsidy-free

Finally, we check prices are within the subsidy-free zone. This involves checking that average prices for each customer group are between the estimated avoidable and stand- alone cost of supplying them. Our prices reflect the economic costs of service provision, by allocating costs based on the shares of network benefit that consumers receive. Residential/small commercial connections make up 99% of all connections on our network. They use on average 8MWh per year for an average network cost of approximately \$900 per year.

- Avoidable costs for an existing consumer are negligible (near zero) since almost all distribution costs relate to shared assets or services.
- Standalone costs on an ongoing basis, are calculated at between \$5,000-\$10,000 per year (including energy cost). We calculated the standalone costs based on the alternative supply of a residential consumer, using solar panels and batteries, or a generator with solar panels and batteries.

#### **Price-quality path changes**

We mitigate price impacts by calculating the customer impact before finalising our prices. If the COSM analysis is significantly different from the revenues recovered through existing prices, prices are adjusted to ensure a better alignment of revenues and costs. This means that changes to prices (up or down) are linked to the costs that drive them.

#### **Customer engagement**

We actively engage with our customers to understand what they value – we need our network to meet their needs, both now and in the future<sup>17</sup>. For example, our customer engagement has found that customers have an increasing willingness to take control of their energy options. This has influenced our strategy to invest in resources to study customer trends and emerging requirements, so we can prepare our network to accommodate them.

We use a variety of means to engage with our customers and capture their feedback about how we manage our network, including pricing. These include:

- Direct interaction with larger commercial and industrial customers
- Customer initiated engagement through promotion of customer facing communication channels
- Customer surveys
- Annual retailer consultations
- Stakeholder meetings and focus groups
- Website, digital services, and phone feedback
- Stands at agricultural field days, exhibitions, and trade shows where customers can provide faceto-face interaction

<sup>&</sup>lt;sup>17</sup> Our customer base includes retailers and their customers, directly contracted industrial businesses, local territorial authorities, and the NZTA.



A key step in setting prices is a consultation process with retailers. We welcome their insights about customer preferences towards pricing.

Findings of our customer engagement surveys are reflected in our asset management planning process along with other key drivers such as safety and resilience. Details of our approach and findings of the 2019 consultation programme are published in our most recent Electricity Asset Management Plan (2023).

#### We set workable prices for retailers to adopt and apply

Powerco consults with retailers and other customers several times throughout the year to discuss pricing issues (including potential improvements) and the impact of any pending review of our prices. A description of this process is available on request from Powerco. Powerco is aware of transaction costs and seeks to minimise them where feasible. Some examples of transaction costs that exist when Powerco transacts with key groups, and how we take these into account, are:

- **Retailers:** Transaction costs can occur when billing systems, the pricing strategy and/or risk management strategy are amended to accommodate large distribution price changes. Over twenty retailers operate on Powerco's network, and we have a detailed pricing consultation process, usually involving two rounds of consultation. There is a balance between rationalising price categories and options to minimise retailer transaction costs against more individualised pricing which some new retailers can accommodate easily with modern systems.
- **Customers:** Customers make medium to long-term investments based on electricity price structures. For example, a very low price for consumption may provide an incentive to invest in a storage heater. Powerco is aware that customers value pricing certainty and aims to minimise any large changes that impact these types of investment decisions. For residential customers we consider feedback from retailers (as they have responsibility for the ultimate price signal). We also collect information from commercial customers via direct engagement.



## 9. Alignment with Electricity Authority Pricing Principles & Focus Areas

The table below provides commentary about how our pricing approach aligns with the Electricity Authority's Pricing Principles, and the Electricity Authority's pricing focus areas.

Principle	Alignment Demonstrated
<b>A1</b> Prices are to signal the economic costs of service provision, including by being subsidy free (equal to or greater than avoidable costs, and less than or equal to standalone costs)	Forecast total revenue recovered from each customer or customer group falls between standalone and avoidable costs. This is discussed in Section 8. Sections 3, 4 and 7 describe how we set prices to reflect the cost of supply for each customer or customer group, and check cost allocations using our cost of supply model.
<b>A2</b> Prices are to signal the economic costs of service provision, including by reflecting the	We set prices to reflect the impacts of network use on economic costs, to the extent practicable.
impacts of network use on economic costs	As described in Sections 2, 4 and 7, the prices for each customer group are designed to recover fixed costs and to signal avoidable costs, for each location. This is achieved by the components of the price structure for each customer group aligning to specific types of costs, to the extent practicable (e.g., the LFC Regulations require us to set prices which discourage consumption).
<b>A3</b> Prices are to signal the economic costs of service provision, including by reflecting differences	We set prices to reflect differences in the network service provided to, or by, customers.
in network service provided to (or by) consumers	Section 5 describes how residential customers across both networks can choose controlled rate pricing which provides them a price discount in return for allowing us to reduce part of their consumption at pre-specified times. Our non-standard pricing for commercial and industrial customers allows those customers to obtain and pay for a distribution service which reflects their specific supply requirements.
	Section 8 describes how our customer engagement activities aid our understanding of customer preferences and informs our asset planning. We also use the insights from the Electricity Network Association's customer engagement surveys and focus groups.



Principle	Alignment Demonstrated
<b>A4</b> Prices are to signal the economic costs of service provision, including by encouraging efficient network alternatives	We set prices to encourage efficient network alternatives. Section 5 describes how our pricing approach provides an incentive for commercial and industrial customers to manage the power factor and recover costs. The Powerco connection standard specifies that power factor correction is best applied at customers' installations. Section 4 refers to our Distributed Generation Policy, which includes a mechanism for distributed generators to receive payments when they supply us a network support service. Additionally, our network management approach supports procurement of efficient network alternatives by tendering for solutions on a case-by-case basis. The benefits are reflected in lower costs of supply, and lower prices.
<b>B</b> Where prices that signal economic costs would under-recover target revenues, the shortfall should be made up by prices that least distort network use.	We set prices to recover the cost of supplying distribution services, and to signal the opportunity for customers to avoid costs. As described in Sections 4, 5 and 7 the components of our prices are intended to recover the fixed costs and the avoidable costs associated with supplying specific customer groups, to the extent practicable. We are working to align the fixed and avoidable price components with the relevant costs.
<b>C</b> Prices should be responsive to the requirements and circumstances of end users by allowing negotiation to reflect the economic value of services and enable price/quality trade-offs	We offer non-standard contracts and pricing to customers – primarily large commercial and industrial – to reflect their specific circumstances and cost of supplying distribution services, and to reduce the risk of inefficient demand curtailment, disconnection, or not connecting. Our approach is described in Section 4.
<b>D</b> Development of prices should be transparent and have regard to transaction costs, consumer impacts, and uptake incentives.	Our approach to pricing and setting prices is described in this Pricing Methodology document and is available to customers and interested people from our website and on request. We have previously used dedicated webpages for annual pricing changes, including survey options. We engage regularly with customers, retailers and other interested people on pricing, reliability and quality of supply and investment plans. For example, we are surveying customers to understand more about their perceptions of our pricing during the coming year. Extensive information is available through our website, Asset Management Plan, and other publications. Our goal is to make good information available to people using our network (or wanting to in the future) for them to make the best possible decisions about energy-related investments and electricity use.



Focus Area	Alignment Demonstrated & Comment
<b>1: Network congestion</b> Consider the impact of future congestion and set out a time-limited plan for responding to that congestion in the roadmap	Forecasts of future congestion due to large load changes, EV uptake, DG growth or other drivers is part of the pricing methodology. The methodology explains how network support services, together with peak price signals, are used to respond to expected future congestion. Section 5 sets out the approach to peak pricing and locational cost. Section 5 also sets out our evolving pricing approach and planned actions over the next 5 years which includes evolving our price signals to improve how congestion is avoided when there is a genuine cost to avoid.
<b>2: Pricing for new/expanded connections</b> Pricing methodologies and/or capital contribution policies ensure that first movers and exacerbators are generally neither advantaged nor disadvantaged compared to other customers	Our capital contribution policy allocates cost using a formula that does not charge the (first, second or later) mover for anticipatory capacity.
<b>3: Pass-through of new transmission charges</b> Pass transmission charges through in accordance with the guidance (preserving the TPM's intended incentives)	We allocate and pass-through these charges to customers using mechanisms that reflect the TPM and the EA's Pricing Principles and TPM pass-through guidance. The new TPM has materially altered the cost allocation across customers as set out in Section 6. More information on the pass-through of transmission charges is available in Table 17 (Appendix A).
<ul> <li>4: Fixed charges match the phaseout path of the low fixed charge tariff regulations</li> <li>Overall proportion of revenue from fixed charges increases year on year.</li> <li>An individual customer's usage has no or minimal influence on their own charge</li> </ul>	Our LFC compliant fixed charges are set at the maximum allowable level.
<b>5: Avoid/transition from recovery of costs that</b> <b>are fixed in nature through use-based charges</b> Reduce use of charges based on a customer's own AMD as soon as possible and have a roadmap for removal	Anytime Maximum Demand charges are used sparingly in our methodology and relate to customer specific asset-based pricing (refer Section 4).



# **10.** How we meet the Commerce Commission Information Disclosure requirements

The table in this section provides references for how this pricing methodology complies with 2.4.1 to 2.4.5 of the Electricity IDD.

Information Disclosure Requirement	Compliance demonstrated
2.4.1 Every EDB must publicly disclose, before the start of each disclosure year, a pricing methodology which-	
(1) Describes the methodology, in accordance with clause 2.4.3 below, used to calculate the prices payable or to be payable;	Powerco's Electricity Pricing Methodology achieves this.
(2) Describes any changes in prices and target revenues;	See Section 6 and 7.
(3) Explains, in accordance with clause 2.4.5 below, the approach taken with respect to pricing in non-standard contracts and distributed generation (if any);	See Section 4.
(4) Explains whether, and if so how, the EDB has sought the views of consumers, including their expectations in terms of price and quality, and reflected those views in calculating the prices payable or to be payable. If the EDB has not sought the views of consumers, the reasons for not doing so must be disclosed.	See Section 8.

2.4.2 Any change in the pricing methodology or adoption of a	
different pricing methodology, must be publicly disclosed at least 20	
working days before prices determined in accordance with the change	
or the different pricing methodology take effect.	

2.4.3 Every disclosure under clause 2.4.1 above must-	
(1) Include sufficient information and commentary to enable interested persons to understand how prices were set for each consumer group, including the assumptions and statistics used to determine prices for each consumer group;	See <u>Appendix A.</u>
(2) Demonstrate the extent to which the pricing methodology is consistent with the pricing principles and explain the reasons for any inconsistency between the pricing methodology and the pricing principles;	See Section 9.
(3) State the target revenue expected to be collected for the disclosure year to which the pricing methodology applies;	See Section 6.
(4) Where applicable, identify the key components of target revenue required to cover the costs and return on investment associated with the EDB's provision of electricity lines services. Disclosure must include the numerical value of each of the components;	See Section 7.
<ul> <li>(5) State the consumer groups for whom prices have been set, and describe–</li> <li>(a) the rationale for grouping consumers in this way;</li> <li>(b) the method and the criteria used by the EDB to allocate consumers to each of the consumer groups;</li> </ul>	See Section 3.



Information Disclosure Requirement	Compliance demonstrated
(6) If prices have changed from prices disclosed for the immediately preceding disclosure year, explain the reasons for changes, and quantify the difference in respect of each of those reasons;	See Section 6.
(7) Where applicable, describe the method used by the EDB to allocate the target revenue among consumer groups, including the numerical values of the target revenue allocated to each consumer group, and the rationale for allocating it in this way;	See Section 7, and <u>Appendix A.</u>
(8) State the proportion of target revenue (if applicable) that is collected through each price component as publicly disclosed under clause 2.4.18.	See <u>Appendix A</u> .

2.4.4 Every disclosure under clause 2.4.1 above must, if the EDB has a pricing strategy-	
(1) Explain the pricing strategy for the next 5 disclosure years (or as close to 5 years as the pricing strategy allows), including the current disclosure year for which prices are set;	Section 5 describes the pricing approach Powerco is adopting
(2) Explain how and why prices for each consumer group are expected to change as a result of the pricing strategy;	and changes.
(3) If the pricing strategy has changed from the preceding disclosure year, identify the changes and explain the reasons for the changes.	

2.4.5	Every disclosure under clause 2.4.1 above must-	
(1) De inclue	escribe the approach to setting prices for non-standard contracts, ding–	See Section 4 and <u>Appendix A</u> .
(a)	the extent of non-standard contract use, including the number of ICPs represented by non-standard contracts and the value of target revenue expected to be collected from consumers subject to non- standard contracts;	
(b)	how the EDB determines whether to use a non-standard contract, including any criteria used;	
(c)	any specific criteria or methodology used for determining prices for consumers subject to non-standard contracts and the extent to which these criteria or that methodology are consistent with the pricing principles;	
(2) De	escribe the EDB's obligations and responsibilities (if any) to consumers	See Section 4.
subje	ct to non-standard contracts in the event that the supply of electricity	
lines	services to the consumer is interrupted. This description must	
expia	the extent of the differences in the relevant terms between standard	
(u)	contracts and non-standard contracts:	
(b)	any implications of this approach for determining prices for	
	consumers subject to non-standard contracts;	
(3) De distri	escribe the EDB's approach to developing prices for electricity bution services provided to consumers that own distributed	See Section 4.
gene	ration, including any payments made by the EDB to the owner of any	
distri	buted generation, and including the-	
(a)	prices; and	
(b)	value, structure, and rationale for any payments to the owner of the	
	distributed generation.	



### 1. **Definitions**

This pricing methodology uses industry standard terms where possible. A glossary of common terms is included for clarity. Additional information on definitions used in the document can be found in:

- Powerco's Electricity Pricing Schedule, Distributed Generation Policy and Asset Management Plan<sup>18</sup>; and
- The Commerce Commission's electricity default price-quality path notice and information disclosure requirements.<sup>19</sup>

**Anytime Maximum Demand (AMD)** means the highest kW peak occurring any time in the 12-month period from 1 September to 31 August, the result of which is applied in the subsequent Price Year commencing 1 April.

**Average Demand Level (ADL)** means the Consumer's average level of kW demand across the 12month period from 1 September 2022 to 31 August 2023, the result of which is applied in the subsequent Price Year commencing 1 April 2024

**Avoided Cost of Transmission (ACOT)** is the amount equal to the actual reduction in the charges that are payable by Powerco to Transpower under the Grid Network Agreement. ACOT charges are a substitute for what otherwise could have been Transpower charges and are regulated by the Electricity Authority.

**Coincident Maximum Demand (CMD)** is the highest kW peak of each GXP, measured in accordance with the AMD method, but accounts for interconnection of certain GXPs.

**Connection** or **Point of Connection** means each point of connection at which a supply of electricity may flow between the Distribution Network and the Customer's installation, as defined by the Distributor.

**Customer** means a purchaser of electricity from the Retailer where the electricity is delivered via the Distribution Network.

**COSM** means Powerco's Cost of Supply Model.

**Demand** means the rate of expending electrical energy expressed in kilowatts (kW) or kilovolt amperes (kVA).

**Distributed Generation** or **Embedded Generation** means electricity generation that is connected and distributed within the Network.

**Distributed Generator** or **Embedded Generator** means an electricity generation plant producing Embedded Generation.

Distribution Network or Network means:

<sup>&</sup>lt;sup>18</sup> Available at <u>www.powerco.co.nz</u>.

<sup>&</sup>lt;sup>19</sup> Available at <u>www.comcom.govt.nz</u>.



Network region	Area	Transpower GXP		
Eastern	Valley (Thames Valley)	Arapuni Hinuera Kinleith Kopu	Piako Waihou Waikino	
	Tauranga	Tauranga Mt Maunganui	Te Matai Kaitimako	
Western	Wairarapa	Greytown Masterton		
	Manawatu Taranaki	Bunnythorpe Linton	Mangamaire	
		Carrington Huirangi Hawera	Opunake Stratford	
	Whanganui	Brunswick Marton Mataroa	Ohakune Whanganui Waverley	

**Distributor** means Powerco Limited, as the operator and owner of the Distribution Networks, and includes its subsidiaries, successors, and assignees.

**Electricity Authority (EA)** means the Electricity Authority which is an independent Crown entity responsible for regulating the New Zealand electricity market.

**Grid Exit Point (GXP)** means a point of connection between Transpower's transmission system and the Distributor's Network.

High-Voltage (HV) means voltage above 1,000 volts, generally 11,000 volts, for supply to Customers.

**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 Customer, and has the attributes set out in the Code.

**kVA** means kilovolt–ampere (amp).

kVAh means kilovolt ampere hour.

kVAr means kilovolt ampere reactive.

**kW** means kilowatt.

**kWh** means kilowatt hour.



**Line Charges** means the total charges levied by the Distributor on Customers for the use of the Distribution Network, as described in the Pricing Schedule. This is the combination of Powerco's prices with the relevant quantities.

**Low Fixed Charge Regulations** – Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004. These are available here: https://www.legislation.govt.nz/regulation/public/2004/0272/latest/DLM283614.html

**Low Voltage (LV)** means voltage of value up to 1,000 volts, generally 230 or 400 volts for supply to Customers.

MVA means Megavolt Ampere.

#### Network see Distribution Network.

**Peak Coincident Demand (PCD)** is the Consumer's average demand during the top 100 peak periods observed on Powerco's network. The peak periods are observed between 1 September 2022 and 31 August 2023 for the Price Year effective 1 April 2024. The PCD is used in

calculating the Delivery Charges of a Consumer on Price Categories such as V40, T50, V60, T60 in the Eastern Region, and the W50 and W60 Price Categories in the Western Region.

**Point of Connection** means the point at which electricity may flow between the Network and the Customer's Installation and to which an Installation Control Point is allocated.

Powerco means Powerco Limited and any of its subsidiaries, successors, and assignees.

**Power Factor** is the ratio of active energy, measured in kilowatts (kW), to apparent energy, measured in kilovolt amperes (kVA). Reactive power, measured in kilovolt amperes reactive (kVAr), results from a non-parity power factor and may incur charges.

**Price Category** means the relevant price category selected by the Distributor from this Pricing Schedule to define the Line Charges applicable to an ICP.

**Price 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.

Price Year means the 12-month period between 1 April and 31 March.

**Recoverable Costs** has the meaning specified in clause 3.1.3 of the Commerce Act (Electricity Distribution Services Input Methodologies) Determination 2012.

Region means the Eastern region or the Western region.

Registry means the Electricity Authority central Registry.

**RAB** means Powerco's Regulatory Asset Base - the value of assets used to provide the network service and <u>publicly disclosed</u> by Powerco under Information Disclosure requirements.

**Retailer** means the supplier of electricity to Customers with installations connected to the **Distribution Network**.



**Temporary Accommodation** means a non-primary place of residence in the context of the Electricity (Low-Fixed Charge Tariff Option for Domestic Consumers) Regulations 2004, such as holiday homes and other non-permanent places of residence that are predominantly not business premises.

**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.



## Appendix A: Allocation of costs across customer groups and price zones

This appendix summarises the approach and resulting allocations of costs to price zones and customer groups in each network region. The table below summarises our main cost components and the approach to allocating them.

#### Table 17: Cost allocations to customer groups

Cost component	Allocation approach
Operating costs	Allocated directly to the GXP where the operating costs are incurred. Where we cannot attribute operating costs to a location, the costs are allocated to each network based on the assets, ICPs, and energy usage within the network.
	Common operating costs relating to the electricity business, e.g., administration costs, are allocated between regions and customer groups using each group's contribution to system demand, consumption and ICP numbers, depending on the type of expense. These costs are shared by all users, but the methodology recognises the contribution larger customers make to these costs.
Cost of capital and depreciation	Allocated to each network based on the RAB values and depreciation of the assets within each network.
	groups, based on the aggregate of the maximum demands contributed by each group.
Transmission costs	Transpower's Connection charge is directly attributed to GXPs. Allocation is based on customer demand, as measured by AMD (load). This provides a proxy for customers' size and ability to pay, while using a historical measure, across a 12-month period, aligning the stable nature of the cost with a charge that does not provide a strong price signal.
	Transpower's Benefit-based and Residual charges are allocated to Powerco based on historical usage. These costs are then allocated between customer groups in each location based on their portion of historical usage, as measured by ADL. The historical observation limits the avoidance of the charge but recognises changing usage by customers over the medium term.
	While ADL currently uses a 12-month historical observation, this will evolve as the effects of the new TPM become apparent. Effects may include customer behaviours around avoiding charges, the requirement for, and impact of, Benefit-based investments.



For the Eastern region, the table below sets out the allocations of costs to customer groups and zones, with the following table showing the resulting cost values.

Table	18:	Cost	allocations	to	Eastern	region	customer	group	ps
								<u> </u>	

		Allocator For:				
Price Zone	Customer Group	Operating Costs	Cost of Capital & Depreciation	Transmission Costs		
Tauranga	0-43 kVA	35.1%	38.3%	23.9%		
	44-299 kVA	3.8%	6.2%	3.8%		
	300-1499 kVA	5.5%	5.0%	6.4%		
	1500 kVA+	7.1%	2.8%	7.7%		
Valley	0-43 kVA	30.0%	36.6%	27.0%		
	44-299 kVA	3.5%	4.5%	3.6%		
	300-1499 kVA	3.2%	2.5%	3.0%		
	1500 kVA+	11.8%	4.1%	24.6%		
Total		100%	100%	100%		

Table 19: Cost components recovered from Eastern region customer groups

			Revenue required:				
Price Zone	Customer Group	ICPs	Operating Costs (\$000)	Cost of Capital & Depreciation (\$000)	Transmission Costs (\$000)	Total (\$000)	
Tauranga	0-43 kVA	91,326	\$16,518	\$48,145	\$12,490	\$77,153	
	44-299 kVA	927	\$1,777	\$7,865	\$1,973	\$11,615	
	300-1499 kVA+	244	\$2,585	\$6,352	\$3,326	\$12,263	
	1500kVA+	39	\$3,357	\$3,467	\$4,017	\$10,841	
Valley	0-43 kVA	75,015	\$14,078	\$46,201	\$14,111	\$74,390	
	44-299 kVA	617	\$1,629	\$5,671	\$1,872	\$9,172	
	300-1499 kVA	99	\$1,481	\$3,151	\$1,560	\$6,192	
	1500 kVA+	30	\$5,561	\$5,220	\$12,871	\$23,652	
Total		168,137	\$46,986	\$126,072	\$52,220	\$225,278	

For the Western region the table below sets out the allocations of costs to customer groups and zones, with the following table showing the resulting cost values.



#### Table 20: Cost allocations to Western region customer groups

	Price Zone	Allocator For:				
Customer Group		Operating Costs	Cost of Capital & Depreciation	Transmission Costs		
W01, W02, W05 &	А	50.0%	53.8%	45.4%		
W06 (0-43 kVA)	В	31.5%	31.8%	24.6%		
W22 & W29 (44-299 kVA)		3.4%	3.6%	4.0%		
W50 (300-1,499 kVA)		7.4%	8.0%	11.3%		
W60 (1,500 kVA+)		7.7%	2.8%	14.7%		
Total		100%	100%	100%		

#### Table 21: Total costs and components to be recovered from Western region customer groups

	Price Zone	ICPs	Revenue required for:				
Customer Group			Operating Costs (\$000)	Cost of Capital & Depreciation (\$000)	Transmission Costs (\$000)	Total (\$000)	
W01, W02, W05 & W06 (0-43 kVA)	А	125,157	\$30,025	\$69,255	\$21,791	\$121,070	
	В	55,954	\$18,878	\$40,949	\$11,800	\$71,628	
W22 & W29 (44-299 k	VA)	311	\$2,047	\$4,686	\$1,921	\$8,655	
W50 (300-1,499 kVA)		249	\$4,464	\$10,277	\$5,441	\$20,181	
W60 (1,500 kVA+)		59	\$4,594	\$3,609	\$7,040	\$15,243	
Total		181,730	\$60,008	\$128,776	\$47,993	\$236,777	



## **Appendix B: Director certification**

#### Director's Certificate for the 2025 Electricity Pricing Methodology Certification of Year-beginning Disclosure

We, Sam Pearce \_\_\_\_and John Loughlin

being Directors of Powerco certify that, having made all reasonable enquiry, to the best of our knowledge:

- (a) the following attached information of Powerco prepared for the purposes of clauses 2.4.1-2.4.5 of the Electricity Distribution Information Disclosure Determination 2012 in all material respects complies with that determination;
- (b) the prospective financial or non-financial information included in the attached information has been measured on a basis consistent with regulatory requirements or recognised industry standards.

Director

Director

22 February 2024 Date 22 February 2024 Date