GAS DISTRIBUTION SERVICES

DEFAULT PRICE-QUALITY PATH

PRICING METHODOLOGY

PRICING YEAR: 01 OCTOBER 2021 – 30 SEPTEMBER 2022

PUBLISHED: 30 SEPTEMBER 2021

DISCLOSED IN ACCORDANCE WITH SECTION 2.4.1 OF THE GAS DISTRIBUTION INFORMATION DISCLOSURE DETERMINATION 2012

CONTENTS

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[1]; and
- The Commerce Commission's electricity default price-quality path notice and information disclosure requirements.[2]

Act means The Commerce Act 1986.

Allowable Notional Revenue (ANR) means the revenue determined under the Price-quality Path Determination that Powerco can earn during the pricing year.

Consumer Price Index (CPI) means a measure of changes to the prices for consumer items purchased by New Zealand households giving a measure of inflation.

COSM means Cost of Supply Model.

Cost allocators means the measure used to allocate costs/ target revenue among consumer groups.

Demand is the term used to denote the peak consumption of gas.

DPM means Distribution Pricing Methodology.

Default Price-quality Path (DPP) refers to the Gas Distribution Services Default Price-quality Path Determination 2017.

Gas consumer is the term used when discussing general characteristics of consumers of natural gas in the New Zealand market.

Gas customer refers to a party who is connected to Powerco's gas network and to whom Powerco provides gas distribution and/or metering services.

GDB means Gas Distribution Business.

Gigajoule (GJ) is a quantity measure of the energy content of gas.

Installation Control Point (ICP), or individual connection to the gas network is the term used to denote a specific gas customer.

Kilowatt-hour (kWh) is a unit of energy, being the product of power in watts and time in hours.

Load group means a category of Powerco gas distribution customer, with a defined capacity and annual consumption that receives a specific distribution tariff.

LRAIC means Long Run Average Incremental Cost.

LPG means Liquified Petroleum Gas.

---

[1] Available at www.powerco.co.nz.
[2] Available at www.comcom.govt.nz.

Mass market means load groups to which standard, published tariffs apply. The bulk of Powerco's gas customers are considered mass market. By contrast, non-standard customers have special requirements and individual pricing arrangements.

Price component means the various prices, fees and charges that constitute the components of the total price paid, or payable, by a consumer.

Pricing principles means the pricing principles specified in clause 2.5.2 of the Gas Distribution Services Input Methodologies Determination 2012 (consolidating all amendments as at 3 April 2018) and included in section 5.4.

Pricing strategy means a decision made by the Directors of a GDB on the GDB's plans or strategy to amend or develop prices in the future and recorded in writing.

Pricing Year (PY) means the annual reporting period beginning on 1 October and ending on 30 September.

SAC means Stand Alone Costs.

scm/h means standard cubic meters per hour. A measure of gas capacity based on the flow rate.

Target revenue means the revenue Powerco expects to receive from prices during the PY.

Volume is the term used to denote gas consumption over a period, such as a day or a year.

WACC means Weighted Average Cost of Capital.

1. EXECUTIVE SUMMARY

This document presents Powerco's pricing methodology and proposed gas distribution prices for the 2021/22 PY. The document has been prepared pursuant to and complying with the requirements of the Act, Gas Distribution Services Information Disclosure Determination 2012 and Gas Distribution Services Input Methodologies Determination 2012.

This document contains a summary of the factors that Powerco considered when developing its pricing strategy and pricing methodology. It includes an overview of the framework and objectives as well as COSM, the cost allocation process and an assessment of subsidy free pricing. Powerco's 2021/22 target revenue and the allocation of that revenue is also disclosed.

There have been no substantive changes to Powerco's DPM in the past twelve months. We continue to apply the same pricing methodology for the current PY and have updated this methodology to ensure compliance with the price-path set out in the Commerce Commission's DPP.

2. ABOUT POWERCO

2.1 HISTORY

Powerco's gas business comprises regional networks that have been acquired and amalgamated as summarised in the diagram below. The regional networks had disparate tariff and operational structures which have been progressively aligned since amalgamation by Powerco.

Figure 1: History of Powerco mergers and acquisitions

<table>
<tr><th></th><th>Region</th><th>1987</th><th>1988</th><th>1989</th><th>1990</th><th>1991</th><th>1992</th><th>1993</th><th>1994</th><th>1995</th><th>1996</th><th>1997</th><th>1998</th><th>1999</th><th>2000</th><th>2001</th><th>2002</th><th>2003</th><th>> 2004</th></tr>
<tr><td rowspan="7">GAS NETWORK ASSETS</td><td rowspan="3">Taranaki</td><td colspan="7">New Plymouth City Council - MED (until May 1993)</td><td colspan="11">Powerco Ltd</td></tr>
<tr><td colspan="7">Hawera Gas Company Ltd (until Dec 1993)</td><td colspan="11">Powerco Ltd</td></tr>
<tr><td colspan="12">NGC (Natural gas Corporation Holdings Ltd (incl. Inglewood, Stratford Eltham, Patea, Waverley and Opunake) (until 1998)</td><td colspan="6">Powerco Ltd</td></tr>
<tr><td>Manawatu</td><td colspan="5">The Palmerston North City Council (incl. Ashurst, Feilding and Levin) (until Dec 1991)</td><td colspan="3">Progas Systems Ltd (until Feb 1994)</td><td colspan="5">Enerco Ltd (Previously Auckland Gas Company Ltd) (until Mar 1999)</td><td>Orion New Zealand Ltd (until Mar 2000)</td><td colspan="2">United Networks Ltd (until Nov 2002)</td><td colspan="2">Powerco Ltd</td></tr>
<tr><td>Hawkes Bay</td><td colspan="3">East Coast Gas Supply Ltd (Merger of Napier Gas & Hastings Gas)</td><td colspan="3">WelGas Holdings (until 1992)</td><td colspan="7">Enerco Ltd (Previously Auckland Gas Company Ltd) (until Mar 1999)</td><td>Orion New Zealand Ltd (until Mar 2000)</td><td colspan="2">United Networks Ltd (until Nov 2002)</td><td colspan="2">Powerco Ltd</td></tr>
<tr><td>Wellington</td><td colspan="11">Wellington Gas Company Ltd (until Mar 1997)</td><td colspan="2">Enerco Ltd (Previously Auckland Gas Company</td><td>Orion New Zealand Ltd (until Mar 2000)</td><td colspan="2">United Networks Ltd (until Nov 2002)</td><td colspan="2">Powerco Ltd</td></tr>
<tr><td>Hutt Valley/ Porirua Basin</td><td colspan="5">Hutt Valley Energy Board (Previously Hutt Valley EPB, Hutt Valley Electric Power and Gas Board) (until Nov 1991)</td><td colspan="5">Energy Direct Corporation Ltd (until Jun 1996)</td><td colspan="4">Transalta New Zealand Ltd (until Mar 2000)</td><td>Australian Gas Light Ltd (until Jul 2001)</td><td colspan="3">Powerco Ltd</td></tr>
</table>

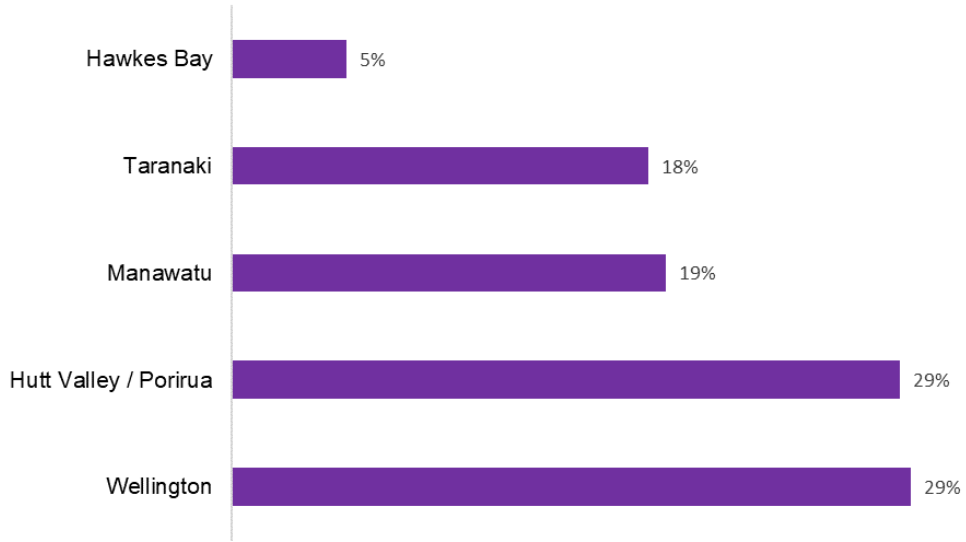
2.2 CUSTOMER PROFILE

2.2.1 REGION

Powerco's active gas distribution networks cover approximately 6,000 km of live pipeline and serve approximately 112,000 North Island ICPs including households, businesses and industries.

Powerco provides gas distribution services to five regions in the North Island. Hawkes Bay is the smallest region in terms of customer connections; Wellington and Hutt Valley / Porirua are the two largest, as shown in the chart below.

Figure 2: % of customers across our five regions



2.2.2 LOAD GROUP

Powerco maintains six standard network mass market load groups. These groups are defined by nominal capacity, in scm/h and by annual consumption. They are charged standard published tariffs.

Non-standard customers are those that fall outside these definitions, because they are too large to fall into one of the defined categories and/or because individual pricing arrangements apply to them because of the need to address a perceived bypass risk.

The rationale for grouping consumers in this way is as follows:

- larger pipes with greater reinforcing are required by the higher volume commercial and industrial customers;
- the delivery of gas exhibits significant economies of scale;
- some large customers may have the option of bypassing Powerco and connecting to an alternative network.

These characteristics mean that, for high volume customers, the fixed infrastructure costs are relatively high, but the per unit cost of delivering gas is low. Conversely, for low volume residential customers, the fixed infrastructure costs needed to service them are relatively low, but the per unit cost of delivering energy to them are relatively high. These differences drive the relative balance of fixed and variable charges that apply to the different customer groups. For the large consumers, fixed charges are higher and variable charges lower, and the converse is the case for residential customers. Where commercial bypass is a credible risk, individual non-standard charging arrangements may be justified.

The load group names and the criteria for assigning customers to these groups is described in the table below.

Figure 3: Customer load groups

		Load group	Definition[3]	Typical customer
Standard mass market	**Residential**	**G06**	End consumers with a load size ≤10 scm/h, and annual usage: Central North Island: < 15 GJ, Greater Wellington region: < 14 GJ. This tariff group is subject to variable charges only. Consumers that qualify for this group may opt into G11 tariffs (which contain a fixed element).	Small residential customers.
		G11	End consumers with a load size ≤10 scm/h and an annual usage: Central North Island: ≥ 15 GJ, Greater Wellington region: ≥14 GJ. Consumers that qualify for this group may opt into G06 tariffs (which are variable only).	Large residential customers Small cafes, takeaways.
	Commercial	**G12**	End consumers with a load size > 10 scm/h and ≤25 scm/h.	Restaurants, small apartment/ office buildings, small/ medium motels.
		G14	End consumers with a load size > 25 scm/h and ≤ 60 scm/h.	Hotels, large motels, shopping complexes, swimming pools.
		G16	End consumers with a load size > 60 scm/h and ≤ 140 scm/h.	Large apartment/ office buildings, commercial kitchens.
		G18	End consumers with a load size > 140 scm/h and ≤ 200 scm/h.	Commercial laundry's, dry cleaners.
Non-standard		**G30**	End consumers for whom network services are individually priced.	Large commercial customers, large hotels. Smaller commercial customers which are at risk of bypass.
		G40	End consumers for whom network services are individually priced and who have a time of use meter.	Manufacturing and industrial businesses.

[3] Central North Island means ICPs on the Hawkes Bay, Manawatu and Taranaki gas networks. Greater Wellington region means ICPs on the Wellington and Hutt Valley/ Porirua gas networks.

The majority of Powerco's network customers are standard mass market customers. We have approximately 112,000 standard customers compared to 217 non-standard customers. 74% of our customer base are in the G11 residential Load Group. In terms of natural gas volumes, the pattern is strikingly different. Non-standard customers represent 46% Powerco's annual gas consumption, and the G11 Load Group accounts for 32%. These differences are illustrated in the charts below.

Figure 3: Consumption by load group

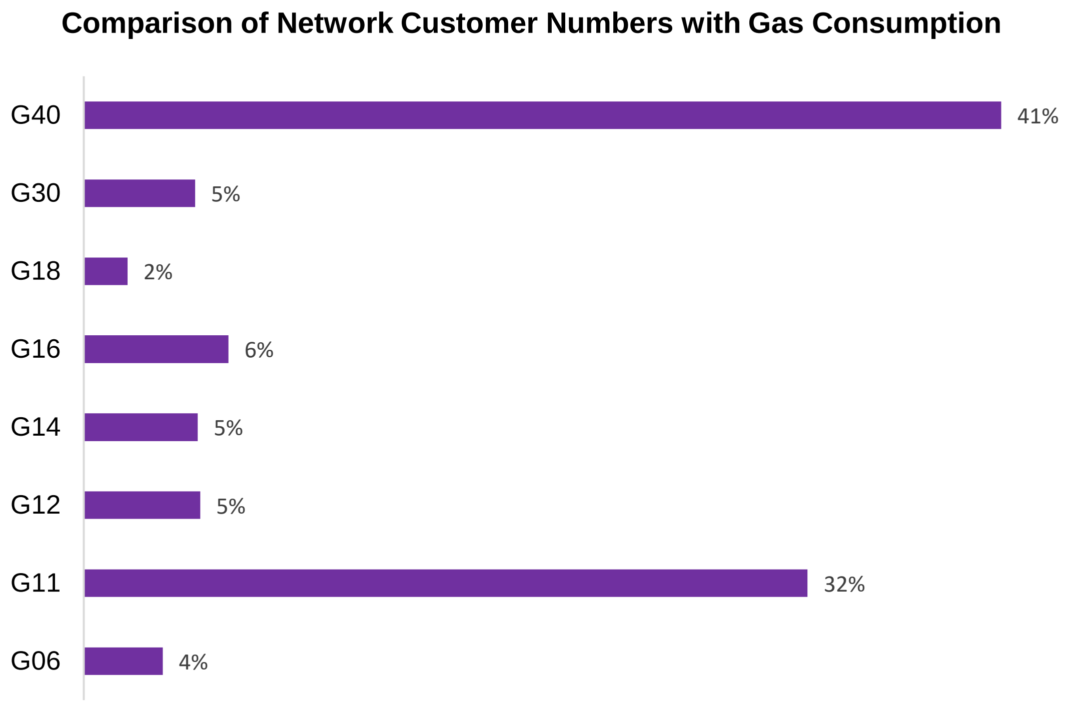
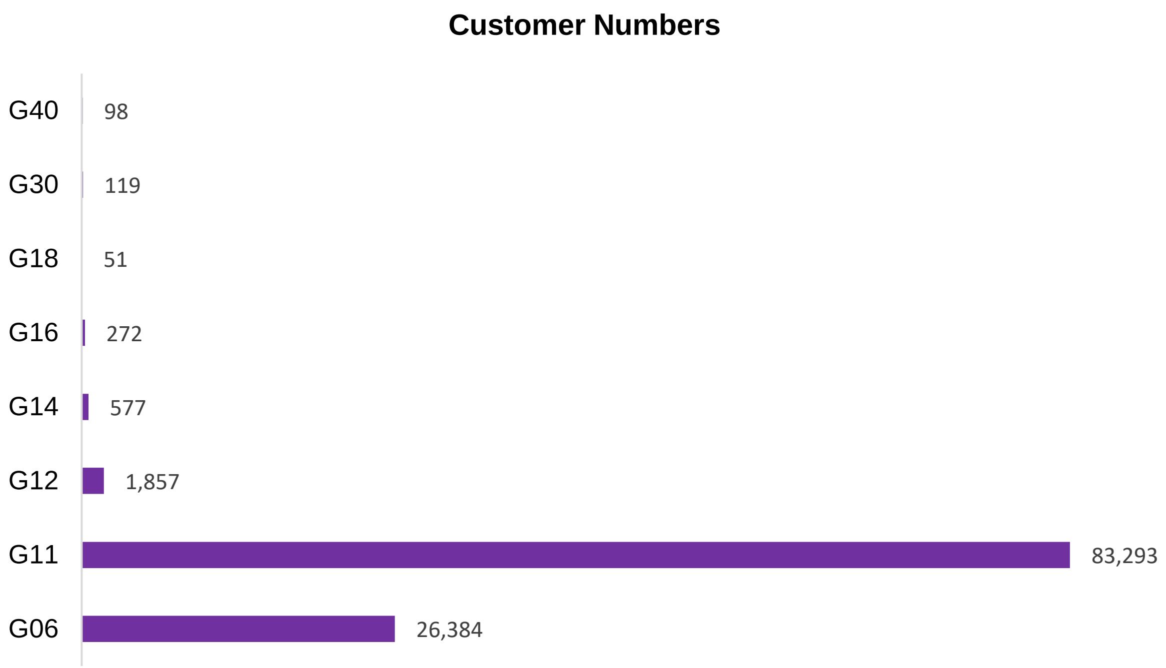
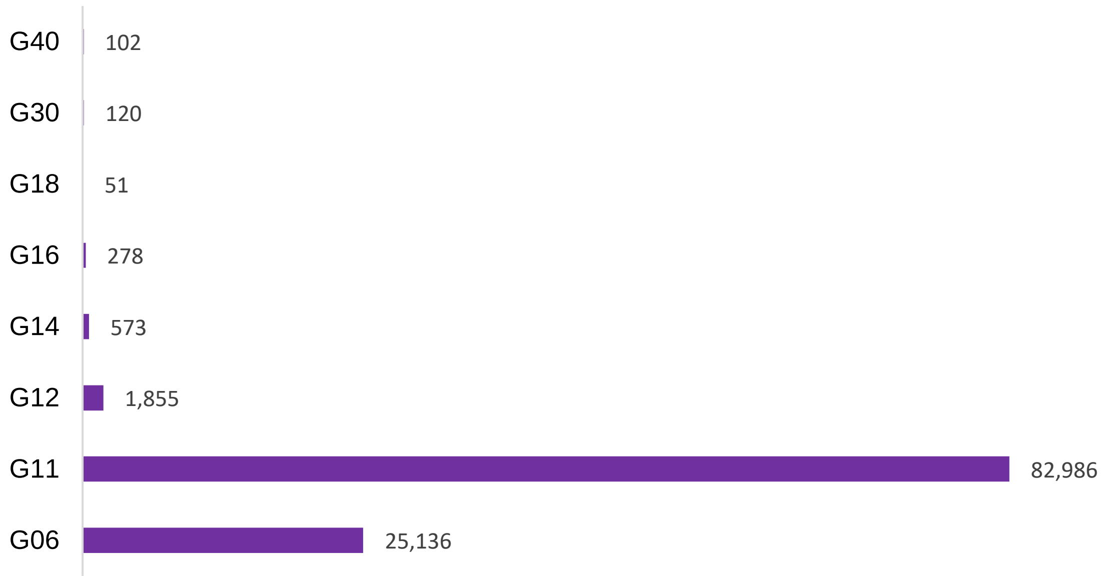


Figure 4: Customer numbers





3. REGULATORY REQUIREMENTS

Powerco's DPM is governed by our regulatory obligations under Part 4 of the Act, enforced by the Commerce Commission.

3.1 REQUIREMENT TO DISCLOSE

Section 2.4 of the Gas Distribution Information Disclosure Determination 2012 requires all GDBs to publicly disclose the pricing methodology used to determine the prices payable for the provision of gas distribution services at the beginning of each PY[4].

3.2 PRICING PRINCIPLES

The pricing principles are specified in clause 2.5.2 of the Gas Distribution Service Input Methodologies Determination 2012. Section 5.4 of this report assesses the compliance with each criterion.

3.3 ALLOWABLE NOTIONAL REVENUE

Powerco is regulated under the Commerce Commission's DPP, which permits ANR, as defined by the DPP, to change in proportion to the movement in CPI each year.

The requirements of the DPP are intended to provide the suppliers of regulated goods and services with enough incentives to innovate and invest, while limiting any ability to extract monopoly profits, and to share with consumers the benefits of any efficiency gains achieved in the supply of the regulated goods and services. These objectives are promoted by simulating the outcomes produced by competitive markets.

The prices applied to the tariff groups on our distribution network are set in accordance with this pricing methodology, which ensures that the notional revenue does not exceed the allowable notional revenue as defined by the DPP.

Overall, the revenue allowance for the 2021/2022 pricing year is a net increase of 1.51%, reflecting a CPI adjustment of 1.46% and +0.05% adjustment to levies and rates. This pricing methodology describes the process for translating this revenue increase to customer prices. Refer Appendix 3 for pricing changes to each load group across our five regions.

[4] For Powerco, this is before 1 October.

4. PRICING STRATEGY FRAMEWORK AND OBJECTIVES

4.1 MEDIUM TERM PRICING STRATEGY

The Powerco gas distribution business has completed a review and updated its gas distribution COSM, which incorporates rules based on economic pricing theory and generally accepted accounting practice that allocates costs between fixed and consumption-based charges and, where appropriate, between regions and customer load groups. Powerco uses the COSM to establish the supply cost for each load group within each of the five network regions and assesses this against existing tariff structures. The COSM is used to evaluate how current tariff structures recover different categories of cost. This process of verifying tariffs through the COSM is used for all regions of the Powerco gas network.

Powerco's medium-term pricing strategy is, over time, to remove pricing anomalies between regions and customer load groups and set prices that better reflect the actual costs of supplying those load groups, but to do so in a way that:

- maintains compliance with the DPP,
- is acceptable to retailers and end use customers, and
- achieves a reasonable degree of price stability and certainty.

Powerco's commercial team will liaise with customers and retailers to help ensure that customers are obtaining the best value possible from Powerco's services.

The pricing strategy is consistent with the prior PY.

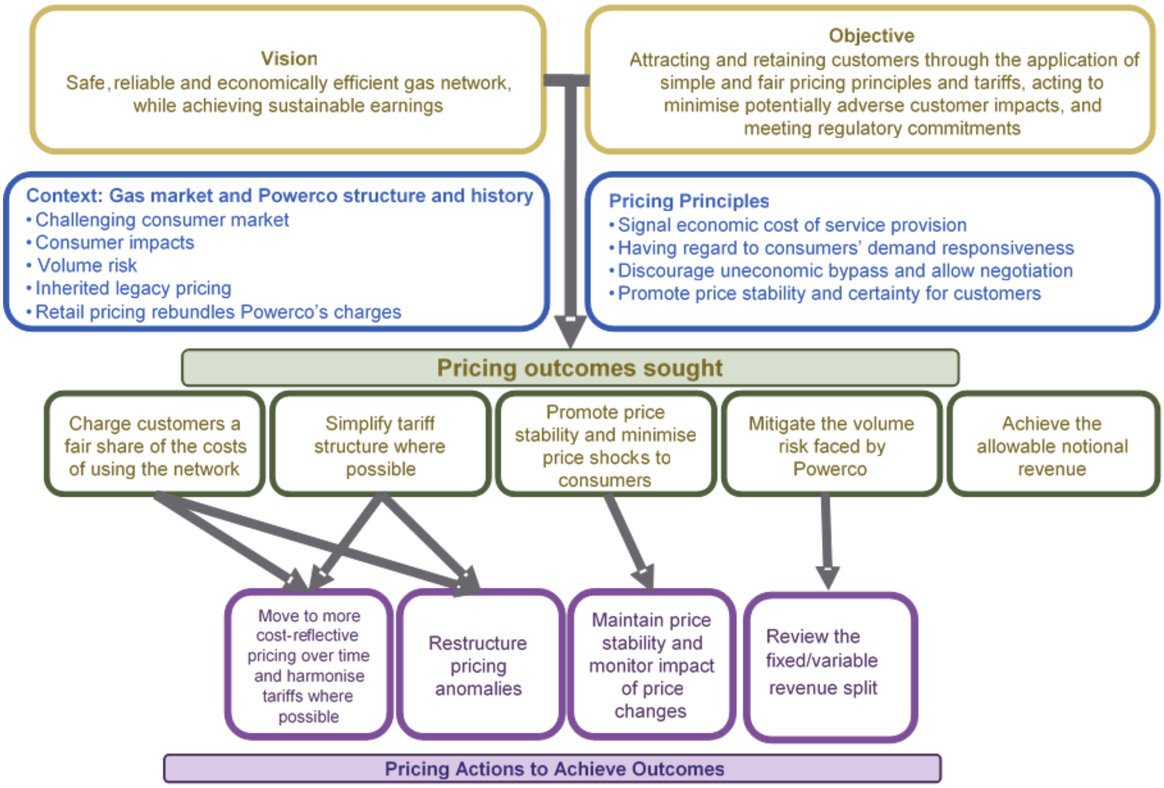
4.2 FRAMEWORK

Powerco's pricing methodology framework begins with its vision for its gas business: to provide safe, reliable, and economically efficient gas network distribution services while achieving sustainable earnings. The framework aims to:

- attract and retain customers through the application of simple and fair pricing principles and tariffs,
- minimise potentially adverse customer impacts, and
- meet its regulatory commitments.

When developing its pricing methodology, Powerco has considered several characteristics of gas distribution markets and has given effect to the Commission's pricing.

Figure 5: Price setting policy framework



4.3 OBJECTIVES

Charge customers a fair share of the costs of using the network
As far as practicable, customers should be charged a price that reflects the costs of providing the service to them. However, cost reflective charging is not the only objective considered when determining prices.

Powerco aims to set tariffs that are cost reflective, but equally aims to ensure that customers face prices that they perceive to be a reasonable and fair reflection of the service provided.

Powerco aims to treat low volume residential customers equitably.

Simplify tariff structure where possible
Simpler price structures can benefit customers, because they make understanding distribution tariffs easier. In addition, simple tariff structures benefit retailers through lower administration costs.

Promote price stability and minimise price shocks to customers
Existing customers have chosen to invest in natural gas appliances with an expectation that future prices will be reasonably comparable to past prices. Therefore, any necessary price movements should be implemented gradually over time. Future price movements will be informed by customer feedback on previous changes as well as by customer consultation on prices.

Mitigate the volume risk faced by Powerco
Prices should be structured in a way that, to the extent practicable, fairly reflects the extent of Powerco's fixed costs, and consequently mitigates the risk associated with annual fluctuations in consumption, while responding to customers' preferences for variable tariffs.

Achieve the allowable target revenue
Powerco's primary pricing objective with respect to its gas network is for pricing to contribute as part of an overall strategy to a vibrant and sustainable gas business; that is, Powerco seeks to recover its allowed target revenue to sustain the gas network business and provide for future required investment.

5. PRICING METHODOLOGY

The methodology for setting Powerco's network prices applies the following steps:

i. determine Powerco's costs of gas distribution;
ii. allocate customers to network load groups, based on capacity (scm/h);
iii. allocate costs to customer groups using an appropriate allocation factor. Powerco's network cost of supply model analyses costs within each of its five gas network areas for each of its six standard and two non-standard customer classes;
iv. assess price structures to determine consistency with the pricing principles and objectives; and
v. establish medium term price paths to make prices more cost reflective and consistent across regions, while satisfying the Commission's pricing principles.

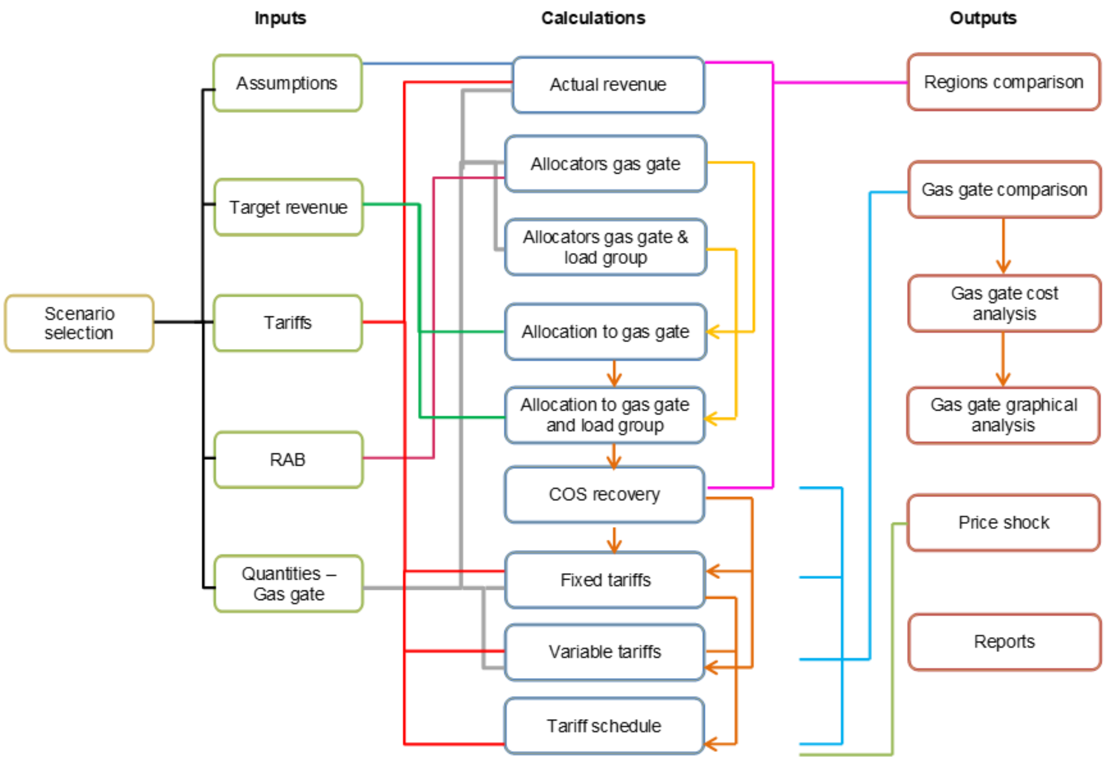
The pricing methodology is consistent with the prior PY.

5.1 COST OF SUPPLY MODEL

Powerco's COSM for the gas network business allows the user to allocate costs and revenues across the respective tariff load groups using alternate allocation methods. The model develops a total cost per network load group as well as a cost per kWh.

A diagram of COSM is presented below. There are several assumptions and input sheets that include parameters such as WACC, CPI figures, demand forecasts, and cost and revenue forecasts. Calculation sheets (coded grey in the diagram) allocate ICPs to defined load groups and allocate costs based on the parameters selected. Output sheets show distributed costs, analyse the subsidy-free tariff range and evaluate pricing scenarios for compliance with the aggregate price cap.

Figure 6: COSM



5.2 ALLOCATORS

Conceptually, there are three possible categories of costs:

5.2.1 IDENTIFIABLE REGION AND LOAD GROUP

Costs that are directly attributable to a specific load group within a specific region do not need to be allocated; they can merely be assigned to the relevant load group. The COSM allows costs of this nature to be included in the evaluation, though none has been identified.

5.2.2 IDENTIFIABLE REGION ONLY

Costs that are attributable to a specific region but not a specific load group. For example, costs for reactive maintenance, scheduled maintenance and customer-initiated maintenance.

Figure 7: Regional network cost allocators

Directly attributable costs to regions	**Cost allocator**
Service interruptions and emergences	Customer numbers
Routine and corrective maintenance – inspections lines	Total line length (rural/urban weighted)
Routine and corrective maintenance – inspections other	Customer numbers
Routine and corrective maintenance – location checks	Customer numbers
Depreciation of network assets	Replacement cost
Other direct costs	**Cost allocator**
Direct rates to regional property	Weighted ICP/GJ
Other direct regional costs	GJ

5.2.2.1 NETWORK ASSET VALUE ALLOCATION

The costs attributable to a specific region tend to be related to the value of network assets servicing the region. For this reason, we allocate regional network asset values to load groups. Broadly, the methodology estimates the percentage of regional assets used by each load group based on the types of assets employed and the annual consumption of each load group.

The process involves three steps outlined below.

i. Group network assets into system categories.

Figure 8: Asset classes assigned to each system category

Intermediate pressure	**Medium pressure**	**Services**
Cathodic protection	Land	LP services
IP mains	LP mains	MP services
IP services	MP mains	
IP valves	MP valves	
SCADA	Stations	
Crossings	Crossings	
Standby pipe	Standby pipe	
Traffic management	Traffic management	

ii. Assign load groups to one or more system categories depending on the assets used to supply their loads.

Figure 9: Load groups assigned to each system category

Intermediate pressure	Medium pressure	Services
G06	G06	G06
G11	G11	G11
G12	G12	
G14	G14	
G16	G16	
G18	G18	
G30	G30	
G40		

iii. Assign a load group's share of the total annual consumption for the system category to a portion of that system category's value. These system category value portions are summed for each individual load group to give its total asset value allocation. The annual consumption volumes for each load group are entered into the appropriate table, and total volumes within each system category are calculated to give the total annual demand for that category.

5.2.3 INDIRECT COSTS

Indirect costs which cannot be attributed to a region or a load group include administration costs, information technology costs and some pass-through costs.

Generally, costs that are asset-related (which include depreciation and return on assets and, by extension, taxation) are allocated based on the share of Powerco's total gas volume that a load group uses. Costs that are not directly related to assets, such as administration and pass through costs, are allocated by an ICP/GJ weighting across all customers.

Figure 10: Indirect network cost allocators

Indirect costs	Cost allocator
Administration	Weighted ICP/GJ
System operations and network / business support	Weighted ICP/GJ
Pass through costs	
• Audit fees	Weighted ICP/GJ
• Indirect rates	Weighted ICP/GJ
• Statutory levies	Weighted ICP/GJ
• Other indirect costs	Weighted ICP/GJ
Return on assets	
• Depreciation of network assets	GJ
• Amortisation of intangibles	Customer numbers
• WACC	GJ
Taxation	
• Taxation expense	GJ

5.3 SUBSIDY FREE PRICES

For prices to be subsidy-free they must be ≥ incremental costs and ≤ standalone costs. A consumer's standalone cost is the cost of delivering the energy they require from an alternative network or fuel source (assuming equivalent quality of supply).

Practically, bypassing Powerco's network with supply from an alternative gas distribution network is unlikely as it would be uneconomic to duplicate network expenditure. However, there are examples in New Zealand of alternative bypass networks that operate within proximity to a gas transmission gate.

The cost of substituting gas distribution supply with an alternative fuel source (such as electricity or bottled LPG) is a greater concern for the Powerco gas distribution business. Reticulated natural gas is to a certain extent a competitive service, as it competes for customers with both electricity supply and LPG. The standalone cost for the gas distribution business is therefore the cost of supply from these alternative energy sources.

5.3.1 STANDALONE COST METHODOLOGY

5.3.1.1 STANDARD CUSTOMER

For standard gas distribution services, SAC costs are established by estimating the costs by load group likely to be incurred by a notional efficient competitor to Powerco's distribution network. In other words, the SAC methodology estimates the bypass cost of supplying each of Powerco's load groups. This is an appropriate approach to determine standalone costs for the tariff group and is consistent with how standalone costs have been calculated in other regulatory jurisdictions. A tariff group is the smallest practical grouping of customers that could be used for this analysis.

The Gas Hub website provides smaller consumers (G06 and G11) with a calculator to compare the cost of reticulated gas supply against comparable costs for supply of bottled LPG and electricity.

The standalone cost is compared at a retail and distribution network level for gas and electricity to identify the total cost and the network cost component which consumers face. Ultimately consumers base their fuel consumption decisions on final retail prices.

5.3.1.2 NON-STANDARD CUSTOMER

Many commercial and industrial consumers also have energy supply options. For these consumers, standalone cost also means the cost of alternative supply, but, for this group, the cost of switching may be sizeable due to the need to convert large scale plant and equipment (e.g. from gas to electricity).

Powerco calculates the the annual cost of supply for a notional G30 and G40 consumer (commercial and industrial, respectively) as follows:

- *LPG:* The cost of supply from the Gas Hub website provides limited information for large commercial and industrial consumers, but we can use LPG prices from the price comparison tool to calculate the annual cost of supply for LPG.
- *Gas and electricity retail:* We source average retail gas and electricity charges from MBIE price surveys. We use these prices to calculate the average annual retail cost of gas and electricity
- *Gas Distribution:* We source gas distribution costs from the COSM and existing Powerco pricing schedules. We were not able to source commercial and industrial distribution prices for electricity.

5.3.2 INCREMENTAL COST METHODOLOGY

Powerco's COSM calculates average incremental costs for the gas distribution network with reference to both short run average incremental cost and long run average incremental cost.

5.3.2.1 SHORT RUN INCREMENTAL COST

Short run average incremental cost is calculated as the average annualised connection cost per connection for the following connection types:

- residential/small commercial
- commercial
- industrial

The amount for each consumer is calculated as follows:

i. 10-year forecasts of future real connections capex are sourced from Powerco's Gas Distribution Asset Management Plan (AMP) by connection type;

ii. this value is divided by the expected annual increase in connections for each connection type (sourced from the Powerco Gas AMP) to determine average connections capex per connection;

iii. the ten-year average is annualised (using the DPP WACC as a discount rate, and assuming a 60-year asset life) to derive an annual connection cost per connection type.

5.3.2.2 LONG RUN INCREMENTAL COST

LRAIC are calculated as short run average incremental cost plus the average incremental investment in upstream capacity. Powerco calculates upstream capacity costs per connection type as follows:

i. the 10-year forecast of future real systems growth capex is taken from Powerco's Gas AMP;

ii. this value is divided by the forecast annual change in maximum monthly load (also sourced from the AMP) to determine systems growth per GJ of demand;

iii. the ten-year average of this figure is multiplied by average load per connection by connection type to derive a long run average incremental cost of additional upstream capacity.

Appendix 1 demonstrates that gas distribution prices fall between the incremental cost and the standalone cost both on average and across a range of annual consumption thresholds.

5.4 COMPLIANCE WITH PRICING PRINICPLES

Figure 11: Compliance with pricing principles

Principle	Compliance
1) Prices are to signal the economic costs of service provision, by a) being subsidy free, that is, equal to or greater than incremental costs and less than or equal to standalone costs, except where subsidies arise from compliance with legislation and/or other regulation	The proposed prices fall within the subsidy-free range, of the pricing methodology as demonstrated by the graphs in appendix 1.
b) having regard, to the extent practicable, to the level of available service capacity; and, c) signalling, to the extent practicable, the impact of additional usage on future investment costs.	Coincident peak demand charging was considered but would be impractical to implement for mass market customers. The ability to store gas in the network ("line pack") also undermines the economic case for coincident peak charging as higher peak demand does not necessarily trigger the need for additional capex. Locational capacity signalling is used in the case of high-volume users and subdivisions located away from the existing network.
2) Where prices based on 'efficient' incremental costs would under-recover allowed revenues, the shortfall should be made up by prices being set in a manner that has regard to consumers' demand responsiveness, to the extent practicable.	This pricing principle envisages the possible use of Ramsey pricing[5] or some form of coincident peak charging. However, Ramsey pricing is impracticable as there is very limited information available on the price elasticity of demand for gas. In any event, distribution charges are invariably smaller than the charges for the energy that is consumed in conjunction with distribution services, so any price signals provided by the distribution charge are bound to be substantially diluted. With respect to coincident peak demand charging see the comment in the cell above. Powerco has tailored a new G06 residential tariff to reflect the preferences of small residential customers.
3) Provided that prices satisfy (1) above, prices should be responsive to the requirements and circumstances of consumers in order to: a) discourage uneconomic bypass, and, b) allow negotiation to better reflect the economic value of services and enable consumers to make price/quality trade-offs or non-standard arrangements for services.	Powerco offers non-standard tariffs to industrial and commercial customers to address the risk of bypass and to enable arrangements that are tailored to customers' needs. These tariffs are reviewed to ensure they do not exceed stand alone cost (as a proxy for bypass).
4) Development of prices is transparent, promotes price stability and certainty for consumers, and changes to prices should have regard to the effect on consumers.	Price stability and the effect of price changes on consumers have been important considerations when designing the pricing methodology and the future strategy. With few exceptions, price increases are less than 10 per cent of yearly distribution charges for all individual customers.

[5] Ramsey pricing requires process to be set in inverse proportion to the price elasticity of demand for the product concerned.

5.5 NON-STANDARD PRICING

Powerco offers non-standard tariffs to large commercial and industrial customers in response to customer preferences or to address bypass risk.

Non-standard tariffs may be offered to customers that satisfy the following criteria:

i. commercial and industrial consumers that require capacity of more than 200 scm/h with more than 10 TJ of annual consumption (G40 load group);
ii. commercial and industrial consumers that are located near to a potential bypass pipeline (G30 load group) with consumption of less than 10 TJ per annum.

When developing non-standard tariffs, we consider:

a) specific customer needs and preferences, such as load requirements, estimated usage and specific location of investment;
b) the most effective and efficient network solution and design to meet consumer requirements, including the capacity of the existing Powerco network to supply the customer's needs;
c) the cost of constructing a competitive network solution; and
d) the investment risk for Powerco associated with constructing a dedicated network solution for the customer. This assessment would include the risk associated with the customer's business and the period that the consumer would be willing to commit to remain connected to the Powerco network. For a higher risk business, the contract price may be set with higher fixed component and the contract period may be shorter.

5.5.1 OBLIGATIONS AND RESPONSIBILITIES

Powerco does not differentiate non-standard customers from standard customers if supply of gas distribution services to customers on non-standard contracts is interrupted. Basic load shedding categories are industry driven and the status of customers at the ICP level are held in the Gas Industry Company's gas registry.

5.5.2 EXTENT OF NON-STANDARD CONTRACTS

All customers in the G30 and G40 load groups are subject to non-standard tariffs. The total number of ICPs represented by non-standard contracts at the end of March 2021 was 217 and the value of target revenue anticipated for these contracts in 2021/22 is $5,985,116.

5.6 CONSULTATION

To date, Powerco has not undertaken any direct consultation with end customers about variations in distribution prices and quality. The main reason for not doing so is that, for mass market customers, changes to distribution prices do not flow through to end use customers in a transparent way – how final charges are set is determined by the retailers. However, Powerco does conduct market research (via both focus groups and customer interviews), which helps to identify forms of pricing which may create barriers to the uptake of gas. Customers have identified increases in fixed charges as the largest barrier to the use of gas.

6. EXCLUDED SERVICES

Services excluded from this pricing methodology include connection of new customers, reconnection, disconnection, and decommissioning services.

These services fall into two general categories; those services that will lead to increased future revenues and those that will not.

For services that lead to future revenues, Powerco's approach is to weigh the cost of providing the service against future expected revenue from the site. In many cases, Powerco will charge a price that is less than its cost of providing the service, in recognition of the expected future revenue stream.

For services that do not produce future revenue, such as disconnection and decommissioning, Powerco charges a price that reflects the costs that Powerco incurs to provide the service.

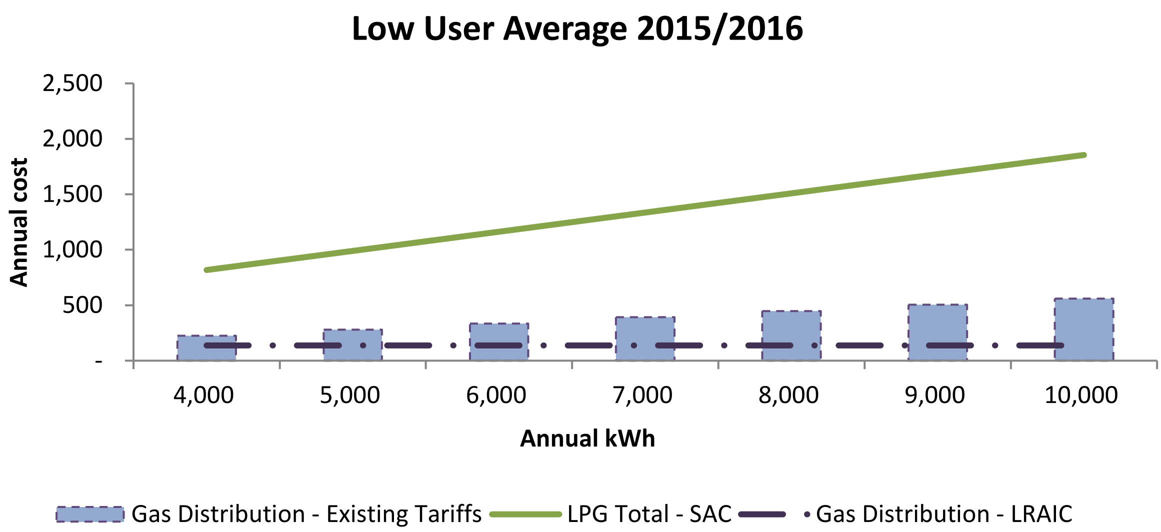
Powerco's excluded services and pricing approach are summarised in the tables below.

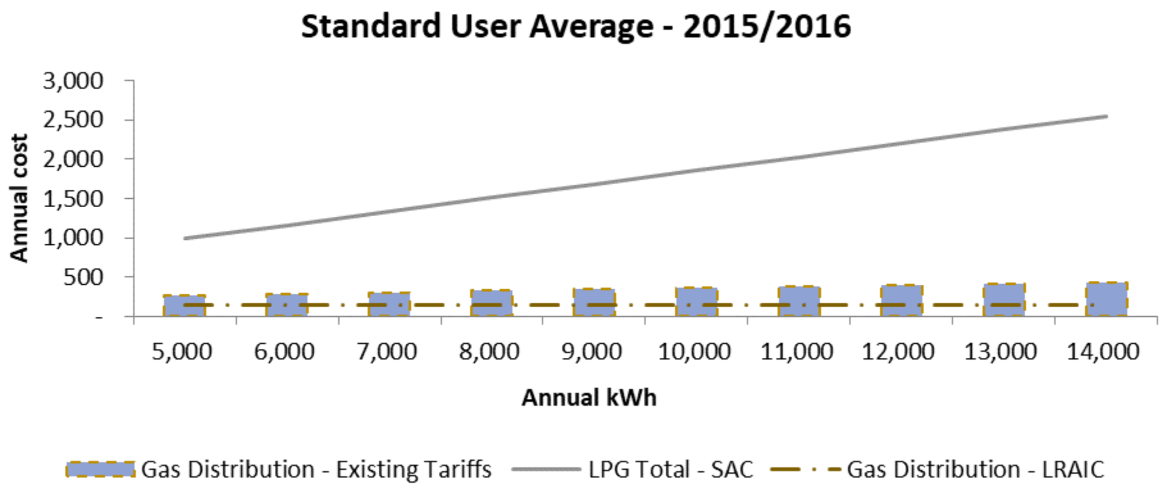
Figure 12: Excluded services

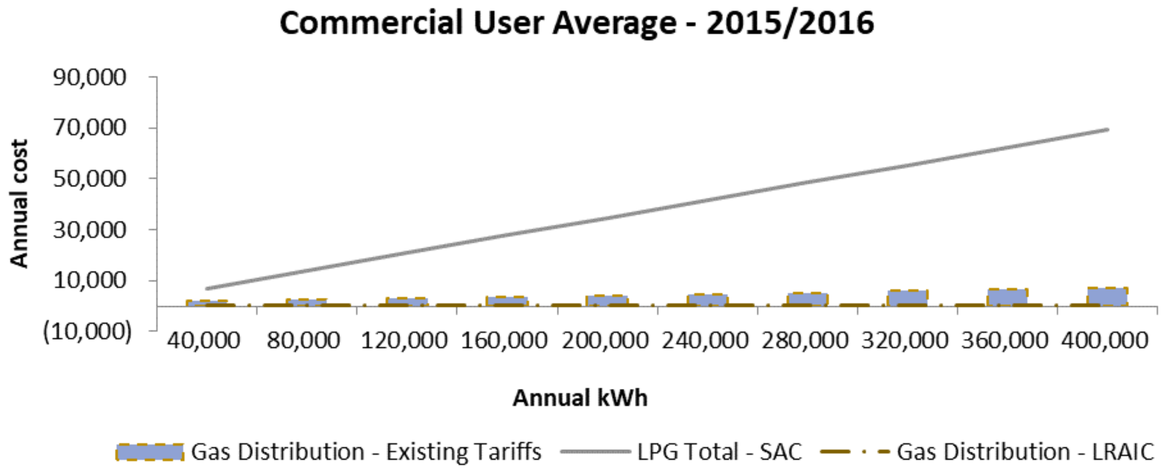
	Service type	Definition	Approach
Service will provide increased future revenues	New connection services	To establish a new point of connection.	Powerco will contribute to the cost.
	Reconnection services	To reinstate a connection where an accessible point of connection exists.	Powerco will contribute to the cost.
	Meter upgrades	To install a larger capacity meter.	Powerco will contribute to the cost.
Service will not provide increased future revenues	Disconnection services	To disconnect the Gas Metering System and to plug the riser (service pipe).	Price based on cost recovery.
	Decommissioning services	To disconnect and to cap the service main at a decommissioned point of connection.	Price based on cost recovery.
	Meter downgrades	To install a smaller capacity meter.	Price based on cost recovery.

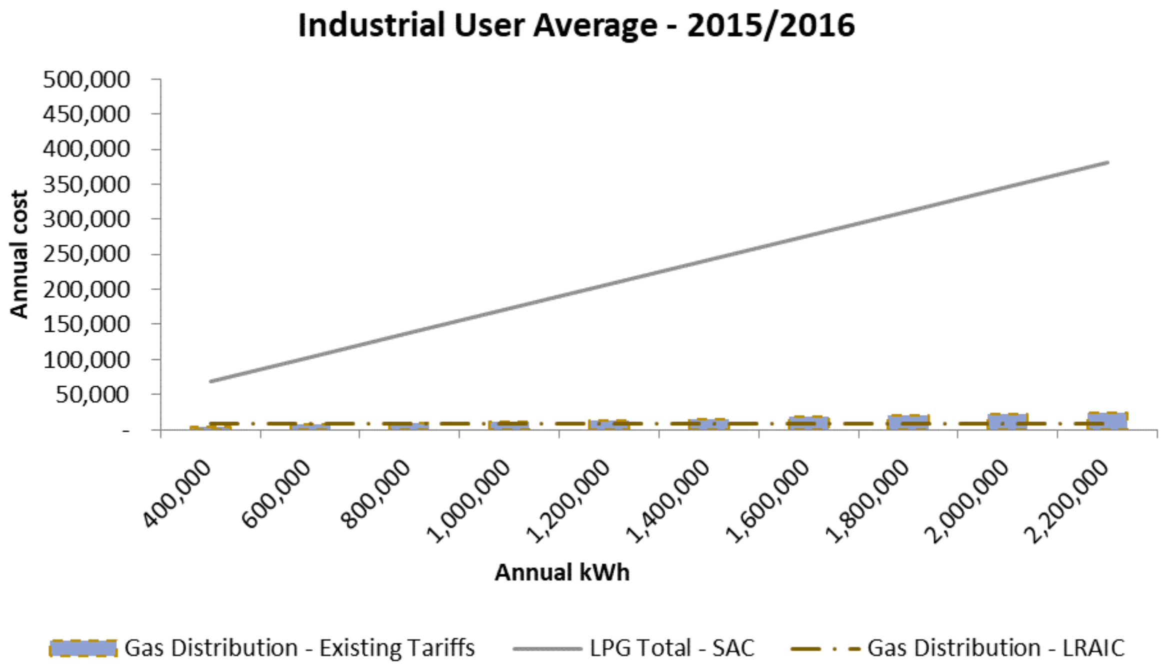
APPENDIX 1

This section sets out the results of a 2015/16 analysis of the standalone and the incremental cost of supply, against the average tariff revenue per kWh. The network charges fell within the subsidy-free range at that time and we are comfortable this finding continues to apply since then.






Commercial User Average - 2015/2016
90,000
70,000
50,000
30,000
10,000
(10,000)
Annual cost
40,000
80,000
120,000
160,000
200,000
240,000
280,000
320,000
360,000
400,000
Annual kWh
Gas Distribution - Existing Tariffs
LPG Total - SAC
Gas Distribution - LRAIC


Industrial User Average - 2015/2016
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
-
Annual cost
400,000
600,000
800,000
1,000,000
1,200,000
1,400,000
1,600,000
1,800,000
2,000,000
2,200,000
Annual kWh
Gas Distribution - Existing Tariffs
LPG Total - SAC
Gas Distribution - LRAIC

APPENDIX 2

Target revenue for 2021/2022 and the proportion of the target revenue that is collected by each tariff type is outlined below. Target revenue for PY 2021/22 (1 October 2021 to 30 September 2022) is $55,530,502.

Load group	Fixed revenue	Variable revenue	Total revenue	
G06	$ -	$ 6,420,146	$ 6,420,146	12%
G11	$ 19,294,679	$ 14,030,157	$ 33,324,836	60%
G12	$ 899,888	$ 2,173,846	$ 3,073,734	6%
G14	$ 1,108,073	$ 1,838,035	$ 2,946,108	5%
G16	$ 750,781	$ 2,254,153	$ 3,004,934	5%
G18	$ 218,821	$ 556,806	$ 775,628	1%
G30	$ 435,068	$ 943,525	$ 1,378,593	2%
G40	$ 1,623,217	$ 2,983,306	$ 4,606,523	8%
Total	**$ 24,330,528**	**$ 31,199,974**	**$ 55,530,502**	**100%**

APPENDIX 3

		Distribution charges effective 1 October 2021			Previous charges	
	Load group	Fixed ($/day)	Variable ($/GJ)	Variable (c/kWh)	Fixed ($/day)	Variable ($/GJ)
Hawkes Bay	G06	$ -	$ 19.1595	$ 0.07	$ -	$ 18.9148
	G11	$ 0.6132	$ 4.5950	$ 0.02	$ 0.6054	$ 4.5363
	G12	$ 1.5960	$ 3.9403	$ 0.01	$ 1.5757	$ 3.8900
	G14	$ 4.3112	$ 3.4523	$ 0.01	$ 4.2561	$ 3.4082
	G16	$ 5.7234	$ 3.2609	$ 0.01	$ 5.6503	$ 3.2192
	G18	$ 9.9634	$ 3.3030	$ 0.01	$ 9.8361	$ 3.2608
Taranaki	G06	$ -	$ 19.1595	$ 0.07	$ -	$ 18.9148
	G11	$ 0.6132	$ 4.5950	$ 0.02	$ 0.6054	$ 4.5363
	G12	$ 1.5960	$ 3.9403	$ 0.01	$ 1.5757	$ 3.8900
	G14	$ 4.3112	$ 2.1984	$ 0.01	$ 4.2561	$ 2.1703
	G16	$ 5.7234	$ 2.1428	$ 0.01	$ 5.6503	$ 2.1154
	G18	$ 9.9634	$ 1.9498	$ 0.01	$ 9.8361	$ 1.9248
Manawatu	G06	$ -	$ 19.1595	$ 0.07	$ -	$ 18.9148
	G11	$ 0.6132	$ 4.5950	$ 0.02	$ 0.6054	$ 4.5363
	G12	$ 1.5960	$ 3.9403	$ 0.01	$ 1.5757	$ 3.8900
	G14	$ 4.3112	$ 3.4523	$ 0.01	$ 4.2561	$ 3.4082
	G16	$ 5.7234	$ 3.2609	$ 0.01	$ 5.6503	$ 3.2192
	G18	$ 9.9634	$ 3.3030	$ 0.01	$ 9.8361	$ 3.2608
Hutt Valley/ Porirua	G06	$ -	$ 20.9595	$ 0.08	$ -	$ 20.6918
	G11	$ 0.6208	$ 5.2893	$ 0.02	$ 0.6129	$ 5.2217
	G12	$ 1.0535	$ 5.6732	$ 0.02	$ 1.0400	$ 5.6007
	G14	$ 6.1537	$ 5.6975	$ 0.02	$ 6.0751	$ 5.6247
	G16	$ 9.4980	$ 4.9276	$ 0.02	$ 9.3767	$ 4.8647
	G18	$ 14.5967	$ 4.7767	$ 0.02	$ 14.4102	$ 4.7157
Wellington	G06	$ -	$ 20.9595	$ 0.08	$ -	$ 20.6918
	G11	$ 0.6208	$ 5.2893	$ 0.02	$ 0.6129	$ 5.2217
	G12	$ 1.0535	$ 5.6732	$ 0.02	$ 1.0400	$ 5.6007
	G14	$ 6.1537	$ 5.6975	$ 0.02	$ 6.0751	$ 5.6247
	G16	$ 9.4980	$ 4.9276	$ 0.02	$ 9.3767	$ 4.8647
	G18	$ 14.5967	$ 4.7767	$ 0.02	$ 14.4102	$ 4.7157

Prices for the major offtake customer groups (G30 and G40), which are subject to individual contracts, are adjusted by CPI and pass-through costs.

DIRECTORS' CERTIFICATE

Director's Certification for Disclosures at the Beginning of a Pricing Year

Pursuant to clause 2.9.2 of section 2.9 of the Gas Distribution Information Disclosure Determination 2012

We, John Loughlin and Michael Cummings,

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

a) the following attached information of Powerco Limited prepared for the purposes of 2.4.1 of the Gas Distribution Information Disclosure Determination 2012 in all material respects complies with that determination; and

b) the prospective financial or non-financial information included in the attached information has been forecast on a basis consistent with regulatory requirements or recognised industry standards.

Director	Director
19 August 2021	19 August 2021
Date	Date