



**Pricing Methodology for Gas Distribution Services**

From 1 October 2017

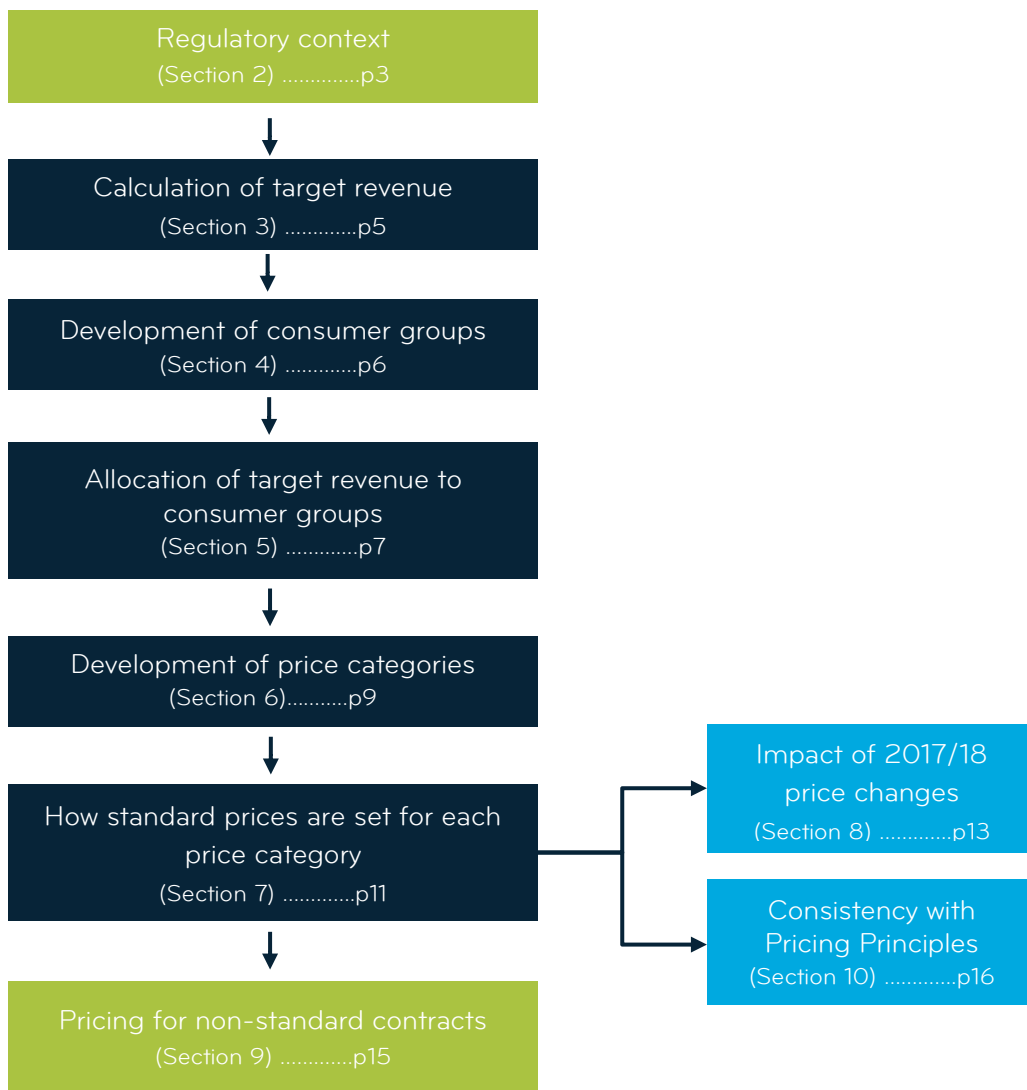
Pursuant to:  
The Gas Distribution  
Information Disclosure Determination 2012 - Consolidated in 2015

# 1 INTRODUCTION

Vector owns and operates the gas distribution network in the greater Auckland region and delivers gas to approximately 107,000 homes and businesses. We recover the cost of owning and operating the network through a combination of standard (published) and non-standard prices for gas distribution services, and capital contributions for new connections.

We are regulated by the Commerce Commission (Commission) and are required to publish our pricing methodology for gas distribution services (Pricing Methodology). This document describes our methodology and meets the requirements of the Gas Distribution Information Disclosure Determination 2012 – Consolidated in 2015 (Disclosure Determination)<sup>1</sup>. It provides information to assist interested parties in understanding how our gas distribution prices are set.

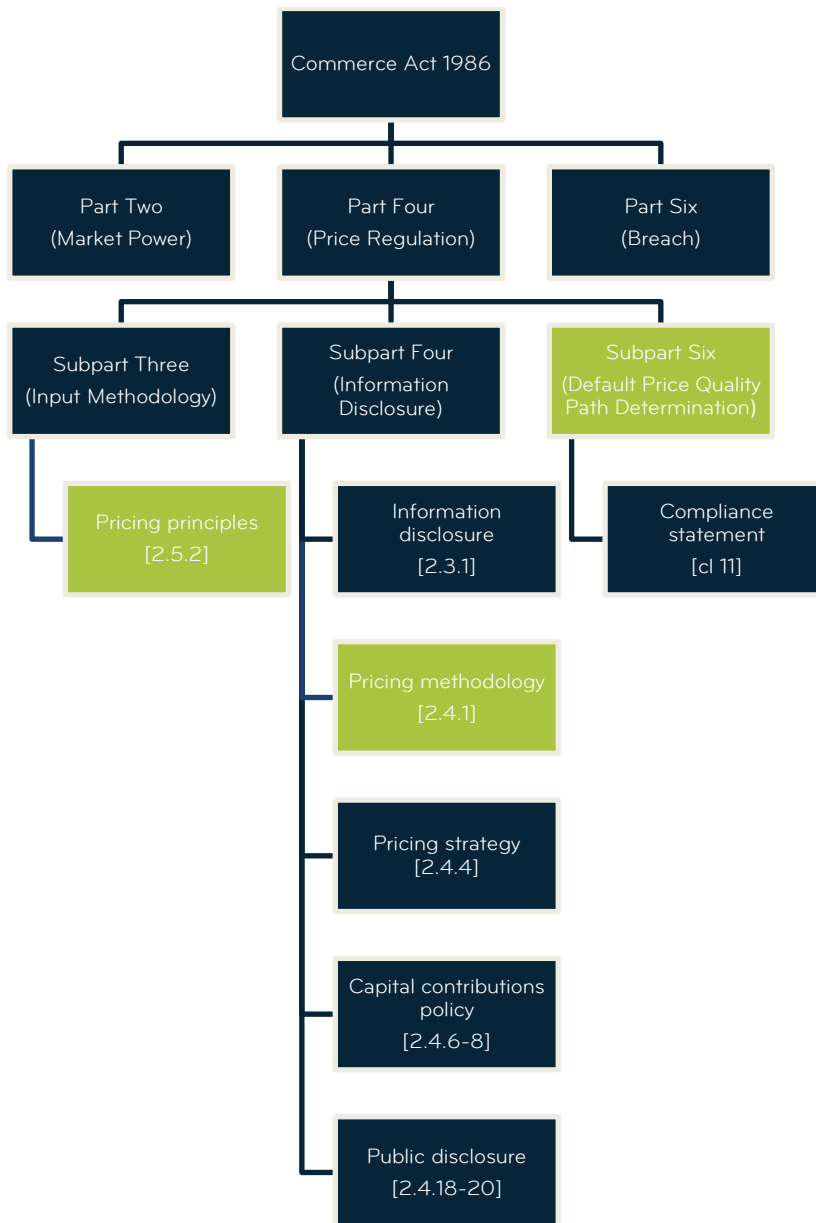
**Figure 1. Process used to allocate costs and set prices**



<sup>1</sup> Gas Distribution Information Disclosure Determination 2012 (Consolidated in 2015) (24 March 2015)

## 2 REGULATORY CONTEXT

This section sets out the regulatory context within which we provide gas distribution services.



### Commerce Act regulation

Under the Commerce Act 1986 (the Act) the Commission regulates markets where competition is limited, including gas distribution services. Under the Act, the Commission makes three determinations directly relevant to our annual gas price-setting process and pricing methodology:

- Price-Quality Path Determination;
- Information Disclosure Determination; and
- Input Methodologies Determination.

### **Price-Quality Path Determination<sup>2</sup>**

Our gas distribution prices are subject to the Gas Distribution Services Default Price-Quality Path Determination 2017 (Price-Quality Path Determination). The Price-Quality Path Determination sets our maximum allowable revenue from prices for the 12 months from 1 October 2017 to 30 September 2018 and allows prices to increase by CPI in the following four years of the regulatory period. The Price-Quality Path Determination also allows for the recovery of costs that are largely outside of our control, known as pass through and recoverable costs. These include council rates and regulator levies.

### **Disclosure Determination<sup>3</sup>**

Under Part 4 of the Act, businesses supplying distribution services are also subject to information disclosure regulation which requires information about their performance to be published. The purpose of this regulation is to ensure that sufficient information is readily available to interested persons to assess whether the purpose of Part 4 of the Act is being met. Consequently, we must make disclosures under the Disclosure Determination. This document contains the information that must be disclosed in accordance with clauses 2.4.1 to 2.4.5 of the Disclosure Determination.

Clause 2.4.4 of the Disclosure Determination requires the disclosure of a documented and Board-approved pricing strategy. We do not currently have a pricing strategy as defined in the Disclosure Determination.

### **Input Methodologies Determination<sup>4</sup>**

We have developed our prices with regard to the Commission's Pricing Principles stated in the Gas Distribution Services Input Methodologies Determination 2012, clause 2.5.2. The purpose of the Pricing Principles is to ensure prices are based on a well-defined, clearly explained and economically rational methodology. The Disclosure Determination requires each gas distribution business to either demonstrate consistency with the Pricing Principles or explain the reasons for any inconsistencies.

Section 10 of this document sets out the Pricing Principles and comments on the extent to which our Pricing Methodology is consistent with them.

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<sup>2</sup> *Gas Distribution Services Default Price-Quality Path Determination 2017* (NZCC15, 31 May 2017)

<sup>3</sup> *Gas Distribution Information Disclosure Determination 2012 (Consolidated in 2015)* (24 March 2015)

<sup>4</sup> *Gas Distribution Services Input Methodologies Determination 2012 (Consolidated February 2017)* (28 February 2017).

### 3 CALCULATION OF TARGET REVENUE

This section sets out the amount of revenue that we are expected to recover through prices (target revenue) and breaks this down by key cost components.

Total target revenue for 2017/18 is \$47.1m. This compares with total target revenue for 2016/17 of \$54.4m.

**Table 1. Target revenue 2017/18 and 2016/17**

Component	Cost type	Target revenue (\$m)	
		2017/18	2016/17
Direct costs	Asset	11.1	10.8
Indirect costs	Non-Asset	0.4	1.7
Depreciation	Asset	11.1	12.1
Regulatory tax adjustment	Asset	3.8	4.4
Regulatory tax allowance	Asset	5.0	6.5
Pass-through and recoverable costs	Non-Asset	3.0	2.4
Return on capital	Asset	12.8	16.6
Target revenue		47.1	54.4

The second column of Table 1 categorises cost components as either 'Asset' or 'Non-Asset'. These categorisations determine the way that the costs are allocated to consumer groups, and are discussed in Section 5.

## 4 DEVELOPMENT OF CONSUMER GROUPS

The following section explains how we have developed distinct groups of consumers in order to allocate the components of target revenue to these groups as part of the price setting process.

We have developed consumer groups based on their utilisation of the network and the nature of the network service they receive. Due to the physical nature of gas distribution networks and the information that is available on consumer demand characteristics, these consumer groups are defined at a relatively high level. Examples of the network characteristics include:

There is a high degree of network meshing and interconnection of consumers.	This means that multiple end consumers utilise many of the same assets. A large industrial consumer consuming large volumes of gas per year is likely to be using some of the same network assets as a residential end consumer consuming only small amounts.
End consumers are not generally geographically segmented in their use of different network assets.	For example, there are in general very few purely "industrial zones" or "residential zones". A residential consumer is likely, in part at least, to use the same assets as an industrial consumer. A map of the location of different types of consumers across a portion of the network is included as Appendix 2 and illustrates this point.
There is a mix of consumers, including a large number of consumers with relatively low individual consumption, and vice versa.	For example, end consumers with a capacity less than 10 standard cubic metres per hour (scm/h) represent 96% of all connections but they only use 19% of the gas transported over the distribution network.

We have maintained the same consumer groups as in 2016/17. The consumers are segmented into four consumer groups based on the maximum flow rate of their connection, measured in scm/h. Table 2 sets out the consumer groups. Consumer groups are mutually exclusive so a consumer can only fit within one group.

**Table 2. Consumer groups**

Consumer group	Flow rate (scm/h)
Mass market	< 10
Small commercial	10 < 40
Large commercial	40 < 200
Industrial	> 200

## 5 ALLOCATION OF TARGET REVENUE TO CONSUMER GROUPS

The following section explains how we use our Cost of Service Model (COSM) to allocate the costs of owning and operating the gas distribution network to the consumer groups described in the previous section to determine how much target revenue we intend to recover from each consumer group.

### 5.1 Features of gas distribution system assets

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

### 5.2 Cost types

Table 1 in Section 3 lists the components of target revenue and categorises these components as either 'Asset' or 'Non-Asset', summarised in Table 3.

**Table 3. Total target revenue by cost allocation category**

Category	Value (\$m)
Asset	43.7
Non-Asset	3.4

### 5.3 Summary of allocation approaches

The allocators used to allocate costs to consumer groups are summarised in Table 4.

**Table 4. Allocators used in the COSM model**

Cost category	Allocator
Asset	Flow rate x number of consumers
Non-Asset	Number of consumers or annual consumption

The value of each allocator is shown in Table 5.

**Table 5. Value of Allocators**

Allocator	Number of consumers	Annual consumption	Flow rate
Unit	ICP	MWh	scm/h
Source	Schedule 8 of the Information Disclosures	Schedule 8 of the Information Disclosures	Consumer group definition (midpoint)
Mass market	95,304	691,869	5
Small commercial	2,590	239,715	25
Large commercial	886	521,224	120
Industrial	153	880,252	400
Non-standard	46	1,307,562	400
Total	98,979	3,640,622	950

Annual consumption (MWh) and number of consumers (ICPs) are based on weighted average data from Schedule 8 of the Gas Information Disclosures. The values are weighted averages of up to five years' worth of data, with more recent years weighted more heavily. The connected flow rate of a consumer is derived from the midpoint for scm/h in relation to each consumer group. This approach was chosen in the absence of more detailed information on individual consumer capacity.

'Non-Asset' costs can be broadly summarised as overhead costs and pass-through and recoverable costs. Costs categorised as 'Non-Asset' have no direct cost driver. We have chosen to create a band of cost allocations using annual consumption and the number of consumers as the allocators.

'Asset' costs have been allocated based on the proportion of scm/h\*ICP for each consumer group. This allocates based on the weighted average of scm/h per consumer that are in each consumer group, effectively capturing each consumer group's utilisation of network assets. The 'scm/h\*ICP' is an appropriate allocator for assets and direct networks costs as the required pressure of a consumer will affect capacity of the network assets.

#### 5.4 Total target revenue allocated to each consumer group

The result of using the different allocators outlined in Table 4 creates a band by consumer group as shown in Table 6.

**Table 6. Target revenue allocation bands by consumer group**

Consumer group	Target revenue (\$m)	
	Lower	Upper
Mass market	28	30
Small commercial	3.7	4.0
Large commercial	6.1	6.7
Industrial	3.4	4.2
Non-standard	4.1	4.1



## 6 DEVELOPMENT OF PRICE CATEGORIES

The following section provides an overview of the various price categories that we offer within each consumer group (as described in Section 4). The key pricing differences between these categories and the reasons why are described in Section 7.

### 6.1 Auckland network

We have one set of price categories applicable to the Auckland network. The approximate area covered by the Auckland gas distribution networks is shown in Figure 2.

**Figure 2. Auckland gas distribution network**



### 6.2 Mass market consumer group

The mass market consumer group is split into two subgroups: residential and general. We recognise that residential customers are more price-sensitive to fixed charges and for this reason, the residential group has a lower fixed charge than general. The subgroups map directly into price categories as set out in Table 7.

### 6.3 Commercial consumer groups

The small and large commercial consumer groups map directly to price categories.

#### 6.4 Industrial consumer group

The industrial consumer group is split into two subgroups: industrial and large industrial. In practice the industrial consumer group contains consumers with a large range of annual consumption. Some consumers, usually those with high annual consumption, do not meet the stand-alone cost (SAC) test, formulated under the Pricing Principles and described in section 10.2. To reduce the administrative burden of offering these consumers individual non-standard prices, we have a “large industrial” price category with a higher fixed price. The large industrial price category (GA05) is suitable for consumers with annual consumption greater than approximately 16,800 MWh per annum. The large industrial price category was introduced from 1 October 2015.

**Table 7. Price categories within each consumer group**

Consumer group	Price category code	Price category description
Mass market	GA0R	Residential
	GA01	General
Small commercial	GA02	Small commercial
Large commercial	GA03	Large commercial
Industrial	GA04	Industrial
	GA05	Large industrial

## 7 HOW STANDARD PRICES ARE SET FOR EACH PRICE CATEGORY

The following section explains how we set our prices to recover the target revenue allocated to consumer groups. It explains what types of prices are used and how the levels of prices are determined.

We generally endeavour to recover the components of target revenue in line with how those costs are incurred, while having regard to (among other things) historical price structures, minimising rate shock to consumers, and minimising recovery risk.

### 7.1 Overview of price components

Each price category has two price components: a fixed daily price (\$/day) and a volume price (\$/kWh). The majority of consumers' meters are simple and record consumers' total use over monthly or two-monthly meter-reading cycles. These meters do not record the time of use or maximum demand. Having consumer consumption information limited to monthly intervals (at best) limits our pricing structures to simple fixed and volume components.

**Table 8. Description of price components**

Price type	Price component	Code	Units	Description
Fixed	Daily	FIXD	\$/day	Daily price applied to the number of days each consumer's point of connection is connected to the gas distribution network.
Variable	Volume	24UC	\$/kWh	Volume price, applied to all gas distributed to each consumer.

### 7.2 How prices are derived

Our price structure reflects the price sensitivity of consumers. The level of the fixed price component for each price category increases with consumer capacity, i.e. the larger the consumer's capacity requirement, the higher the fixed price.

We are conscious of the effect of price changes for consumers. Our starting point for calculating prices is the corresponding price from the previous year. As there are only two price components available in each price category, we are limited to the extent that price adjustments can be made. Changes will either apply to the fixed or volume component of prices.

We have reduced only the variable component of standard prices which decrease by about 23.9%, on average. There is some variation to this decrease between price categories due to the desire to keep prices to four decimal places – see Section 8 for a table of prices for 2017/18 compared to prices for 2016/17. Fixed distribution prices for each price category have not changed from 2016/17.

The decision to reduce only the variable component of prices reflects the fact that the majority of our costs are fixed and sunk, so increasing the fixed portion of revenues aligns the recovery of revenues with the way costs are incurred.

Our final prices incorporate a weighted average price decrease of -14.9% for standard consumers.

**Table 9. Proportion of target revenue by price component by consumer group**

Consumer group	Price categories	Fixed prices	Variable prices
		Daily	Volume
Mass market	GA0R	50%	50%
	GA01	37%	63%
Small Commercial	GA02	30%	70%
Large Commercial	GA03	27%	73%
Industrial	GA04	24%	76%
	GA05	67%	33%

### **7.3 Consultation prior to setting prices**

We did not directly seek the views of consumers when setting prices. Rather, we consulted with retailers on behalf of consumers on the proposed price changes. We have not received any feedback that was unsupportive of the proposed changes.

## 8 IMPACT OF 2017/18 PRICE CHANGES

From 1 October 2017, we are reducing gas distribution prices by a weighted average - 14.1%<sup>5</sup>, the result of:

- a reduction associated with setting prices to the Commission's maximum allowable revenue of (-15.3 percentage points); slightly offset by
- an increase in pass-through and recoverable costs (+1.2 percentage points)

Individual prices changes will vary from the overall weighted average price decrease due to differences in individual consumption levels. Table 10 illustrates the various changes to the price components for all standard price categories. The number of consumers are rounded.

**Table 10. Price changes by price category**

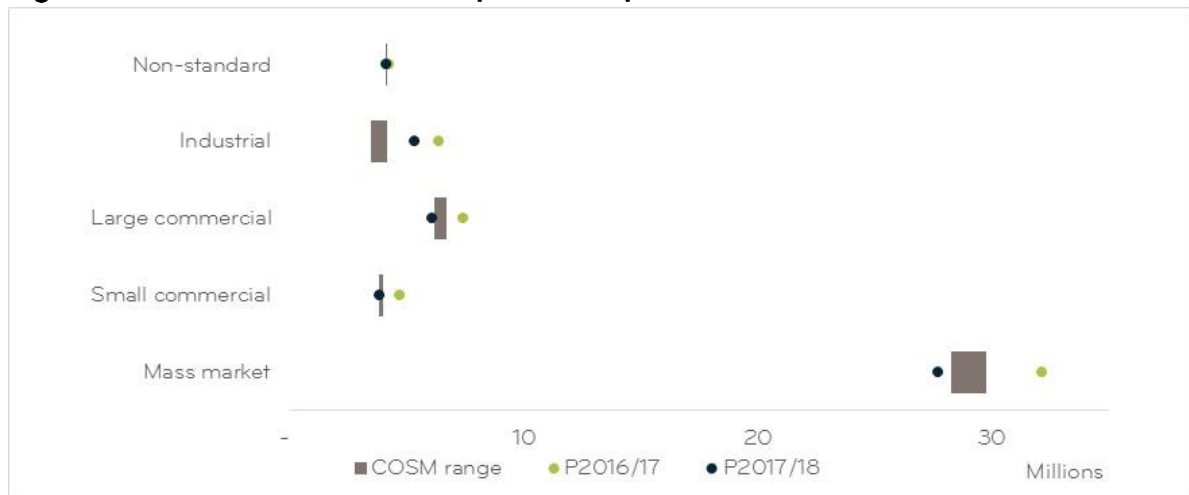
Price category	Number of consumers as at March 2017	2017 Prices		2018 Prices		Price change		
		Fixed price (\$/day)	Volume price (\$/kWh)	Fixed price (\$/day)	Volume price (\$/kWh)	Fixed price change	Volume price change	Estimated total price change*
GA0R	100,000	0.35	0.0261	0.35	0.0199	0.0%	-23.8%	-13.5%
GA01	2,400	0.63	0.0165	0.63	0.0125	0.0%	-24.2%	-16.6%
GA02	2,800	1.12	0.0133	1.12	0.0101	0.0%	-24.1%	-18.2%
GA03	940	4.79	0.0102	4.79	0.0078	0.0%	-23.5%	-18.3%
GA04	140	14.70	0.0068	14.70	0.0052	0.0%	-23.5%	-18.8%
GA05	20	203.00	0.0015	203.00	0.0011	0.0%	-26.7%	-10.7%

\*For an average consumer on each price category

Figure 3 shows revenue forecast to be recovered from 2016/17 and 2017/18 prices compared with the desired COSM outcomes. The desired COSM outcomes are a range of acceptable cost allocations and are presented as a grey band while the revenues from 2016/17 and 2017/18 prices are presented as green and dark blue dots respectively.

<sup>5</sup> -14.9% reduction for standard consumers

**Figure 3. 2016/17 and 2017/18 prices compared with COSM outcomes**



## 9 PRICING FOR NON-STANDARD CONTRACTS

In certain circumstances our published standard prices may not:

1. Adequately reflect the actual costs of supplying a consumer;
2. Reflect the economic value of the service to the consumer; or
3. Address the commercial risks associated with supplying that consumer.

Non-standard contracts allow tailored or specific prices and non-standard commercial arrangements to be applied to individual consumers.

### 9.1 Extent of non-standard contracts

In 2017/18, revenue of around \$4.1m is expected to be recovered from 29 non-standard consumers, representing about 9% of target revenue.

### 9.2 Criteria for non-standard contracts

Consumers may be assessed for non-standard terms or pricing if they meet one of the two following criteria:

- The AQ is greater than 10TJ and the consumer's point of connection to our gas distribution network is within 2km of a gas transmission delivery point of a gas distribution network not owned or operated by us; or
- It can be demonstrated that the alternative sources of energy (including but not limited to wood, coal or electricity) that could meet the consumer's requirements are technically, operationally and commercially viable and have a reasonable prospect of being able to be successfully implemented.

We assess whether to apply non-standard pricing and the corresponding contractual arrangements to new consumers on a case-by-case basis. Generally, if a consumer does not meet at least one of the assessment criteria, they will be subject to published standard distribution prices. Meeting one or more of the assessment criteria does not mean that a non-standard arrangement will apply, merely that the consumer may be reviewed to determine whether standard pricing and standard contractual terms are suitable, given the consumer's individual circumstances. At the conclusion of a non-standard pricing agreement, the consumer will be required to negotiate in good faith at our request before seeking to access standard prices.

For new investments that qualify for non-standard pricing, we use actual costs and/or allocated costs derived from an allocation model to determine prices. This allocation model is consistent with the COSM used in determining standard pricing. The description within Section 10 regarding demonstration of consistency with the Pricing Principles therefore applies to the allocation model used for non-standard pricing.

For new non-standard investments, we apply our capital contributions policy. Our policy for determining capital contributions on our gas distribution network is available at <http://vector.co.nz/disclosures/gas/capital-contributions>.

### 9.3 Obligations in respect of service interruptions

Our obligations and responsibilities to consumers on non-standard contracts are the same as our obligations to consumers on standard contracts in the event that the supply of gas distribution services to the consumer is interrupted and has no impact on determining prices for those consumers on non-standard contracts.

## 10 CONSISTENCY WITH PRICING PRINCIPLES

### 10.1 Pricing Principles

The Pricing Principles are specified in clause 2.5.2 of the Input Methodologies Determination. This sections demonstrates the level to which our Pricing Methodology is consistent with the Pricing Principles.

### 10.2 Principle #1: Economic costs of service provision

Pricing Principle 1) states that:

- 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;*
  - b) *having regard, to the extent practicable, to the level of available service capacity; and*
  - c) *signalling, to the extent practicable, the effect of additional usage on future investment costs.*

#### 10.2.1 Subsidy-free pricing

Prices are said to be “subsidy-free” when they are not less than incremental cost (IC) and are not greater than stand-alone cost (SAC). Incremental costs for a consumer (or group of consumers) are those costs that are only incurred because of that consumer’s (or group of consumers’) connection to and use of the gas distribution network. SAC is the cost of a gas distribution network providing service to just that consumer (or group of consumers).

The revenue allowed under the Price-Quality Path Determination includes an allowance for certain costs (such as administration costs) that is based on an allocation of common and shared costs across our regulated businesses rather than an estimate of the magnitude of those costs on a stand-alone basis. This means that the SAC for the provision of gas distribution services is higher than the revenue allowed under the Price-Quality Path Determination. This also means that, in aggregate, prices set to recover the target revenue are, by definition, less than the SAC for the provision of gas distribution services.

#### **SAC of an alternative network**

At a theoretical level, demonstrating that prices are subsidy-free requires that the regulated supplier demonstrates that, for a consumer (or group of consumers), the price is not less than the incremental cost of supplying that consumer (or group of consumers) and is not greater than the SAC of supplying that consumer (or group of consumers). This is generally not practical to apply across a distribution network with significant numbers of consumers. In particular, the SAC analysis is a highly theoretical exercise involving the construction of hypothetical networks to provide service to each consumer or group of consumers – this is a highly labour-intensive exercise that yields an average SAC for a consumer or group of consumers that is higher than the SAC for the network as a whole.<sup>6</sup> Given that prices in aggregate recover less than the SAC for gas distribution services, it is likely that prices are

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<sup>6</sup> Because of the economies of scale inherent in gas distribution networks, the average per-consumer SAC for a consumer will generally be greater than the average per-consumer SAC for a group of consumers, which in turn will generally be greater than the average per-consumer SAC for the network as a whole. If prices are less than the SAC for the network as a whole then they are likely to be less than SAC for any given consumer or group of consumers. The exception to this is where a large consumer is located close to the gas transmission line and it would be economically viable to bypass the existing gas distribution system.



also less than SAC for any given consumer or group of consumers. Where this is not the case the consumer will have the incentive to bypass the gas distribution network – this is addressed under Pricing Principle 3 below.

### ***Incremental cost test***

Given the practical difficulty of demonstrating compliance with the SAC test, the normal approach to demonstrating compliance with the “subsidy-free” principle relies on demonstrating compliance with the IC test. By definition, if every consumer and every group of consumers is paying a price that recovers at least IC, then cross-subsidy is likely not occurring.

The estimation of IC is challenging given the highly meshed nature of the gas distribution network. The true IC for a consumer group cannot be easily observed, but must be estimated. This estimate of IC is obtained by the following process:

1. Estimate the replacement cost of the combined gas distribution network;
2. Allocate a percentage of the replacement cost based on the total revenue for the consumer group (as calculated by COSM);
3. Calculate the depreciation and return on capital based on the allocated replacement cost;
4. Assign an annual maintenance charge;
5. Add depreciation, return on capital, and maintenance charge; and
6. Divide the sum by the energy consumed by each consumer group (refer to Table 5, page 7).

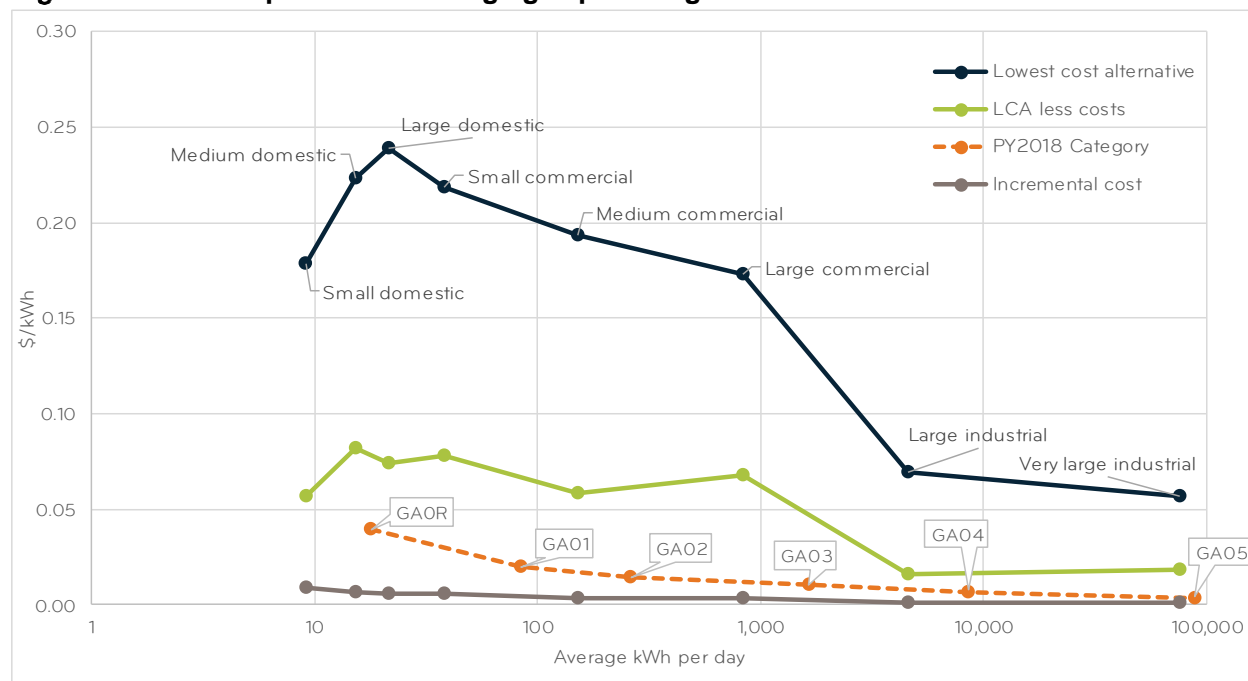
This estimate may be higher than IC to the extent that the use of replacement costs overstates the regulated asset value of our gas distribution assets. This increases the confidence that prices greater than the estimated IC are also greater than the true IC and are therefore subsidy-free. Note also that this is an estimate of the IC for each consumer group as a whole, and not for an individual consumer within that group. The IC for a group of consumers will be higher than the IC for an individual consumer within that group because the IC for the group will include shared assets used by all members of the group. This further increases the confidence that prices greater than the estimated IC are subsidy-free.

### ***Application of the test - comparison against least cost alternative (LCA)***

A key part of our Pricing Methodology is testing proposed prices against the lowest cost alternative energy source. Average prices for each price category are compared against the least cost alternative to ensure that prices are not set at a level that would provide an incentive for consumers to disconnect from the gas distribution network.

In 2012, we asked PricewaterhouseCoopers to calculate an implied cap for gas transmission based on the cost of alternative fuels. The same data can be used to calculate an implied cap for gas distribution. The implied cap for gas distribution costs is a proxy for the maximum prices that could be charged for gas distribution before the cost of an alternative fuel is less than the cost of natural gas. The costs of alternative fuels have been adjusted for inflation from 2012 to Mar 2017.

**Figure 4. Comparison of average gas prices against lowest cost alternative**



The gap between gas distribution services and the lowest cost alternative less costs is the least for residential and industrial consumers: because consumers are not homogenous this means that for some consumers in those categories there will be a lower cost alternative than natural gas. There are limits to the extent to which a standardised pricing schedule can take account of the particular circumstances of individual consumers, so in certain circumstances large (industrial) consumers are able to enter into a non-standard contract as described in Section 9.

Figure 4 demonstrates that for all consumer groups, gas distribution prices are less than the cost of the least-cost alternative and are greater than incremental cost (i.e. meet the IC test). This means that our gas distribution pricing is subsidy-free.

### 10.2.2 Available service capacity and future investment costs

There are no constraints on available service capacity in the gas distribution network that impact on the economic cost of service provision. Indeed, given the level of available service capacity, it is appropriate that pricing is set in a manner that encourages greater utilisation of the gas distribution network.

### 10.3 Principle #2: Recovery of any shortfall

Pricing Principle 2) states that:

- 2) *Where prices based on 'efficient' incremental costs would under-recover allowed revenues, the shortfall is made up by prices being set in a manner that has regard to consumers' demand responsiveness, to the extent practicable.-*

Prices set on efficient incremental costs would under-recover revenue. This shortfall can be observed in Figure 4 as the difference between the 'PY2018 Category' (dashed orange line) and the 'Incremental cost' (grey line).

It is generally not practicable to set standard prices in a manner that has regard to a consumers' demand responsiveness. This would require segmenting consumers into groups based on price elasticity of demand, a near impossible task except perhaps on a case-by-case basis for large consumers where the transaction costs of developing non-standard arrangements are small in relation to the value of the network service.

#### **10.4 Principle #3: Responsive to requirements of consumers**

Pricing Principle 3) states that:

- 3) *Provided that prices satisfy (1) above, prices are 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.*

##### **10.4.1 Prices discourage uneconomic bypass**

Discouraging uneconomic bypass is an important commercial objective for Vector. Gas distribution services must compete with alternative fuel and energy sources such as electricity, LPG, wood fires, coal, and solar heating.

We have historically sought to avoid uneconomic bypass using pricing zones based on distance from the transmission system gate stations. Competing networks need to connect to a transmission system gate station to supply downstream consumers so we previously priced consumers closer to the transmission network at a lower price to discourage bypass. We have since reconsidered the threat of such uneconomic network bypass and, on balance, decided to move away from the pricing zones, aided by the fact that there have been significant overall price reductions in our gas distribution network since zones were introduced.

We consider alternative fuels that may be economically viable for each consumer group. Prices are tested to ensure that, in general, they are both greater than incremental cost and not so high as to provide the incentive for a consumer to switch to an alternative fuel.

The removal of pricing zones significantly simplified our gas distribution pricing, but may have increased the risk of a large consumer near the transmission network bypassing by way of an alternative network. A standard price schedule will never be able to eliminate all opportunities for uneconomic bypass, and we believe that it is more appropriate to deal with these issues through non-standard contracts as each situation can be dealt with on a case-by-case basis where all consumer-specific factors can be considered.

##### **10.4.2 Negotiation for non-standard prices**

We believe that the best way to allow consumers to negotiate differing levels of economic value from a service or to mitigate against uneconomic bypass is through non-standard contracts. Large consumers can negotiate with us for different terms and conditions if it is commercially viable and possible for us to provide the service.

Typical examples of consumers negotiating to realise economic value of different specific services include reinforcement of the network to allow for greater capacity and the installation and management of specialist equipment and connections. Contracts have been negotiated on non-standard pricing structures to allow consumers to manage their

risk, including adjustment in prices to allow for atypical demand loads (e.g. seasonal use patterns) or a preference for pricing that is largely, if not wholly, fixed. We are also willing to offer different terms for contracts of varying duration.

Please refer to Section 9 for our policy regarding pricing for non-standard contracts.

#### **10.5 Principle #4: Pricing process**

Pricing Principle 4) states that:

- 4) *Development of prices is transparent, promotes price stability and certainty for consumers, and changes to prices have regard to the effect on consumers*

##### **10.5.1 Development of prices is transparent**

We believe that a simple pricing structure enhances transparency. Costs are clearly identified and allocated on a simple and transparent basis.

##### **10.5.2 Price stability and certainty**

A simple pricing structure reduces the likelihood that changes in consumer behaviour will result in significant changes to cost allocations between consumer groups. This means that prices by consumer group, based on capacity band, will be more stable over time. A simple pricing structure also makes it easier for consumers to predict their likely costs.

##### **10.5.3 Effect on consumers**

We are particularly conscious of the effect of our pricing on consumers and seeks to implement a pricing framework that provides appropriate incentives for consumers to continue to use, or increase their use of, natural gas.

In July 2017, we consulted with gas retailers. Our proposal did not incorporate any structural changes. We did not receive any feedback that was unsupportive of the proposed changes. Our final price change means that no standard customers experiences an individual price increase.

## APPENDIX 1. GLOSSARY

**Allowable Notional Revenue (ANR):** the revenue determined under the Price-Quality Path Determination that Vector is allowed to earn during the pricing year.

**CPI:** the Consumers Price Index, a measure of changes to the prices for consumer items purchased by New Zealand households giving a measure of inflation.

**ICP:** is an installation control point being a physical point of connection on a local network which a distributor nominates as the point at which a retailer will be deemed to supply gas to a consumer.

**kWh:** kilowatt-hour, a unit of energy being the product of power in watts and time in hours.

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

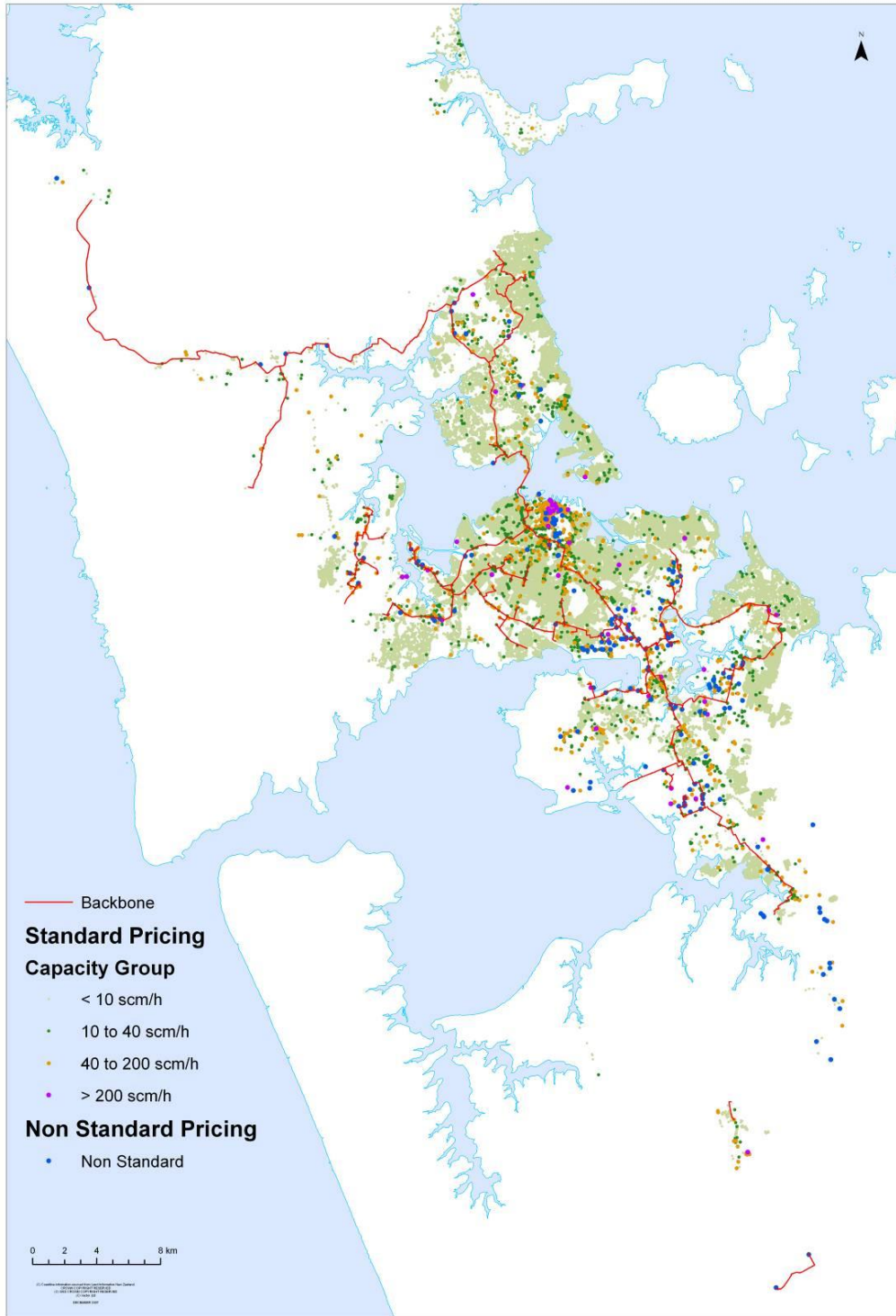
**Pricing strategy:** a decision made by the Directors of a gas distribution business on that business' plans or strategy to amend or develop prices in the future, and recorded in writing.

**Pricing Year:** the annual period beginning on 1 October and ending on 30 September.

**scm/h:** standard cubic metres per hour a measure of gas capacity based on the flow rate.

**Target revenue:** the revenue Vector expects to receive from prices during the pricing year.

## APPENDIX 2. CONSUMER GROUPS ON THE AUCKLAND NETWORK



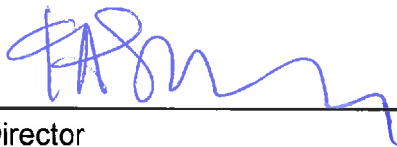
**Schedule 18: Certification for Disclosures at the  
Beginning of a Pricing Year**

Clause 2.9.2

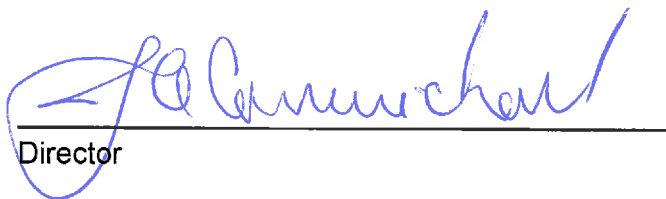
We, Karen Sherry and

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

- (c) the following attached information of Vector Limited prepared for the purposes of clause 2.4.1 of the Gas Distribution Information Disclosure Determination 2012 in all material respects complies with that determination.
- (d) 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

23/08/2017

Date