Pricing Methodology for Gas Distribution Services

From 1 October 2017

Pursuant to the Gas Distribution Information Disclosure Determination 2012

First Gas Limited
4 September 2017

Executive Summary

This is the first substantive review of First Gas' distribution pricing methodology since we acquired our distribution assets from Vector Limited in April 2016.

First Gas owns and operates gas distribution networks across the regions of Northland, Waikato, Central Plateau, Bay of Plenty, Gisborne and Kapiti. Since the establishment of First Gas last year, we have been focused on increasing the growth of gas connections across our network. We are also looking to ensure that prices across our networks support growth and utilisation of our networks.

For the 2016 pricing year, First Gas carried over the previous pricing methodology developed and applied by Vector across its entire network (Auckland and non-Auckland). This distribution pricing methodology reflects changes made to our gas distribution business since First Gas was established, as well as changes made to support growth in our distribution business. The establishment of the First Gas distribution network across the North Island provides the opportunity to consider how our prices should be set independently of the Auckland gas distribution network (retained by Vector). This separation of ownership has changed the dynamics of our network and warranted a full review of how costs are allocated among different consumer groups.

First Gas recovers the cost of owning and operating our distribution networks predominantly through standard prices for gas distribution services, supplemented by 17 non-standard connection contracts. We also earn revenue from capital contributions for new gas connections. For further information on our capital contributions policy, please see our website here.

Pricing for 2017

Our review of the mix of consumers on our networks and the underlying causes of the costs of providing gas distribution services has resulted in substantially revised allocation of costs from our previous pricing methodology (developed by Vector). This pricing methodology results in an increase in the proportion allocated to mass-market consumers and large industrials while decreasing the proportion allocated to business and commercial consumers. The overall costs that First Gas will seek to recover is substantially lower than in previous years following the release of the Default Price Path 2017-2022 by the Commerce Commission.[1] This has resulted in all consumer groups, other than large industrial having reduced network charges for the year from 1 October 2017.

First Gas is also progressing with the initiative to introduce a fully variable residential tariff. For the reasons set out in section 15, there are conditions for accessing this tariff option (including only being available for new consumers initially). We consider that this will ensure an efficient allocation of costs is maintained.

We also evaluated whether the costs of owning and operating networks in different locations are sufficiently different to justify different prices. We found no significant cost differences, and combined with a desire to keep our pricing as simple as possible, this has led us to prefer a single set of prices across our networks.

[1] Final decisions announced 31 May 2017, full information available from the Commerce Commission's website here: http://www.comcom.govt.nz/regulated-industries/gas-pipelines/gas-default-price-quality-path/2017-2022-gas-dpp/

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1. Glossary

2017/18 pricing year	The year from 1 October 2017 through to 30 September 2018.
Act	The Commerce Act 1986.
Allowable Notional Revenue (ANR)	The revenue determined under the Price-Quality Path Determination that First Gas is allowed to earn during the pricing year.
Cost Allocators	The measures used to allocate costs/target revenue among consumer groups.
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.
IDs	The Gas Information Disclosure Determination 2016.
ICP	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.
DPP	The Gas Distribution Services Default Price-Quality Path Determination 2017.
Price component	The various prices, fees and charges that constitute the components of the total price paid, or payable, by a consumer.
Pricing Principles	The Pricing Principles specified in clause 2.5.2 of the Gas Distribution Services Input Methodologies Determination 2017 and included in section 16 above.
Pricing strategy	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	The annual period beginning on 1 October and ending on 30 September.
RAB	Regulatory Asset Base, the regulated value of the assets that First Gas uses to provide gas distribution services.
scm/h	Standard cubic metres per hour, a measure of gas capacity based on the flow rate.
Target revenue	The revenue First Gas expects to receive from prices during the pricing year.

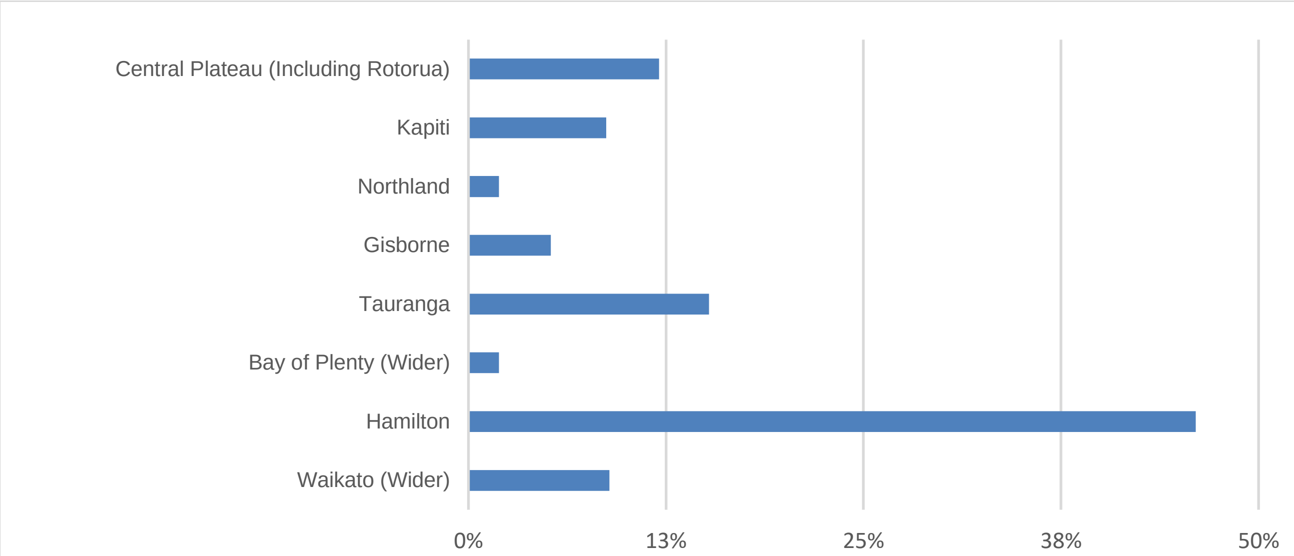
2. About First Gas

First Gas owns and operates more than 4,800km of gas distribution pipelines across the North Island, as well as the gas transmission system that connects gas production to demand. These gas infrastructure assets transport gas from Taranaki to major industrial gas users, electricity generators, businesses and homes, and transport around 20 percent of New Zealand's primary energy supply.

Our distribution networks supply around 62,000 consumers across the regions of Northland, Waikato, Central Plateau, Bay of Plenty, Gisborne and Kapiti. A large proportion of our consumers are in the Waikato region (as shown in Figure 1), with growth in recent years occurring across Waikato, Bay of Plenty and Central Plateau. All our distribution networks exhibit similar cost attributes.

First Gas' prices are charged to retailers who then incorporate them into retail bills to end consumers. Due to this dynamic, First Gas does not have direct control over the cost of energy to consumers, and will work closely with retailers to ensure that consumers' expectations are met where possible.

Figure 1: Proportion of gas distribution consumers by region (as at 1 June 2017)



Our gas distribution services are regulated by the Commerce Commission under Part 4 of the Commerce Act 1986. These services are subject to price-quality path regulation and information disclosure requirements. Our regulatory disclosures can be found on the First Gas website here.

First Gas is focused on growing our distribution networks. Increasing the utilisation of our networks will reduce the cost of providing distribution services to all consumers. We believe that natural gas has an important role to play in New Zealand's energy future as an affordable, efficient, and environmentally responsible fuel.

2.1 Distribution pricing methodology

Every gas distribution business maintains a distribution pricing methodology. The purpose of the document is to describe how the business determines the prices that it charges each consumer group.

The methodology takes the target revenue for the business set by regulation and analyses the underlying costs that build up that revenue. The methodology then sets out how costs will be allocated among consumer groups, and non-standard customers.

The methodology is updated annually as part of the annual pricing review, and feedback is sought from all retailers. The final distribution pricing methodology is published on the First Gas website.

2.2 Use of non-standard contracts

First Gas generally recovers the cost of providing gas distribution services to existing consumers through standard prices. However, First Gas also offers non-standard pricing and contracts to a small number of consumers in circumstances where standard prices on our distribution networks may not:

- Adequately reflect the costs of supplying a consumer;
- Reflect the economic value of the service to the consumer; or
- 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 on the distribution system.

2.3 Contact First Gas

For any questions regarding the distribution pricing methodology, please contact:

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Matt.Wilson@firstgas.co.nz
021 858 512

For further information on First Gas and its gas transmission and distribution networks, please visit our website www.firstgas.co.nz

3. Regulatory context

The development of First Gas' distribution pricing methodology (DPM) is governed by our regulatory obligations under Part 4 of the Commerce Act 1986, enforced by the Commerce Commission. This section outlines the regulatory obligations that are relevant to this DPM.

3.1 Requirement to disclosure methodology

The Commerce Commission's *Gas Distribution Information Disclosure Determination 2012* (IDs)[2] requires all gas distribution businesses to publicly disclose at the beginning of each Pricing Year, the methodology used to determine the prices payable for the provision of gas distribution services.

3.2 Alignment with pricing principles

The Commerce Commission's *Gas Distribution Services Input Methodologies Determination 2012* (IMs)[3] requires First Gas to disclose its pricing methodology and provide:

- an explanation of the extent of consistency of our pricing methodology with the Pricing Principles; or
- reasons for any inconsistency between our pricing methodology with the Pricing Principles.[4]

The Commerce Commission's Pricing Principles are provided in section 16, along with an explanation of how we have reflected these principles in this pricing methodology.

In applying the Commerce Commission's pricing principles First Gas does not rank one objective higher than others, but seeks to achieve the best balance between competing principles so as to achieve our business objectives. This approach will always have an element of judgement involved, and we seek to provide additional detail in this DPM where this judgement has been applied.

3.3 Allowable notional revenue

First Gas' Allowable Notional Revenue (ANR) for each Pricing Year is calculated in accordance with the Commerce Commission's *Gas Distribution Services Default Price-quality Path Determination 2017 (DPP)*. The DPP sets a weighted average price cap that applies to First Gas' distribution business. First Gas' Notional Revenues (NR) must not exceed the allowable notional revenue.

The term "notional" refers to the use of historical quantities that are used in the compliance calculations. Actual throughput for the pricing year in question in not known prior, so historical values are used as the best proxy. The same historic quantities are used in the calculation of ANR and NR.

More further information on the IDs, DPP, and IMs that apply to First Gas' distribution business can be found on the gas pipelines section of the Commerce Commission website.[5]

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[2] *Gas Distribution Information Disclosure Determination 2012 – (consolidated in 24 March 2015),* Commerce Commission, http://www.comcom.govt.nz/regulated-industries/gas-pipelines/key-information-gas/

[3] *Gas distribution services input methodologies determination 2012 (consolidated as of 28 February 2017)*, Commerce Commission, http://www.comcom.govt.nz/regulated-industries/input-methodologies-2/gas-pipelines-2/

[4] Clause 2.5.1 of the IM.

[5] http://www.comcom.govt.nz/regulated-industries/gas-pipelines/

4. Pricing strategy and objectives

This section outlines the relevant business strategies and objectives that have been incorporated into our review of the DPM.

4.1 Pricing strategy

The Commerce Act 1986 requires all gas distribution businesses to disclosure in their DPM the linkages to a business Pricing Strategy, where applicable, and any changes to this strategy in the preceding years.[6] First Gas does not maintain a Pricing Strategy as defined in the IDs. We have determined that the establishment of fair and efficient pricing for our network services will be:

- guided by high-level pricing objectives, as set out below; and
- compliance with the various regulatory frameworks mentioned in section 2 above.

For 2017/18, First Gas has prioritised the review of our DPM to ensure an efficient allocation of the costs between consumers and to improve the alignment of the fixed and variable cost split with the underlying cost drivers of our business. This has allowed us to consider whether operating our networks separately from the Auckland Vector network gives rise to any different outcomes in terms of cost allocation.

4.2 Objectives for setting prices

When setting prices, we need to consider the overarching objectives of our pricing. The objectives need to be weighed up when determining the most appropriate pricing to set for any period. First Gas does not rank one objective higher than others, but seeks to achieve the best balance between competing objectives as required. This approach will always have an element of judgement involved, and we seek to provide additional detail in this DPM where this judgement has been applied.

First Gas' DPM has been guided by the following objectives:

a) **Cost-reflective pricing**
All consumers should face prices that are reflective of the costs of providing gas distribution services to them. Prices for new consumers should recover the additional costs of connecting them to the network, including earning a fair return on the investment. This includes an appropriate alignment of fixed and variable revenue with sunk costs and incremental costs.

b) **Clear and concise pricing structure**
A simple pricing structure, with as few pricing categories as required, should allow the prices to be easily understood by both retailers and end consumers. Clear pricing, including full transparency on how prices were developed, should encourage consumers to stay connected and new consumers to connect where economic.

c) **Encourage network growth**
Pricing should encourage consumers to connect to and use the distribution network where economic and desirable. Customer growth generally improves asset utilisation since most of the costs of providing gas distribution services are fixed.

d) **Achieve full recovery of the ANR**
Full recovery of our ANR ensures that First Gas is sufficiently resourced to deliver on our Asset Management Plan (AMP),[7] whilst delivering reasonable returns to our shareholders.

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[6] Clause 2.4.4 of the ID.

[7] *Gas distribution asset management plan – 2016*, First Gas, http://firstgas.co.nz/wp-content/uploads/FGL_distribution_2016_asset_management_plan.pdf

e) Discourage uneconomic bypass or alternative fuels

There has been significant sunk investment in the existing gas distribution networks. Pricing should ensure that customers with bypass or alternative fuels are not incentivised to make sub-optimal decisions that lead to efficiency losses, where there is available capacity on the distribution network.

f) Promote price stability and avoid price shocks

First Gas is taking the opportunity to realign its prices to the costs of its business now, due to the downward effect on prices from the DPP reset for next regulatory period (2017 – 2022). This price reset will enable First Gas to rebalance the recovery of costs, without increasing the prices charged to any consumer group. The rebalance affects how much each consumer groups' prices are reduced, with some having more significant reductions than others.

g) Signal economic cost of service provision

First Gas' pricing should help signal to potential consumers whether gas is an economic option for their demands. To truly signal the economic cost of service provision, the pricing methodology needs to align with First Gas' capital contribution policy.

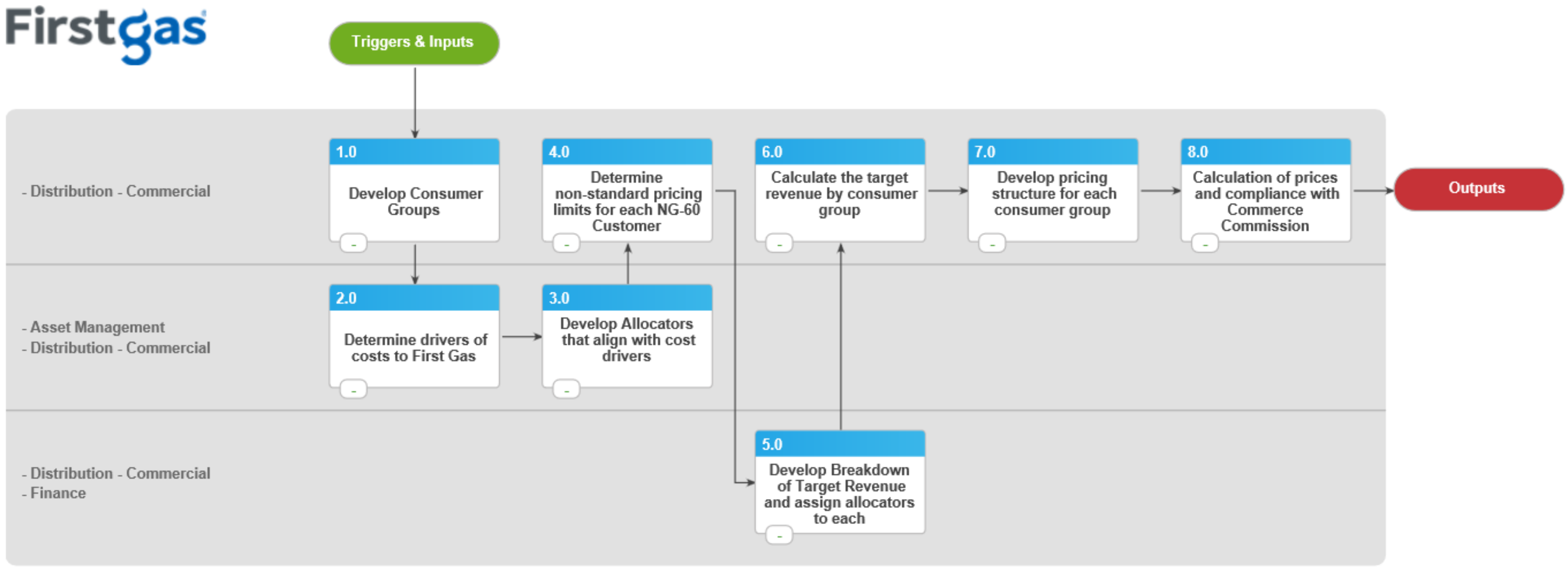
h) Pass the benefits of new pricing categories directly onto end consumers

First Gas is aware that there are different drivers in the gas value chain, from production stations through to end consumers, and that not all drivers in the supply chain are directly aligned. All changes that First Gas makes to its pricing have the intention of passing the effect on to the end consumers of gas. For this reason, the proposed new variable tariff has criteria other than peak load that must be met for a consumer to be eligible.

5. Overview of pricing methodology process

First Gas' DPM for the 2017/18 pricing year has been established following a logical process that will result in the efficient allocation of costs across users of the pipeline. The process is summarised in the diagram below and expanded on further in the following sections. This process has involved close collaboration across different functional teams within First Gas – our commercial team, our asset management team, and our finance team.

Figure 2: Pricing methodology process



6. Development of consumer groups

First Gas has retained the consumer groups that existed upon acquiring the distribution assets in 2016.

Our consumers are divided into four consumer groups based on the maximum flow rate of their connection, measured in standard cubic metres per hour (scm/h). Table 1 sets out the consumer groups that we use for pricing. Consumer groups are mutually exclusive so a consumer can only fit within one group. However, there can be multiple price categories within the consumer group.

First Gas has reviewed the relevance of these consumer groups, and the underlying drivers of each. We have concluded that the historical classifications remain suitable. Consumers within each group have broadly similar demand profiles, responsiveness to price changes and willingness to pay.

Table 1: Consumer groups

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

6.1 Customers on non-standard contracts

First Gas currently has 18 non-standard customers across our network (including one additional non-standard contract for a new load coming on in late 2017). Further details on our non-standard contracts are provided in **Appendix A**.

First Gas continues to assess requests for non-standard contracts (from new and existing customers), and will transition customers off non-standard contracts onto standard prices when circumstances suggest this is appropriate.

7. Allocation methodology

First Gas has built a new cost of service model (or cost allocation model) for the 2017/18 pricing year that reflects the drivers of our business and incorporates the learnings from the current year.[8] This new cost of service model seeks to ensure that costs are efficiently allocated across consumer groups (as identified in section 5 above), based on a bottom-up assessment of cost drivers.

The allocation of costs to each consumer group is determined by an assessment of which consumers are the beneficiaries or exacerbators of various costs. For First Gas, few costs can be directly attributed to an individual consumer group, as most of the costs relate to shared services. These shared service costs can be considered common to multiple consumer groups.

There is no single best way to allocate shared costs. First Gas has taken a practical approach to cost allocation that uses cost allocators that are measurable based on currently available information. We prepared a full list of potential allocators, then reduced this down to the allocators that are currently measured. This process led several allocators to be removed, such as the average length of pipe per connection for each consumer group. While some of First Gas' costs are related to the length of pipeline, due to the integrated nature of our consumers including across multiple consumer categories, it is not possible to determine the distinct length of pipeline (including mains) that serves any particular consumer or consumer group.

7.1 Allocators selected for 2017/18 DPM

The allocators we have used in this DPM are:

- Aggregate (consumer groups) peak monthly consumption (**Capacity**);
- Annual gas consumption in GJ (**Annual Load**); and
- Number of active ICPs (**Number of Connections**).

First Gas has proceeded with a **Capacity** allocator using the monthly peak. While we would ideally prefer to measure **Capacity** at a time period that is appropriate to a gas network's operation (daily), data granularity varies across the network, from hourly for Time of Use (TOU) large sites to multiple months for some mass market connections. Monthly peak consumption is the lowest granularity possible that can be provide with consistent and measurable data.

Historically, an average peak flow rate (i.e. 5 scm/h per residential load) per consumer for each category has been used to determine the allocation. Upon reassessing the costs of the business, First Gas has determined that this no longer is the most appropriate measure. Given usage data is available across the consumer groups (at the monthly level) it is possible to look directly at each consumer groups' impact on the network peak month. First Gas will investigate options for getting better data to understand the coincident peak load information and each consumer group's impact on the network capacity further in future years. This would allow allocations to more accurately reflect each consumer group's impact on the Network's peak period.

[8] For the 1 October 2016 reset, First Gas adopted Vector Limited's cost of service model. This model was developed when Vector owned both the Auckland and First Gas networks.

8. Value of allocators

Each of the allocators have had the historical data for the previous year applied to determine appropriate allocation rates for each. The results are shown in the table below.

Table 2: Historical figures for determining allocation splits

Allocator	**Number of consumers**		**Annual Load**		**Capacity**	
Units	ICP		GJ/year		GJ/month	
Source	**Schedule 8 IDs**	**%**	**Schedule 8 IDs**	**%**	**Monthly Billing Data**	**%**
Mass market	59,991	96.8	1,420,000	15.5	206,840	22.8
Small commercial	1,364	2.2	435,000	4.9	49,578	5.5
Large commercial	498	0.8	876,000	9.9	99,107	10.9
Industrial	73	0.1	1,484,000	16.8	248,513	27.5
Non-standard	17	.03	4,772,658	52.8	418,272	46.2
Total	61,958	100	9,030,794	100	905,271	100

Non-standard customers have other factors that impact the level of cost recovery that First Gas seeks from each customer. These are influenced by considerations such as bypass risk, alternative fuels, and available capacity in the network area. First Gas first determines the forward pricing for the non-standard customers before allocating the remainder to the standard tariff categories.

One assumption that needs to be made at the front end, is what costs the non-standard customers cover. First Gas has applied the non-standard revenue pro-rata across all the cost categories. This is not a perfect science, but is the most efficient allocation for both ease and avoiding the remaining costs being lumped on a particular consumer group.

This means that the allocation of the remainder of costs is not a pure percentage out of the table above. The totals that each proportion is being allocated against is:

- Number of Consumers: 99.97
- Annual Load: 47.2
- Peak Capacity: 53.8

Table 3: Historical allocation drivers normalised to remove non-standard customers

Allocator	**Number of consumers**		**Annual Load**		**Capacity**	
Units	ICP		GJ/year		GJ/month	
Source	Schedule 8 IDs	%	Schedule 8 IDs	%	Monthly Billing Data	
Mass market	59,991	96.8	1,420,000	33.7	206,840	34.3
Small commercial	1,364	2.2	435,000	10.3	49,578	8.2
Large commercial	498	0.8	876,000	20.8	99,107	16.4
Industrial	73	0.1	1,484,000	35.2	248,513	41.1
Total	61,926	100	4,214,000	100	604,038	100

9. Pricing for non-standard contracts

9.1 Level of non-standard contracts in 2017/18

As noted above, First Gas has been actively trying to reduce the number of non-standard contracts on the distribution network. As of 1 June 2017, we had only 17 active non-standard customers

In 2017, we have only issued one additional non-standard contract. This will cover a significant industrial load coming onto the network from the 1 October 2018 pricing year. The cost of delivering gas to this customer was higher than the cost that would be recovered under the standard industrial load pricing due to the need to invest to expand the reach of our network. Thus, we have agreed a non-standard contract that reflects higher than posted prices. This contract ensures that the cost of servicing the consumer is not borne by other users of the distribution network.

When setting prices this year we have transitioned 2 of the previous non-standard contracts to standard industrial categories. This brings the number of active non-standard customers to 16 for 2018.

9.2 Cost recovery of non-standard contracts

First Gas expect to recover notional revenue of approximately $503,000 from the 16 non-standard consumers in 2017/18, which represents 2.5% of First Gas' target revenue for its distribution services.

9.3 Criteria for non-standard contracts

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

- The total annual quantity of gas consumed or forecast to be consumed per annum (AQ) is greater than 20TJ; or
- The AQ between 10TJ to 20TJ and the consumer's point of connection to First Gas' gas distribution network is within 2km of a gas transmission delivery point of a gas distribution network not owned or operated by First Gas; or
- It can be demonstrated that the alternative sources of energy (including but not limited to wood, coal or electricity) that meet the consumer's requirements are technically, operationally and commercially viable and have a reasonable prospect of being able to be successfully implemented.

First Gas will continue to 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, but rather that the consumer may be reviewed to determine whether standard pricing and standard contractual terms are suitable, given the consumer's individual circumstances. A full summary of the current non-standard customers is available in **Appendix A**.

For new non-standard investments, First Gas applies a capital contributions policy. First Gas' policy for determining capital contributions on our distribution networks is available on our website here.

10. Target revenue and assigned allocators

This section sets out the amount of revenue that First Gas expects to recover through prices (target revenue), broken down by key cost components.

To determine target revenue from prices, First Gas uses allowable notional revenue calculated in accordance with the 2017 DPP Determination, adjusted for forecast volume growth (as disclosed in the forecasts contained in GDB Information Disclosures). This establishes the amount of revenue that First Gas expects to earn from gas distribution services in the 2017/18 pricing year.

Table 4: Target revenue broken down by cost categories

Cost Category	Allocator	Cost allocated ($)
Rates on Network Assets	System peak	370,000
Regulatory Levies	System peak	30,000
Marketing and Sales initiatives	Number of connections	400,000
Service Interruptions	Number of connections	2,600,000
Third Party Damage	Number of connections	571,000
Routine Maintenance	Number of connections	1,140,000
Corrective Maintenance	Number of connections	370,000
Asset Replacement and Renewal	System peak	470,000
Network Support Unplanned	Number of connections	1,500,000
Prof Fees - Audit	Number of connections	10,000
Motor Vehicle Costs Total	Number of connections	11,000
Administration Expenses Total	Number of connections	17,000
Notional Deductible interest (Tax)	Number of connections	2,850,000
Regulated Return on Investment	System peak	6,400,000
Depreciation on Regulated Asset Base	System peak	5,361,000
Target Revenue		**22,100,000**

11. Target revenue allocation by consumer group

First Gas calculated target revenue from each consumer group using the method of allocation discussed above. The allocations are shown in the table below:

Table 5: Target Revenue Allocation across Consumer Groups

Consumer Group	Cost allocated	%
Small Business/Mass market	$ 14,020,000	64.5
Small commercial	$ 1,426,000	6.6
Large commercial	$ 2,520,000	11.6
Industrial	$ 3,256,000	15.0
Non-standard	$ 503,000	2.3
Total	$ 21,727,000	100

The allocations above would have resulted in a ~15% increase in network charges for industrial consumers. Given the overall 20% decrease in revenue, and the desire to ensure price stability for consumers, First Gas reallocated $0.5 million of the Industrial allocation to mass-market consumers. The net result is a reduction for the average mass market consumers that is 3.5% lower than using the allocations above, but still a substantial reduction.

We believe that this approach achieves the best balance between providing price stability, avoiding price shocks, and cost reflective pricing. We will reassess this balance annually and determine whether a reallocation between categories remains justified.

12. Development of price categories

The following section provides an overview of the various price categories that First Gas offers within each consumer group. While First Gas has sought to retain the historical price categories where appropriate, there is one new price category that is being offered on a trial basis in 2017/18.

12.1 Mass market consumer group

The mass market consumer group is split into two subgroups: residential and general/business. Residential consumers are more sensitive to fixed charges. Therefore, the residential group has a lower fixed charge than the general/business. Additionally, consumers are increasingly calling for a variable pricing model for gas when they are consuming multiple energy sources/services from the same retailer.

The subgroups map directly into price categories as set out in Table 6 below.

Table 6: Price categories within each consumer group

Consumer group	Price category code	Price category description
Mass market	GN0R GN01 GN0V	Residential General/business New connection variable
Small commercial	GN02	Small commercial
Large commercial	GN03	Large commercial
Industrial	GN04 GN05	Industrial Large industrial

Additionally, new consumers are using alternative fuels (such as LPG) with higher variable, but lower fixed charges. This is an indication of the residential sector of the mass market group's sensitivity to fixed charges, especially consumers who have low to nil consumption through summer months. Subsequently, First Gas has investigated offering a fully variable network tariff. To ensure that such a product's benefits make it through to end consumers, the following criteria will apply:

a) The retailer must not charge a daily fee for the gas services (including network charges, metering and the retailers own internal costs); and

b) The consumer must be installing either natural gas hot water or central heating; and

c) The connection must be a new connection or reconnection of an ICP that has not been connected for 12 months.

d) First Gas reserve the right to issue ICPs with under 9GJ (2,500 kWh) consumption in a 12-month period, or no consumption for 3 plus months with a termination notice for the new connection variable tariff. These consumers will need to be transitioned to a different pricing category within 3 months, unless evidence is provided showing a change in circumstance that would make them compliant with the minimum usage criteria over the next 12 months.

The variable residential pricing category does not directly align with the high fixed costs associated with running a distribution network. We believe that it reflects the requirements and circumstances of consumers. Additionally, we see this tariff option as an opportunity to increase the number of connections (and network use) by responding to demonstrated consumer preferences, match the cost structure of competitive energy sources, and thus lower the overall cost of natural gas services to all consumer groups.

First Gas will continue a variable price for at least 5 years from when the consumer is first connected to ensure price stability. We do not want the consumers making investment decisions based on a model that could change in the short term.

All new connections that are eligible for GN0V pricing will be identified in the gas registry. If the consumer has installed gas hot water, or central heating at the time of connection this will be identified using the tariff code GNFR. This tariff code signals that while the consumer is currently on the fixed/variable tariffs equivalent to GN0R, they are eligible to be transitioned to GN0V.

12.2 Commercial consumer groups

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

12.3 Industrial consumer group

The industrial consumer group is split into two sub-groups: industrial and large industrial.

First Gas has maintained the “large industrial” price category with a higher fixed price (GN05). This price category is suitable for consumers with annual consumption greater than approximately 12,000 MWh per annum, but who do not meet the “stand alone cost test”. Offering this price category reduces the administrative burden of offering these consumers’ individual non-standard prices.

The GN05 category is the underlying cause of the need to transfer $0.5 million of cost allocation from industrial to mass market consumers. These consumers have historically been non-standard consumers, and raising their prices by the ~15% that would have occurred under the original allocation calculations would have bumped a number back onto non-standard network charges.

13. How standard prices are set for each category

13.1 Overview of price components that First Gas uses

Each price category has two price components for consumers, a fixed daily price ($/day) and a volume price ($/kWh).

Table 7: 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, applies to all gas distributed to each consumer.

13.2 How the price for each component is derived

First Gas' price structure reflects the price sensitivity of our consumers. The fixed price for each price category increases with consumer capacity and consumption, i.e. the larger the consumer, the higher the fixed price.

First Gas is aware of the effect of price changes for consumers. First Gas' starting point for calculating our prices last year was the corresponding prices for the network for the previous year. This year a first principles basis has been applied. As discussed previously, the DPP reset and corresponding revenue reductions provide a good opportunity for First Gas to review the allocations between consumer groups. The fixed and variable nature of our costs has not changed and the previous approach to fixed and variable pricing is sound.

Each consumer group is assessed on their impacts on First Gas' costs. Small consumers, such as residential households have a higher (energy weighted) marginal cost to serve than larger consumers. It is therefore expected that the proportion of target revenue that is recovered through fixed costs increases as the size of the consumer load increases. The largest consumers (GN05) are on tariff structure that is highly fixed.

Given the significant reductions in most network price categories for the 2018 year there will be reductions in both the fixed and variable tariffs for most price categories at the same time. The large industrial consumers are the exception to this, and have benefited from a reduced allocation as described in section 10.

Due to the significant level of reductions required as part of the 2017 DPP reset, First Gas was unable to limit price shocks to no more than 10% in the 2018 year. All price variations of greater than 10% are reductions, which is expected to place less strain on our consumers from price volatility than increases.

When deriving the pricing for the mass-market, consumers' willingness to pay is a significant driver. Small businesses appreciate stable costs and are more adept to fixed prices. Residential mass-market consumers on the other hand prefer to only pay for goods as services consumed. A highly variable pricing model suits theses consumers more appropriately. First Gas has endeavoured to meet consumer expectations by providing a variable tariff option, but only in cases where the variable pricing will reach the end consumer. Given it is not directly aligned with the high fixed costs on our businesses, a variable tariff that is repackaged into a fixed price based model by retailers is the least efficient outcome. For this reason, First Gas will retain the existing residential pricing model of high fixed, low variable charges for existing consumers and any new consumer or retailer who wishes to opt for it.

14. Fixed revenue proportion of each consumer group

Table 8: Fixed and variable pricing allocation by price category

Consumer group	Price categories	Fixed prices Daily	Variable prices Volume
Mass market	GN0R	57.73%	42.27%
	GN0V	0%	100%
	GN01	57.73%	42.27%
Small Commercial	GN02	36.71%	63.29%
Large Commercial	GN03	33.63%	66.37%
Industrial	GN04	18.43%	81.57%
	GN05	67.00%	33.00%

15. Consultation process

First Gas has consulted with retailers on behalf of consumers, to discuss the changes to our pricing methodology and the resulting prices for the 2017/18 pricing year. The consultation consisted of a workshop held in Auckland in June 2017, written feedback from retailers throughout June, as well as bilateral meetings in June and July 2017.

There was no feedback received on the cost allocation methodology or the existing pricing categories. There were three broad areas of feedback received.

15.1 Timing of provisional prices to retailers

First Gas chose to consult on the cost allocation methodology and draft DPM prior to tabling preliminary pricing. Retailers have requested that First Gas release provisional prices early in the process in future years. They believe that seeing provisional pricing is important to understanding the impacts of proposed methodologies.

First Gas can understand the reason for retailers requesting this information earlier, and will endeavor to release provision prices along with the draft DPM and cost allocation in future years. We apologise for any inconvenience the approach taken this year may have caused retailers.

15.2 Paper downgrades of consumers

There are two scenarios that retailers have requested First Gas consider allowing paper downgrades for:

(i) Mass market consumers that have a scmh of >10 (usually up to 10.6 maximum). In most cases the GMS capacity and meter pressure results in a very minor breach of the mass market consumer group and it is sensible to allow the consumer to remain on mass market pricing.

(ii) Small to medium commercial consumers that have moved into a property with a large GMS capacity, however the load used has been dramatically reduced because of the new consumers' operations or end use (e.g. using fewer or smaller appliances than the previous consumer).

First Gas was unaware of the paper downgrade process that was available in other networks. The benefits of such a process are now understood. We will work with retailers to try and establish a process to enable paper downgrades. Vector AMS will need to be engaged as the predominant meter owner in our network area. We suggest that this is progressed through bilateral discussions initially with monthly updates to retailers on progress.

15.3 Variable pricing introduction

Some retailers consider that First Gas should not impose requirements on retailers in relation to the recovery of any charges from end consumers. Retailers also sought clarity as to whether the GN0R price category will continue to apply to all residential connections (other than where the GN0V is adopted) regardless of meter set capacity and installation pressure.

First Gas would prefer residential consumers to continue to be managed under the existing GN0R pricing category. There will be an additional category GNFR that is identical in charges to the existing GN0R category. This will be used to identify consumers who are eligible for the GN0V pricing but have selected to remain on GN0R.

First Gas do not believe that we are imposing any requirements on retailers in relation to the recovery of charges. All retailers can still access the existing GN0R pricing category. We are endeavoring to offer an additional option to retailers in the form of a fully variable price. This price requires conditions on it to ensure that we continue to comply with the Commerce Commission pricing principles. Given that the costs of our business are predominantly fixed, a highly-fixed network charge is more aligned to our cost allocation. To reflect Pricing Principle #2 and reflect consumers' demands, we have endeavored to offer consumers an option that reflects the existing pricing of other fuel choices, such as LPG. This purpose of the tariff is only achieved if passed through as a variable charge by retailers.

To avoid cross-subsidisation, or under-recovery from connections with small loads we have included condition (b), a minimum appliance installation.

Finally, the third criteria, (c), is to ensure that there is not an accidental breach of pricing compliance due to incorrect assumptions. As seen recently in the electricity GDB sector, it is difficult to accurately predict the number of existing retailers and consumers that will take up a new product offering. First Gas understands that there are existing consumers that may prefer a variable pricing model, or will disconnect if faced with continued fixed charges. We will investigate price categories to address these consumers in future years once we have further information on the uptake rate of variable pricing. Retailers who provided feedback supported conditions (b) and (c).

Other variable price feedback:

a) Given that the eligibility requirements for this pricing option are extensive in terms of the number of requirements and specific in terms of the detail of the requirements, some retailers believe that the process involved in the management and monitoring of end consumers could be costly and intensive.

First Gas accept that retailers have the choice of whether to offer a variable pricing option. First Gas will endeavour to manage the process to the extent possible to minimise the administrative burdens on retailers. It will be then up to retailers to assess whether they wish to continue with a variable product.

b) Eligible ICP’s need to be identifiable on the gas registry.

As explained above, we will be utilizing an additional gas registry pricing code GNFR for consumers who are on the equivalent charges to the historic GN0R pricing, but are eligible for the GN0V price category.

c) Think about “sun setting” the availability of the plan – suggest 5+ years from date of ICP creation/ active date.

First Gas has considered this suggestion at depth, but has chosen to put a limit on the minimum length of the offer instead. Retailers can choose how to package the product, in terms of minimum/maximum length of offer, individually. First Gas have applied a minimum offer length to give consumers certainty that the pricing model they have made their investment decision under will continue for a minimum period. Given the ~10year life of most gas appliances, providing certainty for at least the first half of the appliances life cycle was seen as the minimum from our perspective.

d) Suggest you wrap minimum usage and vacant consumption exclusions on the plan – say with the right of a three month notice to retailers who have ICPs that should not be on the plan. This is something the electricity networks regularly do and it is a standard practice.

First Gas support this proposal. We will look to issue notices to retailers for any ICP with under 9GJ (2,500 kWh) consumption in a 12-month period, or no consumption for 3+ months with a termination notice. This has been added as criteria (d) for the variable price. This will ensure that the new pricing category does not create cross-subsidisation between residential consumers.

16. Impact of 2017/18 price changes

Table 9: Price changes by price category

Price category	Number of consumers as at July 2016	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*
GN0R	58176	0.357	0.0261	$0.34	$0.021	-4.8%	-19.5%	-12.67%
GN0V	0	N/A	N/A	$0.00	$0.05	N/A	N/A	N/A
GN01	2100	0.65	0.0165	$0.62	$0.0073	-4.6%	-55.8%	-35.92%
GN02	1382	1.154	0.0133	$1.08	$0.0076	-6.4%	-42.9%	-33.33%
GN03	503	4.951	0.0102	$4.79	$0.007	-3.3%	-31.4%	-23.94%
GN04	66	15.19	0.0068	$14.05	$0.0064	-7.5%	-5.9%	-6.19%
GN05	8	209.80	0.0015	$220.00	$0.0014	4.9%	-6.7%	0.75%

*For an average consumer on each price category

17. Consistency with pricing principles

The Pricing Principles are specified in clause 2.5.2 of the Gas Distribution Services Input Methodologies Determination 2010 (Commerce Commission Decision 711, 22 December 2010). The table below assesses the compliance with each criteria.

Pricing principle	Description of 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;	First Gas has conducted a complete cost allocation exercise to determine the amount of Target Revenue that is recovered from each consumer group. This cost allocation model accurately reflects First Gas' business and brings the network pricing in line with the First Gas costs. By mapping the Target Revenue directly to the cost allocation model, First Gas is confident that the services are being provided in an economical manner and are subsidy free across consumer groups. Two of the allocators used by First Gas are tied to consumer load, as constraints from the remaining capacity of the system often drives significant capital investments. First Gas has assessed the alternative fuel options, especially LPG and Electricity and has worked to ensure prices can be offered in the range between incremental and stand-alone costs. This is challenging for some potential new consumers (low use residential, or highly seasonal mass-market) and the capital contribution policy should be read in conjunction with this DPM to understand how only economic consumers, that will not require subsidies from other users, are connected to the network.
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.	Our prices include the provisions for returns on Capital Expenditure, as allowed by the Commerce Commission, which effectively allocates any investment in system capacity to the users who caused the constraint. Our network uses a single set of prices across all network areas which results in some limitations in compliance with principle 1(b). There were no significant differences identified in the costs of owning and operating networks across the different locations, and we sought to keep pricing as simple as possible. First Gas will continue to assess this approach as part of the annual pricing exercise. First Gas is particularly conscious of the effect of its pricing on consumers and will look to implement a pricing structure that provides appropriate incentives for consumers to connect to the gas distribution network and continue to use natural gas.

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.	First Gas has considered consumers' demand responsiveness and factored that into the DPM. It is difficult to determine the precise demand responsiveness of a consumer group due to the variation between consumers in a group. First Gas believes that the pricing derived for commercial and industrial consumers under the 'efficient' allocation of incremental costs closely aligns with the demand responsiveness of these consumers. For the few consumers where this does not align, non-standard pricing is an option. The mass-market consumer group however has a slight disconnect between the 'efficient' incremental costs, and some consumers demand responsiveness. The mass-market issue is exacerbated by the fact that the distribution tariffs are only a portion of the costs charged to the end users. Energy costs and retailers' costs and margins are also included. Mass-market consumers have sensitivity to high daily charges, and the proportion of revenue that is recovered through fixed charges (at the retailer level) is substantial and drives some consumers away from natural gas as a fuel. To address this inconsistency between the pure cost allocation and the demand responsiveness, First Gas has created a new tariff, GN0V, which is a fully variable tariff. To recognize that the purpose is to provide pricing aligned to mass-market consumers demand responsiveness, and aversion to fixed costs, the tariff code has a criterion that no additional fixed charge is applied by a retailer. The pricing must be fed through to the end consumer in a variable structure.
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.	Our non-standard contracts are continually reassessed to transition as many consumers back to standard network pricing where the justifications for non-standard pricing no longer apply, or the "efficient" incremental costs for a consumer have changed. We have also signed up our first customer at higher-than-posted tariffs to ensure that there is no cross-subsidisation by existing users of the network. As described in this DPM, the non-standard consumers' revenue is removed from the allocation exercise, along with the non-standard consumers loads and number of connections to ensure all remaining costs are efficiently allocated to standard consumers.

4)	Development of prices is transparent, promotes price stability and certainty for consumers, and changes to prices have regard to the effect on consumers.	First Gas strives to adhere to principle 4, but notes that we are limited by the overarching regulation. All non-standard customers who are transitioned back to standard prices do not see price increases greater than 10% any year to help manage the price shock component. There will however be two potential price shocks in 2018 and 2019 due to the DPP reset. As seen above there is a significant reduction in Target Revenue and associated prices for 2018. There is an additional wash-up under the regulatory framework in 2019. First Gas will manage any potential price shock as effectively as possible, but the regulatory framework of applying all wash-ups to a single pricing year will mean that stable prices may not be achievable during this period.

Appendix A: Non-standard price summary

	Justification	Standard tariff equivalent	Discount to standard
0008000027NGD9C	Bypass	GN05	94%
0008000029NGE07	Bypass	GN05	86%
0008000033NG63B	Bypass	GN05	95%
0008000038NG8EF	Bypass	GN05	70%
0008000040NGFA6	Bypass	GN05	85%
0008000051NG94E	Bypass	GN05	30%
0008000053NG9CB	Transitioned to Standard	GN05	17%
0008000072NG8DB	Bypass	GN05	92%
0008000074NG954	Bypass	GN05	95%
0008000080NG849	Transition to Standard	GN05	67%
0008000147NGB68	Transition to Standard	GN04	50%
0008000158NGE1B	Alternative Fuel- Black Liquor	GN05	6%
0008000249NGBF0	Bypass	GN05	96%
0008000300NGE00	Bypass	GN05	95%
0009001431NGDA6	Bypass	GN04	53%
1001294166NGCC4	Cost of service higher than standard	GN05	-15%
0008000047NG26C	Measurement only	N/A	N/A
0008000032NGA7E	Measurement only	N/A	N/A

Director certificate

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

Clause 2.9.2

We, Philippa Dunphy and Richard Krogh, being directors of First Gas Limited certify that, having made all reasonable enquiry, to the best of our knowledge:

a) the following attached information of First Gas 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.

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.

Philippa Dunphy	Richard Krogh
Director	Director
4 September 2017	4 September 2017
Date	Date