



Pricing Methodology for Gas Transmission Services

From 1 October 2017

Pursuant to the Gas Distribution Information Disclosure Determination 2012



1 Introduction

First Gas operates 2,500km of gas transmission pipelines (including the Maui pipeline), and more than 4,800km of gas distribution pipelines across the North Island. 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.

For further information on First Gas, please visit our website www.firstgas.co.nz.

Information disclosure

This document is the pricing methodology for gas transmission services prepared pursuant to clause 2.4 of the *Gas Transmission Information Disclosure Determination 2012* (consolidated in 2015), issued by the Commerce Commission on 24 March 2015 (the ID Determination).

This Pricing Methodology covers the 12-month pricing year from 1 October 2017.

The following documents are provided with this Pricing Methodology:

- Maui pipeline pricing methodology
- Non-Maui pipeline pricing methodology
- Director certification

This Pricing Methodology was prepared on 31 August 2017.

Further information

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1. Approach to pricing methodologies for 2017/18

For the pricing year commencing 1 October 2017, First Gas has elected to continue the existing pricing methodologies for the Maui and Non-Maui transmission systems, but has incorporated them into one disclosure document.

Continuation of two existing pricing methodologies

First Gas must retain the structure of the prices under the Maui Pipeline Operating Code (MPOC) and Vector Transmission Code (VTC) for the year beginning 1 October 2017. The single transmission code, the Gas Transmission Access Code (GTAC), is still under development and will not come into force until 1 October 2018. The current pricing methodologies therefore will continue to apply for 2017/18 and have been updated to reflect changes in allowable revenue, pass-through costs etc.

The only material change relates to the Non-Maui transmission system. First Gas has taken the opportunity to rebalance the non-Maui gas transmission services pricing so it best aligns with the pricing structure intended for the GTAC. The pricing structure changes will result in some delivery points having greater price reductions than others. The changes consider transmission distances and the use of transmission assets for transmission services. These factors were not incorporated into the pricing structure for the prior year ending 30 September 2017.

Consolidation into a single disclosure document

For 2017/18, we have decided to describe the two pricing methodologies in a single document. This reflects that the regulatory control under the new Default Price-Quality Path (DPP) applies to our gas transmission business as a whole (i.e. the Maui and non-Maui system), and we are required to demonstrate that our pricing going forward from 1 October 2017 complies with the combined revenue cap.

Move to a single code and single pricing methodology

First Gas intends to establish a new pricing methodology for our gas transmission business for the year beginning 1 October 2018, once the GTAC has been approved. This new pricing methodology will reflect the new access products established for shippers under the GTAC.

Appendix 1: Maui pipeline pricing methodology



Pricing Methodology for Maui Gas Transmission Services

Effective from 1 October 2017

Pursuant to Gas Transmission Information Disclosure Determination 2012



1 Summary

This document describes the Gas Transmission Pricing Methodology (GTPM) that applies to the Maui gas transmission assets owned by First Gas.

1.1 Existing pricing methodology will continue until 30 September 2018

Section 19.9 of the MPOC requires First Gas to use the methodology set out in Schedule 10 of the MPOC for setting prices for the Maui transmission system while the MPOC is in effect.

“19.9 TSP may review and/or change Tariff 1 and/or Tariff 2 in accordance with the tariff principles set out in Schedule 10...”

Schedule 10 of the MPOC is quoted in **Appendix 2**.

1.2 New Gas Default Price-quality Path (DPP)

From 1 October 2017, First Gas will be on a different DPP from what it was on for the year ending 30 September 2017. The new DPP has decreased revenue on First Gas' transmission business relative to the revenue that would be earned by charging current prices by approximately 10%.

The new DPP uses a different compliance methodology than the current DPP:

- The new DPP uses forecasted quantities for the upcoming year when determining compliance against its revenue cap; while
- The current DPP uses quantities from two years previous.

This change means First Gas can better adjust its prices to meet future changes in quantities. However, this also means First Gas loses the advantage of being able to gain two years of revenue from new demand before that demand falls under the revenue cap.

1.3 This pricing methodology complies with regulatory requirements

First Gas' revenue from gas transmission services is subject to and complies with the new DPP for 2017 - 2022.

This pricing methodology also meets the regulatory requirements listed in the Gas Information Disclosure Determination, as set out in section 6 of this document.

1.4 Transmission prices for 2017/18 have not changed

The transmission prices charged under the MPOC that will apply in the year commencing 1 October 2017 are the same as the prices that applied for 2016/17. Maintaining Maui pipeline prices at current rates complies with the DPP.

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2 Overview

2.1 Background

The Maui pipeline runs 299 km from the Oaonui Production Station (south of New Plymouth) to the Huntly Power Station (south of Auckland) in the North Island of New Zealand.

Beginning transmission in 1979, the Maui Pipeline carried 18 PJ of gas from the Maui field in its first year of operation. In 2015, the Maui Pipeline carried 143 PJ of gas from seven production stations that are directly connected. More than half of that gas goes to three consumer connections to the pipeline: the Huntly Power Station and the two methanol plants owned by Methanex.

First Gas also owns other gas transmission pipelines that are directly connected to the Maui Pipeline at 13 interconnection points.

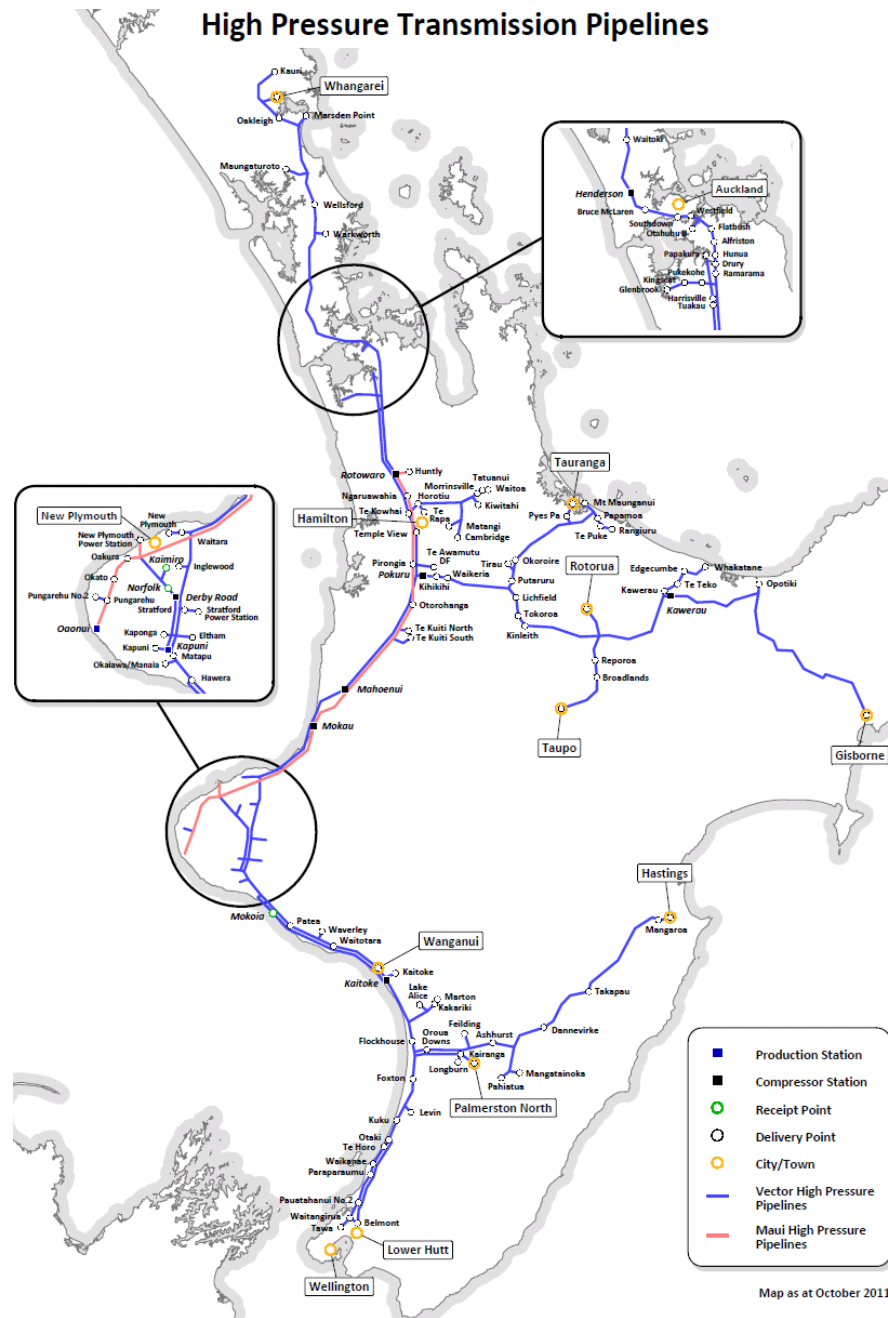
The Maui Pipeline operates under an 'Open Access' regime. This means that any party wishing to carry gas on the Maui Pipeline or wishing to connect to it may do so on standard terms and conditions set out in the Maui Pipeline Operating Code. There are currently 12 different parties who ship gas through the Maui Pipeline.

The map below shows both the transmission system purchased from Vector (in blue) and the ex-Maui Development Limited (MDL) pipeline (in brown).

From 1 October 2017, the gas transmission system will be subject to regulation under the new DPP.

In addition, the Determination requires the GTB to demonstrate how (and if not why) its prices comply with the Pricing Principles.

Figure 1 First Gas' gas transmission system



2.2 Applicable regulations

This disclosure is prepared in accordance with clause 2.4 of the ID Determination. Compliance with the requirements of this clause is demonstrated in the compliance matrix in Section 6.

The GDB's gas transmission services revenue is set in accordance with the DPP for 2017 - 2022.

The Pricing Principles are defined in clause 2.5.2 of the Input Methodologies.

2.3 Additional disclosures

Gas transmission prices are subject to annual approval by the GTB's Board of Directors, and are set to comply with the DPP. They should also recover the Target Revenue.

First Gas' Board of Directors has not made any decision to amend the transmission pricing structure beyond the 2017/18 pricing year or approved any Pricing Strategy.

2.4 Development of a new transmission code and pricing methodology

Having just become the new owner of all open-access gas transmission pipelines in the North Island, a high priority for First Gas is to lead the development of a single new gas transmission access code (GTAC) covering that entire gas transmission network. Considering the work that this will involve, the new gas transmission access code is not likely to be in place before the 2018/19 pricing year.

We see any gas transmission pricing methodology as being inseparable from the prevailing gas transmission code. The GTPM is codified in the MPOC and is fit for purpose under the VTC. However, the GTPM does not cover pricing for the former ex-Vector transmission pipelines and is unlikely to be an appropriate fit for a new code that covers the entire gas transmission network. The design of a new GTPM must therefore occur in step with the development of a new gas transmission code.

This GTPM will apply for 2017/18 and should continue until such time as the service and pricing-related elements of the new gas transmission code are agreed with Shippers and other stakeholders.

3 Tariffs and cost components

3.1 Tariffs to recover different cost components

The tariff principles set out in Schedule 10 of the MPOC mean that:

- **Tariff 1** is the price component intended to provide for a return on our asset base and investments, while
- **Tariff 2** is the price component intended to cover our operational costs.

4 Methodology for setting tariffs

This section describes the methodology the GTB uses to calculate prices for gas transmission services.

4.1 Tariff setting approach

We use a two-step approach to setting tariffs for our pricing year.

1. Tariffs are determined following the methodology stipulated in Schedule 10 of the MPOC, as was used in recent years; and
2. Adjustments (if necessary) are made to Tariff 1 and Tariff 2 until the resulting Target Revenue is less than the Forecast Allowable Revenue.

4.2 Tariff calculation

The first step detailed in in Figure 2 determines what the prices would be if the MPOC was treated in isolation, while utilising the Maui pipeline relevant costs used for the DPP.

Figure 2 shows that the expected revenue from prices will be below the Ideal Target Revenue for 2017/18. First Gas intends to recover the difference via prices charged under the VTC.

This allows MPOC prices to remain at current levels while First Gas still recovers its combined Target Revenue for the MPOC and VTC.

For the purposes of setting a Target Revenue the Total forecasted Transmission Revenue indicated above will be the 2017/18 Target Revenue.

Figure 2 Determining revenue for standard prices

\$ million per pricing period	
Tariff 1	
Pipeline asset value (A)	284.527
WACC (post-tax) (B)	6.41%
Revaluation adjustment (C)	-3.743
Required return (D) = (A) x (B) + (C)	14.495
Depreciation (E)	8.010
Taxation adjustment (F)	4.063
Tariff 1 Ideal Target Revenue (G) = (D) + (E) + (F)	26.568
Throughput forecast (TJ.km) (H)	16,394,056
Tariff 1 (\$ / GJ.km) (I)	0.001578
Tariff 1 Revenue (J) = (H) x (I)	25.870
Tariff 2	
Operational expenditure forecast (K)	12.902
Tariff 2 Ideal Target Revenue (L) = (K)	12.902
Throughput Forecast (TJ) (M)	144,333
Tariff 2 (\$ / GJ) (N)	0.072061
Tariff 2 Revenue (O) = (M) x (N)	10,401
Total Ideal Target Revenue (P) = (J) + (L)	39.470
Additional transmission revenue via cash-outs (Q)	0.386
Total forecasted Transmission Revenue	36.657

The forecasted quantities shown in Figure 2 are the forecasted 2017/18 quantities for those tariffs. The forecast involved the following:

- Huntly Power Station quantities were set equal to the July 2016 to June 2017 quantities as these are approximately equal to the average annual quantities for the previous seven years;
- Methanex quantities were adjusted to allow for the removal of Ngatimaru Road (Receipt) to Ngatimaru Road (Delivery) quantities. Those quantities have been charged for due to a legacy arrangement despite not involving First Gas assets. First Gas has agreed with Methanex to discontinue that arrangement. Methanex will continue to take the bulk of their supply via First Gas assets; and
- Quantities relating to connections with the non-Maui transmission system have been forecasted to change in line with growth trends and known step changes in demand (e.g. Marsden Point's increased offtake with the commissioning of the Henderson Compressor).

- All other quantities are immaterial and have been held equal to the July 2016 to June 2017 quantities.

4.3 Target Revenue and the DPP

4.3.1 Target revenue

Regulatory requirement

2.4.3(3) State the **target revenue** expected to be collected for the **pricing year** to which the pricing methodology applies;

The GTB has set its prices to recover an amount no greater than the Forecast Allowable Revenue (FAR) under the new DPP. Compliance with the FAR requirement is determined by ensuring the 2017/18 prices multiplied by the forecasted 2017/18 quantities (the Target Revenue) is less than or equal to the FAR. Forecast Revenue is the Target Revenue for the 2017/18 pricing year and its compliance with the FAR is set out in Figure 3.

Figure 3 Determining Target Revenue

Forecast Notional Allowable Revenue	38,637,000
Pass-through and recoverable costs	1,034,659
Forecast Allowable Revenue	39,671,659
Forecast Revenue/Target Revenue	36,656,648
Compliance (Forecast Revenue ≤ FAR)	Compliant

5 Consistency with Pricing Principles

Regulatory requirement

2.4.3(2) *Demonstrate the extent to which the pricing methodology is consistent with the **pricing principles** and explain the reasons for any inconsistency between the pricing methodology and the **pricing principles**;*

5.1 Consistency with Pricing Principles

The Commerce Commission has determined pricing principles for regulated gas pipeline businesses. First Gas is required to comply with those pricing principles.

As part of our disclosure, we are required to “demonstrate the extent to which the pricing methodology is consistent with the pricing principles and explain the reasons for any inconsistency between the pricing methodology and the pricing principles”. Our views on the consistency between First Gas’ GTPM and the pricing principles are set out below in Figure 4.

Figure 4 GTPM consistency with pricing principles

Pricing principles	Pricing methodology consistency
<p>(1) Prices are to signal the economic costs of service provision, by-</p> <ul style="list-style-type: none"> (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. 	<p>The GTPM is not consistent with this principle:</p> <ul style="list-style-type: none"> • Incremental and standalone costs have not been considered. • Economic costs of service provision have not been considered. • Available capacity has not been considered. • The effect of additional usage on future investment costs has not been considered.
<p>(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.</p>	<p>The GTPM is the same for all our consumers and does not consider demand responsiveness.</p>

Pricing principles	Pricing methodology consistency
<p>(3) Provided that prices satisfy (1) above, prices are responsive to the requirements and circumstances of consumers in order to-</p> <ul style="list-style-type: none"> (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. 	<p>The GTPM does not satisfy principle (1).</p> <p>Uneconomic bypass is not possible in most cases.</p> <p>Where bypass or alternative fuels are an economic option, the customer cannot apply for non-standard prices under the terms of the MPOC.</p>
<p>(4) Development of prices is transparent, promotes price stability and certainty for consumers, and changes to prices have regard to the effect on consumers.</p>	<p>The GTPM promotes price stability and certainty for our consumers in the short to medium term. In setting prices for this year, First Gas has reflected the value of maintaining current prices under the MPOC – rather than increasing gas transmission prices on the Maui pipeline at the same time as prices are falling across the rest of the transmission system (via prices charged under the VTC).</p>

Inconsistencies between the GTPM and the Commerce Commission's pricing principles is due to the pricing methodology being prescribed by the MPOC and revenue being constrained by both the MPOC and DPP.

The MPOC is a set of terms and conditions that was extensively negotiated among all gas industry participants before the start of the open access regime on the Maui pipeline. Any changes to the MPOC, including its pricing methodology, would require prior industry consultation and a positive recommendation from the Gas Industry Company (GIC).

First Gas has not sought the views of other parties when preparing this pricing methodology. This is because prices charged under the MPOC are defined by principles set out in that code, and First Gas proposes to adopt a new GTPM from 1 October 2018.

6 Compliance matrix

Figure 5 is included to demonstrate how this disclosure complies with the Determination.

Figure 5 GTPM consistency with Determination

Determination requirement	Description
2.4.1 Every GTB must publicly disclose , before the start of each pricing year , a pricing methodology which-	See individual clauses below.
(1) Describes the methodology, in accordance with clause 2.4.3, used to calculate the prices payable or to be payable;	4
(2) Describes any changes in prices and target revenues ;	4
(3) Explains, in accordance with clause 2.4.5 of this section, the approach taken with respect to pricing in non-standard contracts ; and	Not applicable as non-standard contracts do not exist for the MPOC.
(4) Explains whether, and if so how, the GTB has sought the views of consumers , their expectations in terms of price and quality, and reflected those views in calculating the prices payable or to be payable. If the GTB has not sought the views of consumers , the reasons for not doing so must be disclosed.	Section 0
2.4.2 Any change in the pricing methodology or adoption of a different pricing methodology, must be publicly disclosed at least 20 working days before prices determined in accordance with the change or the different pricing methodology take effect.	Not applicable.
2.4.3 Every disclosure under clause 2.4.1 of this section must-	See individual clauses below.

Determination requirement	Description
2.4.3(1) Include sufficient information and commentary for interested persons to understand how prices were set for consumers , including the assumptions and statistics used to determine prices for consumers ;	4
2.4.3(2) Demonstrate the extent to which the pricing methodology is consistent with the Pricing Principles and explain the reasons for any inconsistency between the pricing methodology and the Pricing Principles ;	Section 0
2.4.3(3) State the target revenue expected to be collected for the pricing year to which the pricing methodology applies;	Section 4.3.1
2.4.3(4) Where applicable, identify the key components of target revenue required to cover the costs and return on investment associated with the GTB 's provision of gas transmission services . Disclosure must include the numerical value of each of the components;	Section 4.2
2.4.3(5) If prices have changed from prices disclosed for the immediately preceding pricing year , explain the reasons for changes, and quantify the difference in respect of each of those reasons;	Not applicable as prices are not changing.
<i>Revenue by Consumer Group</i> 2.4.3(6) Where applicable, describe the method used by the GTB to allocate the target revenue among consumers , including the numerical values of the target revenue allocated to consumers and the rationale for allocating it in this way;	Section 4.2
<i>Revenue by Price Component</i> 2.4.3(7) State the proportion of target revenue (if applicable) that is collected through each price component as publicly disclosed under clause 2.4.18.	Section 4.2

Determination requirement	Description
<p><i>Effect of Pricing Strategy</i></p> <p>2.4.4 Every disclosure under clause 2.4.1 above must, if the GDB has a pricing strategy-</p> <p>(1) Explain the pricing strategy for the next 5 pricing years (or as close to 5 years as the pricing strategy allows), including the current pricing year for which prices are set;</p> <p>(2) Explain how and why prices are expected to change as a result of the pricing strategy;</p> <p>(3) If the pricing strategy has changed from the preceding pricing year, identify the changes and explain the reasons for the changes.</p>	<p>Not applicable as no pricing strategy exists for the Maui pipeline other than the move to a new GTPM under the GTAC.</p>

Determination requirement	Description
<p><i>Prices for Non-Standard Contracts</i></p> <p>2.4.5 Every disclosure under clause 2.4.1 above must-</p> <p>(1) Describe the approach to setting prices for non-standard contracts, including-</p> <ul style="list-style-type: none"> (a) the extent of non-standard contract use, including the value of target revenue expected to be collected from consumers subject to non-standard contracts; (b) how the GTB determines whether to use a non-standard contract, including any criteria used; (c) any specific criteria or methodology used for determining prices for consumers subject to non-standard contracts, and the extent to which these criteria or that methodology are consistent with the Pricing Principles; <p>(2) Describe the GTB's obligations and responsibilities (if any) to consumers subject to non-standard contracts in the event that the supply of gas transmission services to the consumer is interrupted. This description must explain-</p> <ul style="list-style-type: none"> (a) the extent of the differences in the relevant terms between standard contracts and non-standard contracts; (b) any implications of this approach for determining prices for consumers subject to non-standard contracts. 	<p>Not applicable as non-standard prices do not exist for the MPOC.</p>

Appendix 1 Glossary

Act:	the Commerce Act 1986.
Connection Point (CP):	an aggregation of one or more Delivery Points (DPs) for cost allocation purposes.
CPI:	the Consumer Price Index.
CRF:	Capacity Reservation Fee, a charge applied for each GJ of reserved capacity.
Delivery Point or DP:	means a point at which a Shipper's gas is taken (or made available to be taken) from a pipeline into another transmission pipeline (whether owned by the GTB or another party), a gas consuming facility or a distribution network.
Determination:	the Gas Information Disclosure Determination, Decision NZCC24, 1 October 2012.
DPP:	the current DPP is the Gas Transmission Services Default Price-Quality Path Determination 2013, NZCC, 28 February 2013. The new DPP is the Gas Transmission Services Default Price-Quality Path Determination 2017, NZCC14, 29 May 2017.
GJ:	Gigajoule, a unit of energy.
GTB:	the gas transmission business, meaning Maui Development Limited prior to 15 June 2016 and First Gas Limited thereafter.
GTPM:	Gas Transmission Pricing Methodology.
Incremental Cost (IC):	the cost of providing a defined service to an additional consumer or group of consumers given that service is already provided to other consumers.
Input Methodologies:	the Gas Transmission Services Input Methodologies Determination 2010 (Commerce Commission Decision 712, 22 December 2010).
MPOC:	the Maui Pipeline Operating Code.
NSFA:	Non-system fixed assets.
Price Component:	the various tariffs, 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 Transmission Services Input Methodologies Determination 2010 (Commerce Commission Decision 712, 22 December 2010).

Pricing Strategy:	a decision made by the Directors of the GTB on the GTB's plans or strategy to amend or develop prices in the future, and recorded in writing.
SFA:	System Fixed Assets.
Shippers:	A person named as a shipper in a Transmission Services Agreement with First Gas.
Stand Alone Cost (SAC):	the cost of providing a defined service or group of services to a particular consumer or group of consumers, without providing any other services or serving any other consumers.
Target revenue:	the revenue the GTB expects to receive during the pricing year, as described in section 3.4.1.
VTC:	Vector Transmission Code.

Appendix 2 MPOC Schedule 10

SCHEDULE 10 TARIFF PRINCIPLES

TSP will set the Transmission Charges in accordance with the standard practice adopted by utilities businesses in New Zealand. Accordingly, TSP will recover the cost and return of capital as follows. TSP will:

- (a) calculate the Maui Pipeline's Optimised Deprival Value or Optimised Depreciated Replacement Cost and multiply this value by a nominal WACC, and then subtract any revaluation gains/losses on the asset ("Required Return");
- (b) calculate the return of capital based on the useful life of the asset Depreciation");
- (c) aggregate the Required Return and Depreciation to derive the "Required Revenue";
- (d) derive a GJ.km tariff ("Tariff 1"); and
- (e) apply Tariff 1 across the Maui Pipeline Shippers on the basis of quantity of Gigajoules of Gas transported multiplied by the distance of Gigajoules of Gas transported.

In any given year, in the event that TSP's total revenues are more or less than its required revenue then Tariff 1 may be adjusted for the following years in a manner that endeavours to reduce pricing volatility for Shippers.

The approach adopted by TSP to recover operating expenditure is to:

- (a) aggregate the Maui Pipeline's operating costs ("Operational Expenditure");
- (b) allocate Operational Expenditure across every Gigajoule of Gas delivered from the Maui Pipeline.

In any given year, in the event that TSP's total Operational Expenditure recovery is more or less than its required recovery then Tariff 2 may be adjusted for the following years in a manner that endeavours to reduce pricing volatility for Shippers.

Appendix 2: Non-Maui pipeline pricing methodology



Pricing Methodology for Non-Maui Gas Transmission Services

Effective from 1 October 2017

Pursuant to Gas Transmission Information Disclosure Determination 2012



1 Summary

In April 2016, First Gas purchased the gas transmission system previously owned by Vector Limited. This network includes all of the high-pressure gas transmission pipelines in the North Island, except the Maui pipeline. In June 2016, First Gas also purchased the Maui gas transmission pipeline that runs from Oaonui to Huntly, which was previously owned by Maui Developments Limited (MDL).

1.1 First Gas developing a new gas transmission code and pricing methodology

First Gas is currently developing a new gas transmission code (the Gas Transmission Access Code, GTAC) that will apply across both the ex-Vector and ex-MDL transmission systems. The GTAC is being developed in consultation with the Gas Industry Company (GIC), shippers, gas producers, major gas users and other stakeholders. The GTAC will replace both the Vector Transmission Code (VTC) and the Maui Pipeline Operating Code (MPOC), and will require a new gas transmission pricing methodology (GTPM). First Gas is aiming for the GTAC and new pricing methodology to take effect from 1 October 2018.

1.2 Existing pricing methodology continue until 30 September 2018

Based on the time required to develop the GTAC and accompanying pricing methodology, First Gas will continue to apply the current GTPM for non-Maui gas transmission assets for the 2017/18 pricing year. Vector developed the current GTPM after an extensive consultation process in 2012/13, and we consider that the GTPM remains fit for purpose to price the access products under the VTC.

This document is an edited version of the GTPM paper produced by Vector. It is intended to meet First Gas' obligations under the Gas Information Disclosure Determination, Decision NZCC24, 1 October 2012. This document provides information to enable interested parties to understand how gas transmission prices are set, and includes a description of the current GTPM's development.

1.3 New Gas Default Price-quality Path (DPP)

From 1 October 2017, a new DPP will apply to First Gas' transmission business. The new DPP decreases the overall revenue that First Gas can earn from its transmission assets (relative to rolling over prices applying under the previous DPP) by around 10%.

The new DPP also uses a different compliance methodology, as a result of changes made to the Input Methodologies applying to gas transmission businesses in 2016. The new DPP uses forecasted quantities for the upcoming year to assess compliance against the revenue cap, rather than using quantities from two years ago. This change allows First Gas to better adjust its prices to reflect known changes in quantities.

1.4 This pricing methodology complies with regulatory requirements

First Gas' revenue from gas transmission services is subject to and complies with the new DPP.

This pricing methodology also meets the requirements of the Gas Information Disclosure Determination.

1.5 Transmission prices for 2017/18 have materially changed

The transmission prices that will apply in the year commencing 1 October 2017 are materially different from the prices that apply for 2016/17. All standard fees, and any fees in non-standard contracts linked to standard fees, have been reduced. This reduction ensures that our prices comply with the DPP.

This results in weighted average prices for non-Maui gas transmission services for 2017/18 being approximately 8.2% lower than the prices that applied in 2016/17.

This average price reduction is not evenly spread across the transmission network, with some delivery points having greater price reductions than others. First Gas has taken the opportunity to rebalance non-Maui gas transmission prices to better reflect the cost of service provision and to more closely align with the pricing structure intended for the GTAC. We consider that the prices applied under this GTPM better account for transmission distances and the use of transmission assets.

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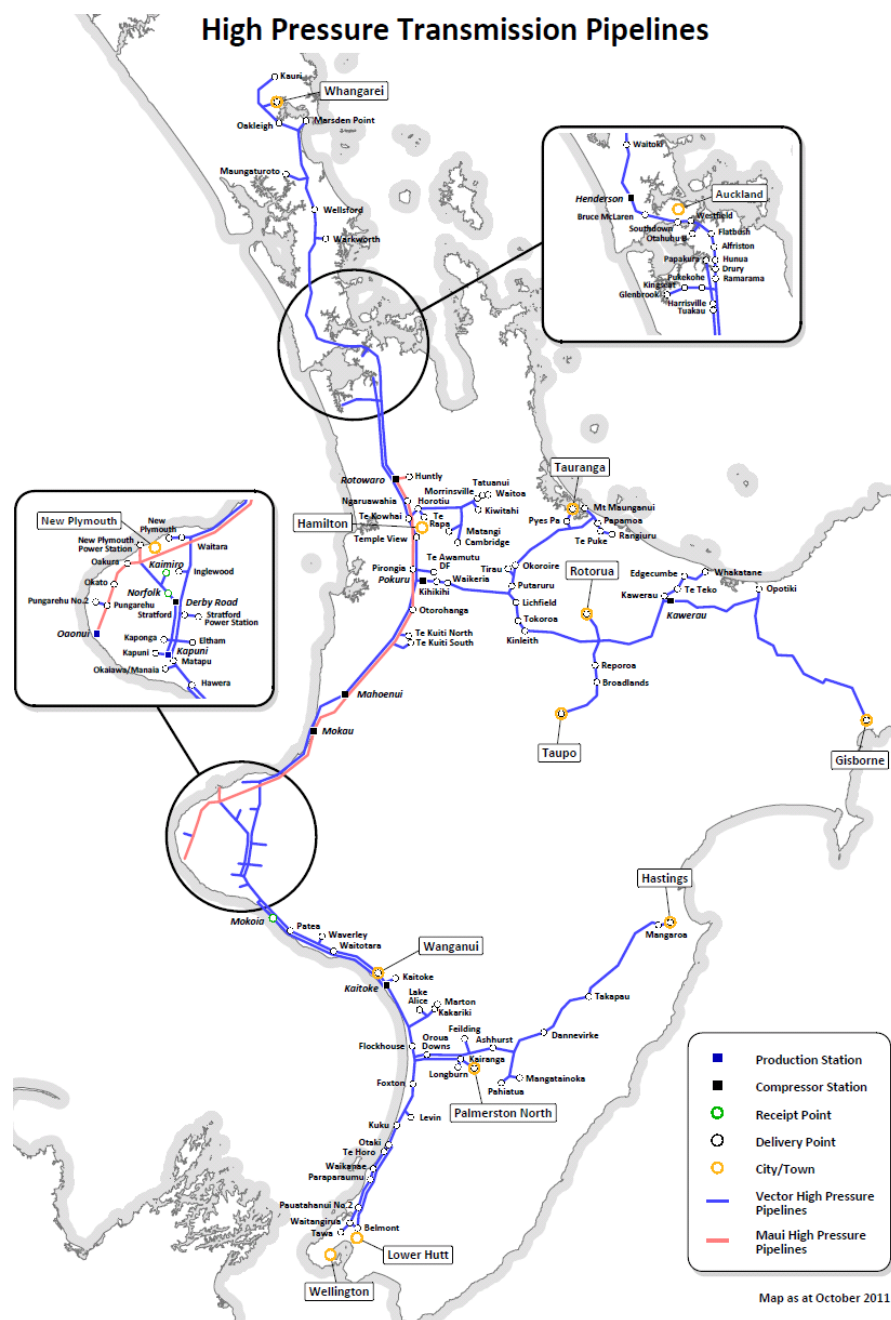
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2 Overview

2.1 Background

First Gas provides gas transmission services in the North Island over a network comprising approximately 2,200 km of pipeline. The system was largely built between 1968 and the mid-1980s by the Natural Gas Corporation (NGC). It was purchased by Vector in 2005, and subsequently by First Gas in April 2016. Figure 1 shows both the transmission system purchased from Vector (in blue) and the ex-Maui Development Limited (MDL) pipeline (in brown).

Figure 1: First Gas' transmission system



Gas is taken from the transmission system at some 130 Delivery Points (DPs) owned by First Gas. These DPs supply both distribution networks and large gas consumers such as industrial plants and power stations. First Gas contracts with Shippers. First Gas transports gas from sources of supply (currently all in Taranaki) through the transmission system for Shippers. At present, there are eight Shippers. Seven of those Shippers operate as gas retailers, though some also ship gas to their own gas consuming facilities. The other Shipper has yet to engage transmission services or gas retailing.

From 1 October 2017, the gas transmission system will be subject to regulation under the new DPP. In addition to complying with the DPP, the Information Disclosure Determination (the Determination) requires First Gas to demonstrate how (and if not why) its prices comply with the Pricing Principles.

In 2013, Vector (as the previous owner) undertook an extensive review of the gas transmission pricing methodology. The current GTPM is an evolution of the outcome of that process.

2.2 Applicable regulations

This disclosure is prepared in accordance with clause 2.4 of the Determination. Compliance with the requirements of this clause is demonstrated in the compliance matrix in Section 6.

The GDB's gas transmission services revenue is set in accordance with the DPP.

The Pricing Principles are defined in the Input Methodologies.

2.3 Additional disclosures

Gas transmission prices are subject to annual approval by the GTB's Board of Directors, and are set to comply with the DPP. They should also deliver the Target Revenue.

First Gas' Board of Directors has not made any decision to amend the transmission pricing structure beyond the 2017/18 pricing year or approved any Pricing Strategy.

2.4 Price setting policy framework

This section highlights some of the key factors that influenced the design of the current GTPM. Current transmission prices are founded on an application of economic pricing principles, subject to practical, physical and commercial constraints. An understanding of these factors assists in understanding the various decisions underpinning the current GTPM.

2.4.1 Most costs to be recovered are shared costs

The transmission system can be broadly described as a network of pipelines radiating from Taranaki and supplying multiple Connection Points along each pipeline's length. A key feature of the gas transmission system is that many of the assets used to convey gas are used by multiple Shippers and many consumers.

The shared use of a significant portion of assets has significant implications for the development of transmission prices. Transmission prices substantially represent a recovery of common costs, rather than being directly attributable to the provision of a specific service to a connection. Decisions must inevitably be made in determining appropriate allocation methods. This has constrained the scope of the Cost of Supply Model (COSM) to high levels of aggregation, with more general "cost reflectivity" principles applying to the manner that prices are developed consistent with the aggregated cost allocations.

2.4.2 There are practical limits on the ability of prices to improve efficiency

The GTB normally contracts with consumers indirectly, through Shippers, and in effect provides a wholesale transmission services to Shippers. Shippers can repackage the transmission charges they pay, meaning that price signals do not necessarily reach the consumer in an “unmodified” way. In any event, gas transmission costs make up only a small portion of the average consumer’s bill, so any price signal at the transmission level tends to be overwhelmed by wholesale gas costs, distribution charges and retail costs.

2.5 Development of the Current GTPM

The current GTPM was developed as part of an extended consultation process with Shippers and consumers, summarised in Figure 2.

Figure 2: GTPM consultation process

December 2011 GTPM Framework	The December 2011 Framework paper communicated the context and objectives of the review together with an outline of the indicative process.
May 2012 GTPM Position Paper – Proposed Framework and Provisional Prices for PY2013	The 31 May 2012 GTPM Position Paper developed an Assessment Framework to guide the development of the GTPM. The Assessment Framework included the Pricing Principles, and continues to be relevant under the DPP. Vector applied this framework to determine provisional price changes for 2013 which involved an adjustment to the balance between fixed and variable Price Components.
August 2012 GTPM – Summary and Response to Submissions	On 31 August 2012, Vector published a Summary and Response to Submissions by interested parties on the Position Paper. This included confirmation of final prices, which reflected submitters’ concerns regarding the re-distributive impact of the provisional price proposal on Auckland and Wellington DPs. The reduced Throughput Fee and uniform dollar increase in CRFs proposed meant a larger relative increase to CRFs in Auckland. The price changes were driven primarily by a desire to rebalance the fixed and variable charge components to better reflect underlying costs, but also considered the need to minimise distortions to incentives (and in particular incentivise less consumption in Auckland, where capacity was constrained at the time). The interim price change took the fixed and variable revenue split from approximately 60%:40% to 65%:35%.

March 2013 GTPM Cost Allocation Framework and Pricing Methodology	On 28 March 2013, Vector published a consultation paper on the cost allocation framework and methodology to apply within the GTPM. This paper introduced the approach described in sections 3.2 and 3.3. Cost allocations and prices were prepared on a Connection Point basis.
May 2013 GTPM Summary of Submissions, Provisional prices PY2014	On 31 May 2013, Vector summarised feedback received on the 28 March paper and notified provisional prices using the revised Pricing Regions described in section 3.1.
May 2014	In May 2014, Vector notified provisional prices for the 2014/15 year. The provisional prices incorporated uniform increases to all prices. Shippers provided no feedback on the provisional prices. On 29 August 2014, Vector notified final prices for the 2014/15 year to Shippers. These prices became effective from 1 October 2014.
May 2015	In May 2015, Vector notified provisional prices for the 2015/16 year. The provisional prices incorporated uniform increases to CRFs, with an additional increase to the throughput fee on the Frankley Road pipeline. Shippers provided no feedback on the provisional prices. On 28 August 2015, Vector notified final prices for the 2015/16 year. These prices became effective from 1 October 2015.
May 2016	In May 2016, First Gas notified provisional prices for the 2016/17 year. The provisional prices incorporated uniform increases to CRFs, and a decrease to the throughput fee on the Frankley Road pipeline. For consistency in the pricing of transmission services, the Kapuni Lactose delivery point was moved from a CRF based price to the Frankley Road pipeline throughput fee. Shippers provided no feedback on the provisional prices. On 31 August 2016, First Gas notified final prices for the 2016/17 year. These prices became effective from 1 October 2016.

2.6 Development of a new transmission code and pricing methodology

Having become the new owner of all open-access gas transmission pipelines in the North Island, a high priority for First Gas is to lead the development of a single new gas transmission code covering that entire gas transmission network. Given the work that this involves, the new gas transmission access code is not likely to be in place before the 2018/19 pricing year.

We see any gas transmission pricing methodology as being inseparable from the prevailing gas transmission code. First Gas inherited the current GTPM when it purchased the transmission network from Vector, and it is clearly fit for purpose under the VTC. However, the GTPM does not cover pricing for the Maui pipeline and will not be an appropriate fit for a new code that covers the entire gas transmission network. The design of a new GTPM must therefore occur in step with the implementation of a new gas transmission access code.

The current GTPM will therefore continue to apply for the upcoming regulatory and pricing year (1 October 2017 to 30 September 2018). First Gas also considers that the GTPM should continue to apply until the service and pricing-related elements of the new gas transmission code are agreed with Shippers and other stakeholders.

3 Commercial price-setting framework

3.1 Competitive pressures on pricing

The starting point for establishing prices for gas transmission services is a consideration of the role of gas as a fuel. Unlike electricity, gas is a discretionary fuel for many consumers. Given the substantial costs of the transmission system, there is a strong commercial drive on the GTB to maintain and improve economies of density (more consumers per unit of pipeline) and economies of scale (more GJ delivered per unit of pipeline). Improved economies of scale and density mean that:

- the GTB can use its capital more efficiently; and
- consumers ultimately benefit from the sharing of common costs across a wider number of consumers and/or GJ.

A more diverse consumer base is also in the GTB's commercial interests as it mitigates asset stranding risks and increases the commercial resilience of gas transmission.

3.2 Pricing against alternative energy sources

A key part of the GTB's pricing methodology is testing proposed prices against the lowest cost alternative energy source.

In 2012, Vector asked PricewaterhouseCoopers (PwC) to calculate an implied cap for gas transmission cost based on the cost of alternative fuels, using the approach summarised in Figure 3. The implied cap on gas transmission cost is a proxy for the maximum price that could be charged for a gas transmission service before an alternative fuel becomes more cost effective.

Figure3: Calculation of implied transmission cost

All-in delivered cost of alternative
Less
– GST
– replacement capital expenditure (annualised)
– gas cost
– retailer margin
– gas distribution cost (if relevant)
– other costs
<hr/>
= Implied cap on gas transmission cost
<hr/>

Bottled LPG, biomass, and coal were the alternative fuels examined. For each consumer group the lowest implied transmission cost was selected from these three fuels. As shown in Figure 4, bottled LPG sets the implied transmission cap for domestic and commercial consumers, while coal sets the implied transmission cap for industrial consumers.

Figure 4: Implied transmission costs caps set by alternative fuel costs

Consumer type	Alternative fuel	Implied transmission cap (\$/GJ 2012)
Small domestic	Bottled LPG	39.05
Medium domestic	Bottled LPG	31.57
Large domestic	Bottled LPG	27.75
Small commercial	Bottled LPG	20.22
Medium commercial	Bottled LPG	15.24
Large commercial	Bottled LPG	20.09
Large industrial	Coal	4.20
Very large industrial	Coal	4.90

Vector used the above to derive weighted average transmission cost caps for Connection Points. The distribution of consumer types at each DP was informed by institutional knowledge, the ratio of TOU and non-TOU consumers obtained from the transmission allocation agent, as well as samples of the actual breakdown of consumer categories obtained from Vector's gas distribution business.

The implied transmission cost caps are incorporated into the GTB's price-setting process, with SAC being set to the lesser of the implied transmission cap set by alternative fuels and the cost of an alternative network.

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, the GTB and a consumer may enter into a non-standard contract as described in Section 6.

4 Methodology for standard prices

This section describes the methodology the GTB uses to calculate prices for gas transmission services.

Under this GTPM, prices are set for Pricing Regions, which are an aggregation of Connection Points.¹ Section 4.1 provides the rationale for the use of Connection Points and Pricing Regions, and lists the Pricing Regions and Connection Points comprising multiple DPs.

Section 4.2 describes the price setting for the Pricing Regions.

4.1 Pricing Regions

DPs in the same or close geographical location are linked to a single “Connection Point” on the transmission system. For example, the Edgecumbe Connection Point combines the Edgecumbe dairy factory and Edgecumbe town DPs into one Connection Point with a single price. This approach means that DPs that are adjacent (or nearly adjacent) do not have different prices simply because of an artefact of how the cost allocation methodology and pricing methodology work.

Figure 4 below lists all Connection Points which have multiple DPs linked to them. The remaining CPs have only a single DP linked to them.

All stakeholders who submitted on Vector's March 2013 proposals supported greater levels of aggregation for pricing. Consequently, Vector adopted a broader aggregation into the Pricing Regions shown in Figure 5. First Gas has maintained this approach for the 2017/18 pricing year, but has made some changes (shown in Figure 6) to account for distances gas is transmitted and to better align the current pricing with the intended GTPM for the GTAC. This means that DPs in a similar geographic area do not have different prices simply because of an artefact of how the cost allocation methodology and pricing methodology work.

¹ Connection point is a group of delivery points feeding the same network and/or delivery points located at the same gate station

Figure 5: Aggregation of Delivery Points into Connection Points

Connection Point	Delivery Points
Ammonia Urea	Ballance 8201 and 9626
Drury	Drury 1
Edgecumbe	Edgecumbe, Edgecumbe DF
Greater Auckland	Westfield, Henderson, Papakura, Waikumete, Bruce McLaren
Greater Hamilton	Temple View, Te Kowhai
Greater Mt Maunganui	Mt Maunganui, Papamoa, Papamoa 2
Greater Tauranga	Tauranga, Pyes Pa
Greater Waitangirua	Waitangirua, Pauatahanui 2
Hastings	Hastings, Hastings (Nova)
Hawera	Hawera, Hawera (Nova),
Hunua	Hunua, Hunua (Nova), Hunua 3
Kawerau	Kawerau, Kawerau (ex-Caxton), Kawerau (ex-Tasman)
Kinleith	Kinleith, Kinleith (Paper mill)
Kiwitahi	Kiwitahi 1 (Peroxide), Kiwitahi 2
Marsden	Marsden 1 (NZRC), Marsden 2
Morrinsville	Morrinsville, Morrinsville DF
Okaiawa \ Manaia	Manaia, Okaiawa
Tawa	Tawa A, Tawa B (Nova)
TCC \ Stratford	Stratford 2 (Peaker), Stratford 3 (Storage), TCC Power Station
Te Awamutu \ Kihikihi	Kihikihi, Te Awamutu DF
Tirau	Tirau, Tirau DF

Figure 6: Aggregation of Delivery Points into Pricing Regions

2017/18 Pricing Region	Current Pricing Region(s)	Delivery points
1 Taranaki	Taranaki	Eltham, Inglewood, Kaponga, New Plymouth, Stratford, Waitara, Oakura, Okato, Opunake, Pungarehu No 1, Pungarehu No 2, Pokuru 2 Delivery, Stratford 2 (Peaker), Stratford 3 (Storage), TCC Power Station
2 Waikato South	Waikato south	Otorohanga, Pirongia, Te Awamutu DF, Te Kuiti North, Te Kuiti South,
3 Auckland	Auckland	Alfriston, Drury 1, Flat Bush, Glenbrook (Steel Mill), Greater Auckland, Harrisville, Hunua, Hunua (Nova), Hunua 3, Kingseat, Pukekohe, Ramarama, Tuakau 2, Waitoki
4 Northland	Northland	Marsden 1 (NZRC), Marsden 2, Kauri DF, Maungaturoto DF, Warkworth, Wellsford, Whangarei
5 Waikato North	Waikato north	Cambridge, Horotiu, Huntly Town, Kiwitahi 1 (Peroxide), Kiwitahi 2, Matangi, Morrinsville, Morrinsville DF, Ngaruawahia, Tatanui DF, Te Rapa Cogen Plant, Waitoa
6 South Taranaki - Whanganui	Manawatu-Wanganui	Hawera, Hawera (Nova), Kaitoke, Kakariki, Lake Alice, Okaiawa \ Manaia, Marton, Matapu, Mokoia, Patea, Waitotara, Wanganui, Waverley
7 Manawatu - Horowhenua	Hawkes Bay and Wellington	Ashhurst, Feilding, Flockhouse, Kairanga, Longburn, Mangatainoka, Oroua Downs, Pahiatua, Pahiatua DF, Palmerston North, Foxton, Kuku, Levin,
8 Hawkes Bay	Hawkes Bay	Dannevirke, Hastings, Hastings (Nova), Mangaroa, Takapau
9 Wellington	Wellington	Belmont, Greater Waitangirua, Otaki, Paraparaumu, Pauatahanui 2, Tawa A, Tawa B (Nova), Te Horo, Waikanae 2
10 Waikato East	Waikato south	Kihikihi, Kinleith, Kinleith (Paper mill), Lichfield DF, Lichfield 2, Okoroire Springs, Putaruru, Tirau, Tirau DF, Tokoroa, Waikeria
11 Bay of Plenty West	Western Bay of Plenty	Greater Mt Maunganui, Greater Tauranga, Rangiuru, Te Puke
12 Bay of Plenty South	Eastern Bay of Plenty	Broadlands, Kawerau, Kawerau (ex-Caxton), Kawerau (ex-Tasman), Reporoa, Rotorua, Taupo,
13 Bay of Plenty East	Eastern Bay of Plenty	Edgecumbe, Edgecumbe DF, Te Teko, Whakatane
14 Eastland	Eastern Bay of Plenty	Gisborne, Opotiki
Hamilton	Hamilton	Greater Hamilton, Temple View, Te Kowhai

4.2 Price setting

Within the GTPM, revenue and prices are determined for non-standard contracts first so standard prices can be set. This is due to non-standard prices largely being ongoing and/or negotiated on an individual basis.

4.2.1 Non-standard contracts and standard price setting

Before standard prices can be determined, the 2017/18 prices and revenue for non-standard contracts is determined. The prices for these contracts are a combination of ongoing contracts on a set price path and contracts that are renewed on an annual basis. Contracts that are to be renewed have had their 2017/18 prices set at the same rates as 2016/17.

Figure 7: Determining revenue for standard prices

Forecast Allowable Revenue	89,646,664
Revenue from Non-standard contracts	31,420,834
Revenue for determining standard prices	58,225,830

2017/18 forecasted quantities each non-standard contract is either:

- The average annual quantities over the last seven years; or
- The average for the last years that best match current operating conditions for the relevant end user; or
- The estimated quantities for 2017/18 based on known step changes in quantities (i.e. historical quantities cannot be used to determine future quantities).

4.2.2 Standard price setting

Standard prices for each Pricing Region are assessed on a case by case basis while complying with the overall Forecast Allowable Revenue by being less than or equal to revenue applicable to standard prices determined in Figure 8.

The prices set for 2017/18 are a transition toward the GTAC GTPM. Development of the GTAC GTPM will assess the revenue earned from transmission services for each of the Pricing Regions from the VTC and the MPOC.

Assessment of prices for each Price Region is based on the commonality of transmission assets used and the relative use of transmission assets by other Pricing Regions. Figure 9 shows how those price changes effected the revenue from each Price Region.

Figure 8: Standard price revenue changes

2017/18 Pricing Region	Standard Price Revenue		Change %	Comment
	P2018*Q2018	P2017*Q2018		
1 Taranaki	\$478,198	\$674,656	-29.1%	Reduced to equivalent of Frankley Road Pipeline throughput fee
2 Waikato South	\$1,334,902	\$1,553,616	-14.1%	Reduced by average reduction and made equal to 5 & 10 but maintained higher than 3 due to assets used
3 Auckland	\$22,080,048	\$24,553,637	-10.1%	Reduced by average reduction but maintained lower than 2, 5 & 10 due to assets used
4 Northland	\$400,097	\$423,695	-5.6%	Reduce prices but no lower than the minimum revenue required for the return on investment of the Henderson compressor
5 Waikato North	\$2,513,597	\$2,717,333	-7.5%	Reduced by average reduction and made equal to 2 & 10 but maintained higher than 3 due to assets used
6 South Taranaki - Whanganui	\$2,810,777	\$3,225,365	-12.9%	Reduced to be approximately equal to the average reduction
7 Manawatu - Horowhenua	\$2,613,281	\$2,964,590	-11.9%	Reduced to be approximately equal to the average reduction
8 Hawkes Bay	\$2,468,531	\$2,724,838	-9.4%	Reduced but maintained higher than Pricing Region 7
9 Kapiti - Wellington	\$7,996,384	\$9,298,976	-14.0%	Reduced to be approximately equal to the average reduction but kept higher than Pricing Region's 7 and 8 due to assets used
10 Waikato East	\$6,375,192	\$7,420,294	-14.1%	Reduced by average reduction and made equal to 2 & 5 but maintained higher than 3 due to assets used
11 Bay of Plenty West	\$1,254,562	\$1,438,239	-12.8%	Reduced to be approximately equal to the average reduction
12 Bay of Plenty South	\$3,058,888	\$3,525,402	-13.2%	Reduced but maintained higher than Pricing Region 11 due to assets used

2017/18 Pricing Region	Standard Price Revenue		Change %	Comment
	P2018*Q2018	P2017*Q2018		
13 Bay of Plenty East	\$2,468,916	\$2,727,136	-9.5%	Reduced but maintained higher than Pricing Region 12 due to assets used
14 Eastland	\$1,122,130	\$1,189,184	-5.6%	Reduced but maintained higher than Pricing Region 13 due to assets used
Hamilton	\$1,225,476	\$1,240,920	-1.2%	CRF maintained at current rates
Total	\$58,200,981	\$65,677,882	-11.4%	

2017/18 forecasted standard price quantities use either:

- Growth trends over the previous seven years if the Connection Point is a network not dominated by a single end user; or
- The average over the last seven years if the Connection Point is the majority of demand is for a single end user; or
- Estimated quantity for 2017/18 if historical quantities cannot be used as the basis of forecasting.

4.3 Price setting and the allocation of target revenue

Target revenue

Regulatory requirement

2.4.3(3) *State the **target revenue** expected to be collected for the **pricing year** to which the pricing methodology applies;*

The GTB has set its prices to recover an amount no greater than the Forecast Allowable Revenue (FAR) under the new DPP. Compliance with the FAR requirement is determined by ensuring the 2017/18 prices multiplied by the forecasted 2017/18 quantities (the Forecast Revenue) is less than or equal to the FAR. Forecast Revenue is the Target Revenue for the 2017/18 pricing year and its compliance with the FAR is set out in Figure 10.

Figure 9: Determining Target Revenue

Forecast Notional Allowable Revenue	82,959,000
Pass-through and recoverable costs	6,687,664
Forecast Allowable Revenue	89,646,664
Forecast Revenue/Target Revenue	89,621,817
Compliance (Forecast Revenue \leq FAR)	Compliant

The post-allocation adjustments occur as part of the price setting process described in section 3.4.2 below.

4.4 Setting prices

Prices do not flow mechanistically from cost allocations. The GTB can still vary the fixed/variable split, and move CRFs by uniform or different amounts. For the 2017/18 pricing year, First Gas has:

- Reduced the Throughput Fee (TPF) to \$0.05/GJ from \$0.06/GJ which applies across all Pricing Regions;
- Maintained CRF for Greater Hamilton at current rates;
- Decreased other CRFs by between 5 to 30%; and
- Reduced the standard Frankley Road Pipeline transmission fee to \$0.28/GJ.

The CRF is expressed in whole dollars and is generally set at a level that will comply with the DPP and consequently recover approximately the same Target Revenue as implied by the cost allocations plus a pro-rata allocation of pass-through costs.

Target revenue by Pricing Region

Regulatory requirement

2.4.3(6) *Where applicable, describe the method used by the GTB to allocate the **target revenue** among **consumers**, including the numerical values of the **target revenue** allocated to **consumers** and the rationale for allocating it in this way;*

It is neither appropriate nor possible to publicly disclose the Target Revenue for individual consumers. The cost allocation approach allocates costs to Connection Points and Pricing Regions. Consumers of transmission services may take delivery of gas at any given Connection Point or Pricing Region, and it is the allocation for the Pricing Region that is relevant. The outcome of the pricing methodology is the allocation between Pricing Regions shown in Figure 10.

Figure 10: Target revenue by Pricing Region

2017/18 Pricing Region	Target revenue from prices $(P_{i2018}, Q_{i2018})^2$
1 Taranaki	\$15,040,278
2 Waikato South	\$1,334,902
3 Auckland	\$22,524,577
4 Northland	\$10,329,076
5 Waikato North	\$4,139,720
6 South Taranaki - Whanganui	\$3,286,939
7 Manawatu - Horowhenua	\$3,879,444
8 Hawkes Bay	\$2,714,122
9 Kapiti - Wellington	\$8,033,905
10 Waikato East	\$8,178,678
11 Bay of Plenty West	\$1,278,350
12 Bay of Plenty South	\$3,058,888
13 Bay of Plenty East	\$3,466,330
14 Eastland	\$1,122,130
Hamilton	\$1,225,476
Target Revenue	\$89,621,817

² Determined by actual forecasted quantities by region times prices

Revenue by price component

Regulatory requirement

2.4.3(7) *State the proportion of **target revenue** (if applicable) that is collected through each **price component** as **publicly disclosed** under clause 2.4.18.*

The Determination defines “Price Component” as the various tariffs, fees and charges that together make up the total price paid, or payable, by a consumer. The standard gas transmission Price Components, as specified in the VTC, are:

Capacity Reservation Fee (CRF), applied to the (annual) GJ of capacity reserved at a DP;

- Capacity Reservation Fee (CRF), applied to the (annual) GH of capacity reserved at a DP;
- Throughput Fee (TPF), applied to GJ delivered; and
- Overrun Fee, equal to 10 times the relevant CRF divided by 365 (or 366) days and applied to GJ delivered in excess of reserved capacity.

Different Price Components may apply under the various types of non-standard contract used on the transmission system, including fixed fees (per GJ of capacity or per day), variable fees and fees for interruptible capacity.

The proportion of revenue recovered by each price component is shown in Figure 11.

Figure 11: Proportion of target revenue by price component

Price component	Target revenue	Proportion
Capacity Reservation Fees	\$53,156,860	59.3%
Other Fixed Fees	\$25,794,915	28.8%
Throughput Fees	\$4,882,319	5.4%
Over-run Fees	\$3,348,027	3.7%
Interruptible Contracts	\$2,439,696	2.7%
	\$89,621,817	100%

4.5 Price changes

Regulatory requirement

2.4.3(5) *If **prices** have changed from **prices** disclosed for the immediately preceding **pricing year**, explain the reasons for changes, and quantify the difference in respect of each of those reasons;*

From 1 October 2017, First Gas transmission services revenue cap are set to comply with a new DPP. Weighted average gas transmission prices charged under the VTC required to comply with the DPP are 8.2% lower than those charged in 2016/17.

As noted above, the relative pricing for each Pricing Region has changed in this GTPM.

Figure 12 below shows the price changes by Pricing Region.

Figure 12: Price changes by Pricing Region

Pricing Region	Notional revenue		Revenue change
	P _{i2018} , Q _{i2018}	P _{i2017} , Q _{i2018}	%
1 Taranaki	\$15,040,278	\$16,041,032	-6.2%
2 Waikato South	\$1,334,902	\$1,553,616	-14.1%
3 Auckland	\$22,524,577	\$24,983,279	-9.8%
4 Northland	\$10,329,076	\$9,895,883	4.4%
5 Waikato North	\$4,139,720	\$4,337,563	-4.6%
6 South Taranaki - Whanganui	\$3,286,939	\$3,631,895	-9.5%
7 Manawatu - Horowhenua	\$3,879,444	\$4,400,404	-11.8%
8 Hawkes Bay	\$2,714,122	\$2,812,085	-3.5%
9 Kapiti - Wellington	\$8,033,905	\$9,335,584	-13.9%
10 Waikato East	\$8,178,678	\$9,486,268	-13.8%
11 Bay of Plenty West	\$1,278,350	\$1,475,925	-12.8%
12 Bay of Plenty South	\$3,058,888	\$3,525,402	-13.2%
13 Bay of Plenty East	\$3,466,330	\$3,716,936	-6.7%
14 Eastland	\$1,122,130	\$1,189,184	-5.6%
Hamilton	\$1,225,476	\$1,240,920	-1.2%
Notional revenue	\$89,621,817	\$97,625,975	-8.2%

Differences in price changes between regions reflect are the net of the different CRF changes, the different contribution of the (changed) Throughput Fee, changes in non-standard prices and, in the case of Taranaki, the change to fully-variable pricing on the Frankley Road pipeline.

The increase in revenue from Pricing Region 4 is due to price increases of ongoing non-standard contracts being greater than the price reductions of standard priced transmission services.

5 Consistency with Pricing Principles

5.1 Regulatory requirement

2.4.3(2) *Demonstrate the extent to which the pricing methodology is consistent with the **pricing principles** and explain the reasons for any inconsistency between the pricing methodology and the **pricing principles**;*

5.2 Consistency with Pricing Principles

The Commerce Commission has determined pricing principles for regulated gas pipeline businesses. First Gas is required to report consistency with those principles in its GTPM. Our evaluation of the consistency between First Gas' GTPM and the pricing principles is set out in Figure 13.

Figure 13: GTPM consistency with pricing principles

Pricing principles	Pricing methodology consistency
<p>(1) Prices are to signal the economic costs of service provision, by-</p> <ul style="list-style-type: none"> (d) 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; (e) having regard, to the extent practicable, to the level of available service capacity; and (f) signalling, to the extent practicable, the effect of additional usage on future investment costs. 	<p>The GTPM is not fully consistent with this principle.</p> <p>Although the GTPM inherited from Vector did consider incremental and standalone costs, First Gas believes that the Pricing Regions used previously do not reflect the commonality of the delivery points within those regions. To address this issue, while avoiding unnecessary price changes, First Gas has adjusted prices to better reflect the differences between Pricing Regions.</p> <p>The ability to signal available capacity and the effect of additional usage on future investment costs is driven as much by the access products offered under the code as the way those products are priced. Access products under the GTAC (particularly the ability to offer priority rights), have been developed to provide better price signals in situations when transmission is scarce.</p>

Pricing principles	Pricing methodology consistency
<p>(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.</p>	<p>The GTPM is not fully consistent with this principle. As with principle 1, the terms of transmission access code have a material impact on consistency with this principle. In the case of the VTC, the ability to offer non-standard pricing in certain circumstances provides the ability to directly gauge alternative energy supply options that are available to consumers and reflect those in prices.</p> <p>Pricing in this GTPM is based on location and the pricing structure inherited under previous versions of this GTPM.</p>
<p>(3) Provided that prices satisfy (1) above, prices are responsive to the requirements and circumstances of consumers in order to-</p> <ul style="list-style-type: none"> (c) discourage uneconomic bypass; and (d) 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. 	<p>Where bypass or alternative fuels are an economic option, the customer can apply for non-standard prices under the VTC.</p>
<p>(4) Development of prices is transparent, promotes price stability and certainty for consumers, and changes to prices have regard to the effect on consumers.</p>	<p>We believe development of our prices is transparent and the GTPM promotes price stability and certainty for our consumers in the short to medium-term.</p>

First Gas has not sought the views of other parties for this pricing methodology, given that we intend for the structure of this methodology to only apply for one more year. We are seeking the views of other parties for the pricing methodology that will apply under the GTAC from 1 October 2017 and will consult on that methodology in 2018.

6 Pricing for non-standard contracts

This section describes the approach to setting prices for non-standard contracts.

6.1 Extent of non-standard contracts

2.4.5(1) *Describe the approach to setting **prices** for **non-standard contracts**, including-*

- (a) *the extent of **non-standard contract** use, including the value of **target revenue** expected to be collected from **consumers** subject to **non-standard contracts**;*

In certain circumstances published standard prices may not adequately reflect the actual 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. In addition to standard published prices, the GTPM also covers the following non-standard transmission agreements:

- a) Supplementary agreements – a bi-lateral agreement between the GTB and a Shipper that amends parts of the VTC and provides firm transmission capacity for the purposes of delivery of gas to:
 - i. A specific consumer and/or specific site; or
 - ii. A specific Delivery Point.
- b) Interruptible agreements – a form of supplementary agreement under which the capacity provided is fully interruptible.

These contracts allow tailored or specific prices and contractual terms to be applied to individual points on the transmission system.

There are 37 non-standard contracts.³ Their estimated charges represent 34% of Target Revenue for 2017/18.

6.2 Criteria for non-standard contracts

2.4.5(1)(b) *Describe the approach to setting **prices** for **non-standard contracts**, including-*

*how the **GTB** determines whether to use a **non-standard contract**, including any criteria used;*

Vector published a policy that provided a general guide to the steps to be taken and factors to be considered when deciding whether to offer a non-standard contract (supplementary agreement) on the transmission system. This document (Supplementary Agreements Policy, March 2012) can be found on OATIS at:

<https://www.oatis.co.nz/Ngc.Oatis.UJ.Web.Internet/Common/Publications.aspx>

First Gas is maintaining this policy pending the development of a new transmission access code and GTPM.

³ This includes: supplementary agreements which apply the standard CRF and TPF for the relevant DP as well as those that don't (including where there are no standard prices for the relevant DP); all interruptible agreements (including those that apply published standard prices); and all "deemed" contracts on the Frankley Road pipeline, i.e. where Shippers are charged the throughput fee for that pipeline.

6.3 Methodology for non-standard prices

2.4.5(1) Describe the approach to setting **prices** for **non-standard contracts**, including-

(c) any specific criteria or methodology used for determining **prices** for **consumers** subject to **non-standard contracts**, and the extent to which these criteria or that methodology are consistent with the **Pricing Principles**;

The prices for non-standard contracts are set to reflect the circumstances of the specific Shipper/consumer. In all cases, prices are tested to ensure they are not less than incremental cost and not greater than standalone costs.

When a non-standard contract is due for renewal, pricing is re-assessed to determine whether non-standard prices should continue to apply.

The flexible approach to pricing for non-standard contracts ensures that compliance with the Pricing Principles is enhanced, as demonstrated in Figure 14 below.

Figure 14: Compliance of non-standard pricing with the Pricing Principles

Pricing principle	Extent of compliance without non-standard pricing	Extent of compliance with non-standard pricing
<p>1) Prices are to signal the economic costs of service provision, by-</p> <p>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;</p> <p>b) having regard, to the extent practicable, to the level of available service capacity; and</p> <p>c) signalling, to the extent practicable, the effect of additional usage on future investment costs.</p>	<p>Prices are subsidy-free.</p> <p>There are no capacity constraints to reflect in current pricing. Price structure is set to generally encourage use of spare capacity. However, some spare capacity may be unused in the absence of non-standard pricing if the consumer disconnects from the gas transmission system.</p>	<p>Prices remain subsidy-free.</p> <p>Compliance enhanced because non-standard pricing ensures that consumers that would otherwise disconnect from the gas transmission system will remain connected, use available capacity that would otherwise be unutilised. These consumers will continue to pay some portion of the shared costs of the gas transmission system at least equal to or above incremental costs, providing a benefit to all connected parties.</p>

Pricing principle	Extent of compliance without non-standard pricing	Extent of compliance with non-standard pricing
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.	If a consumer disconnects because standard prices exceeded their "reservation cost" then those prices did not reflect the demand responsiveness of that consumer.	Compliance is enhanced because the demand responsiveness of a price-sensitive consumer has been taken into account by the non-standard pricing.
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.	All prices are subsidy-free so meet (1) above. Prices have been explicitly set to account for the cost of alternative sources of energy for the average consumer in a category, but do not account for the specific circumstances of all consumers.	Prices continue to be subsidy-free so meet (1) above. Compliance is enhanced because non-standard pricing allows differential prices to be set for the specific consumers where bypass is viable or would otherwise be uneconomic. Compliance is enhanced because non-standard pricing allows prices for gas transmission services to be customised to reflect the economic value of gas transmission services to specific consumers, and allows the consumer to make quality/price trade-offs.
4) Development of prices is transparent, promotes price stability and certainty for consumers, and changes to prices have regard to the effect on consumers		Compliance is enhanced because allowance can be made for the effect on particular consumers whose circumstances make them more sensitive to prices.

6.4 Obligations in respect of service interruptions

- (2) Describe the **GTB's** obligations and responsibilities (if any) to **consumers** subject to **non-standard contracts** in the event that the supply of **gas transmission services** to the **consumer** is interrupted. This description must explain-
- (a) the extent of the differences in the relevant terms between **standard contracts** and **non-standard contracts**;
 - (b) any implications of this approach for determining **prices** for **consumers** subject to **non-standard contracts**.

The GTB's obligations in respect of the provision of transmission capacity under (standard) transmission services agreements and (non-standard) supplementary agreements (excluding interruptible agreements) are identical.

Transmission capacity provided under Shippers' transmission services agreements (reserved capacity) ranks equally with firm capacity provided under supplementary agreements (supplementary capacity) in the event of any emergency or other event affecting the relevant part(s) of the transmission system.

The VTC requires First Gas to use all reasonable endeavours to curtail consumers on interruptible agreements before restricting Shippers' reserved capacity or supplementary capacity.

The main difference between firm transmission capacity and interruptible capacity is the probability of curtailment. Firm capacity may only be curtailed as the result of an emergency (unless the Shipper is in overrun), whereas interruptible capacity may be interrupted at any time.

A Shipper whose firm capacity is curtailed will normally be entitled to a rebate fixed transmission fees.

A Shipper using interruptible capacity will not be charged to the extent of the interruption.

7 Compliance matrix

Figure 15 is included to demonstrate how this disclosure complies with Determination.

Figure 15: GTPM compliance with Determination

Principle	Description
2.4.1 Every GTB must publicly disclose , before the start of each pricing year , a pricing methodology which-	See individual clauses below.
(1) Describes the methodology, in accordance with clause 2.4.3, used to calculate the prices payable or to be payable;	4
(2) Describes any changes in prices and target revenues ;	4
(3) Explains, in accordance with clause 2.4.5 of this section, the approach taken with respect to pricing in non-standard contracts ; and	1
(4) Explains whether, and if so how, the GTB has sought the views of consumers , their expectations in terms of price and quality, and reflected those views in calculating the prices payable or to be payable. If the GTB has not sought the views of consumers , the reasons for not doing so must be disclosed.	Section 0
2.4.2 Any change in the pricing methodology or adoption of a different pricing methodology, must be publicly disclosed at least 20 working days before prices determined in accordance with the change or the different pricing methodology take effect.	Not applicable.
2.4.3 Every disclosure under clause 2.4.1 of this section must-	See individual clauses below.

Principle	Description
2.4.3(1) Include sufficient information and commentary for interested persons to understand how prices were set for consumers , including the assumptions and statistics used to determine prices for consumers ;	4
2.4.3(2) Demonstrate the extent to which the pricing methodology is consistent with the Pricing Principles and explain the reasons for any inconsistency between the pricing methodology and the Pricing Principles ;	Section 0
2.4.3(3) State the target revenue expected to be collected for the pricing year to which the pricing methodology applies;	Section 4.3.1
2.4.3(4) Where applicable, identify the key components of target revenue required to cover the costs and return on investment associated with the GTB's provision of gas transmission services . Disclosure must include the numerical value of each of the components;	Not applicable as prices have been set subjectively so that price shocks in the transition to the GTAC GTPM are minimised.
2.4.3(5) If prices have changed from prices disclosed for the immediately preceding pricing year , explain the reasons for changes, and quantify the difference in respect of each of those reasons;	Section 4.5
<i>Revenue by Consumer Group</i> 2.4.3(6) Where applicable, describe the method used by the GTB to allocate the target revenue among consumers , including the numerical values of the target revenue allocated to consumers and the rationale for allocating it in this way;	Section 0
<i>Revenue by Price Component</i> 2.4.3(7) State the proportion of target revenue (if applicable) that is collected through each price component as publicly disclosed under clause 2.4.18.	Section 0

Principle	Description
<p><i>Effect of Pricing Strategy</i></p> <p>2.4.4 Every disclosure under clause 2.4.1 above must, if the GDB has a pricing strategy-</p> <p>(1) Explain the pricing strategy for the next 5 pricing years (or as close to 5 years as the pricing strategy allows), including the current pricing year for which prices are set;</p> <p>(2) Explain how and why prices are expected to change as a result of the pricing strategy;</p> <p>(3) If the pricing strategy has changed from the preceding pricing year, identify the changes and explain the reasons for the changes.</p>	<p>First Gas inherited the current GTPM from Vector, and has used it in the determination of transmission prices for 2017/18.</p>

Principle	Description
<p><i>Prices for Non-Standard Contracts</i></p> <p>2.4.5 Every disclosure under clause 2.4.1 above must-</p> <p>(1) Describe the approach to setting prices for non-standard contracts, including-</p> <ul style="list-style-type: none"> (a) the extent of non-standard contract use, including the value of target revenue expected to be collected from consumers subject to non-standard contracts; (b) how the GTB determines whether to use a non-standard contract, including any criteria used; (c) any specific criteria or methodology used for determining prices for consumers subject to non-standard contracts, and the extent to which these criteria or that methodology are consistent with the Pricing Principles; <p>(2) Describe the GTB's obligations and responsibilities (if any) to consumers subject to non-standard contracts in the event that the supply of gas transmission services to the consumer is interrupted. This description must explain-</p> <ul style="list-style-type: none"> (a) the extent of the differences in the relevant terms between standard contracts and non-standard contracts; (b) any implications of this approach for determining prices for consumers subject to non-standard contracts. 	<p>Section 5</p> <p>Section 5.1</p> <p>Section 5.2</p> <p>Section 5.3</p> <p>Section 5.4</p>

8 Glossary

Act:	the Commerce Act 1986.
Allowable Notional Revenue:	the revenue First Gas can earn during the pricing year under the GDPP.
Connection Point (CP):	an aggregation of one or more Delivery Points (DPs) for cost allocation purposes.
COSM:	Cost of Supply Model.
CPI:	the Consumer Price Index.
CRF:	Capacity Reservation Fee, a charge applied for each GJ of reserved capacity.
Delivery Point or DP:	means a point at which a Shipper's gas is taken (or made available to be taken) from a pipeline into another transmission pipeline (whether owned by the GTB or another party), a gas consuming facility or a distribution network.
Determination:	the Gas Information Disclosure Determination, Decision NZCC24, 1 October 2012.
DPP:	the current DPP is the Gas Transmission Services Default Price-Quality Path Determination 2013, NZCC, 28 February 2013. The new GDPP is the Gas Transmission Services Default Price-Quality Path Determination 2017, NZCC14, 29 May 2017.
GJ:	Gigajoule, a unit of energy.
GTB:	the gas transmission business, meaning Vector prior to 20 April 2016 and First Gas Limited thereafter.
GTPM:	Gas Transmission Pricing Methodology.
Incremental Cost (IC):	the cost of providing a defined service to an additional consumer or group of consumers given that service is already provided to other consumers.
Input Methodologies:	the Gas Transmission Services Input Methodologies Determination 2010 (Commerce Commission Decision 712, 22 December 2010).
Maximum Flow:	the peak flow rate or capacity of a transmission asset (eg pipeline or DP) or Connection Point.
MPOC:	Maui Pipeline Operating Code.
NGC:	Natural Gas Corporation.
NSFA:	Non-system fixed assets.
Price Component:	the various tariffs, 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 Transmission Services Input Methodologies Determination 2010 (Commerce Commission Decision 712, 22 December 2010).
Pricing Region:	a group of Delivery Points with the same CRF (as set out in section 3.1); not the same as a "Transmission Pricing Zone" as defined in the VTC.
Pricing Strategy:	a decision made by the Directors of the GTB on the GTB's plans or strategy to amend or develop prices in the future, and recorded in writing.

SFA:	System Fixed Assets.
Shippers:	A person named as a shipper in a Transmission Services Agreement with First Gas.
Stand Alone Cost (SAC):	The cost of providing a defined service or group of services to a particular consumer or group of consumers, without providing any other services or serving any other consumers.
Target revenue:	the revenue the GTB expects to receive during the pricing year, as described in section 3.4.1.
TOU:	Time of use.
TPF:	Throughput fee, a charge applied to each GJ of gas delivered at a DP.
VTC:	Vector Transmission Code

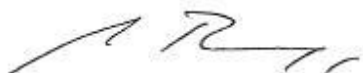
Appendix 3: Director certificate

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 Transmission Information Disclosure Determination 2012* in all material respects complies with that determination; and
- b) the prospective financial or non-financial information included in the attached information has been forecast on a basis consistent with regulatory requirements or recognised industry standards.



Philippa Dunphy
Director



Richard Krogh
Director

4 September 2017
Date

4 September 2017
Date