



REGULATORY DISCLOSURE

Gas transmission services: Capacity allocation methodology and transmission system capacity reservations

Year ended 30 September 2018



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.

Compliance statement

This document is a regulatory disclosure prepared pursuant to sections 2.5.3 and 2.5.4 of the *Gas Transmission Information Disclosure Determination (No. 1) 2017* consolidating all amendments as of 14 June 2017 issued by the Commerce Commission. The regulatory disclosure covers First Gas' transmission business (both the Maui and Non-Maui transmission systems) for the 12-month period ending 30 September 2018.

The capacity allocation methodology and system capacity reservation information in this disclosure refers to the Non-Maui gas transmission system. The Maui transmission system is managed under the Maui Pipeline Operating Code (MPOC).¹ The shippers on the Maui line nominate their requirements daily. This forms the capacity for that day. There is no forward commitment on a firm capacity basis and capacity is not reserved on the Maui transmission system.

The 2018 capacity disclosure is the final disclosure made separately for the Non-Maui gas transmission system and the Maui transmission system. From 1 October 2019, the gas transmission system will be managed under a single Gas Transmission Access Code (GTAC).

This regulatory disclosure was prepared on 20 March 2019.

Further information

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¹ Until 30 September 2019.

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1. Capacity allocation methodology

1.1 Current capacity allocation methodologies (clause 2.5.3(1)(a))

First Gas currently provides two types of firm contractual transmission capacity to Shippers² - Reserved Capacity and Supplementary Capacity.

Reserved Capacity is First Gas' standard capacity product, and is allocated in accordance with the relevant provisions of the Vector Transmission Code (the Code):

- (I) Prior to the start of each contract year;³ and
- (II) During each contract year,

in response to Shippers' specific requests, to the limit of uncommitted operational capacity.⁴ The processes involved in (i) and (ii) above are separately described below. Under the current Code, a Shipper retains the right to use any Reserved Capacity allocated to it unless and until that Shipper relinquishes it.⁵

Supplementary Capacity is firm transmission capacity that First Gas provides to a Shipper under a Supplementary Agreement, in compliance with specific provisions of the Code. Since First Gas is under no obligation to provide Supplementary Capacity, the Reserved Capacity allocation process set out in the Code does not apply to Supplementary Capacity. Supplementary Capacity is available to a Shipper only for the term of the relevant Supplementary Agreement.

Reserved Capacity and Supplementary Capacity are equally "firm", so First Gas must take both into account when determining uncommitted operational capacity.

1.1.1. Allocation of Reserved Capacity before the start of a contract year

Under the Code:

- 1) All Shippers must notify First Gas of their Confirmed Reservation Requirements⁶ by 5pm on the second Friday in September.
- 2) A Shipper is entitled to reserve up to the amount of Reserved Capacity it holds at any Receipt-Point-Delivery Point⁷ (RP – DP) on the second Friday in September, although it may request more or less. A Shipper may request Reserved Capacity at a RP – DP irrespective of whether it currently has any capacity there.
- 3) First Gas must notify Shippers of the extent to which it accepts their Confirmed Reservation Requirements by 5pm on the third Friday in September. This requires First Gas to determine the uncommitted operational capacity available, taking into account such things as:
 - (I) The amounts of Reserved Capacity requested compared with the amounts currently allocated;
 - (II) Changes in the distribution of Reserved Capacity, i.e. the extent to which requests for less Reserved Capacity at some RP-DPs offset requests for more at others;
 - (III) Changes in Supplementary Capacity (if any);
 - (IV) How much capacity was allocated in prior years, and where;

² A shipper is a person named in a transmission services agreement with First Gas. Only Shippers may hold transmission capacity. The Information Disclosure Determination refers to Shippers as "consumers".

³ Being the year commencing on 1 October in year "n" and ending on 30 September in year "n+1".

⁴ Uncommitted operational capacity is the amount of a pipeline's physical capacity available to be allocated to Shippers, and is equal to: operational capacity – aggregate contractual (firm) capacity. The determination of operational capacity is described in First Gas' "Gas Transmission Asset Management Plan – 2016" (AMP), available at www.firstgas.co.nz/About-Us/Regulatory/Transmission.

⁵ Either by not reserving it again, trading it to another Shipper or cancelling it in accordance with the Code.

⁶ Under the Code, Shippers must lodge non-binding Provisional Reservation Requirements earlier each year.

⁷ In this disclosure, Code terms are used, i.e.: Receipt Point = intake point; Delivery Point = offtake point.

- (V) The most recent pipeline modelling information, e.g. in the Asset Management Plan (AMP); and
 - (VI) The maximum capacity of individual Receipt and Delivery Points.
- 4) If it believes there is insufficient uncommitted operational capacity for it to approve all Shippers' requests for Reserved Capacity,⁸ First Gas must apply the capacity allocation procedure set out in the Code. Briefly, that process would work as follows:
- (I) Any Shipper requesting the same amount of, or less Reserved Capacity than it currently holds at an RP-DP would be allocated that amount;
 - (II) First Gas would then determine the extent of uncommitted operational capacity available by referencing the AMP or any other relevant pipeline modelling information or, if necessary, undertaking additional modelling;
 - (III) First Gas would then allocate increased Reserved Capacity to the relevant Shippers in accordance with the following formula:

$$\text{increase} = (\text{Shipper's requested increase for an RP-DP} \div \text{All Shippers' requested increases for all RP-DPs on the pipeline}) \times \text{uncommitted operational capacity}; \text{ and}$$
 - (IV) First Gas would then check that any allocated increases in Reserved Capacity could actually be delivered via the relevant Delivery Points.⁹ If not, capacity above the maximum that could be delivered would be re-allocated to other RP-DPs by a further iteration of the above formula.

1.1.2. Allocation of Reserved Capacity during a year

Under the Code:

- 1) A Shipper may request Reserved Capacity, or additional Reserved Capacity during a year, e.g. if it acquires new customers, or if one or more existing customers increase their load.
- 2) A Shipper must apply for additional Reserved Capacity using the appropriate screen on OATIS.¹⁰ First Gas must approve (or decline) any such request via OATIS.
- 3) First Gas must approve any such request (subject to the conditions set out in the Code) where it believes there is sufficient uncommitted operational capacity. To ascertain that, First Gas considers:
 - (I) the relevant matters listed in paragraph (3) of the previous section; and
 - (II) any capacity transfer requests (to or from the RP-DP in question, or any other RP-DP relevant to the request) approved but not yet effective; and
 - (III) existing queued requests for capacity (if any).
- 4) Should it decline a request for additional capacity, First Gas would (subject to the Code and the wishes of the Shipper concerned) place the request in the capacity queue for the relevant pipeline. If capacity subsequently became available, e.g. if a Shipper applied to cancel Reserved Capacity or to transfer Reserved Capacity elsewhere (including out of the pipeline altogether), First Gas would offer additional Reserved Capacity to Shippers in the capacity queue, in accordance with the Code.

⁸ Namely, where First Gas reasonably believed that a breach of its Security Standard (e.g. by the pressure at a critical point in a pipeline falling below the acceptable minimum) could result.

⁹ This would be necessary because a Shipper might request a "disproportionate" amount of additional capacity at the far end of a pipeline. The first pass of the allocation formula could then produce an unsustainable outcome. This reflects the reality that it is unrealistic to represent the uncommitted operational capacity of a pipeline by a single number: where capacity is required would change any such number

¹⁰ First Gas' "Open Access Transmission Information System", at www.oatis.co.nz.

1.2 Approved requests for capacity (clause 2.5.3(1)(b))

During the disclosure year there was **sufficient uncommitted operational capacity** to meet all Shippers' requests for Reserved Capacity:

- (I) Confirmed Reservation Requirements for 2017-18: **approved** in full;
- (II) Requests for additional Reserved Capacity: **124**;
- (III) Requests for additional Reserved Capacity **approved in full: 124**; and
- (IV) Requests for additional Reserved Capacity **approved in part: zero**.

1.3 Unmet demand for capacity (clause 2.5.3(1)(c))

During the disclosure year there was no unmet demand for Reserved Capacity:

- (I) Requests for Reserved Capacity **declined: zero**;
- (II) Maximum daily quantities associated with requests **declined: zero**; and
- (III) Reasons for requests not being approved in full: **not applicable**.

2. Transmission system capacity reservations

- 1) Tables 1 – 6 below set out the information required to be disclosed in accordance with clause 2.5.4 of the Information Disclosure Determination, for each of First Gas' Non- Maui transmission pipeline systems.
- 2) The named offtake points (= Delivery Points) for each pipeline system are those which, in the system peak flow period, satisfied one or more of the criteria set out in clause 2.5.4(3)(a) – (c); i.e.:
 - (I) Throughput \geq 2,000 GJ;
 - (II) Contractual firm capacity \geq 10,000 GJ (per day); or
 - (III) Nominal delivery pressure $>$ 20 bar gauge.

The relevant offtake points are those identified in First Gas' "Pipeline Peak Flow Disclosure"¹¹ for 2018. That disclosure refers to actual offtake points, whereas for commercial/contractual reasons some such points are aggregated into "notional" offtake points. An example is "Greater Auckland", which currently comprises 5 actual offtake points. Since this capacity disclosure is concerned with contractual capacity, Tables 1 – 6 show data for notional/contractual offtake points.

- 3) For all offtake points on a pipeline system that did not satisfy any of the criteria set out in clause 2.5.4(3)(a) – (c), data was aggregated in accordance with clause 2.5.4(3)(d) of the Information Disclosure Determination and appears in the tables on the line labelled "All Other Points".
- 4) Data is given for the three dates specified in clause 2.5.4(4), i.e.:
 - (I) The last day of the preceding pricing year (i.e. 30 September 2018);
 - (II) The first day of the new pricing year (i.e. 1 October of 2018); and
 - (III) The first day of each system's peak flow period for the preceding pricing year (i.e. the year ending 30 September 2018).
- 5) Firm contractual transmission capacity in respect of each offtake point comprises Reserved Capacity plus Supplementary Capacity (if any).
- 6) The MDQ (maximum daily quantity) and MHQ (maximum hourly quantity), respectively, for each offtake point correspond to the aggregate amount of firm contractual transmission capacity in each case. For Reserved Capacity, the MHQ is currently 1/16th of MDQ. For Supplementary Capacity the MHQ can be a different fraction of MDQ, hence actual MHQs were obtained from the actual contracts.
- 7) MDQ and MHQ values have been rounded up to the nearest GJ.

¹¹ Available at www.firstgas.co.nz/About-Us/Regulatory/Transmission.

Table 1: North system

Offtake Point		Aggregate Firm Contractual Transmission Capacity (GJ) Held by All Shippers on:			Nominal Delivery Pressure > 20 bar g
		30-Sep-2018	1-Oct-2018	25-Jun-2018	
Harrisville 2	MDQ	1,725	1,684	2,215	
	MHQ	108	105	138	
Drury 1	MDQ	904	860	1,197	
	MHQ	57	54	75	
Hunua (all)	MDQ	908	1,235	908	note 1
	MHQ	57	77	57	
Flat Bush	MDQ	1,781	1,713	1,781	
	MHQ	111	107	111	
Greater Auckland	MDQ	51,013	46,877	52,144	note 2
	MHQ	3,181	2,916	3,251	
Marsden 1	MDQ	13,600	13,800	15,600	21.0 bar g
	MHQ	567	575	650	
Kauri DF	MDQ	2,600	2,600	1,300	
	MHQ	130	130	65	
Waitoki	MDQ	602	581	602	
	MHQ	38	36	38	
Glenbrook	MDQ	6,500	6,500	6,500	
	MHQ	406	406	406	
Warkworth	MDQ	1,567	1,554	1,567	
	MHQ	79	78	79	
Tuakau 2	MDQ	2,362	2,499	2,252	
	MHQ	148	156	141	
Whangarei	MDQ	572	476	580	
	MHQ	36	30	36	
Maungaturoto DF	MDQ	2,400	2,400	1,200	
	MHQ	120	120	60	
Major Points	MDQ	86,534	82,779	87,846	
	MHQ	5,036	4,791	5,108	
All Other Points	MDQ	479	537	484	
	MHQ	30	34	30	
TOTAL SYSTEM	MDQ	87,013	83,316	88,330	
	MHQ	5,066	4,825	5,138	

note 1: Hunua (all) includes the Hunua, Hunua (Nova) and Hunua 3 Delivery Points. At Hunua 3 First Gas delivers gas at pipeline pressure (ie unregulated)

note 2: Greater Auckland is a notional Delivery Point, comprising the actual Westfield, Papakura, Bruce McLaren, Waikumete and Henderson Delivery Points

Table 2: Central north system

Offtake Point		Aggregate Firm Contractual Transmission Capacity (GJ) Held by All Shippers on:			Nominal Delivery Pressure > 20 bar g
		30-Sep-2018	1-Oct-2018	20-Aug-2018	
Greater Hamilton	MDQ	7,058	6,667	7,160	note 1
	MHQ	441	417	448	
Tatuanui DF	MDQ	1,600	1,650	1,600	
	MHQ	100	103	100	
Waitoa	MDQ	1,400	1,092	1,100	
	MHQ	88	68	69	
Cambridge	MDQ	2,151	2,164	1,850	
	MHQ	134	135	116	
Kiwitahi 1 (Peroxide)	MDQ	1,000	1,000	1,000	
	MHQ	63	63	63	
Te Rapa Cogen	MDQ	23,200	23,200	23,200	22.5 bar g
	MHQ	1,092	1,092	1,092	
Morrinsville DF	MDQ	1,091	1,000	1,073	
	MHQ	68	63	67	
Major Points	MDQ	37,501	36,772	36,984	
	MHQ	1,986	1,940	1,954	
All Other Points	MDQ	1,399	1,830	1,099	
	MHQ	87	114	69	
TOTAL SYSTEM	MDQ	38,900	38,602	38,083	
	MHQ	2,073	2,055	2,022	

note 1: Greater Hamilton is a notional Delivery Point, comprising the actual Hamilton (Te Kowhai) and Hamilton (Temple View) Delivery Points

Table 3: Central south system

Offtake Point		Aggregate Firm Contractual Transmission Capacity (GJ) Held by All Shippers on:			Nominal Delivery Pressure > 20 bar g
		30-Sep-2018	1-Oct-2018	20-Aug-2018	
New Plymouth	MDQ	3,238	2,864	3,238	
	MHQ	202	179	202	
Pokuru	MDQ	-	-	-	note 1
	MHQ	-	-	-	
Major Points	MDQ	3,238	2,864	3,238	
	MHQ	202	179	202	
All Other Points	MDQ	1,442	1,442	1,428	
	MHQ	89	89	88	
TOTAL SYSTEM	MDQ	4,679	4,306	4,666	
	MHQ	291	268	291	

note 1: Pokuru refers to the Pokuru 2 Delivery Point

Table 4: Bay of Plenty system

Offtake Point		Aggregate Firm Contractual Transmission Capacity (GJ) Held by All Shippers on:			Nominal Delivery Pressure > 20 bar g
		30-Sep-2018	1-Oct-2018	16-Oct-2017	
Lichfield DF	MDQ	2,142	2,040	2,000	
	MHQ	134	128	125	
Lichfield 2	MDQ	3,900	4,400	3,900	
	MHQ	222	222	222	
Edgecumbe DF	MDQ	4,699	4,738	4,685	
	MHQ	294	296	293	
Reporoa	MDQ	2,217	2,118	1,975	
	MHQ	139	132	123	
Whakatane	MDQ	3,680	3,693	2,647	
	MHQ	188	188	135	
Tirau DF	MDQ	1,513	1,500	1,400	
	MHQ	95	94	88	
Kinleith (CHH Mill)	MDQ	8,952	11,040	11,121	
	MHQ	559	690	695	
Kawerau (Tasman)	MDQ	1,792	1,800	1,800	
	MHQ	112	113	113	
Kawerau (Caxton)	MDQ	524	700	500	
	MHQ	33	44	31	
Greater Tauranga	MDQ	1,360	1,080	1,258	note 1
	MHQ	85	67	79	
Gisborne	MDQ	1,818	1,504	1,438	
	MHQ	114	94	90	
Greater Mt Maunganui	MDQ	2,597	2,593	2,595	note 2
	MHQ	162	162	162	
Rotorua	MDQ	1,820	1,347	1,558	
	MHQ	114	84	97	
Major Points	MDQ	37,012	38,553	36,878	
	MHQ	2,249	2,314	2,253	
All Other Points	MDQ	2,787	2,617	2,514	
	MHQ	174	164	157	
TOTAL SYSTEM	MDQ	39,799	41,170	39,392	
	MHQ	2,423	2,478	2,410	

note 1: Greater Tauranga is a notional Delivery Point, comprising the actual Tauranga and Pyes Pa Delivery Points

note 2: Greater Mt Maunganui is a notional Delivery Point, comprising the actual Mt Maunganui and Papamoa Delivery Points

Table 5: South system

Offtake Point		Aggregate Firm Contractual Transmission Capacity (GJ) Held by All Shippers on:			Nominal Delivery Pressure > 20 bar g
		30-Sep-2018	1-Oct-2018	3-Sep-2018	
Paraparaumu	MDQ	707	615	707	
	MHQ	44	38	44	
Hawera (all)	MDQ	1,544	2,108	1,552	note 1
	MHQ	97	132	97	
Wanganui	MDQ	4,374	4,458	4,314	
	MHQ	273	279	270	
Okaiawa	MDQ	1,653	-	1,653	note 4
	MHQ	103	-	103	
Marton	MDQ	900	936	900	
	MHQ	56	58	56	
Palmerston North	MDQ	4,233	3,488	4,291	
	MHQ	265	218	268	
Longburn	MDQ	971	777	899	
	MHQ	61	49	56	
Levin	MDQ	1,105	1,042	1,150	
	MHQ	69	65	72	
Belmont	MDQ	6,469	4,803	6,469	
	MHQ	404	300	404	
Feilding	MDQ	860	815	860	
	MHQ	54	51	54	
Hastings (all)	MDQ	7,287	7,425	7,347	note 2
	MHQ	455	464	459	
Tawa (A+B)	MDQ	10,059	8,360	10,044	
	MHQ	629	522	628	
Greater Waitangirua	MDQ	1,467	1,314	1,467	note 3
	MHQ	92	82	92	
Major Points	MDQ	41,629	36,138	41,653	
	MHQ	2,602	2,259	2,603	
All Other Points	MDQ	6,304	6,008	6,304	
	MHQ	332	313	332	
TOTAL SYSTEM	MDQ	47,932	42,147	47,957	
	MHQ	2,934	2,572	2,935	

note 1: Hawera (all) refers to the Hawera and Hawera (Nova) Delivery Points

note 2: Points

note 3: Greater Waitangirua is a notional Delivery Point, comprising the actual Waitangirua and Pauatahanui 1 Delivery Points

note 4: The sole end-user of the Okaiawa Delivery Point disconnected from the transmission system in Sep 2018, so the need for capacity ceased from 01/10/2018.

Table 6: Frankley Road system

Offtake Point		Aggregate Firm Contractual Transmission Capacity (GJ) Held by All Shippers on:			Nominal Delivery Pressure > 20 bar g
		30-Sep-2018	1-Oct-2018	7-May-2018	
Frankley Road-Bi	MDQ	209,000	204,000	209,000	note 1
	MHQ	9,033	8,783	9,033	
Kaimiro	MDQ	-	-	-	
	MHQ	-	-	-	
Stratford 2	MDQ	50,000	50,000	50,000	note 2
	MHQ	2,500	2,500	2,500	
Ammonia-Urea	MDQ	22,500	-	22,500	note 3
	MHQ	1,010	-	1,010	
Kapuni GTP	MDQ	25,000	25,000	25,000	
	MHQ	1,250	1,250	1,250	
Stratford 3	MDQ	56,000	56,000	56,000	note 4
	MHQ	2,333	2,333	2,333	
TCC	MDQ	64,000	64,000	64,000	31.0 bar g
	MHQ	2,840	2,840	2,840	
Major Points	MDQ	426,500	399,000	426,500	
	MHQ	18,967	17,707	18,967	
All Other Points	MDQ	-	-	-	
	MHQ	0	-	0	
TOTAL SYSTEM	MDQ	426,500	399,000	426,500	
	MHQ	18,967	17,707	18,967	

note 1: The pressure at Frankley Road equals the pressure in the Maui Pipeline.

note 2: Stratford 2 supplies the Stratford "peaker" power station. FGL delivers gas there at pipeline (ie unregulated) pressure

note 3: Ammonia-Urea comprises the Ballance 8201 (fuel) and 9626 (process gas) Delivery Points. FGL aims to deliver gas at both DPs at not less than 29 bar g.

note 4: Stratford 3 is for the Ahuroa underground gas storage facility