



REGULATORY DISCLOSURE

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

Year ended 30 September 2017



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.2) 2017* consolidating all amendments as of 21 December 2017 issued by the Commerce Commission. The regulatory disclosure covers First Gas' transmission business (both the Maui and Non-Maui transmission systems) for the 12month period ending 30 September 2017.

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). 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 system.

This regulatory disclosure was prepared on 29 March 2017.

Further information

For further information regarding this regulatory disclosure, please contact:

Karen Collins
Regulatory Manager
First Gas Limited
Karen.Collins@firstgas.co.nz
04 979 5368

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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 Shippers¹ - 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;² and
- (II) during each contract year,

in response to Shippers' specific requests, to the limit of uncommitted operational capacity.³ 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.⁴

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 Requirements⁵ by 5 pm 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 Point⁶ (RP-DP) on the second Friday in September, although it may request more or less. A Shipper may request Reserved Capacity at an 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 5 pm on the third Friday in September. This requires First Gas to determine the uncommitted operational capacity available, taking into account such things as:

¹ 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".

² Being the year commencing on 1 October in year "n" and ending on 30 September in year "n+1".

³ 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.

⁴ Either by not reserving it again, trading it to another Shipper or cancelling it in accordance with the Code.

⁵ Under the Code, Shippers must lodge non-binding Provisional Reservation Requirements earlier each year.

⁶ In this disclosure, Code terms are used, i.e.: Receipt Point = intake point; Delivery Point = offtake point.

- (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;
 - (V) the most recent pipeline modelling information, e.g. in the 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,⁷ 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:

increase = (Shipper's requested increase for an RP-DP ÷ All Shippers' requested increases for all RP-DPs on the pipeline) × uncommitted operational capacity; and
 - (IV) First Gas would then check that any allocated increases in Reserved Capacity could actually be delivered via the relevant Delivery Points.⁸ 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.⁹ 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).

⁷ 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.

⁸ 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

⁹ First Gas' "Open Access Transmission Information System", at www.oatis.co.nz.

- 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.

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.e.:

- (I) Confirmed Reservation Requirements for 2016-17: **approved** in full;
- (II) requests for additional Reserved Capacity: **132**;
- (III) requests for additional Reserved Capacity **approved in full: 132**; 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.e.:

- (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"¹⁰ for 2016-17. 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 2017);
 - (II) the first day of the new pricing year (i.e. 1 October of 2017); and
 - (III) the first day of each system's peak flow period for the preceding pricing year (i.e. the year ending 30 September 2017).
- 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.

¹⁰ 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 2017	01 Oct 2017	10 Jul 2017	
Harrisville 2	MDQ	1,793	1,381	2,192	
	MHQ	112	86	137	
Drury 1	MDQ	818	677	1,212	
	MHQ	51	42	76	
Hunua (all)	MDQ	870	908	870	note 1
	MHQ	54	57	54	
Flat Bush	MDQ	1,472	1,631	1,622	
	MHQ	92	102	101	
Greater Auckland	MDQ	48,635	45,922	49,569	note 2
	MHQ	3,029	2,853	3,087	
Marsden 1	MDQ	13,600	13,800	14,800	21.0 bar g
	MHQ	567	575	617	
Kauri DF	MDQ	2,600	2,600	1,300	
	MHQ	130	130	65	
Waitoki	MDQ	514	595	495	
	MHQ	32	37	31	
Glenbrook	MDQ	6,500	6,500	6,200	
	MHQ	406	406	388	
Warkworth	MDQ	1,573	1,552	1,571	
	MHQ	80	78	79	
Tuakau 2	MDQ	1,933	1,972	1,918	
	MHQ	121	123	120	
Whangarei	MDQ	595	501	555	
	MHQ	37	31	35	
Maungaturoto DF	MDQ	2,400	2,400	1,200	
	MHQ	120	120	60	
Major Points	MDQ	83,303	80,439	83,504	
	MHQ	4,831	4,642	4,850	
All Other Points	MDQ	520	438	2,282	
	MHQ	33	27	143	
TOTAL SYSTEM	MDQ	83,824	80,877	85,786	
	MHQ	4,864	4,669	4,993	

note 1: Hunua (all) refers to 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 2017	01 Oct 2017	21 Aug 2017	
Greater Hamilton	MDQ	6,834	7,206	7,635	note 1
	MHQ	427	450	477	
Tatuanui DF	MDQ	1,500	1,500	1,500	
	MHQ	94	94	94	
Waitoa	MDQ	1,275	1,187	1,415	
	MHQ	80	74	88	
Cambridge	MDQ	2,146	2,032	1,438	
	MHQ	134	127	90	
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	967	967	967	
Morrinsville DF	MDQ	1,057	1,000	900	
	MHQ	66	63	56	
Major Points	MDQ	37,013	37,125	37,089	
	MHQ	1,830	1,837	1,835	
All Other Points	MDQ	412	654	701	
	MHQ	26	41	44	
TOTAL SYSTEM	MDQ	37,424	37,780	37,789	
	MHQ	1,856	1,878	1,878	

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 2017	01 Oct 2017	26 Dec 2016	
New Plymouth	MDQ	2,906	2,783	2,990	
	MHQ	182	174	187	
Pokuru	MDQ	-	-	-	note 1
	MHQ	-	-	-	
Major Points	MDQ	2,906	2,783	2,990	
	MHQ	182	174	187	
All Other Points	MDQ	1,361	1,332	1,266	
	MHQ	85	83	79	
TOTAL SYSTEM	MDQ	4,266	4,115	4,256	
	MHQ	267	257	266	

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 2017	01 Oct 2017	25 Sep 2017	
Lichfield DF	MDQ	1,997	2,000	2,035	
	MHQ	125	125	127	
Lichfield 2	MDQ	3,900	4,400	3,900	
	MHQ	222	222	222	
Edgecumbe DF	MDQ	4,931	4,685	4,931	
	MHQ	308	293	308	
Reporoa	MDQ	2,189	1,975	2,226	
	MHQ	137	123	139	
Whakatane	MDQ	2,670	2,647	2,670	
	MHQ	158	156	158	
Tirau DF	MDQ	1,450	1,400	1,550	
	MHQ	91	88	97	
Kinleith (CHH Mill)	MDQ	9,946	10,500	9,946	
	MHQ	622	656	622	
Kawerau (Tasman)	MDQ	1,741	1,800	1,741	
	MHQ	109	113	109	
Kawerau (Caxton)	MDQ	598	500	625	
	MHQ	37	31	39	
Greater Tauranga	MDQ	1,438	1,258	1,438	note 1
	MHQ	90	79	90	
Gisborne	MDQ	1,284	1,438	1,284	
	MHQ	80	90	80	
Greater Mt Maunganui	MDQ	2,577	2,595	2,577	note 2
	MHQ	161	162	161	
Rotorua	MDQ	1,611	1,558	1,636	
	MHQ	101	97	102	
Major Points	MDQ	36,331	36,756	36,558	
	MHQ	2,240	2,235	2,254	
All Other Points	MDQ	2,790	2,514	2,793	
	MHQ	174	157	175	
TOTAL SYSTEM	MDQ	39,121	39,271	39,351	
	MHQ	2,414	2,392	2,429	

note 1:

Greater Tauranga is a notional Delivery Point, comprising the

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 2017	01 Oct 2017	10 Jul 2017	
Paraparaumu	MDQ	626	574	559	
	MHQ	39	36	35	
Hawera (all)	MDQ	1,668	2,014	1,074	note 1
	MHQ	104	126	67	
Wanganui	MDQ	4,570	3,942	4,179	
	MHQ	286	246	261	
Okaiawa	MDQ	1,680	1,600	1,680	
	MHQ	70	100	70	
Marton	MDQ	817	796	889	
	MHQ	51	50	56	
Palmerston North	MDQ	4,305	3,628	3,977	
	MHQ	269	227	249	
Longburn	MDQ	862	761	891	
	MHQ	54	48	56	
Levin	MDQ	1,092	1,047	1,259	
	MHQ	68	65	79	
Belmont	MDQ	6,427	5,075	6,660	
	MHQ	402	317	416	
Feilding	MDQ	855	787	848	
	MHQ	53	49	53	
Hastings (all)	MDQ	6,852	7,633	9,132	note 2
	MHQ	428	477	571	
Tawa (A+B)	MDQ	9,533	9,455	10,195	
	MHQ	596	591	637	
Greater Waitangirua	MDQ	1,610	1,263	1,383	note 3
	MHQ	101	79	86	
Major Points	MDQ	40,897	38,575	42,724	
	MHQ	2,521	2,411	2,635	
All Other Points	MDQ	6,061	6,034	6,296	
	MHQ	317	315	331	
TOTAL SYSTEM	MDQ	46,959	44,609	49,020	
	MHQ	2,838	2,726	2,967	

note 1:

Hawera (all) refers to the Hawera and Hawera (Nova) Delivery

note 2:

Hastings (all) refers to the Hastings and Hastings (Nova) Delivery

note 3:

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

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 2017	01 Oct 2017	05 Jun 2017	
Frankley Road-Bi	MDQ	215,000	209,000	215,000	note 1
	MHQ	9,333	9,033	9,333	
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	22,500	note 3
	MHQ	1,010	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	432,500	426,500	432,500	
	MHQ	19,267	18,967	19,267	
All Other Points	MDQ	-	-	-	
	MHQ	0	-	0	
TOTAL SYSTEM	MDQ	432,500	426,500	432,500	
	MHQ	19,267	18,967	19,267	

note 1: FGL is required to deliver gas at sufficient pressure for it to enter the Maui Pipeline

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

note 3: Ammonia-Urea comprises the Ballance 8201 and 9626 Delivery Points. Vector endeavours to deliver gas at both points at not less than 29 bar g

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