



REGULATORY DISCLOSURE

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

Year ended 30 September 2019



## Introduction

First Gas Limited (Firstgas) operates 2,500 kilometres of gas transmission pipelines (including the Maui pipeline), and more than 4,800 kilometres 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 Firstgas, please visit our website [www.firstgas.co.nz](http://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 3 April 2018 issued by the Commerce Commission. The regulatory disclosure covers Firstgas' transmission business (both the Maui and Non-Maui transmission systems) for the 12-month period ending 30 September 2019.

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).<sup>1</sup> 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.

This regulatory disclosure was prepared on 25 March 2020.

## Further information

For further information regarding this regulatory disclosure, please contact:

Karen Collins  
Regulatory Policy Manager  
First Gas Limited  
[Karen.Collins@firstgas.co.nz](mailto:Karen.Collins@firstgas.co.nz)  
04 979 5368

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<sup>1</sup> Until 30 September 2019.

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## 1. Capacity allocation methodology

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

Firstgas currently provides two types of firm contractual transmission capacity to Shippers<sup>2</sup> - Reserved Capacity and Supplementary Capacity.

**Reserved Capacity** is Firstgas' 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<sup>3</sup> and
- (II) During each contract year

in response to Shippers' specific requests, to the limit of uncommitted operational capacity.<sup>4</sup> 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.<sup>5</sup>

**Supplementary Capacity** is firm transmission capacity that Firstgas provides to a Shipper under a Supplementary Agreement, in compliance with specific provisions of the Code. Since Firstgas 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 Firstgas 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 Firstgas of their Confirmed Reservation Requirements<sup>6</sup> 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 Point<sup>7</sup> (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) Firstgas 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;

<sup>2</sup> 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".

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

<sup>4</sup> 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 Firstgas' "Gas Transmission Asset Management Plan – 2016" (AMP), available at [www.firstgas.co.nz/About-Us/Regulatory/Transmission](http://www.firstgas.co.nz/About-Us/Regulatory/Transmission).

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

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

<sup>7</sup> 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,<sup>8</sup> Firstgas 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:
 
$$\text{increase} = (\text{Shipper's requested increase for an RP-DP} \div \text{All Shippers' requested increases for all RP-DPs on the pipeline}) \times \text{uncommitted operational capacity and}$$
  - (IV) Firstgas would then check that any allocated increases in Reserved Capacity could actually be delivered via the relevant Delivery Points.<sup>9</sup> 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.<sup>10</sup> Firstgas must approve (or decline) any such request via OATIS.
- 3) Firstgas 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, Firstgas 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, Firstgas 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), Firstgas would offer additional Reserved Capacity to Shippers in the capacity queue, in accordance with the Code.

<sup>8</sup> Namely, where Firstgas 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.

<sup>9</sup> 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

<sup>10</sup> Firstgas' "Open Access Transmission Information System", at [www.oatis.co.nz](http://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 Firstgas' Non- Maui transmission pipeline systems.<sup>f</sup>
- 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 Firstgas' "Pipeline Peak Flow Disclosure"<sup>11</sup> 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.

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<sup>11</sup> Available at [www.firstgas.co.nz/About-Us/Regulatory/Transmission](http://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	
	30-Sep-2019	1-Oct-2019	23-Aug-2019		
Harrisville 2	MDQ	1,709	1,434	1,709	
	MHQ	107	90	107	
Drury 1	MDQ	1,101	836	1,418	
	MHQ	69	52	89	
Hunua (all)	MDQ	1,235	1,513	1,235	Note 1
	MHQ	77	95	77	
Flat Bush	MDQ	1,713	1,584	1,713	
	MHQ	107	99	107	
Greater Auckland	MDQ	48,515	40,502	49,055	Note 2
	MHQ	3,012	2,511	3,046	
Marsden 1	MDQ	13,600	13,800	13,600	21.0 bar g
	MHQ	850	863	850	
Kauri DF	MDQ	2,600	2,600	2,340	
	MHQ	130	130	117	
Waitoki	MDQ	678	586	678	
	MHQ	42	37	42	
Glenbrook	MDQ	6,500	7,100	6,500	
	MHQ	406	444	406	
Warkworth	MDQ	1,577	1,553	1,577	
	MHQ	80	78	80	
Tuakau 2	MDQ	3,045	3,826	3,165	
	MHQ	190	239	198	
Whangarei	MDQ	563	374	572	
	MHQ	35	23	36	
Maungaturoto DF	MDQ	2,400	2,400	2,160	
	MHQ	120	120	108	
Major Points	MDQ	<b>85,235</b>	<b>78,108</b>	<b>85,720</b>	
	MHQ	<b>5,226</b>	<b>4,781</b>	<b>5,263</b>	
All Other Points	MDQ	<b>482</b>	<b>702</b>	<b>478</b>	
	MHQ	<b>30</b>	<b>44</b>	<b>30</b>	
TOTAL SYSTEM	MDQ	<b>85,716</b>	<b>78,810</b>	<b>86,198</b>	
	MHQ	<b>5,256</b>	<b>4,824</b>	<b>5,292</b>	



Note 1:	Hunua (all) includes the Hunua, Hunua (Nova) and Hunua 3 Delivery Points. At Hunua 3 Firstgas 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-2019	1-Oct-2019	23-Aug-2018		
Greater Hamilton	MDQ	6,917	5,209	7,845	Note 1
	MHQ	432	326	490	
Tatuanui DF	MDQ	1,650	1,500	1,650	
	MHQ	103	94	103	
Waitoa	MDQ	1,416	1,503	1,441	
	MHQ	89	94	90	
Cambridge	MDQ	2,189	2,036	1,907	
	MHQ	137	127	119	
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	747	1,000	1,000	
	MHQ	47	63	63	
Major Points	MDQ	<b>37,119</b>	<b>35,447</b>	<b>38,043</b>	
	MHQ	<b>1,962</b>	<b>1,857</b>	<b>2,020</b>	
All Other Points	MDQ	<b>1,464</b>	<b>2,971</b>	<b>1,473</b>	
	MHQ	<b>92</b>	<b>186</b>	<b>92</b>	
TOTAL SYSTEM	MDQ	<b>38,583</b>	<b>38,418</b>	<b>39,516</b>	
	MHQ	<b>2,053</b>	<b>2,043</b>	<b>2,112</b>	
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-2019	1-Oct-2019	12-Oct-2018		
New Plymouth	MDQ	3,136	2,422	2,864	Note 1	
	MHQ	196	151	179		
Pokuru	MDQ	-	-	-		
	MHQ	-	-	-		
Major Points	MDQ	<b>3,136</b>	<b>2,422</b>	<b>2,864</b>		
	MHQ	<b>196</b>	<b>151</b>	<b>179</b>		
All Other Points	MDQ	<b>1,372</b>	<b>1,202</b>	<b>1,442</b>		
	MHQ	<b>86</b>	<b>75</b>	<b>90</b>		
TOTAL SYSTEM	MDQ	<b>4,508</b>	<b>3,624</b>	<b>4,306</b>		
	MHQ	<b>282</b>	<b>226</b>	<b>269</b>		
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-2019	1-Oct-2019	27-Sep-2019		
Lichfield DF	MDQ	2,040	2,050	2,040	
	MHQ	128	128	128	
Lichfield 2	MDQ	3,696	3,900	3,696	
	MHQ	231	244	231	
Edgecumbe DF	MDQ	4,603	4,647	4,603	
	MHQ	288	290	288	
Reporoa	MDQ	2,009	2,107	2,009	
	MHQ	126	132	126	
Whakatane	MDQ	3,656	3,631	3,656	
	MHQ	192	190	192	
Tirau DF	MDQ	1,402	1,500	1,402	
	MHQ	88	94	88	
Kinleith (CHH Mill)	MDQ	13,523	11,100	13,523	
	MHQ	845	694	845	
Kawerau (Tasman)	MDQ	1,834	1,800	1,834	
	MHQ	115	113	115	
Kawerau (Caxton)	MDQ	639	700	639	
	MHQ	40	44	40	
Greater Tauranga	MDQ	1,066	923	1,066	Note 1
	MHQ	67	58	67	
Gisborne	MDQ	1,059	1,159	1,059	
	MHQ	66	72	66	
Greater Mt Maunganui	MDQ	2,575	2,408	2,575	Note 2
	MHQ	161	151	161	
Rotorua	MDQ	1,744	979	1,744	
	MHQ	109	61	109	
<b>Major Points</b>	MDQ	<b>39,846</b>	<b>36,903</b>	<b>39,846</b>	
	MHQ	<b>2,454</b>	<b>2,270</b>	<b>2,454</b>	
<b>All Other Points</b>	MDQ	<b>2,674</b>	<b>1,630</b>	<b>2,674</b>	
	MHQ	<b>167</b>	<b>102</b>	<b>167</b>	
<b>TOTAL SYSTEM</b>	MDQ	<b>42,520</b>	<b>38,534</b>	<b>42,520</b>	
	MHQ	<b>2,621</b>	<b>2,372</b>	<b>2,621</b>	
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-2019	1-Oct-2019	23-Aug-2019	
Paraparaumu	MDQ	690	-	690	
	MHQ	43	-	43	
Hawera (all)	MDQ	1,616	1,570	1,447	Note 1
	MHQ	101	98	90	
Wanganui	MDQ	4,232	3,854	4,433	
	MHQ	265	241	277	
Greater Kapiti	MDQ	-	401	-	Note 4
	MHQ	-	25	-	
Marton	MDQ	971	841	981	
	MHQ	61	53	61	
Palmerston North	MDQ	3,683	2,785	3,898	
	MHQ	230	174	244	
Longburn	MDQ	825	1,013	773	
	MHQ	52	63	48	
Levin	MDQ	1,021	853	1,053	
	MHQ	64	53	66	
Belmont	MDQ	6,252	3,777	6,688	
	MHQ	391	236	418	
Pahiatua DF	MDQ	3,303	3,350	2,913	
	MHQ	206	209	182	
Feilding	MDQ	741	592	946	
	MHQ	46	37	59	
Hastings (all)	MDQ	7,325	6,739	7,437	Note 2
	MHQ	458	421	465	
Tawa (A+B)	MDQ	10,565	7,176	10,991	
	MHQ	660	449	687	
Greater Waitangirua	MDQ	1,500	1,001	1,500	Note 3
	MHQ	94	63	94	
Major Points	MDQ	<b>42,724</b>	<b>33,952</b>	<b>43,750</b>	
	MHQ	<b>2,670</b>	<b>2,122</b>	<b>2,734</b>	
All Other Points	MDQ	<b>2,705</b>	<b>1,915</b>	<b>2,739</b>	
	MHQ	<b>169</b>	<b>120</b>	<b>171</b>	
TOTAL SYSTEM	MDQ	<b>45,430</b>	<b>35,868</b>	<b>46,489</b>	
	MHQ	<b>2,839</b>	<b>2,242</b>	<b>2,906</b>	
Note 1:	Hawera (all) refers to the Hawera and Hawera (Nova) Delivery Points				
Note 2:	Hastings (all) refers to the Hastings and Hastings (Nova) Delivery Points				

Note 3:	Greater Waitangirua is a notional Delivery Point, comprising the actual Waitangirua and Pauatahanui 1 Delivery Points
Note 4:	Greater Kapiti is a notional Delivery Point, comprising the actual Waikanae 2 and Paraparaumu. Effective 01/10/2019

**Table 6: Frankley Road system**

Offtake Point	Aggregate Firm Contractual Transmission Capacity (GJ) Held by All Shippers on:			Nominal Delivery Pressure	
	30-Sep-2019	1-Oct-2019	6-Sep-2019		
Frankley Road-Bi	MDQ	204,000	208,200	204,000	Note 1
	MHQ	10,200	10,410	10,200	
Kaimiro	MDQ	-	-	-	
	MHQ	-	-	-	
Stratford 2	MDQ	50,000	50,000	50,000	Note 2
	MHQ	2,500	2,500	2,500	
Ammonia-Urea	MDQ	-	-	-	29 - 30 bar g
	MHQ	-	-	-	
Kapuni GTP	MDQ	25,000	25,000	25,000	39 bar g
	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	Note 5
	MHQ	2,840	2,840	2,840	
Major Points	MDQ	<b>399,000</b>	<b>403,200</b>	<b>399,000</b>	
	MHQ	<b>19,123</b>	<b>19,333</b>	<b>19,123</b>	
All Other Points	MDQ	-	-	-	
	MHQ	-	-	-	
TOTAL SYSTEM	MDQ	<b>399,000</b>	<b>403,200</b>	<b>399,000</b>	
	MHQ	<b>19,123</b>	<b>19,333</b>	<b>19,123</b>	
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.				
Note 4:	Stratford 3 is for gas going to the Ahuroa underground gas storage facility				
Note 5:	FGL delivers gas to the TCC at pipeline (ie unregulated) pressure				