

Gas industry – facts at a glance

Updated November 2017

1. Gas Consumers

Approximately 281,000 consumers:

Residential	=	264,354
Small Commercial	=	11,304
Large Commercial	=	4,755
Large Industrial	=	353

Source: Gas Registry

2. Gas Use by Consumer Group (for 2016 calendar year)

Total annual consumption = approx 191 PJ

Electricity generation	=	26.5%
Petrochemical feedstock gas	=	20.5%
Petrochemical process gas	=	30.5%
Industrial	=	14.8%
Commercial	=	4.2%
Residential	=	3.5%

Source: 2017 Energy in New Zealand - MBIE

3. Regional Gas Use (for calendar year 2016)- by volume: Terajoules (TJ)

Region	ToU ICPs	Non ToU ICPs	Reticulated (TJ)	Direct (TJ)	Total (TJ)	% of total
Auckland	155	104,904	14,438	1,795	16,233	9.3
Bay of Plenty	31	14,663	3,810	102	3,912	2.2
Gisborne	7	3,164	391	-	391	0.2
Hawke's Bay	26	4,784	2,057	18	2,074	1.2
Manawatu/Whanganui	46	29,808	2,904	614	3,518	2.0
Northland	7	1,165	131	3,837	3,968	2.3
Taranaki	26	18,674	1,519	100,105	101,624	58.3
Waikato	60	36,559	3,353	35,208	38,561	22.1
Wellington (incl Hutt Valley, Kapiti)	43	66,313	3,974	-	3,974	2.3

Notes:

Northland includes NZ Refinery

Auckland includes NZ Steel

Waikato includes Huntly PS, Te Rapa cogen/Fonterra

Taranaki direct includes Methanex, Ballance ammonia/urea, Stratford PS, Stratford peaker station

Source: New Zealand Gas Story

4. Gas Production (for 2016 calendar year)

Gas producing fields = 15

Main fields (which will have the most effect on supply if production is lost):

Pohokura	=	38% (commenced production in 2006)
Maui	=	17% (commenced production in 1979)
Kupe	=	14% (commenced production in 2009)
Mangahewa	=	15% (commenced production in 2001)

Other producing fields: Turangi (4.7%), Kapuni (4.5%), Maari/Tui (2.8%), Kowhai (1.8%), Other (1.4%), Ngatoro (0.6%), McKee (0.5%)

Source: 2017 Energy in New Zealand - MBIE

5. Gas Transmission

Two open access, high pressure pipeline systems transmit gas. Both are owned by First Gas.

- The 309 km (of mostly 750mm diameter pipe) extending from Oaonui, in south west Taranaki, to Huntly. Known as the 'Maui pipeline' and formerly owned by Maui Development Limited (until June 2016).
- A total of 2,196 km (of mostly 100mm to 200mm diameter pipes) generally radiating from the Maui pipeline and delivering gas throughout the North Island. This system was formerly owned by Vector Limited (until April 2016)

6. Gas Distribution

There are four gas distribution network owners:

Distributor	Total Length (km)	Region	Active Connections (as at 1 November 2017)	% of total active connections
Vector	6,399	Greater Auckland	105,353	37.49
First Gas	4,523	Northland, Waikato, Bay of Plenty (including Rotorua, Taupo), Gisborne, Kapiti	61,107	21.75
Powerco	6,383	Greater Wellington, Hawke's Bay, Manawatu, Horowhenua, Taranaki	104,621	37.23
Gasnet	662	Wanganui, Rangitikei	9,675	3.44
Nova	100 ¹	Wellington, Porirua, Hutt Valley, Hastings, Hawera, Papakura, Manukau City.	229 ²	0.08
Total	17,967		280,985	100

¹ Nova is not subject to statutory disclosure requirements. This figure is from the Commerce Commission Gas Industry Final Report in 2004.

² Gas Registry information

7. Gas Retailers

There are 10 retail brands:

Retailer	Active ICPs as at 1 November 2017	% of Active ICPs	% of total allocated gas volume (FY2017)
Genesis Energy	94,564	33.65%	21.46%
Contact Energy	64,361	22.91%	7.69%
Mercury Energy	46,595	16.58%	3.20%
Nova Energy (subsidiary of Todd Corporation)	28,906	10.29%	27.42%
Trustpower	32,996	11.74%	3.21%
Energy Online (subsidiary of Genesis)	9,709	3.46%	0.63%
Pulse Energy	3,213	1.14%	0.17%
On Gas (subsidiary of Vector)	291	0.10%	23.88%
Switch Utilities	314	0.11%	0.20%
Greymouth Gas	36	0.01%	12.14%
	280,985	100%	100%

Notes:

Greymouth and On Gas supply only larger commercial and industrial consumers.

% volume = share of allocated volumes in 12 months up to and including October 2017

Source: Gas Registry

Allocated volume includes gas consumed by industrial, commercial and residential customers, but excludes gas volumes for consumers connected directly with the transmission system. Direct connections generally include major industrial sites such as thermal power stations, petrochemical plants, the oil refinery, pulp & paper operations and dairy factories.

Allocated gas represents about 20 percent of total gas consumption.

Direct connect proportions are (the average for the period October 2016-September 2017):

Electricity Generation	=	23%
Petrochemicals	=	48%
Processing (eg Dairy steel, wood, refining etc)	=	8%
Gas storage	=	1%
Bypass gas gates	=	1%

Source: Gas Registry

Gas Pipeline Outage History

New Zealand's main gas transmission systems traverse some of the North Island's most rugged terrain and have a strong reliability record over their 30 to 40 years of operation.

In that time, there have been five significant outages, two of them caused by third party damage, one by severe flooding and two by landslips.

- The rupture of the Kapuni North pipeline at Pukearuhe on the North Taranaki coast in 1977, due to a slow moving landslip.
- The rupture of the Kapuni North pipeline near Inglewood, Taranaki, circa 1985, due to being struck by a mechanical digger.
- The rupture of the Kapuni South pipeline at Himatangi in the lower North Island in 2003, due to being struck by a bulldozer.
- The forced shutdown of the Hawke's Bay pipeline at Awapuni in 2004, when it became detached from a bridge that was swept away during severe flooding in central and lower areas of the North Island.
- The rupture of the Maui pipeline at Pukearuhe, near the 1977 Kapuni pipeline failure site, in 2011, due to a slow moving landslip.

The longest outages, 5-6 days, have been Hawke's Bay (2004) and Maui (2011) – *(note: duration of the 1977 Kapuni pipeline failure at Pukearuhe not known)*