

# Gas Industry – Facts at a Glance

Updated January 2017

## 1. Gas Consumers

Over 270,000 consumers:

Residential	=	260,000
Commercial	=	15,700
Industrial	=	400

Source: Gas Registry

## 2. Gas Use by Consumer Group (for 2015 calendar year)

Total annual consumption = approx 185 PJ

Electricity generation	=	30.4%
Petrochemical feedstock gas	=	27.1%
Petrochemical process gas	=	18.5%
Industrial	=	15.7%
Commercial	=	4.7%
Residential	=	3.7%

Source: 2016 Energy in New Zealand - MBIE

## 3. Regional Gas Use - by volume: Terajoules (TJ)

Region	Non ToU ICPs	ToU ICPs	Reticulated (TJ)	Direct (TJ)	Total (TJ)	% of total
Northland	1,159	7	130	3,930	4,060	2.4
Auckland	99,008	166	14,428	2,393	16,821	9.9
Waikato	35,843	61	3,388	35,821	39,210	23.0
Bay of Plenty	13,959	29	3,825	107	3,932	2.3
Gisborne	3,141	7	392	--	392	0.2
Taranaki	18,369	26	1,531	94,406	95,938	56.4
Manawatu/Whanganui	30,261	50	2,938	757	3,695	2.2
Hawke's Bay	4,610	32	2,062	18	2,080	1.2
Wellington (incl Hutt Valley, Kapiti)	65,087	47	3,993	--	4,209	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 2015 calendar year)

Gas producing fields = 15

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

Pohokura	=	37% (commenced production in 2006)
Maui	=	18% (commenced production in 1979)
Kupe	=	14% (commenced production in 2009)
Mangahewa	=	12% (commenced production in 2001)
Kapuni	=	6% (commenced production in 1970)

Other producing fields: Turangi (4%), Kowhai (3%), Maari/Tui (4%), Other (1%) McKee (1%), Ngatoro (1%)

Source: 2016 Energy in New Zealand

#### 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 2,211 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	% of total active connections
Vector	5,900	Greater Auckland	103,044	37.2
First Gas	4,870	Northland, Waikato, Bay of Plenty (including Rotorua, Taupo), Gisborne, Kapiti	60,402	21.8
Powerco	6,315	Greater Wellington, Hawke's Bay, Manawatu, Horowhenua, Taranaki	103,407	37.4
Gasnet	659	Wanganui, Rangitikei	9,682	3.5
Nova	100 <sup>1</sup>	Wellington, Porirua, Hutt Valley, Hastings, Hawera, Papakura, Manukau City.	226 <sup>2</sup>	0.1
<b>Total</b>	<b>17,844</b>		<b>276,761</b>	<b>100</b>

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

<sup>2</sup> Gas Registry information

## 7. Gas Retailers

There are 10 retail brands:

Retailer	Active ICPs	% of Active ICPs	% of total allocated gas volume
Genesis Energy	98,357	35.5	22
Contact Energy	62,243	22.5	7.1
Mercury Energy	43,724	15.8	3.0
Nova Energy (subsidiary of Todd Corporation)	28,847	10.4	26.9
Trustpower	32,096	11.6	1.9
Energy Direct NZ (subsidiary of Trustpower)	0	0	1.2
Energy Online (subsidiary of Genesis)	8,638	3.1	0.6
Pulse Energy	2,392	0.9	0.1
On Gas (subsidiary of Vector)	353	0.1	24.2
Switch Utilities	79	0.03	0.2
Greymouth Gas	32	0.01	12.8
	<b>276,761</b>		

Notes:

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

% volume = share of allocated volumes in 12 months up to and including December 2016

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 2015-September 2016):

Electricity Generation	=	26%
Petrochemicals	=	46%
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)*