

GAS INDUSTRY KEY INFORMATION AT A GLANCE

As at June 2014

1. Gas Consumers

Residential	=	248,000
Commercial	=	14,000
Industrial	=	1,500
Total	=	263,500

Source: *Energy in New Zealand*

2. Gas Use

Total annual consumption	=	approx 174 PJ
Electricity generation	=	40.7%
Petrochemical feedstock gas	=	22.8%
Petrochemical process gas	=	15.6
Industrial*	=	13.2%
Commercial	=	4.4%
Residential	=	3.3%

* Industrial includes gas used in Agriculture, forestry and fishing sector which are shown separately as 1.1PJ in *Energy in New Zealand*

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

Region	Active ICPs	Reticulated (TJ)	Direct (TJ)	Total (TJ)	% of total
Northland	1,170	123	3,027	3,150	1.8
Auckland	96,299	13,807	15,276	29,083	16.2
Waikato	35,683	3,184	32,284	35,468	19.9
Bay of Plenty	13,850	3,750	102	3,852	2.2
Gisborne	3,150	408	--	408	0.2
Taranaki	17,955	1,615	95,926	97,542	54.6
Manawatu/WHanganui	30,240	3,202	60	3,262	1.8
Hawke's Bay	4,392	1,861	109	1,970	1.1
Wellington (incl Hutt Valley, Kapiti)	63,100	4,035	--	4,035	2.2

Notes:

Northland includes NZ Refinery

Auckland includes NZ Steel, Southdown PS, Otahuhu PS

Waikato includes Huntly PS, Te Rapa cogen/Fonterra

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

4. Gas Production

Gas producing fields = 15

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

Pohokura	=	40% (commenced production in 2006)
Maui	=	20% (commenced production in 1979)
Kupe	=	15% (commenced production in 2009)
Mangahewa	=	7.7% (commenced production in 2001)
Kapuni	=	6% (commenced production in 1970)

Other producing fields: Turangi (4%), Kowhai (2%), McKee (2%), Ngatoro (1%).

5. Gas Transmission

Two open access, high pressure pipeline systems transmit gas:

- Maui Pipeline (309 km of mostly 750mm diameter pipe) extending from Oaonui, in south west Taranaki, to Huntly. Owned by Maui Development Limited (MDL).
- Vector (total of 2,211 km, mostly of 100mm to 200mm diameter pipes) generally radiating from the Maui pipeline and delivering gas throughout the North Island.

6. Gas Distribution

There are four gas distribution network owners:

Distributor	Total Length (km)	Region	Connections	% of total connections
Vector	10,479	Northland, Greater Auckland, Waikato, Bay of Plenty (including Rotorua, Taupo), Gisborne, Kapiti	156,952	58.1
Powerco	6,218	Greater Wellington, Hawke's Bay, Manawatu, Horowhenua, Taranaki	102,794	38.0
Gasnet	645	Wanganui, Rangitikei	10,229	3.8
Nova	100 ¹	Wellington, Porirua, Hutt Valley, Hastings, Hawera, Papakura, Manukau City.	216	0.1
Total	17,342		270,191	100

Note: Network statistics 2014

7. Gas Retailers

There are 10 retail brands:

Retailer	ICPs	% of total ICPs	% of total allocated gas volume
Contact Energy	60,882	22.8	10.6
Genesis Energy	103,630	38.4	18.9
Energy Online (subsidiary of Genesis)	2,814	1.0	0.1
Greymouth Gas	27	0.01	10.6
Nova Energy (subsidiary of Todd Corporation)	30,890	11.6	28.6
On Gas (subsidiary of Vector)	334	0.1	25.5
Mercury Energy (subsidiary of MRP)	43,333	16.2	3.3
Trustpower	11,859	4.4	0.1
Energy Direct NZ (subsidiary of Trustpower)	11,789	4.4	2.3
Pulse Energy	971	0.3	
	266,529		

Notes:

Greymouth and On Gas supply only larger commercial and industrial consumers.
ICPs and percentages as at May 2014 and fluctuate

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 18.5 percent of total gas consumption.

Direct connect proportions are:

Electricity Generation	=	30%
Petrochemicals	=	43%
Processing (eg Dairy steel, wood, refining etc)	=	7%
Gas storage	=	1%
Bypass gas gates	=	1%

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)*.