

Demand for gas from the New Zealand market - and satisfying it

A Smith

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Abstract

The Ministry of Economic Development periodically publishes results of its energy forecasting work. This is based on using energy supply and demand scenarios, and is descriptive rather than predictive.


The last publication, with scenarios through to 2020, was released in February 2000. Currently the Ministry is engaged in a major round of forecasting, reviewing and revising previous assumptions, and carrying scenarios forward through to 2025. The results of this exercise will not be available until later this year.

This paper, however, presents the latest information that the Ministry has in respect of supply and demand prospects for the gas market through to 2025.

Author

ANDREW SMITH is manager of the Energy Markets and Information Services Group in the Resources and Networks Branch of the Ministry of Economic Development. The Group is responsible for energy modelling, forecasting and statistics; for administration of information disclosure regimes for the electricity and gas industries for purposes of economic regulation; and for maintaining New Zealand's international energy relations with organisations such as the International Energy Agency.

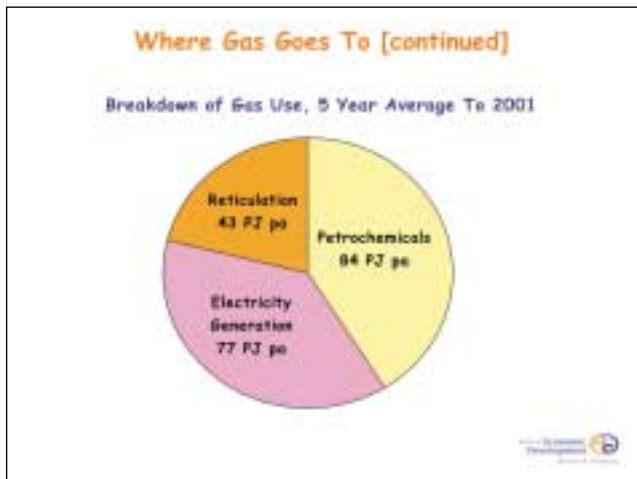
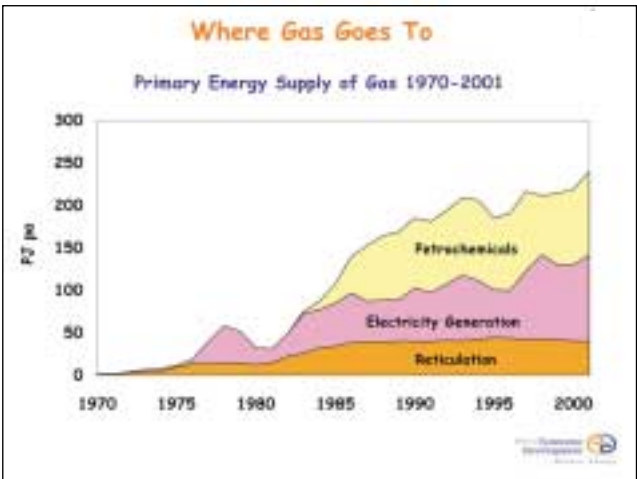
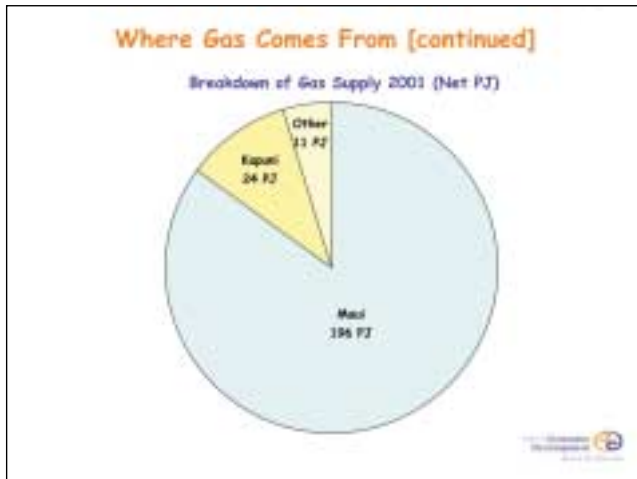
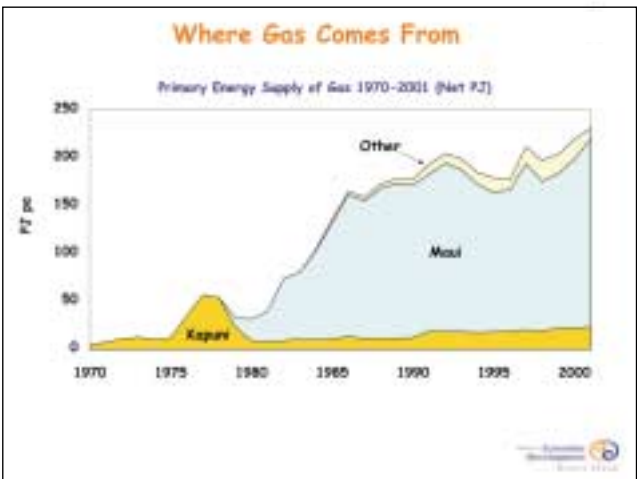
Andrew joined the Ministry's predecessor, the Ministry of Commerce, in 1989, having previously been in the Ministry of Energy. He has been involved with various aspects of energy policy development and implementation throughout since joining the Ministry of Energy in 1984.



GAS SUPPLY AND DEMAND

2002 New Zealand Petroleum Conference
 Auckland, New Zealand

Andrew Smith
 Energy Markets and Information Services
 Resources and Networks Branch



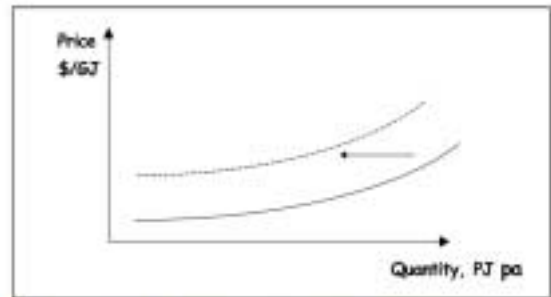
- ### Determinants of Future Gas Supply
- market price for gas (current, and future prospects)
 - availability of Maui supply
 - cost of recovering known reserves
 - > dependent on Government policy settings (resource consent procedures, taxes etc)
 - > can be dependent on condensate present

Determinants of Future Gas Supply [continued]

- new discoveries and their cost of recovery
 - > Ministry baseline scenario assumes average rate of discovery of 90PJ pa of economic reserves (also: 60PJ pa low; 120 PJ pa high)
 - > not so sure about costs of recovery
- known reserves would appear to indicate plenty of availability for reticulation and electricity generation (but not petrochemicals) through to 2020 at least
 - > Maui, Kapuni, Pohokura, Wairoa, Kupe, Mangahewa etc



Prospects for Future Gas Supply



- almost certainly, with the rundown of Maui, the supply curve will move left

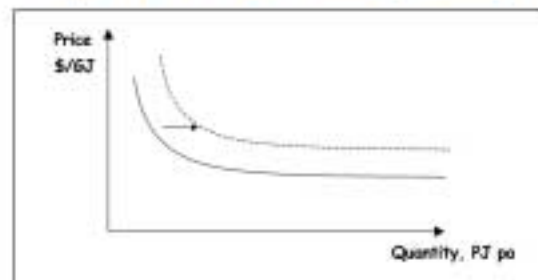


Determinants of Future Gas Demand

- market price of gas
- prices of competing energy sources
- above dependent upon Government policy settings (taxes etc)



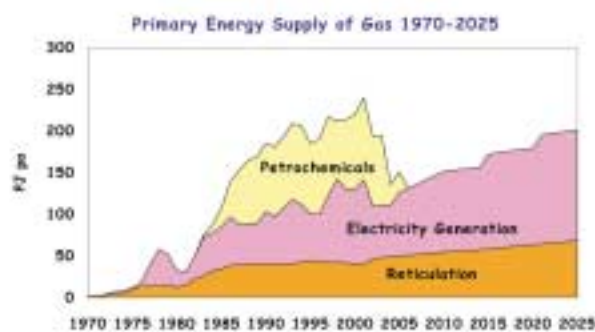
Prospects for Future Gas Demand [continued]



- with general growth in demand for energy, and with gas having relatively low greenhouse gas emissions compared to some other fuels, the prospect is for the demand curve to move right

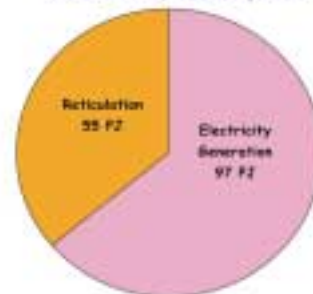


A Scenario of Future Gas Use



A Scenario of Future Gas Use [continued]

Breakdown of Gas Use, 2010



Conclusions

- Maui depleted by 2007?
- without large cheaply recoverable reserves, petrochemicals production will cease
- But:
 - plenty of gas available for high value reticulated market
 - significant gas available for electricity generation
- prospects are that gas use for both reticulation and electricity generation will grow over time



Conclusions [continued]

- future of gas market particularly dependent on:
 - costs of recovery from known fields and new discoveries
 - greenhouse gas policy decisions
- Ministry will this year be undertaking further modelling with a range of scenarios
 - different assumptions on GDP growth, forestry industry growth, energy efficiency uptake, Government policy settings etc
 - propose to publish full results later in the year

