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PETROLEUM CONFERENCE 2006

# The Market for New Zealand Oil

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Hale & Twomey

# Introduction

- 2004 Conference focused a lot on gas
- Important given New Zealand's supply/demand balance
- However oil is still the major prize for an explorer
- This presentation concentrates on oil – what is the market for New Zealand oil?

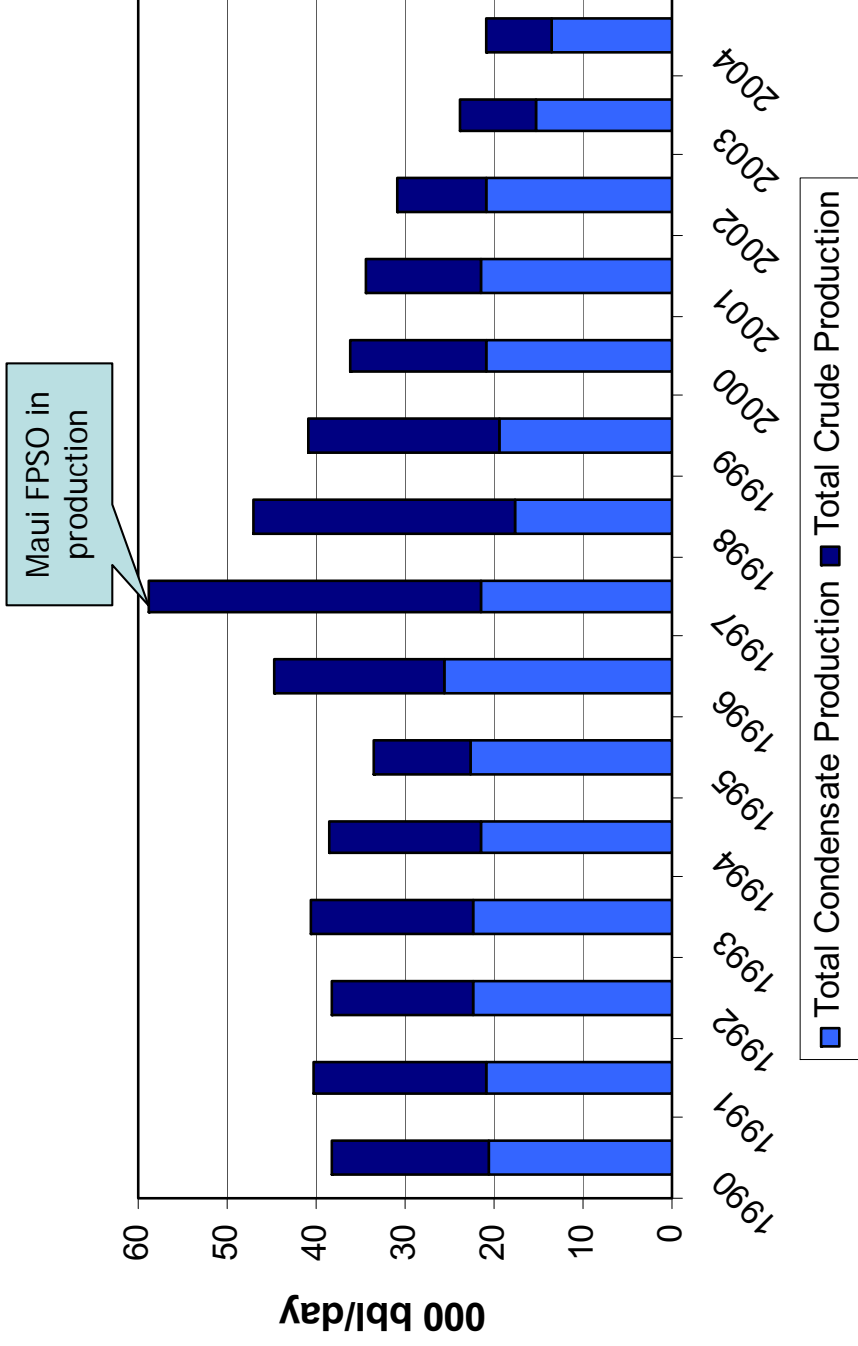


# NZ Production History

- New Zealand oil production significantly related to gas production because of associated condensate
- Peaked in 1997 following development of Maui crude FPSO
- Meanwhile demand for oil products has been increasing by about 3% per year
- Much of the growth in demand has been met by direct product imports (not crude refined in New Zealand)
- New Zealand production has fallen from about 45% of total demand to about 15%



# New Zealand Oil Production History Crude and Condensate

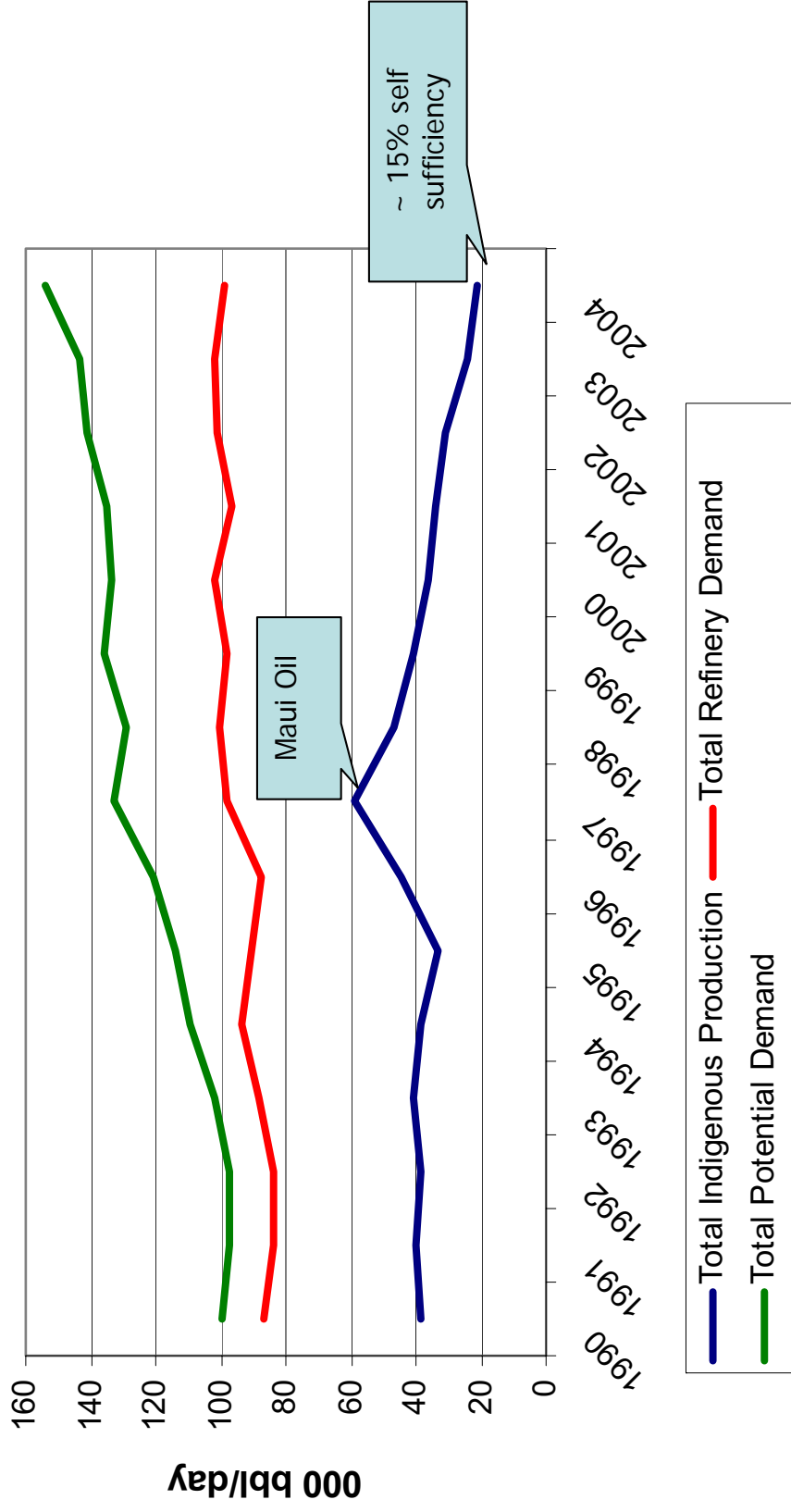


Source: Energy Data File



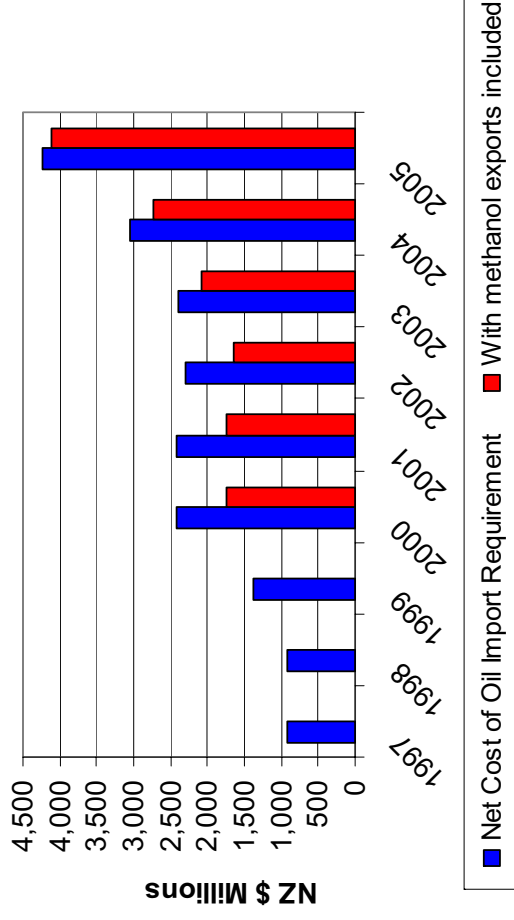
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# History of Production and Demand



# Impact on New Zealand's Balance of Payments

- Reduction in indigenous production and current oil prices are having a major impact on New Zealand's balance of payments
- Simple analysis highlights New Zealand needed nearly two billion dollars more in 2005 than 2003 to pay for oil
- You need to produce a lot of lamb or milk to pay for that



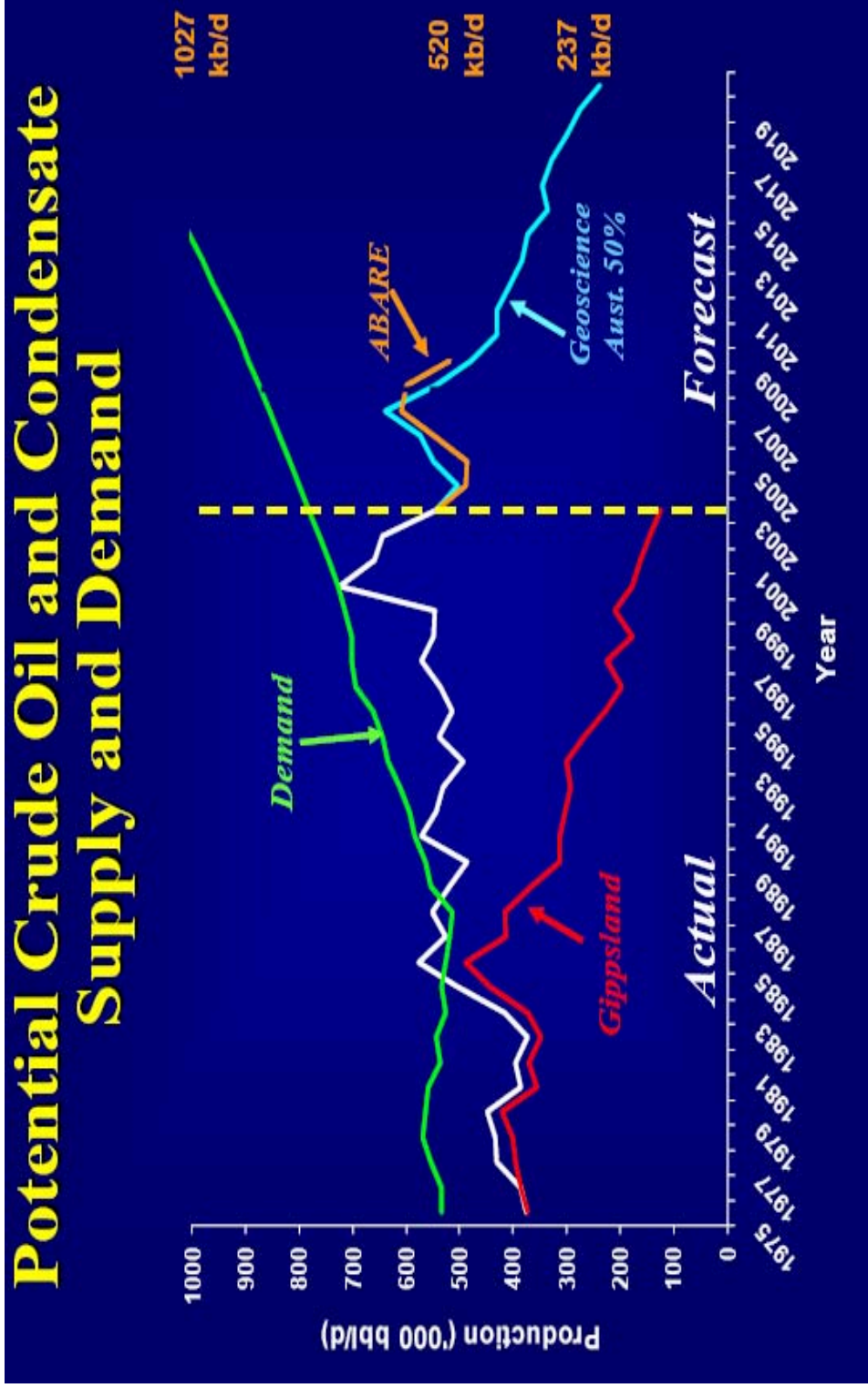
Source: Hale & Twomey



# Australian situation

- Similar scenario to New Zealand but not as drastic
- Crude production falling relative to demand (~75%) - ~50% by 2012/13
- East Coast (Gippsland etc) production falling rapidly
- Most activity in Western Australia – long way from demand centre
- East Coast Australia will continue to remain very dependent on imported crude

# Australian Supply/Demand



Source: APPEA



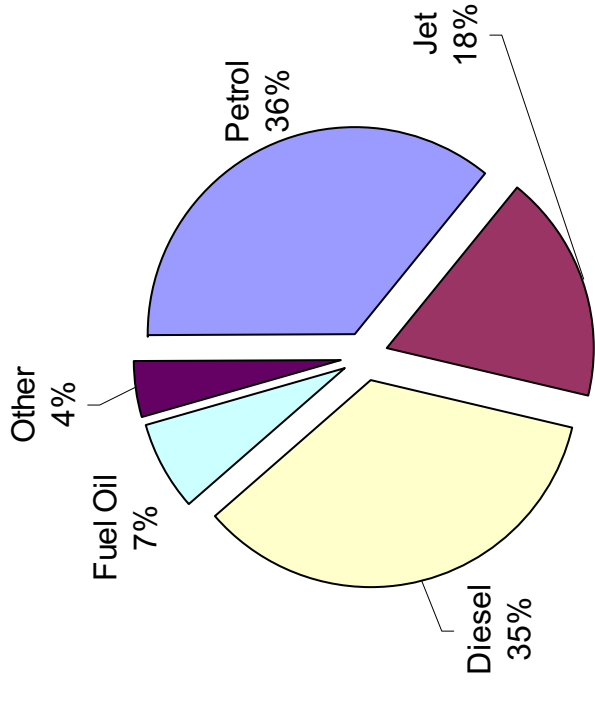
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# Market for Oil Products

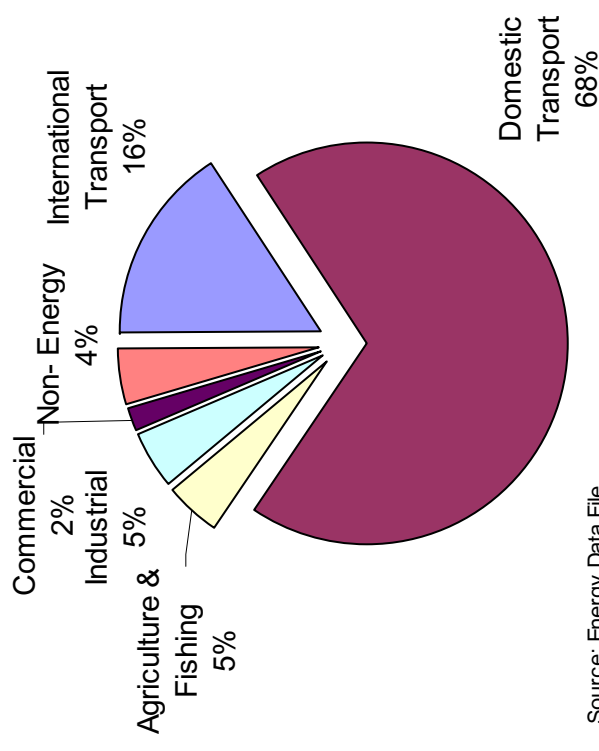
- Transport over 90% of ultimate demand
- Very strongly linked to economic growth
- Key growth areas in New Zealand have been jet fuel (tourism) and diesel (strong economy)
- Australian market characterised by higher relative gasoline demand
- Demand for oil products unlikely to change significantly in the medium term
- Alternatives (biofuels/new technologies) will develop but likely to meet only small proportion of demand
- Demand for crude oil sound into the foreseeable future



# New Zealand Demand by Product/Use



Source: Energy Data File

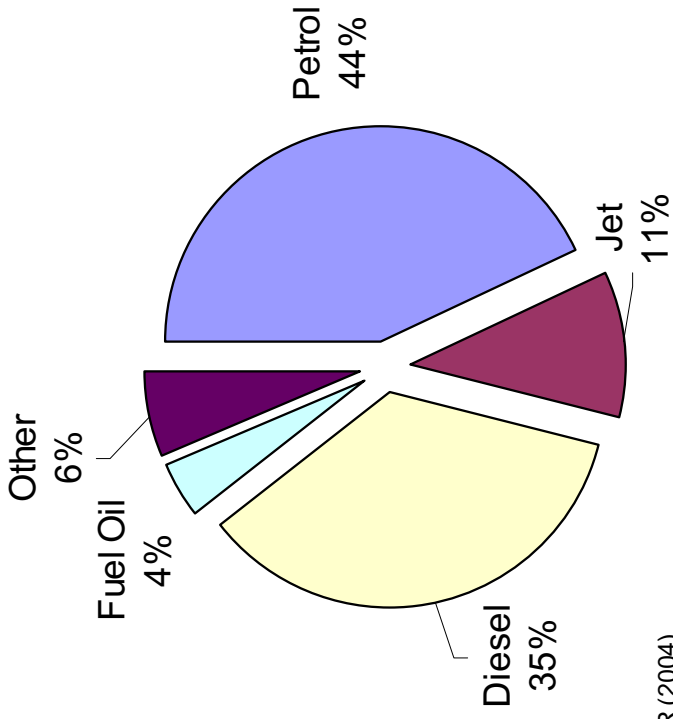


Source: Energy Data File



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# Australian Demand by Product



Source: Australian DITR (2004)

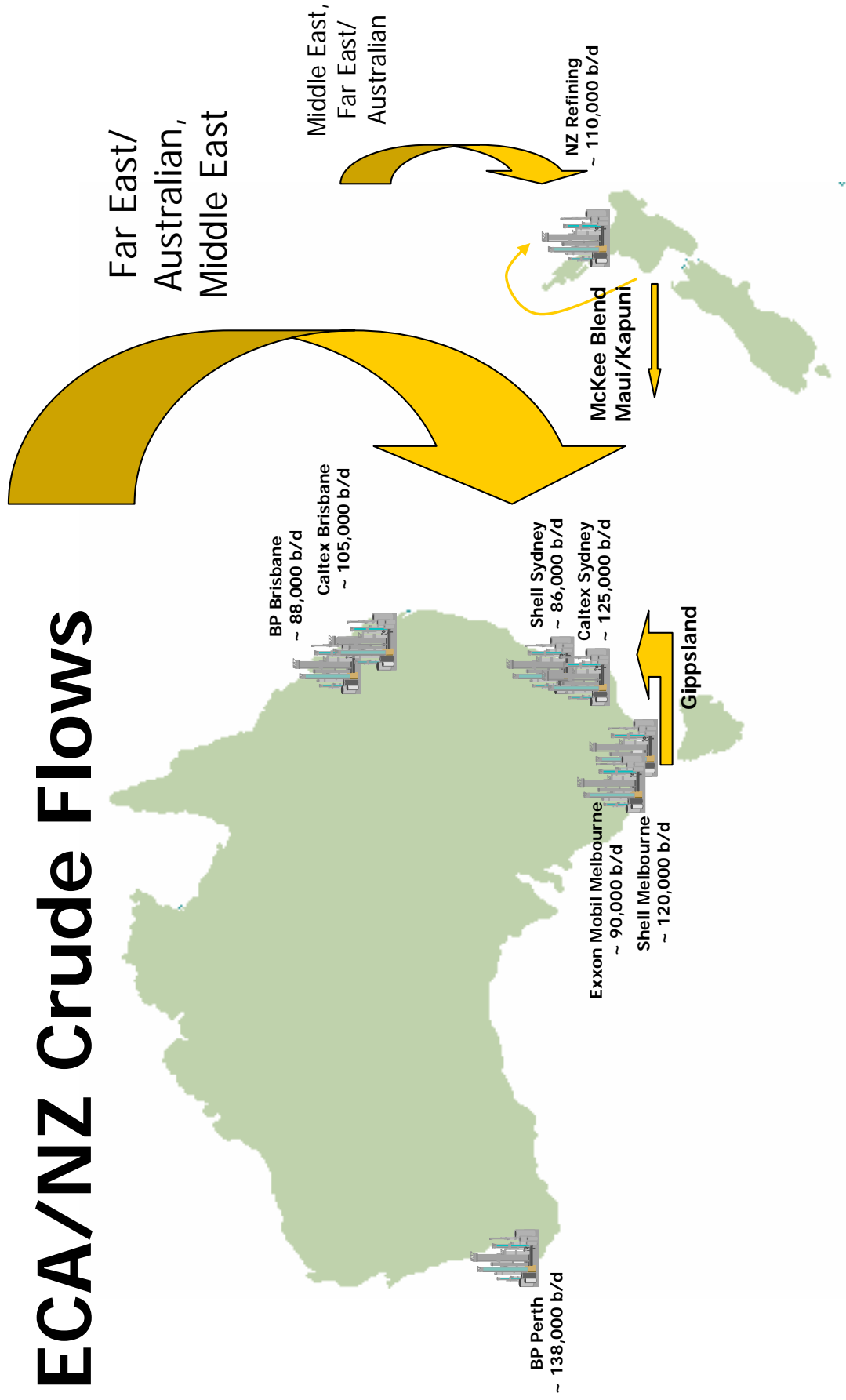


# Regional Oil Flows

- Oil demand is linked to product demand by refining capability
- But market is not just New Zealand
- Market is New Zealand/East Coast Australia region
- Linked to international market by crude and feedstock flows



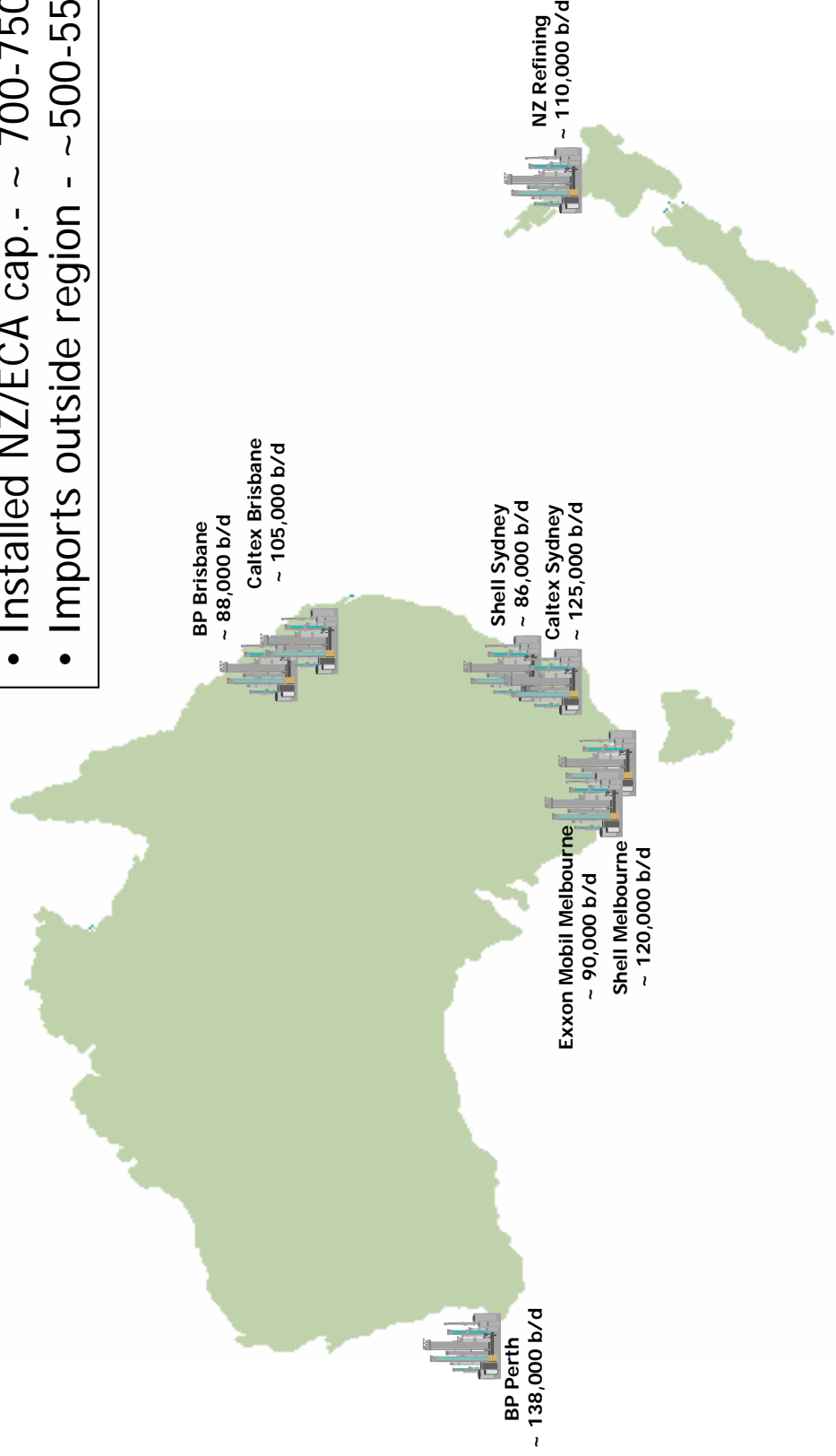
# ECA/NZ Crude Flows



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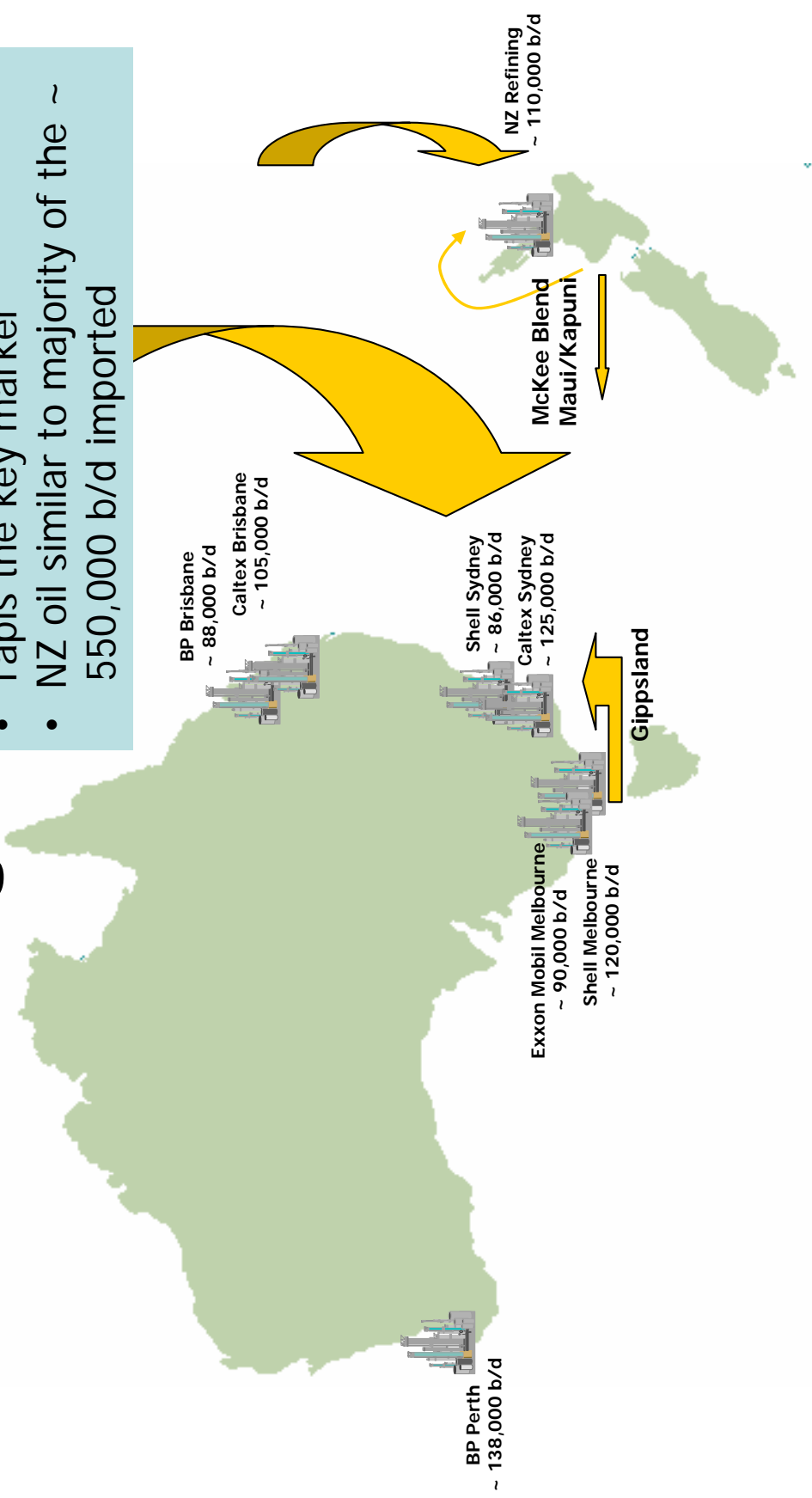
# ECA/NZ Refining – Key Statistics

- Installed NZ/ECA cap.- ~ 700-750,000 b/d
- Imports outside region - ~500-550,000 b/d



# ECA/NZ Pricing

- Pricing Benchmark is import parity i.e. benchmark crude plus freight
- Tapis the key marker
- NZ oil similar to majority of the ~ 550,000 b/d imported



# Regional Oil Flows

- The impact of the large imported flows is critical
- Sets an import benchmark for crude produced in the region – has freight benefit
- Refining capacity is short in the region – imports of oil products are required to meet total market demand - refining margins also based on import parity
- Of the ~550,000 bbl/day imported into the region majority is light low sulphur crude similar to crude found in New Zealand



# Refining Capacity

- All ECA/NZ refineries are complex with upgrading capability
- NZRC configuration based on hydro-cracking/high sulphur flexibility
- ECA refineries predominantly catalytic residue cracking with limited sulphur handling flexibility
  - run more light sweet crude
  - larger appetite for New Zealand type crude
- Refining margins strengthened considerably in last two years and some have announced expansion plans (NZRC feasibility studies + 20%, Caltex Australia +20%) – but still indications of a reluctance to invest



# Quality

- Valuation of crude will vary between refiners as a function of:
  - Capacity configuration
  - Alternative feed-stocks available
  - Level of competitive interest
- New Zealand crude tends to be higher yielding gasoline type (more recently lower value than good diesel yielding crudes)



# Freight

- Shipping is a fundamental part of New Zealand oil production
- Large crude import flows into region see good vessel liquidity for offshore producers
- Onshore production faces additional challenge of matching acceptable freight capacity with volumes/onshore logistics
- Nevertheless import parity benchmark can improve netback with a contribution from freight



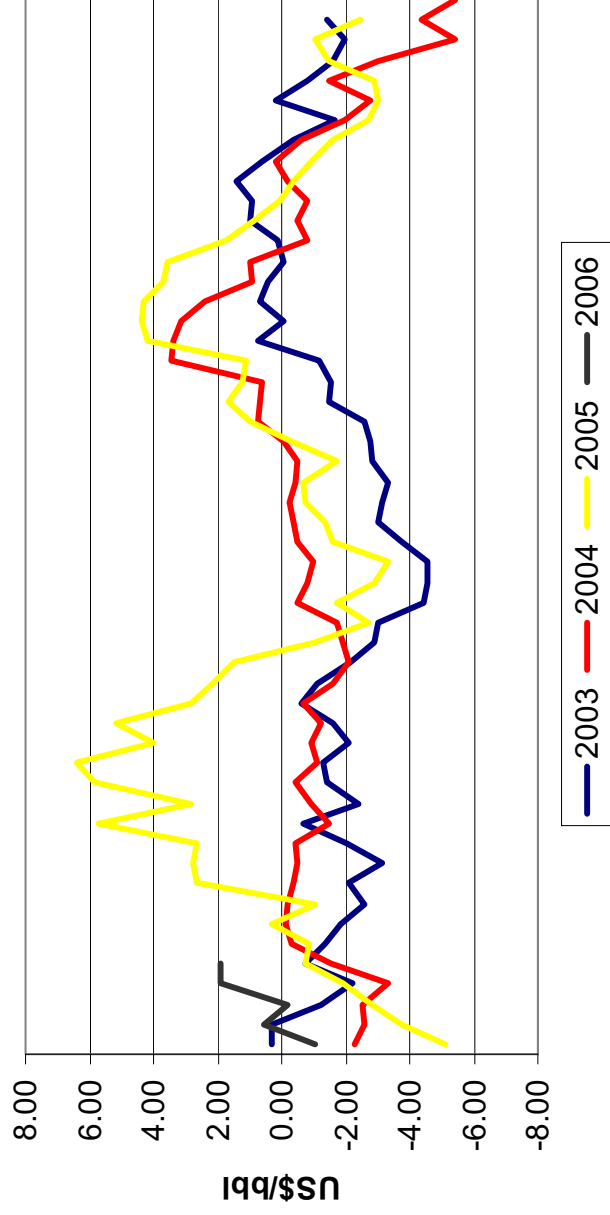
# Value of Oil

- As discussed market is import parity
- Therefore netbacks can be high
- Key marker for crude in the region is Tapis
- High value crude – similar value to WTI



# Tapis vs WTI

- Historically Tapis traded ~US\$1/bbl less than WTI
- In 2005 Tapis traded ~US\$0.50/bbl more
- Graph shows Tapis vs WTI (Tapis-WTI)



Source: Hale & Twomey



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# Value Influences

## Crude Quality

- Generally New Zealand crudes are high quality and value
- Expect more gasoline related – tend to be lower value than a strong middle distillate crude like Tapis

## Location

- Benefit of competing with crudes from outside the region
- The cost of shipping to market generally lower than competing imports - can result in a net positive contribution of up to US\$0.50/bbl

## Market

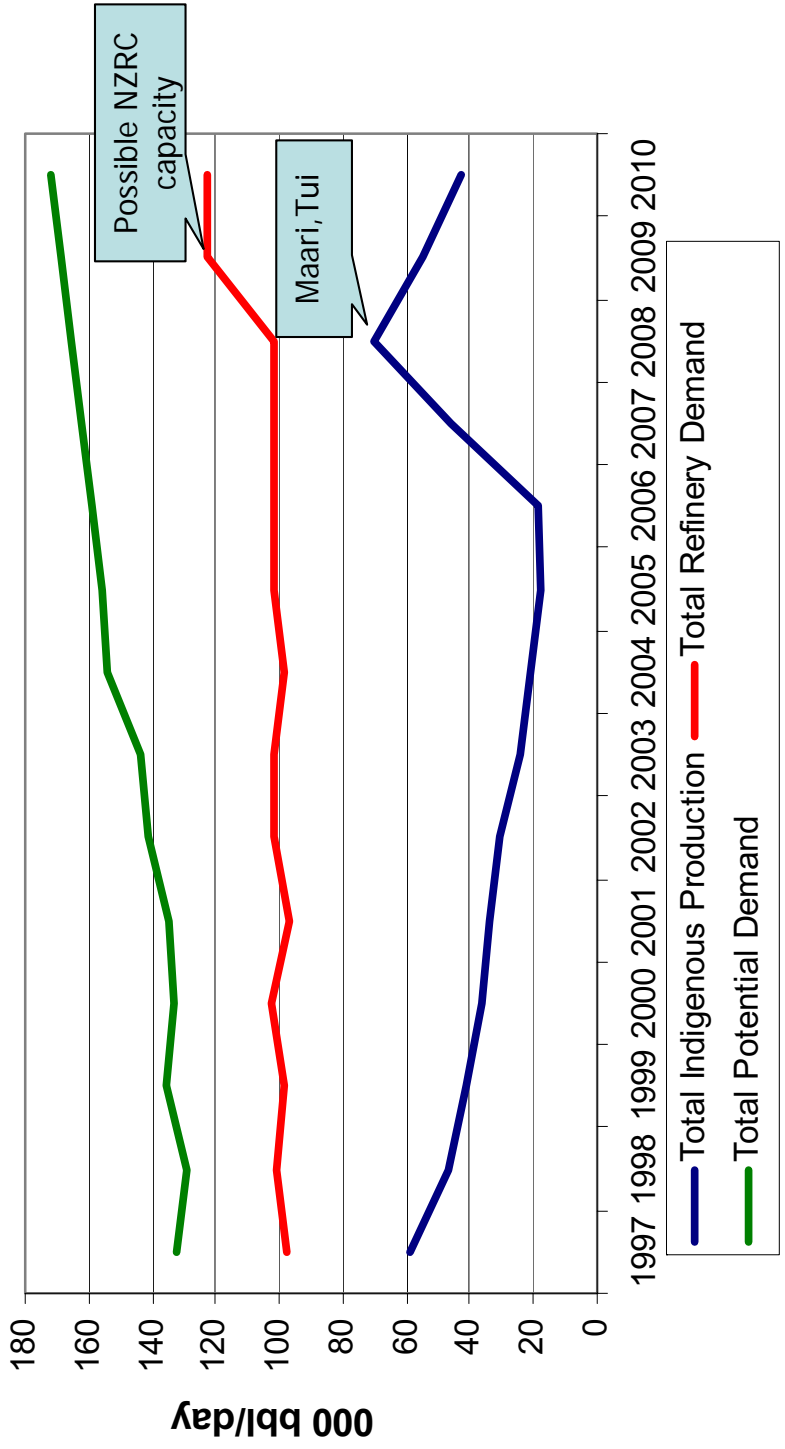
- Significant demand with four major companies refining
- Provides good competitive outlet but requires active marketing



# Outlook for New Zealand

- The good news: Pohokura, Tui, Maari, Kupe developments will significantly increase New Zealand production (expectation is more than 1997 peak)
- Very positive impact on New Zealand's oil security – reduce IEA storage requirement significantly
- However peak will be short lived and unless new discoveries are made by 2012/2014 New Zealand will have a similar proportion of indigenous production as current levels
- From a demand perspective NZRC/Caltex Australia considering further capacity increment (~ 20%) but still indications in refining sector of reluctance to invest

# New Zealand Forward Profile



Source: Energy Data File/Crown Minerals



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# Thank you

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