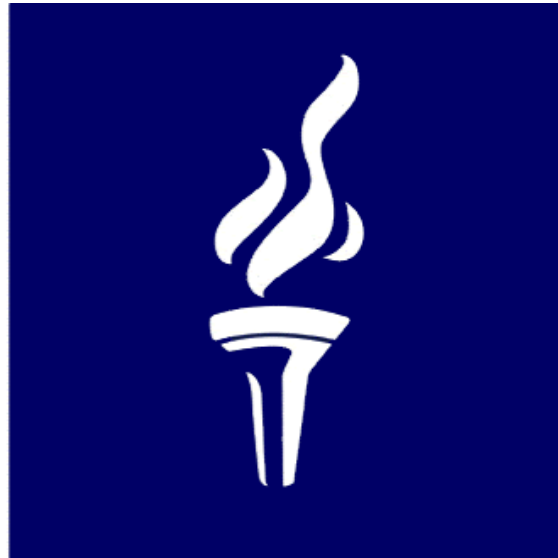


Gas Inquiry Conference



Commerce Commission
26 July 2004

Presentation Overview



- Presentation Overview & Introduction
 - Steve Bielby (NGC)
- Gas Industry Overview
 - Phil James (NGC)
- Commercial Overview
 - Ian Wilson (NGC)
- Business Concerns with Commission's Model
 - Paul Hodgson (NGC)
- Economic Response to Commission's Model
 - Professor Lew Evans, Nathan Strong (Charles Rivers Assoc.)
- Conclusions & Questions
 - Steve Bielby (NGC)

- Gas is fundamentally different
 - industry differs from overseas and electricity
 - regulatory regime reflects difference
 - gas is marginal fuel
- Gas supply has changed fundamentally
 - future conditions will constrain transportation prices

- Gas transportation market evolving
 - response to supply changes
 - inter-fuel competition and volatility
 - key investment and risk issues
 - new market mechanisms
- Commission's model
 - differs from business realities
 - key inputs need change
 - excess profits not established



- More appropriate model
 - confirms no excess profits
- Benefits to acquirers/public
 - foreign ownership issue

Current & Future Gas Industry



Part 1

Gas Inquiry Conference



Phil James – Chief Executive
26 July 2004

This Presentation



This Presentation



- Gas is different

This Presentation



- Gas is different
- We shouldn't regulate, just because others do

This Presentation



- Gas is different
- We shouldn't regulate, just because others do
- A small benefit today could be a substantial cost tomorrow

- The Maui period (1970-2001)
- Market transition (2002-2006)
- An uncertain future (2007+)

- Dependence on a single field
- Supply exceeded demand
- Gas prices low and stable
- Significant market development
 - Petrochemicals
 - Power generation
 - Energy intensive Industrials
- No exploration activity

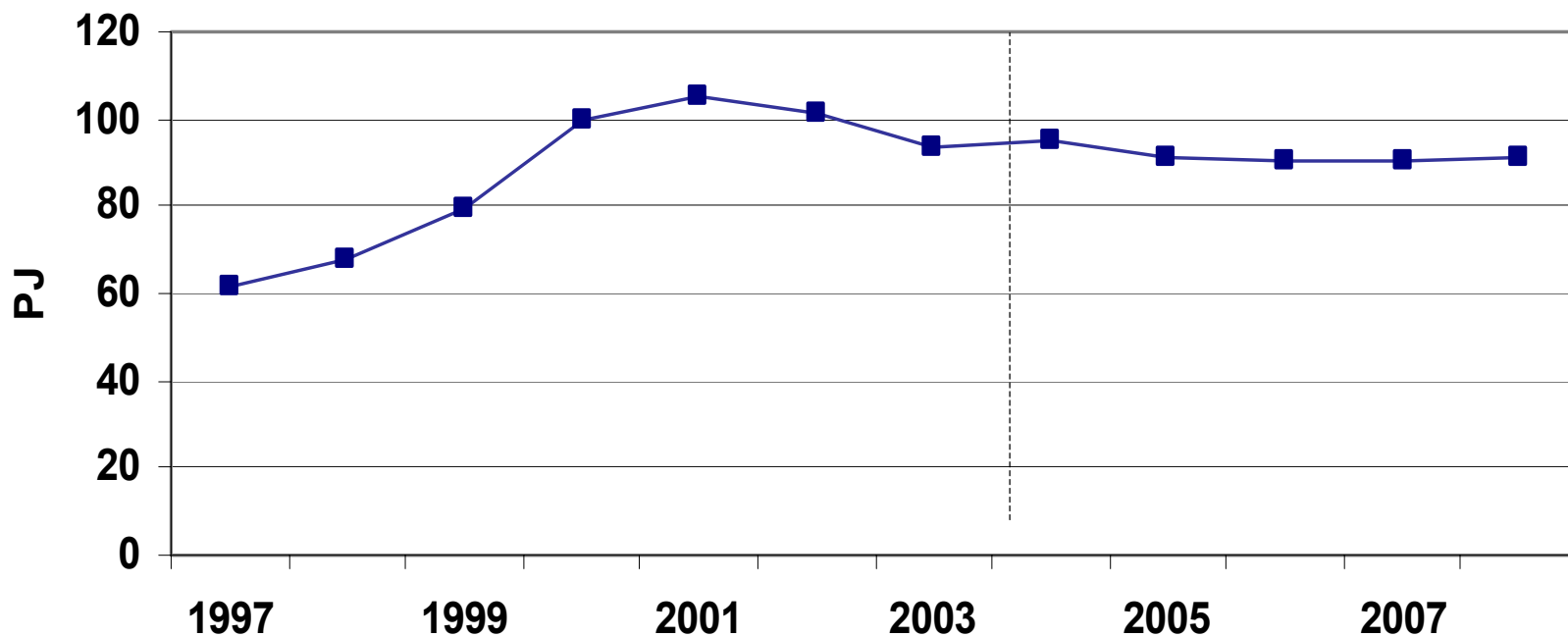
- Maui supply (and flexibility) ending
- Demand exceeds supply
- Step change to wellhead prices
- Decline in gas market demand
 - Petrochemicals
 - Power generation
 - Energy intensive industrials
- Early stages of new exploration

- Increased supplier market power
- Shortened reserves horizon
- Risk of insufficient indigenous gas
- High cost base of alternatives
- Significant risk to NZ economy
 - Industrial disinvestment
 - Loss of key markets for NZ producers
- Reduced economic growth

These Trends Affect NGC

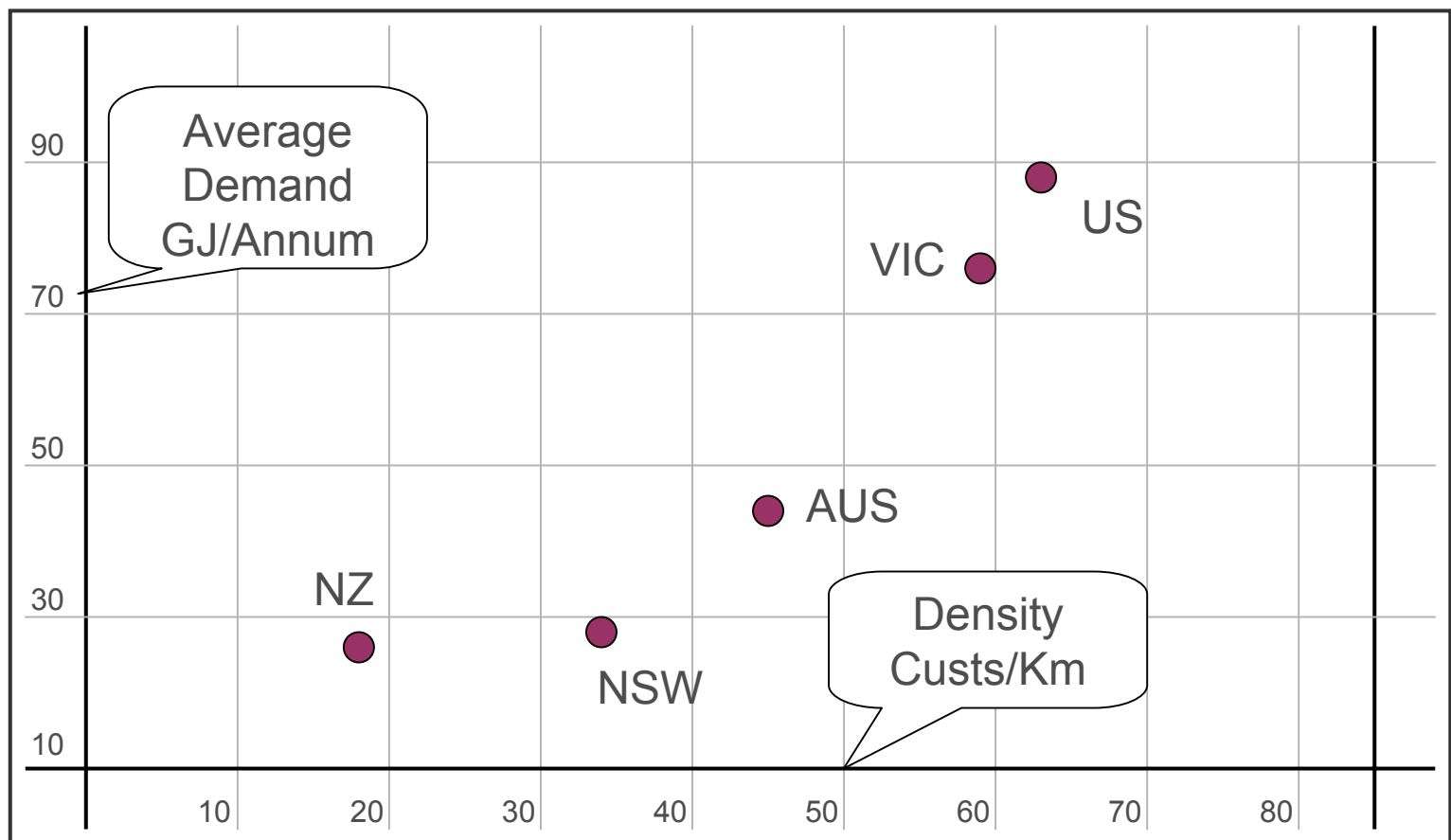


NGC Transmission Throughput 1997-2008

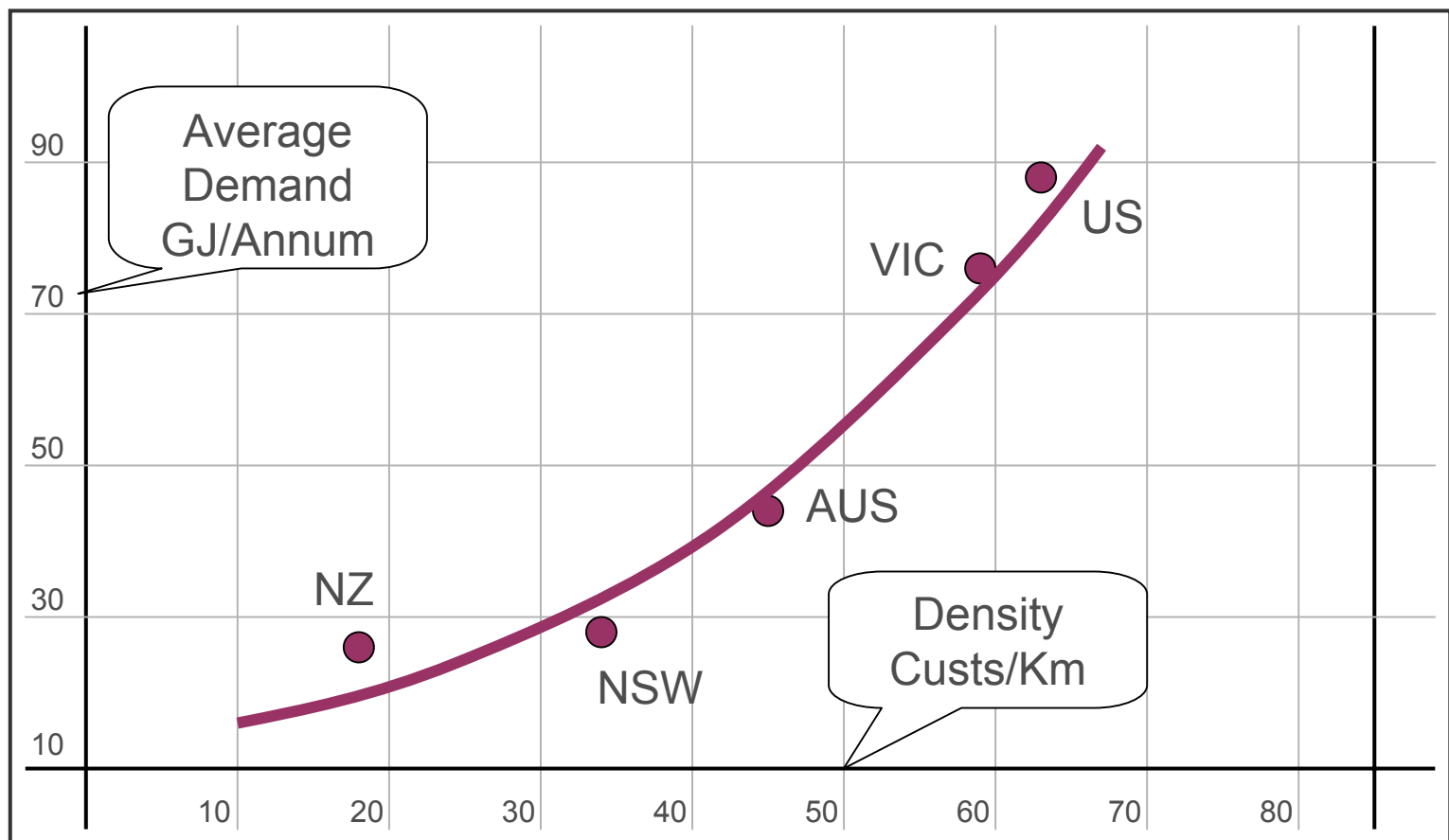


- To electricity and telecommunications because it is a discretionary product
- In NZ, because of its low penetration and sensitivity to market change
- For all of the foreseeable future, gas will be constrained by market forces
- Regulation is a blunt instrument that may damage the gas industry

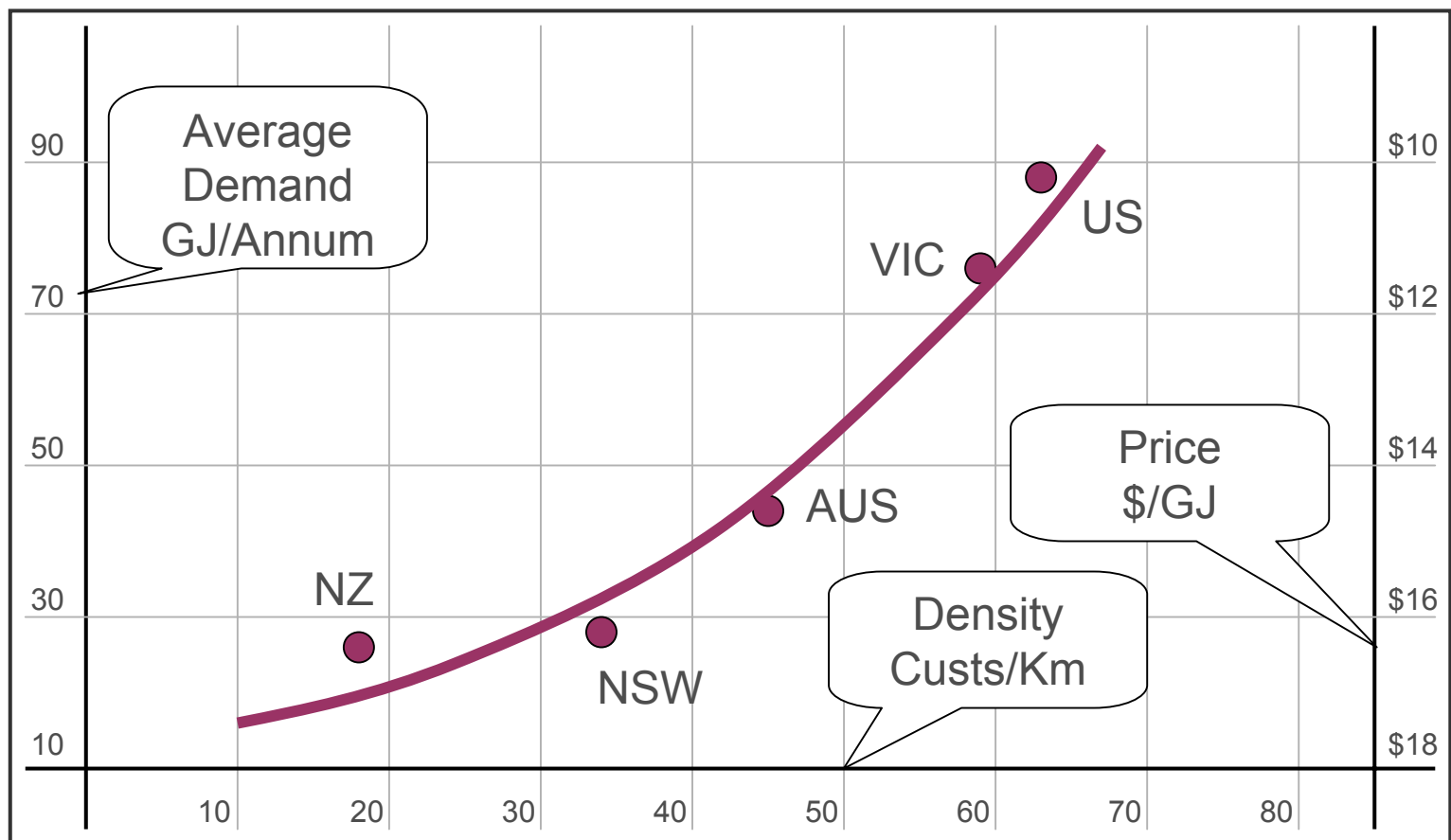
Utilisation is a Key Issue



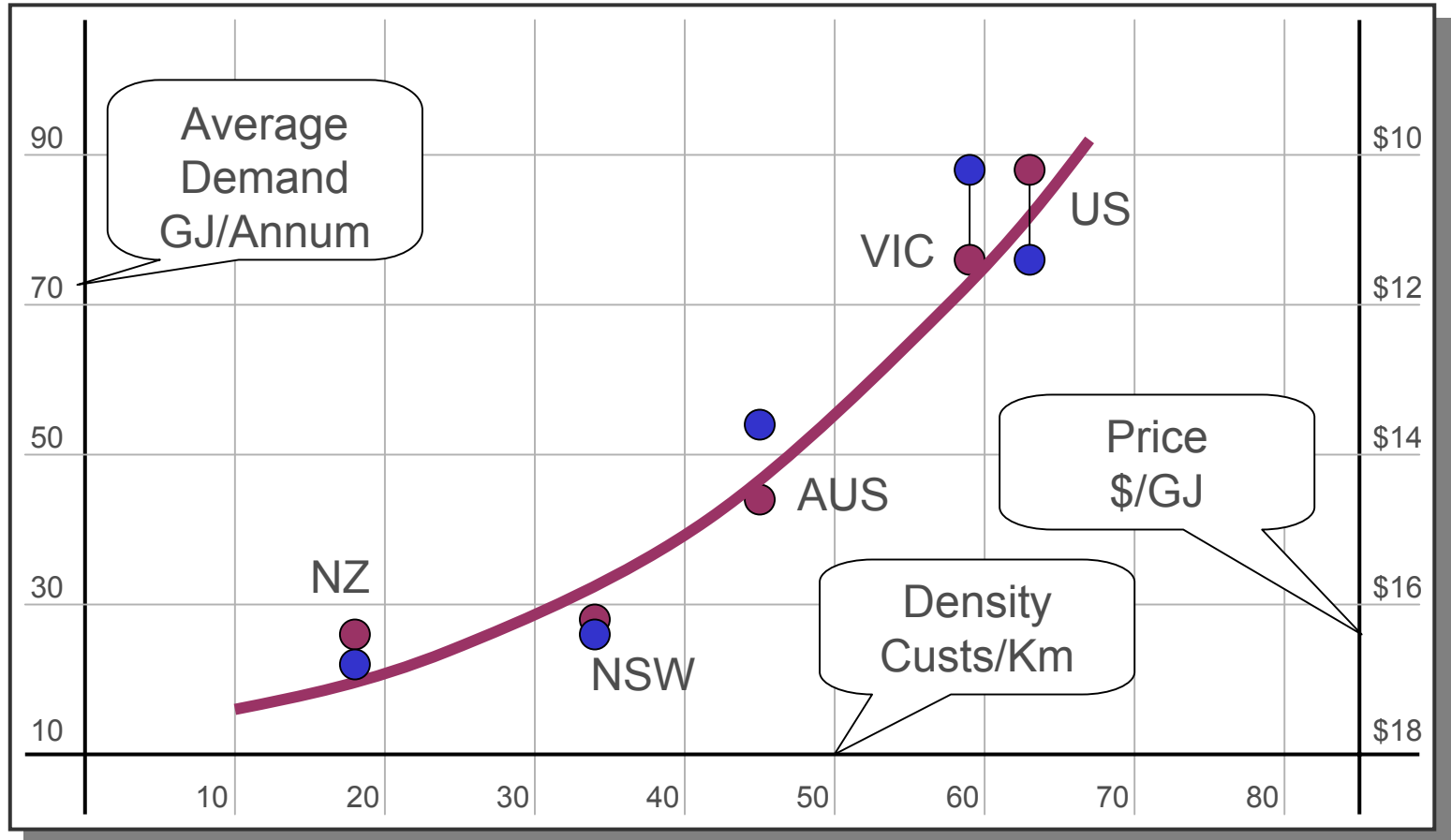
Utilisation is a Key Issue



Utilisation is a Key Issue



Utilisation is a Key Issue



Why Regulate?



- Regulation should reflect the underlying economics and commercial reality
- Evidence of excess profits is open to significant debate
- Gas service providers are constrained by other forces
 - Inter-fuel competition
 - Industry governance
- Regulatory comparison with Australia

- Without investment, the gas industry will not grow in NZ
- Net public benefits is the right test, but...
 - Foreign investment is crucial to NZ
 - The investment climate is always volatile
- Regulation can alter the balance of interest between current and future consumers

Conclusion



-
- The gas industry is small and subject to significant challenges

-
- The gas industry is small and subject to significant challenges
 - Control would require robust evidence of excess returns

- The gas industry is small and subject to significant challenges
- Control would require robust evidence of excess returns
- The Commission must be certain of the benefits of control, particularly to future consumers

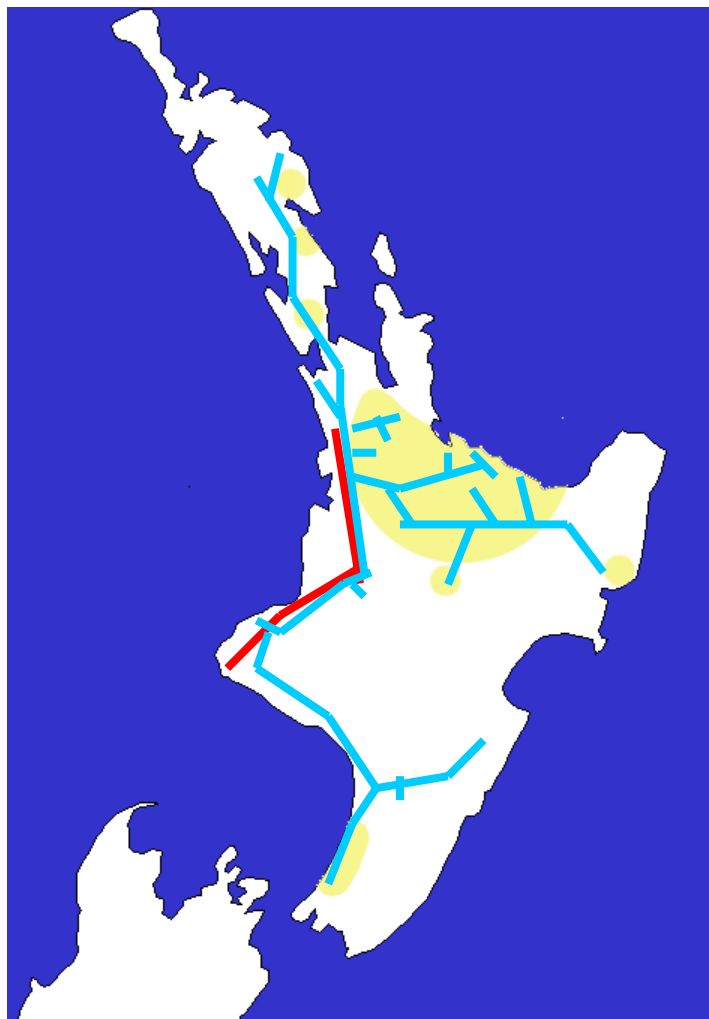
Commercial Overview



Part 2

- Gas as a fuel
- Transmission investment risks
- Distribution investment risks
- Innovation

NGC's "pipes" business



 **NGC
Transmission
Pipelines**

 **Maui Pipeline
(operated by NGC)**

 **NGC
Distribution
Networks**

Is gas a commodity in New Zealand?



- ↪ Specification gas is Fungible
BUT.....
- ↪ Few sellers
- ↪ Small market
- ↪ No Spot Market
- ↪ Long term fixed price contracts

Features of an immature, high risk market

® In NZ gas is a marginal fuel rather than commodity

Supply side uncertainty



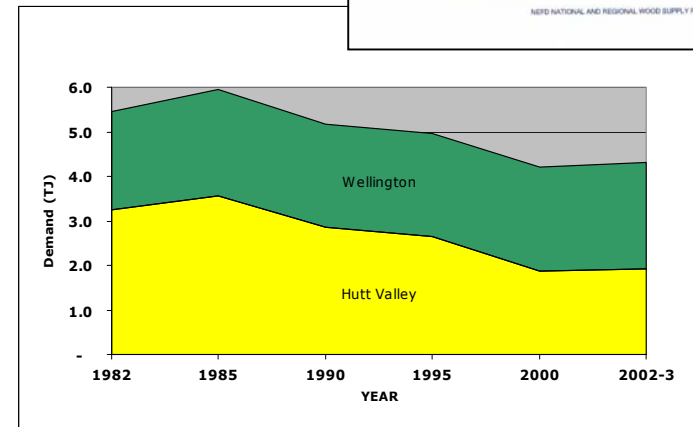
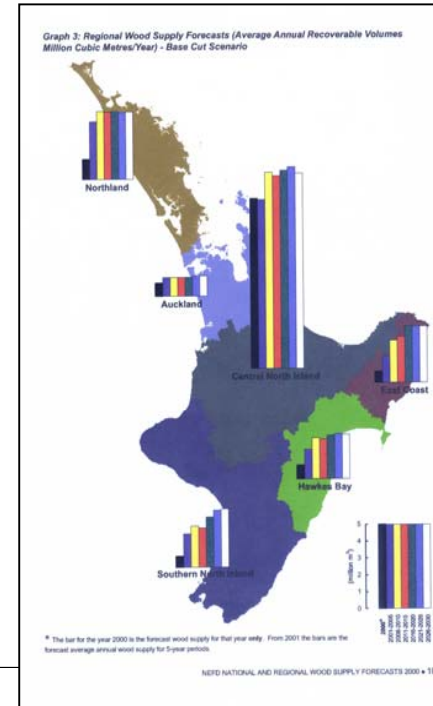
- NZ's largest gas source depletes early
 - Replacement options?
 - More small fields?
 - LNG?
 - Decline of industry?
- NZ's largest gas pipeline goes open access
 - Good news for NGC pipelines?
 - More use of Frankley Road pipeline?
 - Less use of Kapuni to Rotowaro pipeline?



Demand side uncertainty



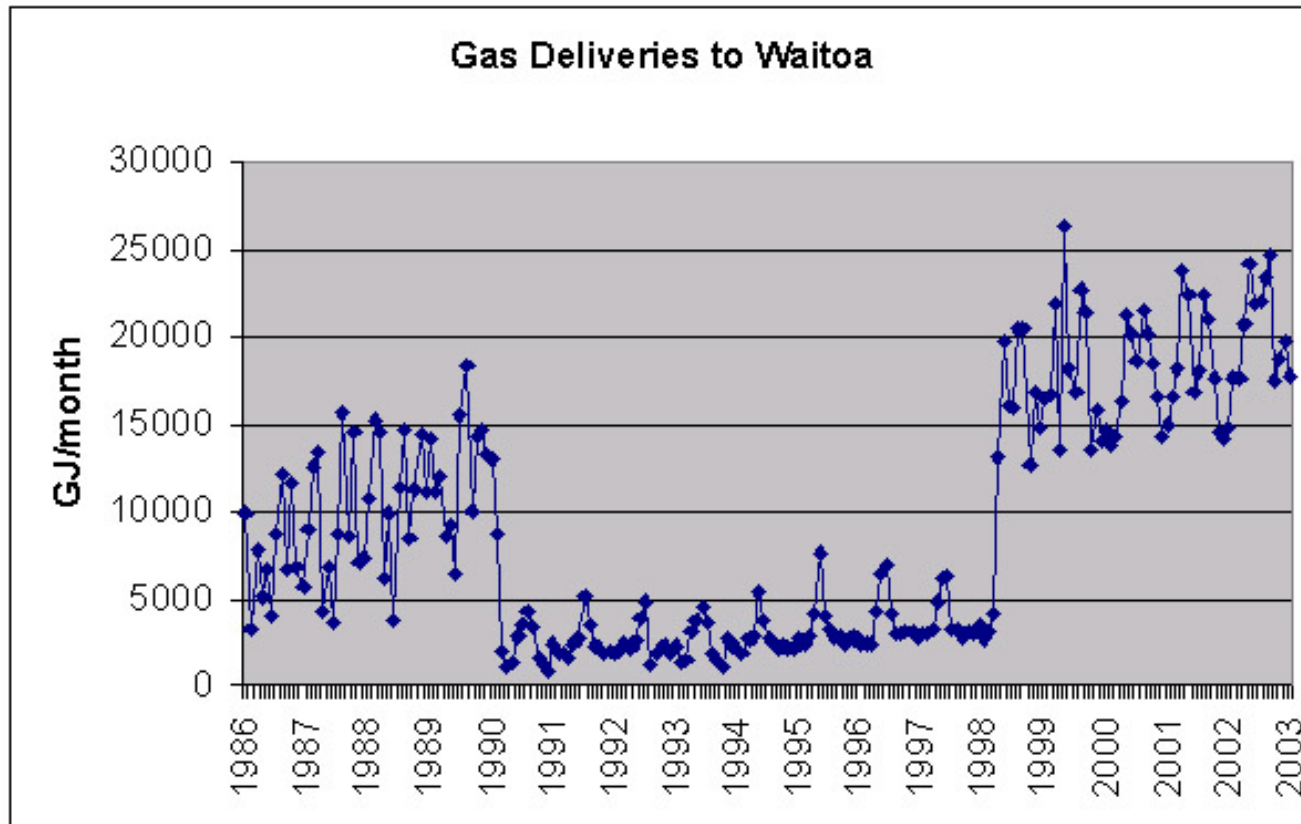
- Industry trends
 - Electricity industry deregulates
 - Dairy industry consolidates
 - Timber industry uses wood waste
 - Meat industry quits big freezing works
- Demographic trends
 - Industry moves to Auckland
 - Inner city living
 - Central heating



High risk pipelines - Waitoa



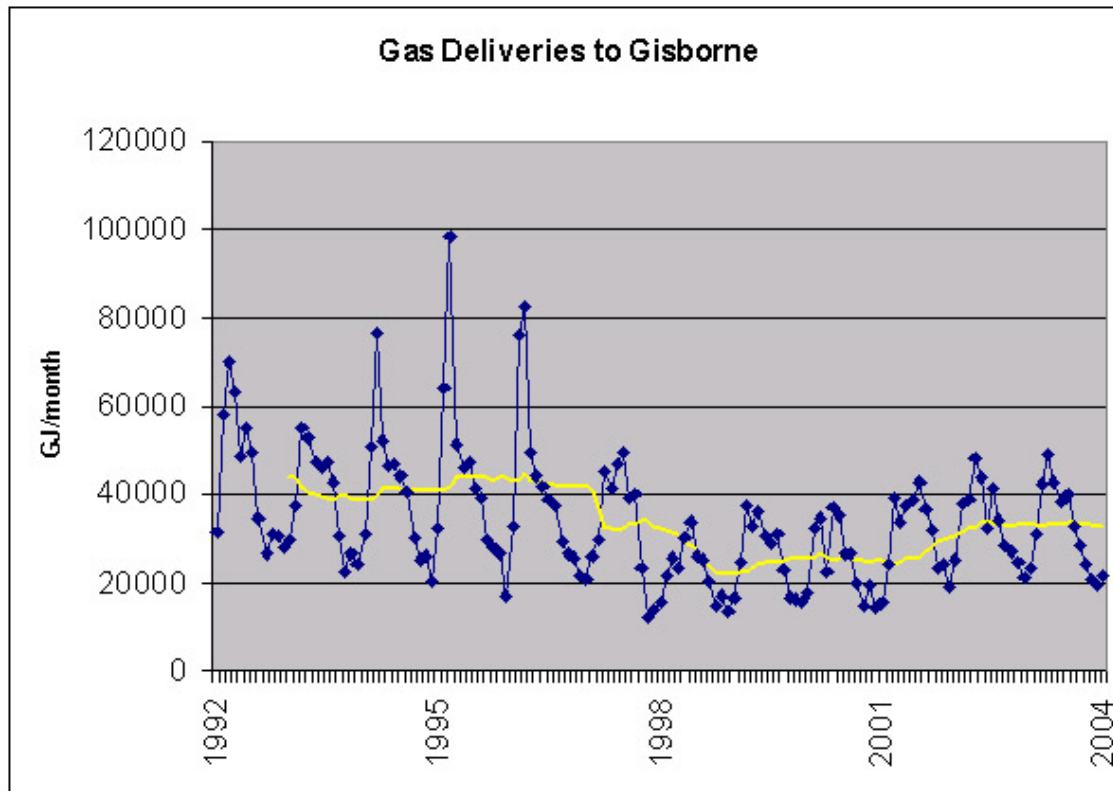
- Built 1985
- Capable of delivering 200,000 GJ/month



High risk pipelines - Gisborne



- Built 1984
- Capable of delivering 100,000 GJ/month



Transmission Asset Values



| SYSTEM | RC (\$000) | ORC (\$000) | ODRC (\$000) | EV Adjustment (\$000) | ODV (\$000) |
|---------------|----------------|----------------|----------------|-----------------------|----------------|
| BAY OF PLENTY | 208,134 | 189,846 | 134,999 | 25,021 | 109,978 |
| FRANKLEY RD | 55,863 | 35,740 | 21,361 | 0 | 21,361 |
| SOUTH | 260,386 | 187,567 | 115,987 | 0 | 115,987 |
| NORTH | 312,363 | 276,693 | 173,971 | 884 | 173,087 |
| MORRINSVILLE | 24,258 | 22,877 | 16,031 | 540 | 15,491 |
| OFF-MAUI | 10,246 | 9,820 | 7,148 | 0 | 7,148 |
| | 871,250 | 722,542 | 469,497 | 26,445 | 443,052 |



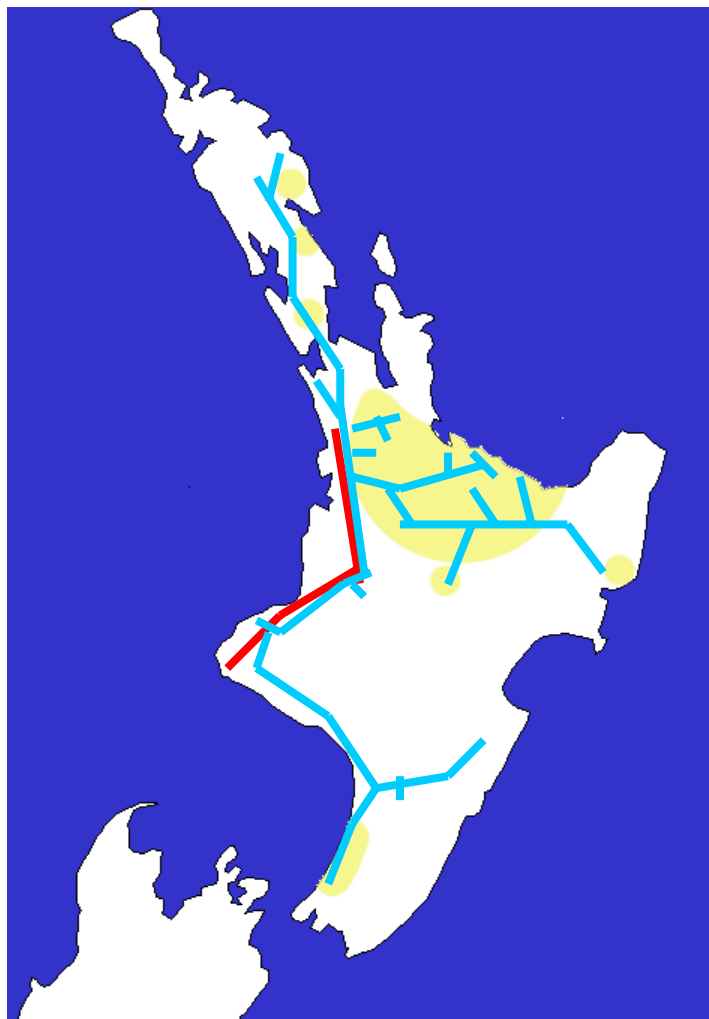
17% optimisation



6% EV writedown

- Risks from the supply and demand side
 - New fields, LNG etc.
 - Maui pipeline going open access
 - Competing fuels – coal, wood-waste geothermal
 - Demand more mobile than pipelines
- NGC needs to continue taking risks
 - NGC invests in Huntly to East Tamaki route designation

NGC's "pipes" business



 **NGC
Transmission
Pipelines**

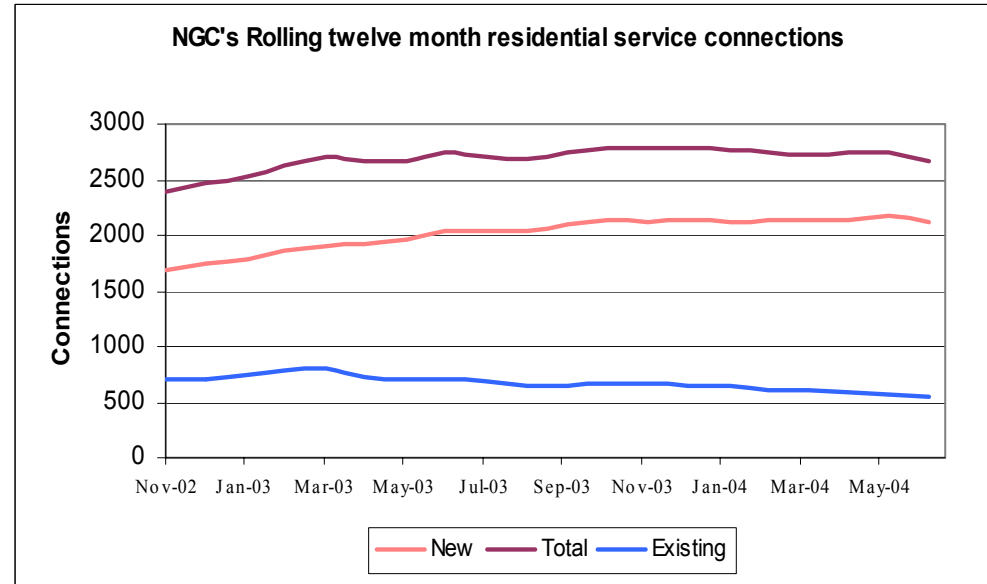
 **Maui Pipeline
(operated by NGC)**

 **NGC
Distribution
Networks**

Hard won growth



- Most new connections from new mains
- Gas only competes for some electricity demand – it is a marginal fuel



| | NGC | Vector | Powerco | Wanganui Gas |
|-------------------------|--------|---------|---------|--------------|
| Electricity Lines (Km) | | 22,700 | 14,930 | |
| Gas Lines (Km) | 2,400 | 4,580 | 4,170 | 348 |
| Electricity Connections | | 612,000 | 287,000 | |
| Gas Connections | 56,000 | 68,000 | 108,000 | 11,000 |

Distribution Issues



- Gas is a discretionary fuel – the market is difficult to grow
- Residential growth requires new investment (of 2,700 new connections in 03/04, only 500 were off existing reticulation)
- Investment is very marginal
- Commercial/Industrial growth requires innovative gas based solutions



Network Asset Values



| REGION | RC (\$000) | DRC (\$000) | ODRC (\$000) | EV Adjustment (\$000) | ODV (\$000) |
|---------------|----------------|----------------|----------------|-----------------------|----------------|
| Northland | 10,729 | 7,714 | 7,290 | 454 | 6,836 |
| Waikato | 100,832 | 49,907 | 46,616 | 343 | 46,273 |
| Bay of Plenty | 44,740 | 32,668 | 31,671 | 69 | 31,602 |
| Gisborne | 10,741 | 7,405 | 7,405 | 0 | 7,405 |
| Auckland | 12,016 | 11,219 | 11,188 | 1,683 | 9,505 |
| Kapiti | 14,854 | 10,329 | 10,313 | 270 | 10,043 |
| Total | 193,913 | 119,242 | 114,483 | 2,819 | 111,664 |



4% optimisation

2% EV writedown

- Demand side risks include
 - Availability and price of gas
 - Competing fuels - electricity, LPG, fuel oil, wood waste
 - Industrial and Demographic trends
 - Behaviour of Gentailers
- NGC needs to continue taking risks
 - Investing in new reticulation

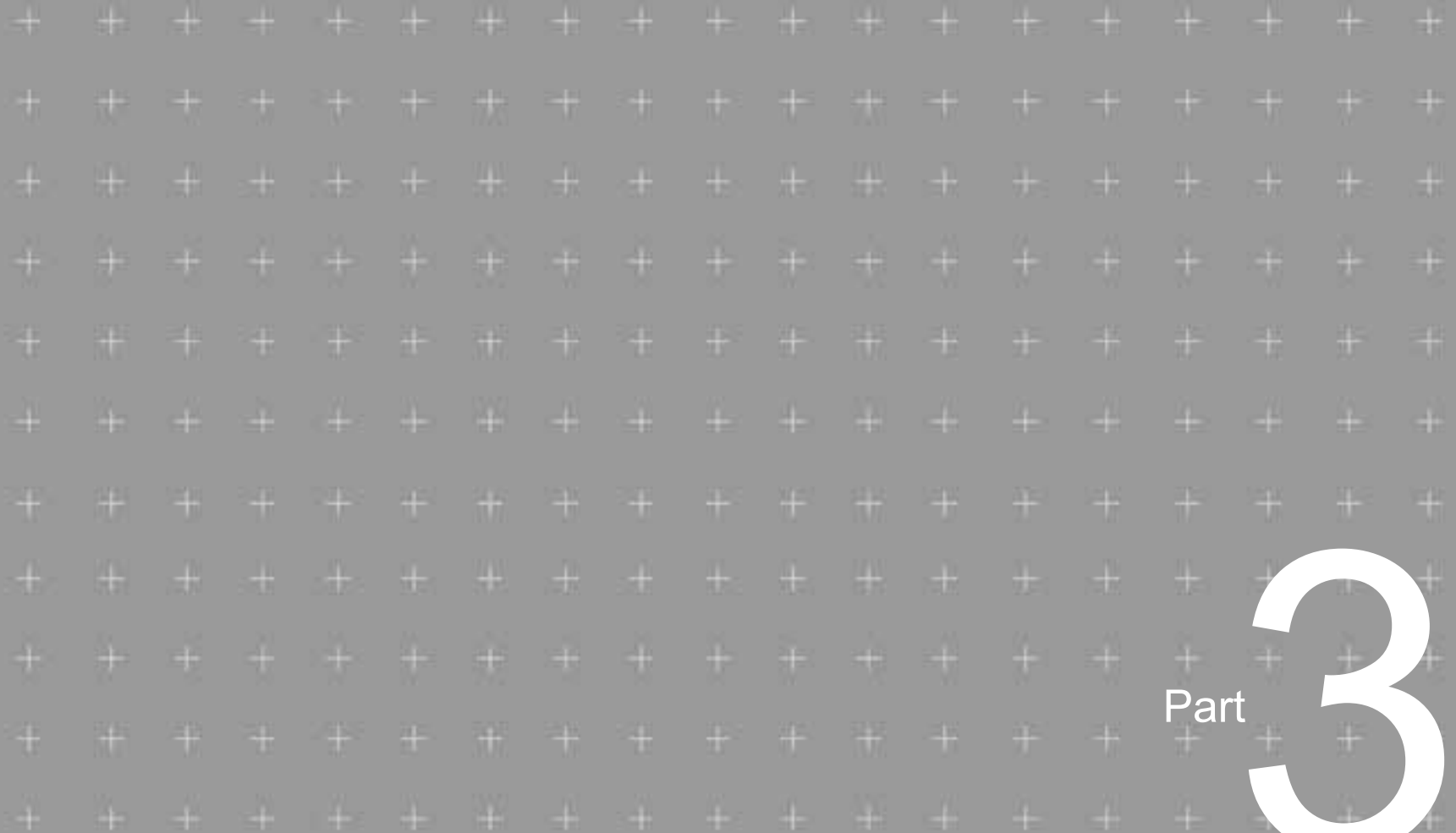
Commercial Summary



- Gas in NZ is not a commodity
- Transmission pipelines in NZ are risky
- Distribution pipelines in NZ are risky
- Innovation matters



Business Concerns with Model



Part **3**

- Is the model an average or a forecast?
- NPV=0 and practice
- Asset stranding
- Kapuni North pipeline
- Dynamic efficiency issues
- Factual & counterfactual
- Productive efficiency
- Information estimates
- Other significant concerns
- Impact of key concerns

- *“Normal returns need to be assessed over a period of time, so that singular events do not bias the results and thereby unduly influence the Commission’s recommendations. However, assessing returns overtime can be a difficult issue.”*
 - Draft Report, Chapter 4 Assessment Principles (para 4.29)
- Dr Lally warns that asymmetric risks present particular difficulties and suggests an approach if the biases they introduced were considered slight.
 - Lally (2004), The Weighted Average Cost of Capital for Gas Pipeline Businesses (pp 3-4)
- It is not reasonable to consider the impact of an issue to be slight, if it changes the model’s results from control to no control.

- Optimisation and economic value risks best borne by company
- Incentive on asset owner to:
 - avoid stranding, or
 - find alternative economic uses
- Otherwise consumers exposed to volatility and costs
- ODV process reflects stranding through
 - optimisation of the system, and
 - economic value adjustment to resultant system

Kapuni North Pipeline



- Stranded due to the Maui pipeline
- From 2001 capacity was being sold, including to allow Swift's Rimu gas to come to market in 2002
- Capacity fully sold by 2003, so de-optimised in the 2003 valuation
- \$50m increase in valuation
- Model treats this the same as a revaluation
- This assumption leads to a control recommendation for NGCT
 - If an average, this event biases the model
 - If a forecast of control, NGC would have sought ex ante dispensation or the pipeline would not have been utilised

NPV Example



- NGC has provided a 20 year example to illustrate the issues associated with a shortened assessment period
- Table D ($NPV > 0$) and Table B ($NPV = 0$), but only the sample period is different
- Even with reduced revenues compared to the full asset life a de-optimisation can lead to $NPV > 0$ in a shortened assessment period
- Will there be future changes in stranding?
- Implicitly the terminal value is the estimate of future earnings but it incorporates significant uncertainty

- Assessment over asset life or snapshot
 - Risk of a single event bias
- Revaluations vs stranding
 - Revaluations treated as income
 - Optimisation and economic value adjustments require a different approach to match reality
 - An issue recognised in the Draft Report
- Ex post recovery impractical in reality
- Mutually exclusive options in the model
 - If ex post use DRC in excess profit equation
 - If ODV exclude stranding as income

- Preserve incentive
 - Frankley Rd pipeline & Derby Rd compressor station (optimisation \$20m)
 - Storage, hub, wholesale market?
 - Gisborne (EV \$25m)
 - co-generation to support electricity system?
 - NGCT: Optimisation \$150m, Economic value \$26m
- Past was volatile
 - NGCT stranding: 1997 29%, 2000 36%, 2003 23%
 - NGCD stranding: 1997 2%, 2000 3%, 2003 6%
- Future is not certain

- Forward looking
 - Behaviour would have been different
 - Incentive for growth
- Therefore use:
 - Forecasts only, or
 - If averaging, start at year 0 & correct for one-off events

- Can not assume additional gains under price control
- Investor owned company listed on the NZX
- If inefficient, threats of:
 - takeover
 - by-pass
 - inter-fuel substitution
 - management change
- Can not rely on Meyrick study to assume additional gains
 - NGCD a superior cost performer, 30% lower than US firms
 - NGCT is simply not comparable to the Moomba to Sydney pipeline
- Under control would save up gains in years 4 & 5

- NGC forecasts provide the best estimate of future
 - Prepared for the Board, included scenarios
 - Basis of information provided to investors and the market
 - Not taking a forward looking approach leads to control
- Common cost allocation
 - Strict top down ACAM around 100% of actual
 - Allocation on basis of funds employed around 62% of actual
 - NGC's s70E responses only 54% of actual
- Forecast tax expense corrections
 - Price increase impact not included
 - Transmission's non-deductible expenditure not included
 - Distribution under-estimated
- WACC – risk free rate
 - Forecast risk free rate needs updating to July 2004
 - Model assumes control period of 5 years but risk free rate of 3 years

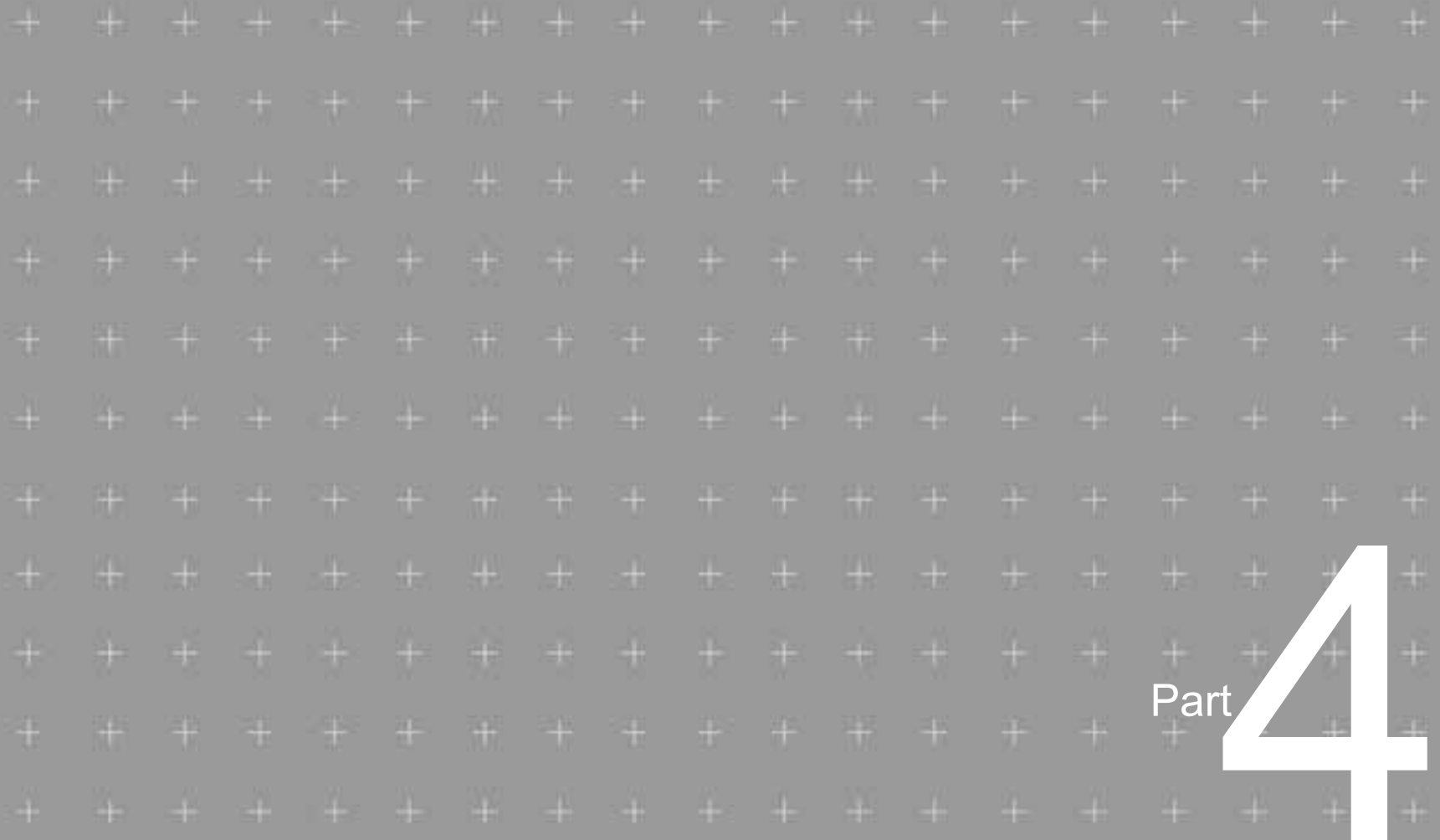
- **Sale of Asset Gains**
 - Gain not related to excess profits
- **Valuation of Easements**
 - Replacement cost should be used
 - More appropriate date for indexing
- **Costs of control**
 - This inquiry is the decision process, not the one that would establish the control regime
 - Direct and indirect costs should remain in opex as another process would be required to set up the control regime
 - The model deducts more from opex than it attributes to the costs of control

Impact of Concerns



| | NAB (\$000s) |
|--------------------------------|--------------|
| • NGC Transmission | |
| – Commission's Baseline | 3,322 |
| – Forward looking | 495 |
| – Kapuni North pipeline | -625 |
| – Combined (CC model) | -2,176 |
| – A more realistic WACC | -5,668 |
| • NGC Distribution | |
| – Commission's Baseline | 1,077 |
| – Forward looking | 27 |
| – Realistic dynamic efficiency | -269 |
| – Combined (CC model) | -2,333 |
| – A more realistic WACC | -3,833 |

Economic Response to Model



Part **4**

- Professor Lewis Evans
- Nathan Strong

Conclusions & Questions



Part **5**