GAS INDUSTRY COMPANY LIMITED

www.gasindustry.co.nz

NZ Gas Story and Regulation Update

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NZ Gas Story and Regulation Update

Topics:

1. Gas Industry Company's role
2. Where the NZ Gas Story is up to
3. Where it is headed

Gas Industry Co – the ‘co-regulatory model’

- Formed 2004 as a *co-regulator* of the downstream gas sector under Gas Act 1992
- Government/industry compact:
  - healthy domestic gas market underpins Government energy policy and upstream investment
  - industry wanted right-sized regulatory framework for small gas NZ gas industry
  - in return, industry needs to maintain Government confidence that greater intervention not warranted

Gas Industry Co role

- GIC is the **'industry body'** under Part 4A Gas Act; Government Policy Statement on Gas Governance 2008
- GIC's principal objective is to develop governance arrangements that:

  'ensure that gas is delivered to existing and new customers in a safe, efficient, and reliable manner'

- As '**co-regulator**', GIC must:
  - consult;
  - consider non-regulatory and regulatory options; and
  - obtain Minister's approval for any proposed regulation
- Other objectives:
  - **barriers to competition** in the gas industry are minimised
  - **incentives for investment** in gas processing facilities, transmission, and distribution are maintained or enhanced
  - delivered **gas costs and prices** are subject to sustained downward pressure

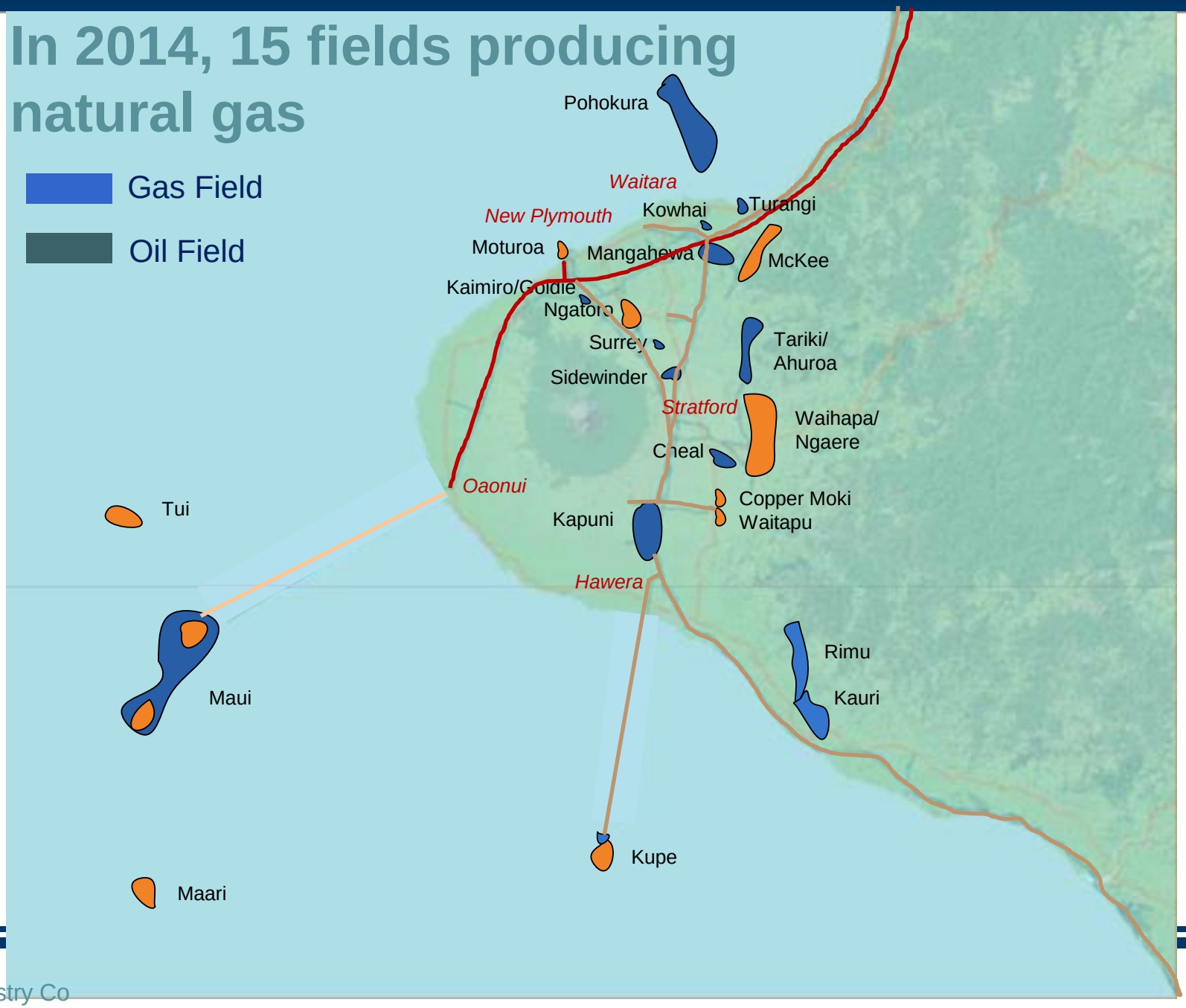
Gas Industry Co Governance

- Special purpose company established under Gas Act
- Governed by Board of Directors
  - Independent Chair and majority of Independent Directors
  - Remaining Directors are industry CEOs
- Shareholders – principal industry participants (Shell, Nova, Methanex, Contact, Genesis etc…)
- Required to consult on proposed strategy, work programme and funding
  - high levels of industry support in recent years

Where the NZ Gas Story is up to…

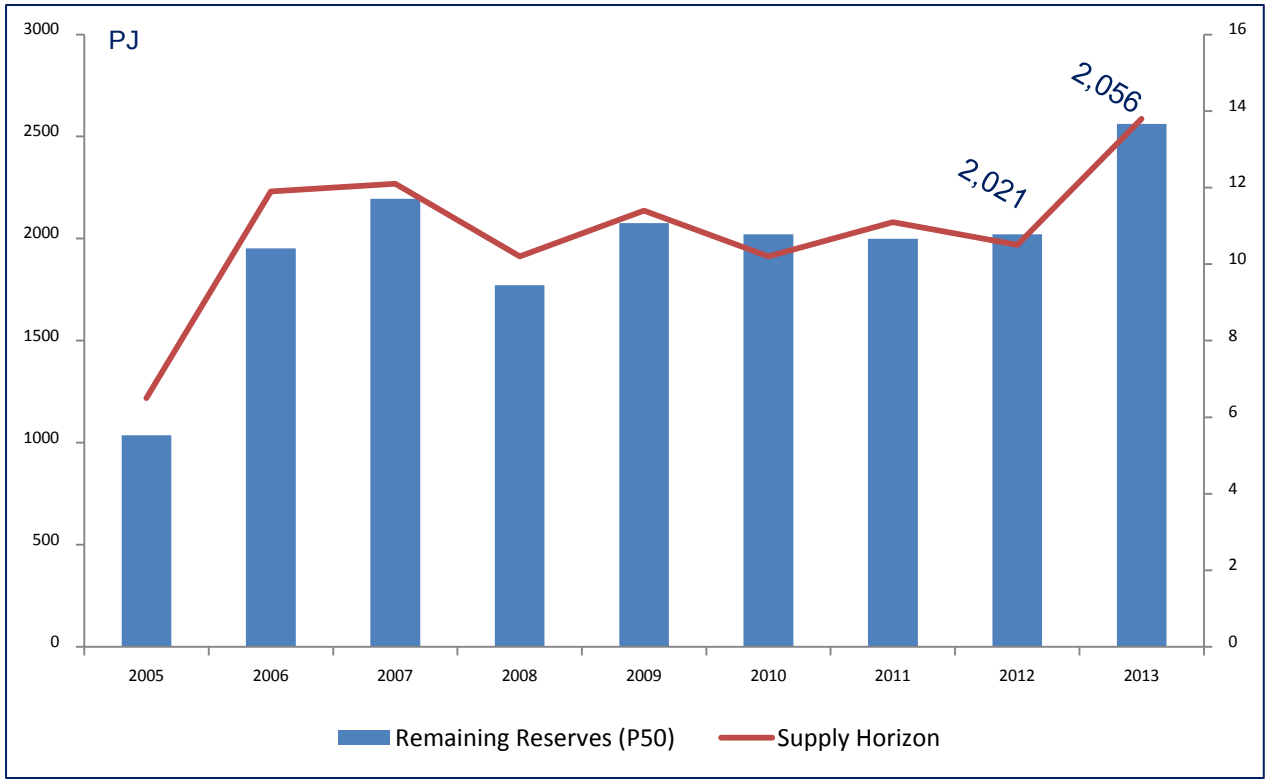
From 1970, Kapuni and Maui fields opened NZ's North Island to natural gas

In 2014, 15 fields producing natural gas



Gas reserves increased 31% in 2013 to 13 years (P50)

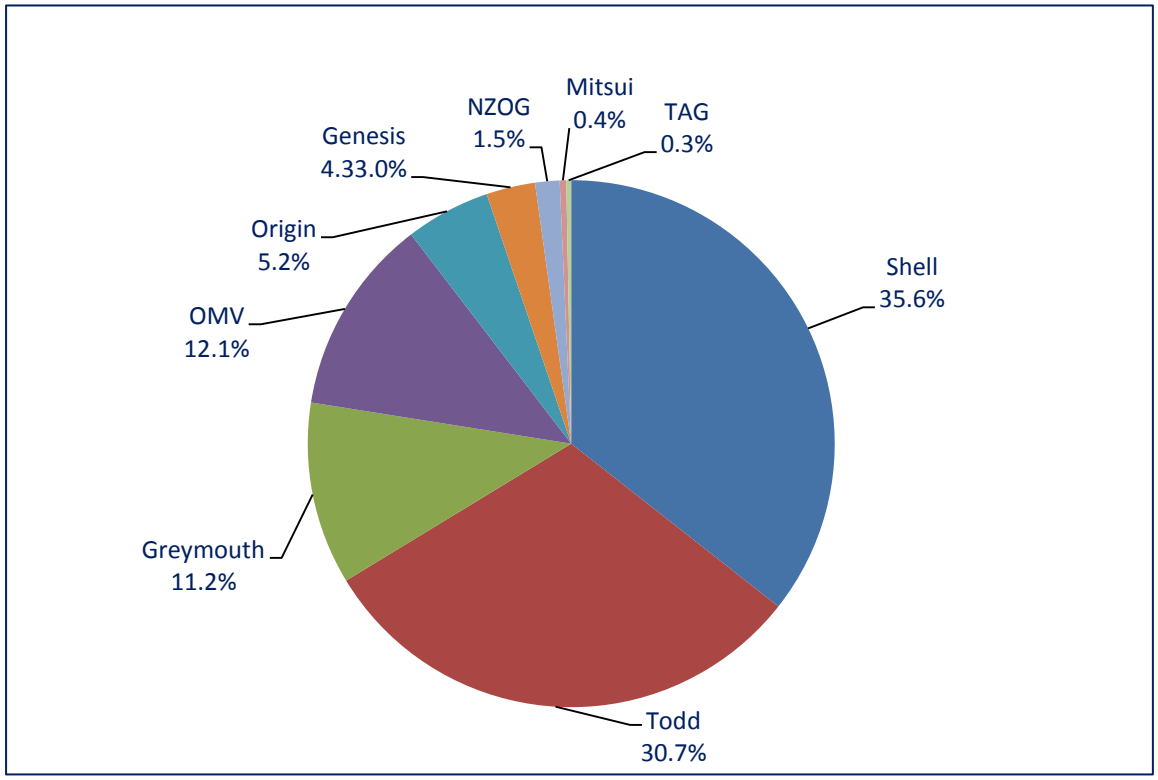
Remaining Reserves/Supply Horizon 2005-2013



Source: 2014 Energy in New Zealand

Shell and Todd are the largest gas reserves owners, but smaller players are establishing a foothold

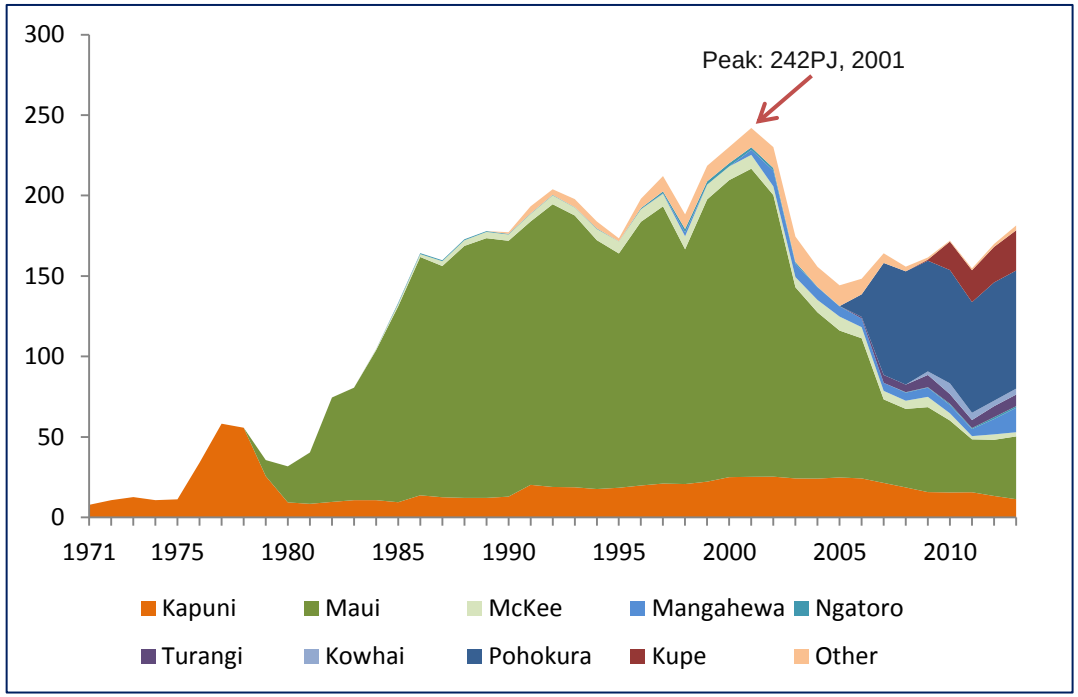
Producers' Share of Remaining Gas Reserves 1 January 2014



GIC calculated : Source: 2014 Energy in New Zealand

Annual production has fluctuated with Maui decline, but is picking up…

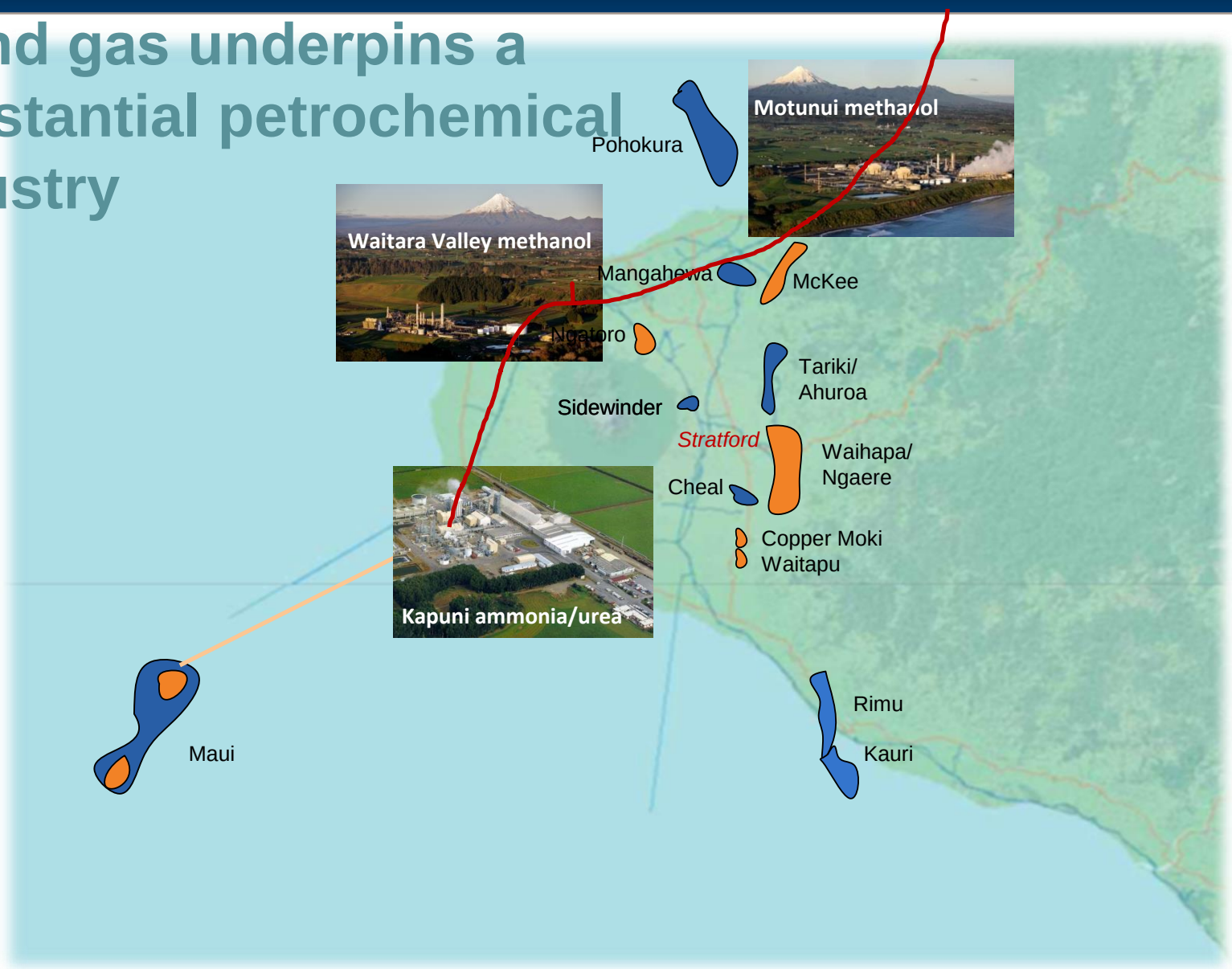
Natural Gas Production by Field 1971-2013 (PJ)



Source: 2014 Energy in New Zealand

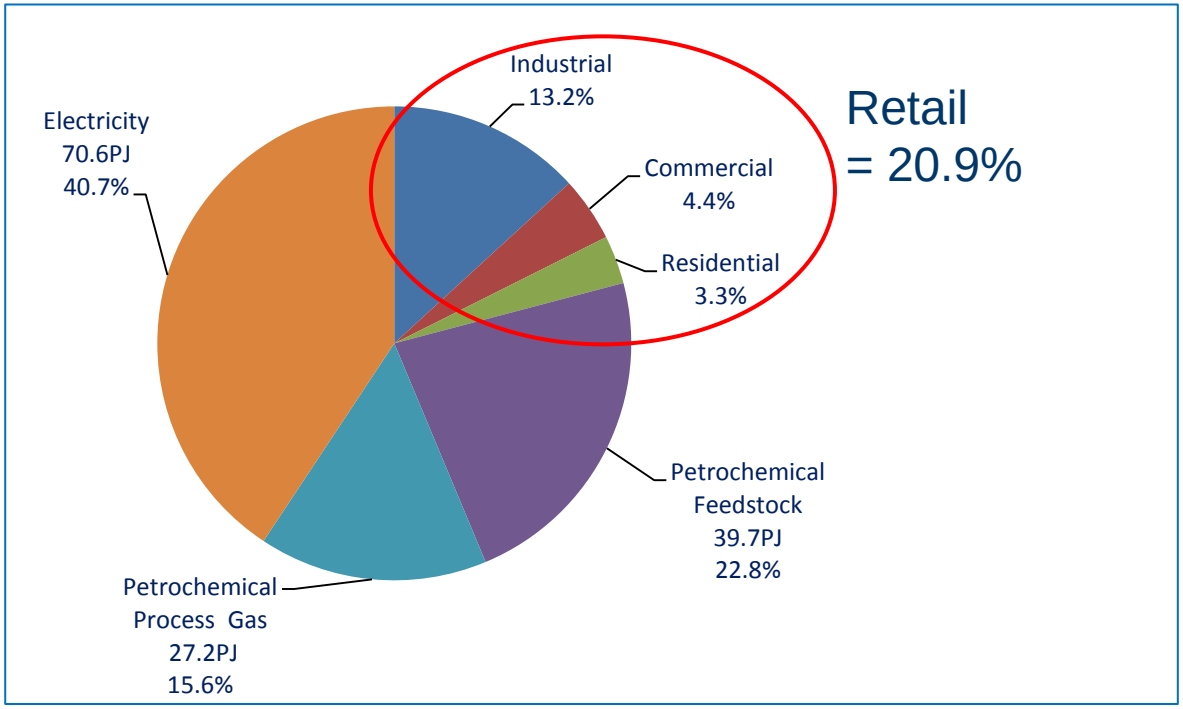
Gas supports electricity supply security through thermal generation…

…and gas underpins a substantial petrochemical industry



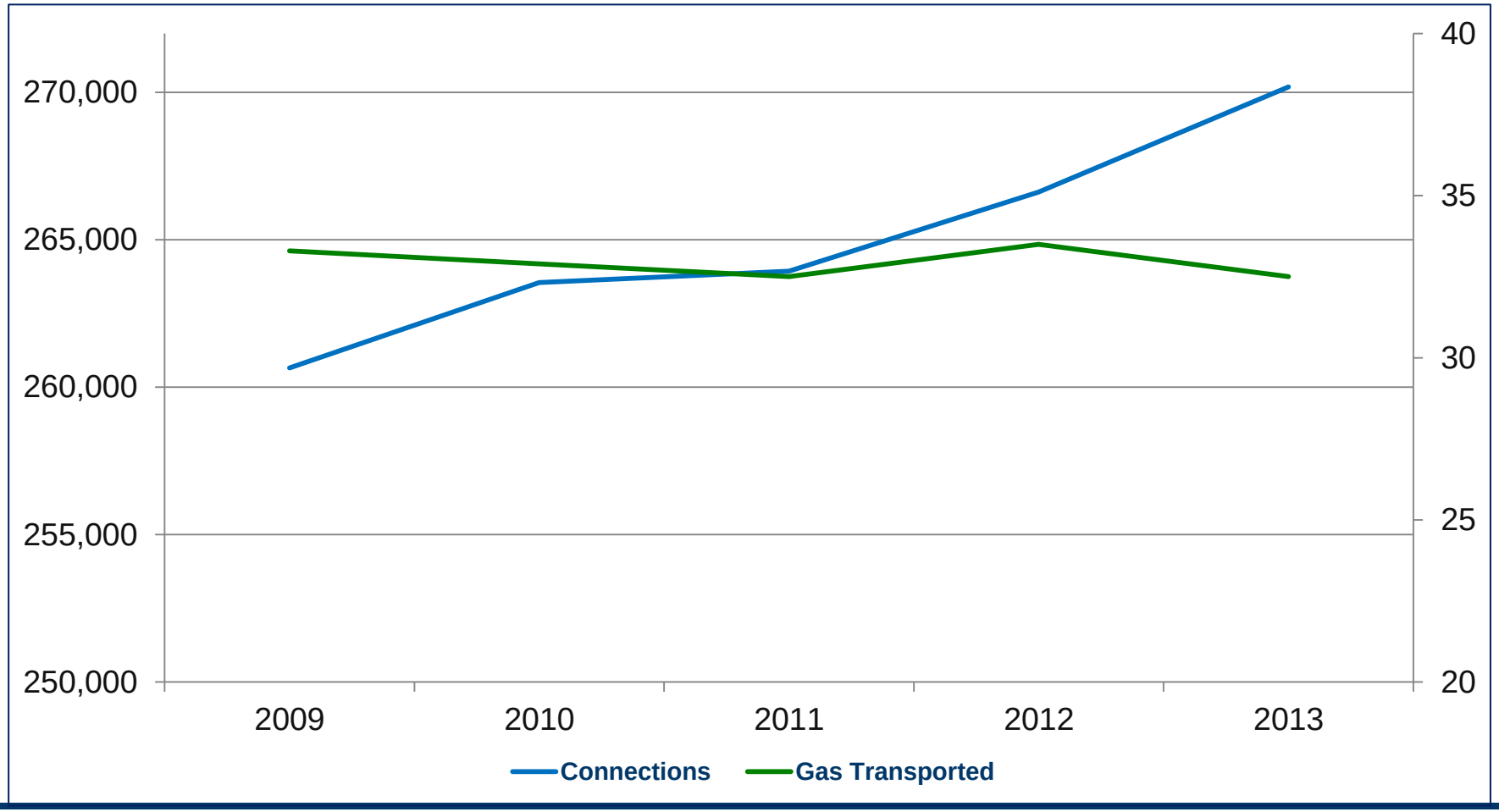
80% of NZ gas is used in electricity generation and petrochemicals; 248,000 households use just 3.3%

Consumer Gas Use 2013 (174PJ)



Source: 2014 Energy in New Zealand

Distribution connections are growing, but gas volumes are easing



Co-regulatory model underpins today's gas market…

Governance through a mix of regulatory and non-regulatory arrangements

- Rules/regulations establish a platform for the downstream industry
  - switching rules
  - downstream reconciliation
  - critical contingency management
  - compliance
- Case examples:
  - retailer failure (E-Gas)
  - Maui Pipeline outage

Governance through a mix of regulatory and non-regulatory arrangements

- Non-regulatory arrangements also work well:
  - Gas Retail Contracts Oversight Scheme
  - Gas Distribution Contracts Oversight Scheme
  - Interconnection Guidelines
  - Information Gathering Protocol

The model seems to be working…

Customer choice/competition

- 98% of consumers have a choice of at least 6 retailers
- Churn has tripled to around 17% per annum
- Switching time down to 7 business days (previously weeks / months)

Efficiency

- Annual unaccounted-for gas (UFG) down to 1.1% (nearly halved)

Transparency

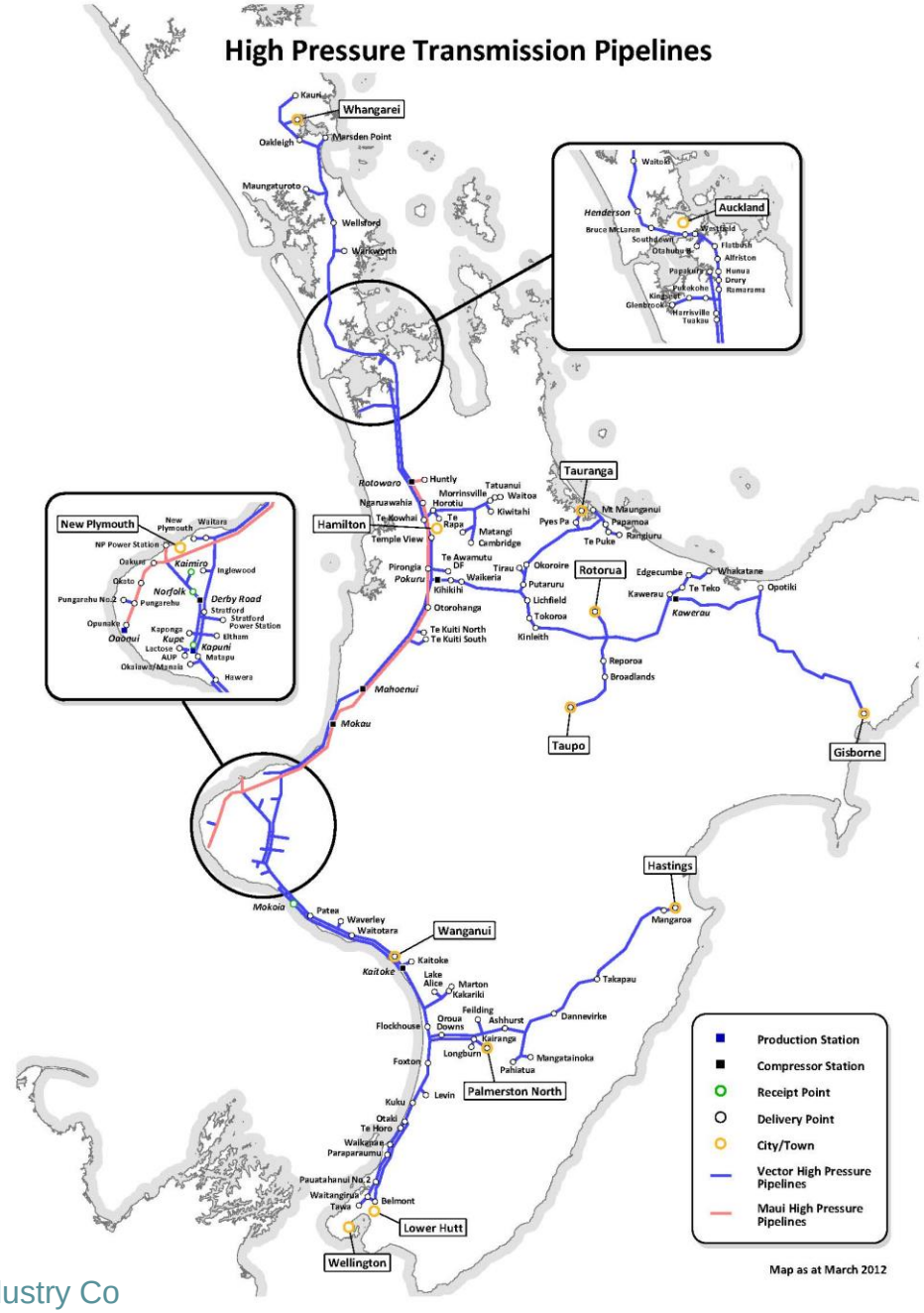
- Customer numbers and volume market shares published
- Switching gains / losses readily available
- Market information routinely reported by media

Consumer voice

- Formal complaints process (Electricity & Gas Complaints Commission)

Compliance/Standards

- High level compliance across all rules/regulations



Case Study: gas transmission governance

Case study: gas transmission governance

- Two open access transmission systems governed by
  - multi-lateral codes (open access/allocation)
  - economic regulation (price/quality regime)
  - technical regulation (to international standards)
- 2009: contractual congestion concerns for key Auckland market
- Auckland gas demand increasingly ‘peaky’
- 2011: industry asked GIC to lead a project

Case study: gas transmission governance

- Developed voluntary ‘Bridge Commitments’ and GTX bulletin board for capacity trading
- Panel of Expert Advisers:
  - confirmed need to optimise existing pipelines; not invest in more pipelines
  - recommended industry-led “evolutionary convergence” of existing transmission codes rather than regulation
  - Proposed key principles/elements
- Industry working group developing code changes
- GIC developing ‘regulatory counterfactual’ if group fails to progress

Where are we heading?

Gas is transforming global energy and environment debate…

- IEA predicts 70% increase in world electricity demand by 2035 – underpinned by doubling of gas-fired generation

- Context of mounting worries about energy security, climate change, nuclear power

- US leading the way in unconventional gas. Shale gas is driving down prices and coal-fired generation:
  - US natural gas production up 56% by 2040
  - gas-fired electricity generation will overtake coal by 2035
  - US already achieved 70% of CO^2 emissions reduction target
  - US to become a net exporter again by 2020

- Australia has 15% gas-fired generation, but heavily reliant on coal (75%)

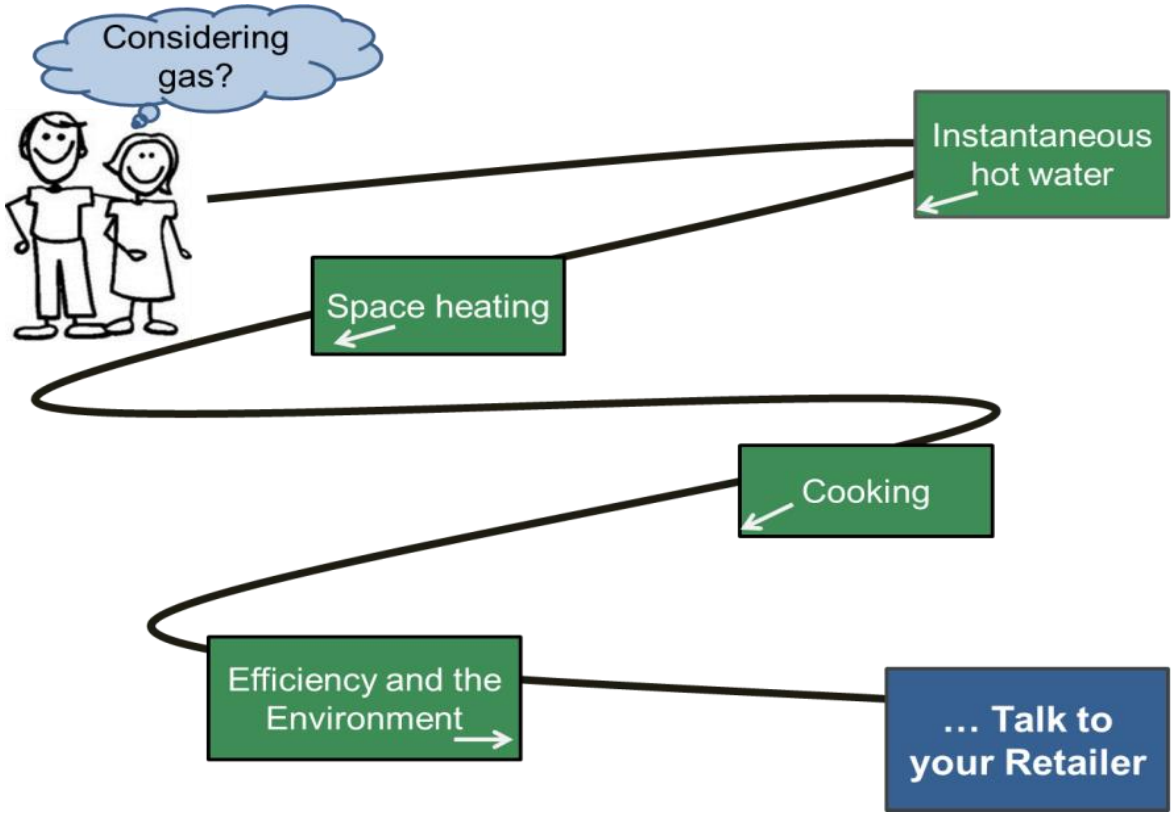
- Australian gas production has soared – CSG contribution up from 2% to 13% in 10 years. Much is for export:
  - $200b new-build LNG capacity nearing completion
  - $65b on three CSG-to-LNG projects

Gas has a voice in the green economy debate

- Gas is part of the global debate on climate change and the drive for greener economies.
- Internationally, gas has an important role in environmental sustainability:
  - cleanest burning among fossil fuels
  - for many countries it is a bridge to a greener future by replacing more harmful energy forms (coal, oil)
- Opportunities for gas substitution in NZ fewer than in other countries (US, Australia) because we already have a high level of renewable energy:
  - 37% of primary energy
  - 75% electricity generation; 90% target by 2025
- Direct gas use and efficient technologies can lower energy emissions.

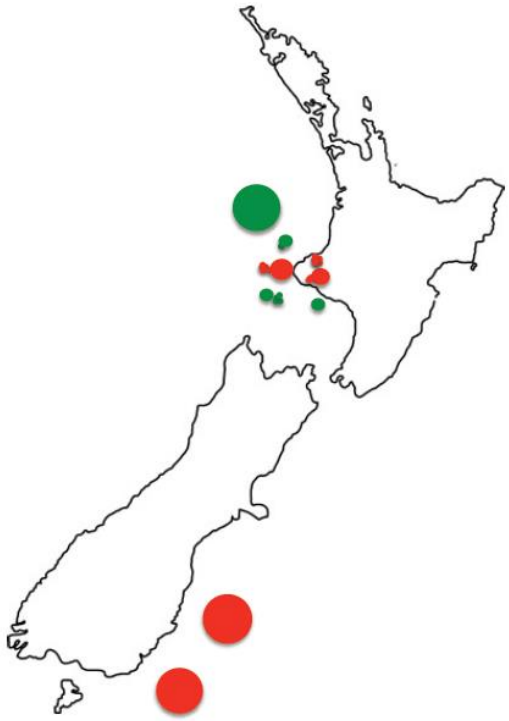
'Making the most of the country's abundant energy potential for the benefit of all New Zealanders' through.. 'the environmentally responsible development and efficient use of the country's diverse energy resources' – New Zealand Energy Strategy

Gas holds its own in the highly competitive energy market – for homes and businesses



Text and image from the report: *Consumer Energy Options: An Evaluation of the Different Fuels and Technologies for Providing Water, Space and Process Heat*, Concept Consulting, November 2012.

Upstream investment is high, supported by Government policy



Source: *Commercialisation Issues, Opportunities and Challenges in the Event of Substantive Gas-Rich Exploration Success in New Zealand*, John Kidd, Woodward Partners May 2014

Opportunities to grow the NZ gas market?

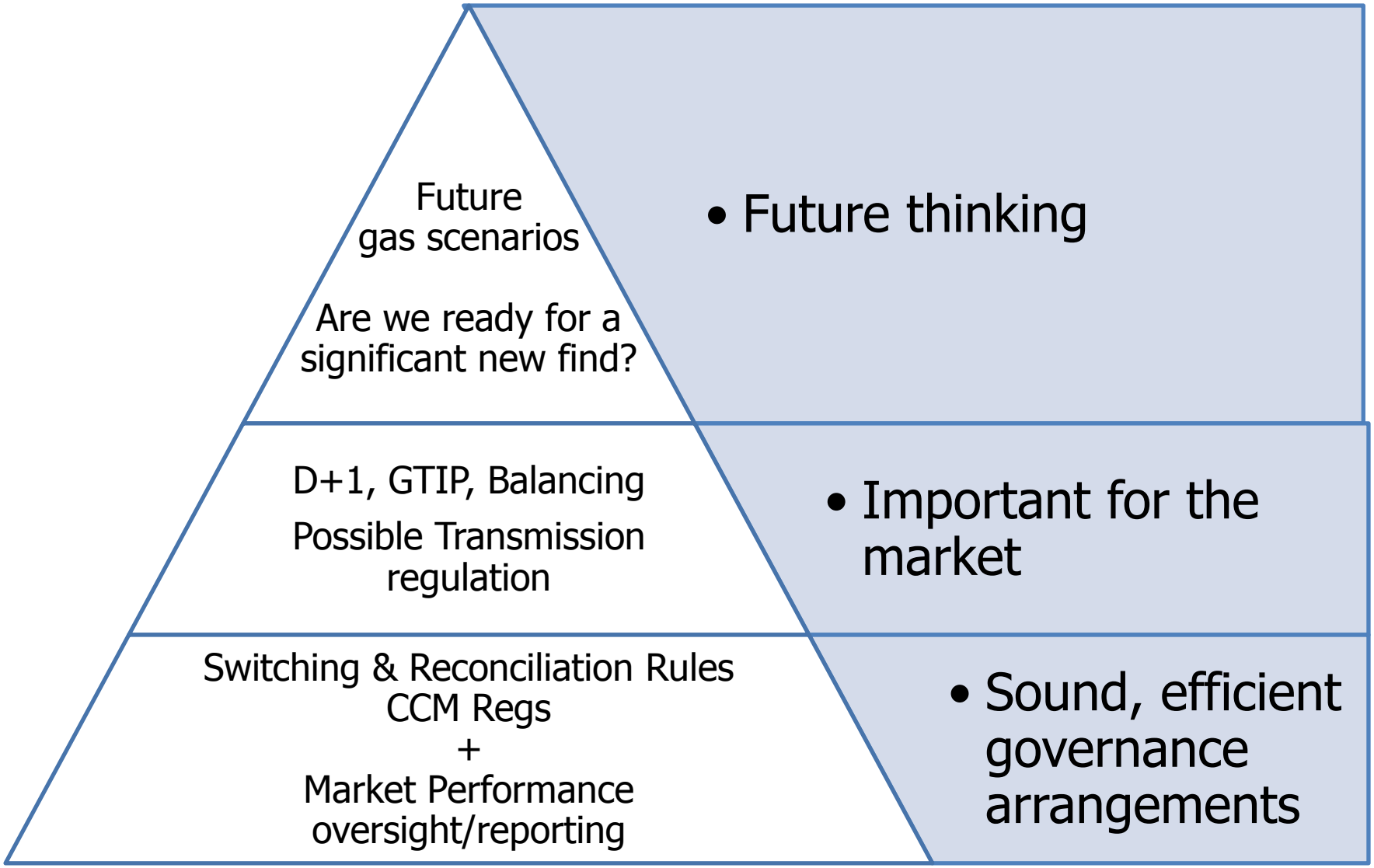
- Traditional markets can be further developed:
  - industrial heat
  - electricity generation (South Island)
  - reticulation
  - fertiliser
- Innovative developments may translate to NZ, depending on cost/scale:
  - micro technology enabling direct LNG consumption
  - developments for gas as a transport fuel
- A lot depends on the delivered gas cost and scalability!

Duel diesel/LNG powered train - USA

LNG-powered truck

Shell LNG refuelling station - Canada

Gas Industry Co Strategy 2015 and beyond



Concluding Comments

- Gas becoming increasingly important to global energy/environment
- Has made a major 45-year contribution to NZ
- Significant NZ gas investment and potential
- Current discussion around future role for NZ gas
- Co-regulation speaks particularly to how regulators engage industry/investors successfully
- Co-regulatory model requested by industry, and seems to be working after 10 years