Submission by


to the

**Gas Industry Company**

on the

**Gas Market Settings Investigation**

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# GAS MARKET SETTINGS INVESTIGATION CONSULTATION PAPER – SUBMISSION BY BUSINESSNZ ENERGY COUNCIL[1]

## INTRODUCTION

1. BusinessNZ Energy Council (BEC) is pleased to have the opportunity to provide feedback on the 'Gas Market Settings Investigation' consultation paper published by the Gas Industry Company (GIC) in May 2021.
2. The BEC is a group of New Zealand's energy sector organisations taking a leading role in creating a sustainable, affordable, and secure energy future for all New Zealander. BEC is a division of BusinessNZ, New Zealand's largest business advocacy body and the member committee of the World Energy Council (WEC).
3. BEC members are a cross-section of leading energy sector businesses, government and research organisations. Together we seek to shape the energy agenda for New Zealand.
4. Gas has an important role to play in our transition to a low-emissions economy supporting security of supply, providing fuel diversity, and ensuring an affordable energy transition. It is critical that gas market settings are appropriate to ensure gas is able to fulfil this role.
5. We would like to acknowledge the thoughtful paper produced by GIC. We note they have engaged widely, canvassing several issues. We would also like to acknowledge the work they have commissioned from Concept Consulting to provide a useful outlook of gas supply and demand.

## GENERAL COMMENTS

6. We agree with the paper's characterisation of the role of gas in New Zealand and its commercial outlook. We agree the market, commercial and regulatory settings for gas for the most part work well and are manageable. However, we do acknowledge the issues identified. In our view:
    - Gas is critical to ensuring New Zealand businesses can operate efficiently.
    - Gas plays a key role on New Zealand's journey to our *net* carbon-zero target.
    - Gas plays an important role supporting electricity supply.
    - Affordability of gas and electricity are key components ensuring a successful transition.
    - Predictability is required to ensure industry can plan and invest appropriately.

7. While we agree with many of the issues identified we would like to reinforce the following points:
    - Gas has an ongoing role to play to support businesses and electricity generation. Ongoing investment will be required so it is critical to get gas market settings right.
    - We caution against interfering with existing commercial arrangements which will create further uncertainty and deter the required investment.
    - We would like to highlight some of the possible consequences for New Zealand businesses, communities and the economy if gas supply was limited.
    - We support the development of an energy strategy including the role of low carbon gas.
8. While the GIC has done a good job of identifying stakeholders' concerns we believe further work is required to determine the core issues before solutions are developed. Never-the-less, we have provided an initial view of the proposed solutions.

[1] Background information on BusinessNZ is attached as Appendix One.

## DETAILED COMMENTS

### Gas has an ongoing role to play to support businesses and electricity generation.

9. Gas is currently used in New Zealand to produce chemicals and food products, as heat for industrial processes, to generate electricity and to provide heating and cooking in buildings. Gas is expected to play an ongoing role, particularly in the electricity and industrial sectors. In the demonstration paths modelled by the Climate Change Commission, gas will continue to be used as a fuel source in buildings, industry and heat, and to generate electricity, until at least 2035[2].

10. BECs own modelling suggests gas will have a role to play until 2050. BEC has developed a New Zealand specific model TIMES-NZ to explore two possible future energy scenarios; Kea (cohesive) where climate change is prioritised as the most processing issue, and Tūī (individualist) where climate change is one of many pressing issues. Our bottom-up model selects from available technologies to produce a least-cost energy system over the medium to long term. The model shows around 50PJ of natural gas is consumed in 2050 in both scenarios. Gas will be required as a feedstock for industry where no alternatives are available, and even in the Kea (cohesive) scenario, gas is selected for electricity generation as a back-up fuel to support increasing levels of intermittent renewable generation like wind and solar.

**Figure 1: Kea – Fuel Consumption for all subsectors, all end use, all technology (PJ)**

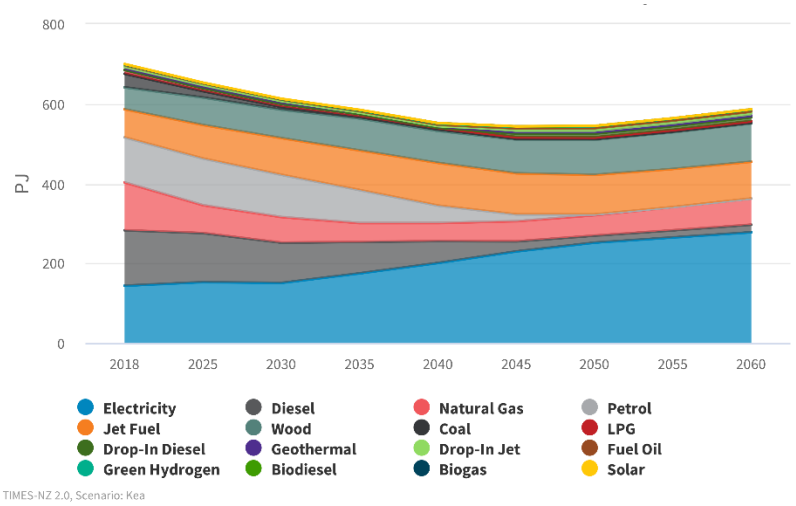
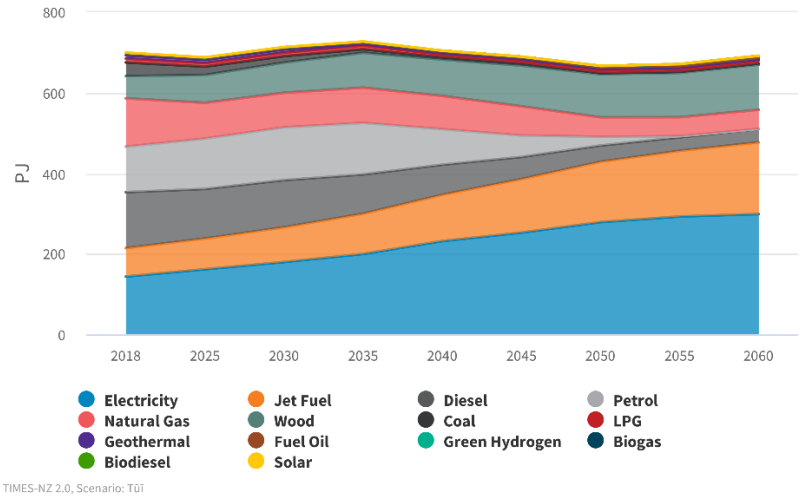



**Figure 2: Tūī – Fuel Consumption for all subsectors, all end use, all technology (PJ)**




[2] Climate Change Commission, Ināia tonu nei: a low emissions future for Aotearoa, p112, 113, 115.

11. Not only is gas required to support the industrial and electricity sectors, but existing infrastructure could also be used to enable the transition to a low carbon economy. For example, First Gas have done some work on zero carbon gases to demonstrate how existing gas infrastructure could be used to transport zero carbon fuels like biogas and green hydrogen[3]. This could become an attractive option to decarbonise some transport and industrial applications such as high temperature process heat, refining, the production of fertilizer and steel. FirstGas note that enabling these alternative fuels would reduce the burden on the electricity system, remove the need to overbuild renewable generation and could provide inter-seasonal and inter-year storage of energy for use in dry years.

**A successful transition maintains security and affordability while improving sustainability.**

12. A balanced approach is required to ensure a successful energy transition. Any policy changes which seek to improve our environmental sustainability or meet our emissions targets must also take into consideration impacts on the availability, affordability and security of the energy system as a whole.

13. We use the energy trilemma framework to benchmark our energy system performance globally. The trilemma balances environmental sustainability with energy security and energy equity (including access to and affordability of energy). Currently New Zealand is ranked within the top 10 of countries globally. However, while our sustainability score has improved over the last decade, our security score has declined due to declining energy storage, increased import dependence, and a lower diversity of electricity generation sources as thermal generation retires.[4] This trend is likely to continue with further thermal generation closures, and growing reliance on imported fuel to meet energy shortfalls.

14. Gas contributes to energy security by providing an important back up to renewable generation options and providing energy diversity. As the Climate Change Commission points out in their final advice to government "*removing fossil gas too quickly from the system could increase electricity prices and reduce reliability*"[5]. The Commission also highlight the potential flow on effect to the electrification of transport and low- to medium-temperature process heat, two significant opportunities to reduce emissions.

**Ongoing investment will be required. It is critical to get gas market settings right.**

15. In order for gas to continue to support electricity generation and industrial activity, ongoing investment will be required. As the Gas Industry Company have pointed out this investment may be very large, estimating between *"$300-500 million every 3 to 5 years to produce existing reserves and maintain production levels"*[6]. Therefore, it is critical that we get the gas market settings right.

16. The private sector has a crucial role to play to make investments decisions and manage commercial risk. Any changes made to market settings should not interfere with existing commercial arrangements. This will affect the viability of businesses in New Zealand and may cause them to move offshore, leading to the loss of jobs locally. It also creates further uncertainty in a sector already facing significant uncertainty over future demand, including the future for major industrial energy users, potential changes to supply with the New Zealand Battery Project and possible regulatory outcomes of the Climate Change Commissions final advice. This level of uncertainty chills investment and deters innovation. In recent years, the uncertainty over future demand has most likely slowed investment in renewable generation.

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[3] FirstGas, https://gasischanging.co.nz/our-path-to-zero-carbon-gas/

[4] World Energy Council, Energy Trilemma Index https://trilemma.worldenergy.org/#!/country-profile?country=New%20Zealand&year=2020

[5] Climate Change Commission,Ināia tonu nei: a low emissions future for Aotearoa, p69.

[6] Gas Industry Go, Briefing to the Incoming Minister, October 2020, p4.

17. The Climate Change Commission notes *"As the use of fossil fuels is phased down, the diminishing role of fossil gas across the energy system will need to be carefully managed and sequenced as there may be consequences for network infrastructure and the workforce."* We agree these consequences need to be considered and managed, which is why we support an energy strategy to provide greater certainty to the sector and encourage investment. An overarching strategy will help ensure a smooth transition by considering the timing of the transition, and by ensuring alternative technologies are available when required.

**Possible consequences for New Zealand businesses, communities and the economy.**

18. While there may be options to replace gas in heating and cooking there are fewer options for some industries and applications. According to our modelling gas will continue to be used to produce food and fertiliser until 2050. In the worst-case scenario uncertainty over gas supply could lead to the loss of these businesses, resulting in the loss of jobs, negatively impacting communities and the economy as a whole.

19. For example, Methanex is a major user of gas in New Zealand providing demand to incentivise investment and flexibility when supply issues arise. As the Climate Change Commissions final advice notes *"With reducing supply, it may become uneconomic for Methanex to continue to operate in Aotearoa."*[7] This would not only lead to a loss of jobs locally, but also impact investment in gas infrastructure, eroding security of gas and electricity supply.

20. Gas is also used by New Zealand growers, particularly covered crop growers where gas provides heat and $CO_2$ enrichment inside glasshouses. Predominantly these heated glasshouses are used for growing tomatoes, capsicums, cucumbers, eggplant and lettuce for the domestic market. There is also the nursery sector (an important part of the supply chain for fruit and vegetable producers). Local production of fresh, sustainably produced food is vital to maintaining food security in New Zealand. It reduces transport emissions allowing efficient and cost-effective supply. Energy availability and costs are important considerations for these businesses so many growers have already taken steps to reduce consumption and consider alternative energy sources, however gas is preferred (for those who can access it e.g. North Island growers) as it provides the added benefit of $CO_2$ enrichment which increases yield.

21. If gas supply was no longer available many of these growers would be forced out of business, as, while the industry is working on how the sector can decarbonise, at the present time there is a lack of suitable technically and economically feasible low carbon options to transition to. The implications of a limited gas supply, resulting in constraints on the covered crop sector, are that these products may no longer be produced competitively in New Zealand. This could result in relying on import substitutions and increasing overall emissions due to higher transport emissions and potentially higher emissions associated with production. As Horticulture New Zealand notes in a recent submission *"Policy that forces covered crop growers out of business […] would likely have negative impacts regarding food security."*[8] The continued availability of gas may also support the covered crop sector to transition to low carbon fuels – for example, by providing energy security at peak times (e.g. the coldest nights in winter) where the heating provided by electricity may not meet the energy needs, or as a back-up supply.

**Further work is required to define issues and determine appropriate solutions**.

22. While this paper has already identified many of these issues amongst others, we would expect to see further analysis completed to clearly identify the root cause of any issue before any solutions can be implemented. Solutions should clearly address the core issues identified. We note some of these issues may not be the result of a failure of the market. We do not support any regulatory interventions where no market failure can be demonstrated.

[7] Climate Change Commission, Ināia tonu nei: a low emissions future for Aotearoa, p69.

[8] Horticulture NZ, Submission on Phasing out fossil fuels in process heat, p22.

23. Despite this, we have provided an initial view on some of the proposed solutions below to help guide future work.

**Table 1: Comments on proposed solutions**

| Proposed solution | Comments |
|---|---|
| **Gas storage** | We support further investigation of whether there are sufficient incentives to develop additional gas storage. We agree this could be a useful solution while the New Zealand Battery project options are developed. |
| **Increasing information availability** | We support initiatives to increase awareness of information already available, and to make further information available provided it is useful and is not commercially sensitive. |
| **Better understanding of risks** | We support education initiatives which help participants better understand risks, provided it is not overly costly or onerous to produce. |
| **ETS** | We support wider use of the Emissions Trading Scheme. |
| **Regulatory framework for gas pipelines** | We support a review of the regulatory framework for gas pipelines. |
| **Green gases (biogas, hydrogen, natural gas as an enabler)** | We support a fuel agnostic approach which considers all alternatives. This could form a useful comparison to options identified by the New Zealand Battery Project. |
| **Support for long-term wholesale contracts** | We are unsure whether there is sufficient certainty for users to consider entering into long-term contracts. |
| **Increasing policy predictability** | We support the development of a New Zealand Energy Strategy with input from the broader energy sector. |
| **Potential contribution of LNG** | We support a fuel agnostic approach which considers all alternatives. This could form a useful comparison to options identified by the New Zealand Battery Project. |
| **Reserves capacity market for energy** | While we would generally support market mechanisms to develop reserve capacity, we recognise this option represents a significant change to the existing market structure may only add to already high levels of uncertainty in the sector. |
| **Potential government investment** | No comment. |

**Consult with industry to develop energy strategy.**

24. In our view the most important next step is to develop an energy strategy, in consultation with industry, to ensure ongoing security and affordability of energy while reducing emissions. We understand the New Zealand Battery project is considering renewable options only. We support a fuel agnostic approach which considers all options (including gas storage, green gases and

LNG) as well as carbon mitigation strategies such as carbon capture and storage. By considering all of the options, we believe we will achieve emissions reductions faster and at least-cost. Cost-benefit analysis should be completed, weighing the costs of each solution against additional security and environmental benefits. We agree some of the options proposed may potentially be deployed while alternative options are considered under the New Zealand Battery Project, and may provide a useful comparator to the options being assessed under the New Zealand Battery Project.

**Appendix One - Background information on BusinessNZ Energy Council**

The BusinessNZ Energy Council (BEC) is a group of New Zealand's peak energy sector organisations taking a leading role in creating a sustainable energy future. BEC is a division of BusinessNZ, New Zealand's largest business advocacy group. BEC is a member of the World Energy Council (WEC). BEC members are a cross-section of leading energy sector businesses, government and research organisations. Together with its members BEC is shaping the energy agenda for New Zealand.

Our vision is to support New Zealand's economic wellbeing through the active promotion of the sustainable development and use of energy, domestically and globally. With that goal in mind, BEC is shaping the debate through leadership, influence and advocacy.

BusinessNZ is New Zealand's largest business advocacy body, representing:

- Regional business groups EMA, Business Central, Canterbury Employers' Chamber of Commerce, and Employers Otago Southland
- Major Companies Group of New Zealand's largest businesses
- Gold Group of medium sized businesses
- Affiliated Industries Group of national industry associations
- ExportNZ representing New Zealand exporting enterprises
- ManufacturingNZ representing New Zealand manufacturing enterprises
- Sustainable Business Council of enterprises leading sustainable business practice
- BusinessNZ Energy Council of enterprises leading sustainable energy production and use
- Buy NZ Made representing producers, retailers and consumers of New Zealand-made goods

BusinessNZ is able to tap into the views of over 76,000 employers and businesses, ranging from the smallest to the largest and reflecting the make-up of the New Zealand economy.

In addition to advocacy and services for enterprise, BusinessNZ contributes to Government, tripartite working parties and international bodies including the International Labour Organisation (ILO), the International Organisation of Employers (IOE) and the Business and Industry Advisory Council (BIAC) to the Organisation for Economic Cooperation and Development (OECD).


www.businessnz.org.nz