



24 June 2021

Gas Industry Company
Market Settings Investigation

By email: consultations@gasindustry.co.nz

Gas Market Settings Investigation Consultation

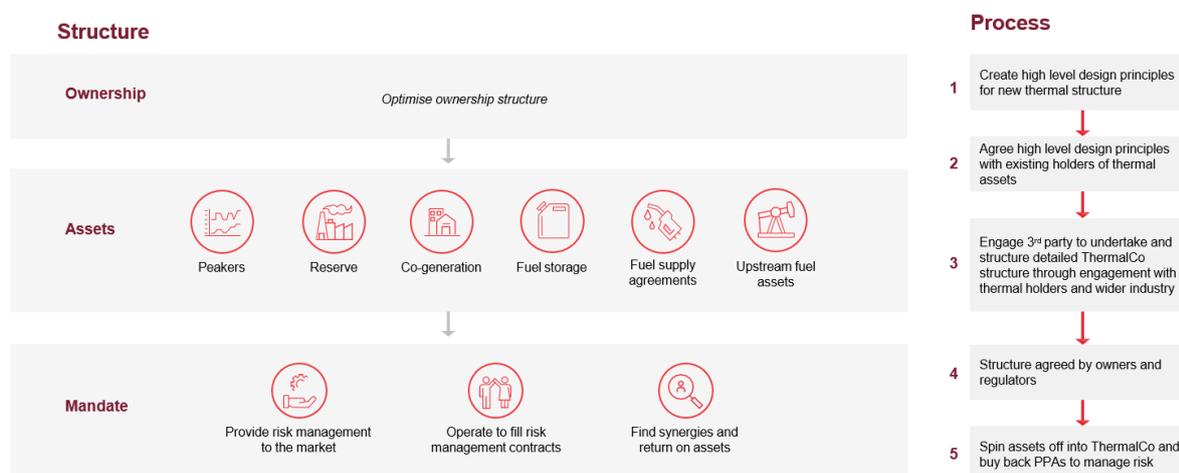
1. Contact welcomes the opportunity to comment on the GIC consultation on the gas market and its settings. Contact broadly supports the analysis and conclusions in the Gas Market Settings paper, and the comprehensive analysis undertaken by Concept Economics.
2. The wholesale electricity market has recently experienced increased volatility as a result of reduced water storage and reduced gas availability. The current supply situation means that there has been increased uncertainty with gas supply. As the GIC paper notes, this short-term volatility is expected to reduce by 2022.
3. The market has responded effectively to ensure ongoing security of supply. Commercial agreements including Contact's gas tolling agreement with Todd, and voluntary reductions in gas supply by Methanex, suggest that the market is responding effectively to support the overall availability and flexibility of gas supply, to support security of supply in the electricity market; and to provide major gas users with sufficient certainty and transparency about gas supply for their operations.
4. Contact agrees with the feedback that commercial and regulatory settings for gas for the most part work well and are manageable. The Concept Economics analysis does not suggest a material risk to security of supply but recognises that ongoing investment in existing gas fields will be required. It is not clear that further intervention is warranted.
5. The Climate Change Commission report modelling has extended its assumptions about the ongoing operation of Methanex as a significant gas user out to 2040, from its draft assumption of 2029. This change reflects the important role that Methanex's demand will play to support ongoing investment in existing gas fields.
6. The Emissions Trading Scheme (ETS) is a key mechanism to encourage lower emission activity. Over time, increasing carbon costs under the ETS in the electricity sector will accelerate investment in renewable generation and make thermal generation increasingly uneconomic – resulting in the reducing demand by the electricity sector for gas.
7. The GIC paper notes that potential actions could include considering whether a reserves / capacity market is desirable to ensure electricity security is desirable. As renewable generation continues towards a goal of 100% renewable generation, the use of remaining thermal generation will become increasingly intermittent, with the associated economic challenges of continuing to manage these resources – which nonetheless will continue to

play an important role to provide security of supply, including to address dry year risk. in the medium term.

8. Contact has been giving considerable thought to these challenges as it undertakes a thermal review.

Contact Thermal Review

9. Contact has announced a review of our thermal generation portfolio to act on our commitment to be a decarbonisation leader, to identify an operating model to ensure security of supply, and to manage the value of our flexible thermal assets.
10. Contact is engaging with key stakeholders to explore the establishment of a Thermal Co that would achieve a return on assets and facilitate the energy transition to 100% renewable.



11. Contact believes there are significant public benefits of taking a coordinated approach to thermal generation as New Zealand transitions to 100% renewable electricity. This includes improved security of supply, reduced market volatility, accelerated renewable investment and least-cost transition. Such an approach would also improve certainty in demand for fossil fuels over time.
12. Contact would welcome the opportunity to brief the GIC on this proposal in further detail.

Hydrogen

13. The GIC paper identifies the opportunities of biogas and hydrogen to displace fossil fuels. Contact and Meridian Energy are currently investigating the opportunities for a large-scale green hydrogen facility in the lower South Island. We expect to release analysis from McKinsey shortly. Contact and Meridian will provide a joint briefing once the McKinsey hydrogen report is released.

14. The development of a Hydrogen industry is a significant opportunity to decarbonise New Zealand, including the production of chemicals such as ammonia and fuel for heavy transportation. The interruptability of hydrogen production could also address dry year risk and reduce the need for thermal generation during those periods - further reducing demand for fossil fuels.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jacqui Nelson', written in a cursive style.

Jacqui Nelson
Chief Generation Officer

Submission template

Gas Market Settings Investigation 2021

Submission prepared by: Contact Energy

Question		Comment
Q1	Do you agree with our characterisation of the role of gas in New Zealand?	<p>Contact agrees with the GIC's characterization of the market. While renewable generation will largely displace thermal generation over time, gas will continue to have an important role for firming wind and solar generation, and to manage dry year risk.</p> <p>Contact is undertaking a review of its thermal portfolio, and believes that the development of a Thermal Co to own and manage remaining thermal generation has the potential to deliver significant public benefit by supporting New Zealand's transition to 100% renewable generation, reducing interim wholesale market volatility, accelerating transition, and ensuring an orderly exit of thermal plant.</p> <p>Contact is also exploring New Zealand green hydrogen opportunities with Meridian Energy. We expect to release a comprehensive study by McKinsey shortly. These opportunities include domestic consumption of green hydrogen to displace fossil fuel use, and the opportunity for interruptible hydrogen production to address dry year risk – further accelerating demand reduction for fossil gas.</p>
Q2		Contact agrees with Concept Economics' analysis, and the recognition that further investment will be required to support

	<p>Do you have any comments in relation to the gas supply and demand outlook?</p>	<p>the expected demand for gas across both proven reserves and contingent resources – to avoid the worst-case scenario of electricity security of supply risk as early as 2027.</p> <p>Concept’s analysis also recognizes that significant amounts of fuel are available other than gas, including coal and diesel, to support energy security of supply.</p> <p>Contact’s proposal of a commercial Thermal Co would further support electricity security of supply and support rapid decarbonization. The Thermal Co could include coal and diesel generation assets as well as gas.</p>
<p>Q3</p>	<p>Do you agree with our characterisation of the commercial outlook for gas?</p>	<p>Contact agrees with the increasing commercial risks resulting from the cost of maintaining both generating plant and infrastructure to deliver it, with increasing uncertainty on future demand as migration to renewable energy sources continue.</p>
<p>Q4</p>	<p>Have we captured the issues fairly and accurately? Have we missed anything?</p>	<p>The paper has captured most issues and challenges clearly.</p> <p>At a high level, the description of the interaction between electricity and gas pricing captures a number of the principles, but there are some inaccuracies:</p> <ul style="list-style-type: none"> • The marginal generator dispatch is often due to operational considerations rather than fueling decisions. Operating thermal plant on the margin can be undesirable from a plant maintenance perspective with more flexible hydro generation often sitting on the margin. • The operation of the electricity market and the price setting process when there are fuel constraints is not necessarily dissimilar to normal market conditions, with the marginal price reflecting higher cost alternatives such as diesel or demand response to manage security of supply. • The tolling example in 4.4.6 is not correct in that a tolling arrangement consists of both a sale of gas and a corresponding purchase of electricity. In this way the

		<p>seller of gas continues to capture profit from electricity prices.</p> <p>Figure 6 highlights the significant uncertainty with transition timing. Contact supports the Climate Change Commission's recommendation that a comprehensive New Zealand Energy Strategy is developed with the industry, and we also believe that Contact's proposal for a Thermal Co would be likely to improve certainty on likely future fossil fuel demand in the future.</p>
Q5	<p>What are your views on the potential solutions stakeholders have raised? Can you share any more detailed information to help inform us on how feasible or effective they might (or might not) be?</p>	<p>One option put forward is to review whether further gas storage is required. Practically, the timeline for any storage solution, whether sufficient 'spare' gas for further storage is available in the medium term, and its potential cost would limit its practicality in the near term. Without further cost benefit analysis being completed, it is difficult to determine whether additional gas storage would be a preferable solution than other options such as batteries, hydrogen, LPG and LNG.</p> <p>Further investigation would be required to determine whether there are any underground fields like Ahuroa available to use as storage, their conversion cost and timeline; and whether there is spare capacity within existing pipelines that could be used as storage.</p> <p>Further work is required to understand the opportunities for biogas – and particularly the impact of the ongoing viability of existing gas reticulation networks. This issue was also raised in the Climate Change Commission's final report.</p> <p>Contact and Meridian are exploring the opportunity for a large-scale green hydrogen facility in the lower South Island. We expect to release a comprehensive report from McKinsey and a call for expressions of interest shortly. The report identifies the early opportunities of green hydrogen in New Zealand to support our own goals for decarbonization. This includes the opportunity for hydrogen to provide dry year risk cover and accelerate the declining demand for fossil gas. Contact will organize a briefing for GIC.</p>

Q6	Are there any other potential solutions?	As discussed, Contact believes that a Thermal Co has the potential to deliver significant public benefits, accelerate decarbonization and improve certainty on future fossil fuel demand through a coordinated phasing out of thermal generation. Contact is happy to provide the GIC with a detailed briefing on our proposal.
Q7	Do you agree that there is potential in a set of solutions linked to providing greater confidence to support the required investment in gas supply and flexibility, and that there is unlikely to be a single solution?	<p>Contact believes that the market has been effective managing security of supply – including during the current volatility. Information disclosure, together with a coordinated Energy Strategy as proposed by the Climate Change Commission, and commercial opportunities such as Thermal Co, will improve confidence as transition away from fossil gases accelerates.</p> <p>As the Concept Economics’ analysis shows, ongoing investment in existing fields will be required. However, the risks of further ad hoc government intervention or regulation heighten uncertainty and make further investment more challenging – or distort investment between different energy sources.</p>
Q8	What are the most important next steps to ensure that gas can support security of supply in the electricity market and that major users have sufficient certainty/transparency about gas supply for their operations during the transition?	<p>The Concept Economics report recognizes that in the medium term, risks of security of supply in the electricity market are manageable, with further investment necessary to support gas supply over the longer term.</p> <p>The New Zealand Energy Strategy in conjunction with the industry, as recommended by the Climate Change Commission, is a sensible next step because it will take a coordinated approach to energy across both fossil and renewable sources to meet New Zealand’s climate change objectives.</p>