



TRANSPOWER

Keeping the energy flowing

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Gas Industry Company

Wellington

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Upload via website

Gas Market Settings Investigation

Transpower appreciates the opportunity to respond to the Gas Industry Company's consultation on its Gas Market Settings investigation.

Gas currently plays an important role in ensuring security of supply in the electricity market. We also consider the flexibility gas provides is a valuable tool for transitioning to a net zero carbon economy.

When investigating options to decarbonise the energy sector, decisions must also be weighed against cost and feasibility. This investigation provides valuable insight into the possible future scenarios for the gas industry, and whether it can meet the demands of the electricity sector as a transitional fuel.

The investigation has assumed a scenario where New Zealand relies on gas to manage dry year risk and to maintain security while decarbonising the electricity sector. There may be other technologies and options to achieve these outcomes. However, it is important that the option of using gas as a transitional fuel is well understood, so that options can be weighed accordingly.

In Appendix A, we have responded to the Gas Industry Company's specific consultation questions.

Yours faithfully,

Dr Stephen Jay

General Manager Operations

Appendix A

Gas Market Settings Investigation 2021

Submission prepared by: **Transpower New Zealand Ltd**

Question	Comment
<p>Q1 Do you agree with our characterisation of the current role of gas in New Zealand?</p>	<p>Yes.</p>
<p>Q2 Do you have any comments in relation to the gas supply and demand outlook?</p>	<p>Worst case scenario</p> <p>The 'worst case' scenario demand forecast laid out in the consultation paper seems unlikely to eventuate. It may be reasonable to classify this scenario as an 'edge case' rather than a plausible scenario for setting policy in the gas sector.</p> <p>Future economic viability of methanol</p> <p>The investigation has highlighted that supply side investment, and future availability of gas, will be largely driven by petrochemical producers. Therefore, the investigation may benefit from sensitivity testing petrochemical producers' willingness to pay and/or contract.</p> <p>Dry year winter gas demand</p> <p>Our electricity risk curves assume that thermal generation will operate at its maximum capacity (with an allowance for planned and unplanned outages) for months at a time. It would be useful to understand if the scenarios include this assumption.</p> <p>Gross vs Net Production</p>

		The Concept Consulting report (page 16) allows for a 0.4% difference between gross and net production. This does not appear to line up with MBIE gas production and consumption information , which infers more material differences between gross and net production.
Q3	Do you agree with our characterisation of the commercial outlook for gas?	We broadly agree with the characterisation of gas supply outlook. However, the maintenance and operation of sunk investments may carry on longer if revenues cover variable costs. Although this would not create an environment for investing in new assets and will signal the industry was contracting.
Q4	Have we captured the issues fairly and accurately? Have we missed anything?	For 4.2, yes, but there are a range of other technology solutions that can work with gas to assist with Security of Supply (capacity and energy margins) as they develop between now and 2030. We agree that demand for gas from electricity generation will require increasing levels of flexibility. This flexibility will be needed for meeting both capacity (peaking) and energy (dry year baseload) needs. Both problems have different technology solutions, e.g. batteries can support capacity margins but not energy margins. We have no comment on other aspects.
Q5	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?	We agree all the solutions outlined are valid. We agree there is likely a mix of solutions instead of a single solution. We also think there is likely to be a mix of non-fossil fuel technology solutions to many of the roles that gas currently plays in the electricity

	<p>sector.</p> <p>On increasing information availability: To assess electricity market security of supply the System Operator relies on information from gas producers and gas electricity generators. There may be benefit in formalising the provision of this information. We are concerned that current gas production forecast disclosures to MBIE are infrequent and suffer from prolonged publication delays.</p> <p>On better understanding of risks: We support both short term (3 – 24 month) and medium term (2 – 10 year) gas supply risk assessments. These risks assessments should use transparent assumptions and methodology and be subject to industry consultation.</p> <p>We agree an import terminal would improve security of supply for electricity and may provide secure energy margins but think there needs to further consideration needs to give to:</p> <ul style="list-style-type: none">• If the goal is to transition off fossil fuels an LNG import terminal needs to be carefully considered. An import terminal may undermine other potential solution such as batteries, pumped hydro, demand response.• The pricing impacts of an LNG import terminal need to be carefully considered. We think further work needs to be undertaken to ascertain if an import terminal would act as a price cap or price setter and if this is a good or bad outcome. Once a nation has import or export capability prices may become based of export/import price parity.
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Q6	Are there any other potential solutions?	<p>This paper does not look at the wider range of options outside of gas to meet energy and capacity needs in the electricity sector, such as grid scale batteries, small scale aggregation of batteries, pumped hydro and demand response. All these options can help solve capacity and energy needs in the electricity sector.</p> <p>Any transition must be orderly and economic, this will take time hence the need for gas as a transition fuel. The extent and duration to which gas is used as a transitional fuel may vary depending on how other solutions can compete on an economic basis.</p>
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>Yes, we agree there is likely to be more than one solution or a set of solutions.</p> <p>An import terminal can provide dry year cover but may not provide a high degree of flexibility intraday to meet the needs of gas peaking. It would be useful to provide additional information to clarify this.</p> <p>Further development of AGS and increased stored gas can improve flexibility in the short term and provide dry year cover. It would be beneficial to provide information on the costs, risks, and benefits for investors in new storage compared to building an import terminal.</p> <p>If there is insufficient incentive to store gas then market settings could be amended, but we support the cost of those market settings being internalised by the gas users rather than government i.e. those that value gas flexibility should pay for it.</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?	Flexibility in the short term and long term are the greatest problems that need to be resolved. For gas to be used as a transitional fuel to support renewables, the gas supply and network infrastructure must be capable of fuelling gas generators to meet winter energy and peak demand. If this is not possible, then the use of gas as a transition fuel to support renewables may be limited.
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