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Comments on Draft : Long term gas supply and demand scenarios (2019 Update)

Our view is that the draft report is a good product overall, and is well written. While we have different views on some of the commentary and conclusions, the breadth and depth of the analysis is appreciated and provides a useful reference point for the industry.

We provide below a few high level comments that we would suggest are considered further before finalizing the report.

Supply Profiles: We understand the underlying data-set for the supply side to be the most recent 2019 MBIE data-set. However we find it difficult to reconcile the supply forecasts (namely the central scenario as described on page 24 as $2P + 2C \times 75\%$) with the 2P and 2C forecasts in the MBIE data-set. Using Pohokura as an example (there are other examples too):

- With regard to the Pohokura profile, we note 2019 MBIE 2P and 2C estimates of 714PJ and 56PJ respectively (the latter of which is discounted to 75% as per the methodology). This compares with a cumulative production estimate in the report of 838PJ, resulting in an apparent overstatement of Pohokura production within the report of 82PJ.
- Coupled with this is an assumption within the report of Pohokura end of field life in 2031, which contradicts both the 2019 MBIE derived production profile, and end of field license (both 2036).
- For Pohokura, this implies more volume overall, which is then produced over an accelerated timeframe (compared to MBIE data-set)

Carbon Prices: Carbon price scenarios are used to model the point at which certain customers are incentivized to switch away from gas and onto other fuels. However no thought seems to have been given to use of carbon capture and storage (CCS) as a mitigant to carbon emissions/prices. We would suggest this is factored into the modeling and conclusions.

Carbon Prices: Also on carbon prices, while Figure 20 lays out the derivation of carbon price scenarios, the resulting 'mid' and 'high' scenarios portray carbon prices in the short term (e.g. 2020) which are difficult to reconcile with current market/policy conditions.

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Carbon Leakage: There are several points in the report (e.g. page 10) where reference is made for the potential for New Zealand methanol production to be withdrawn if NZ carbon policy settings do not properly consider the carbon costs applicable to international methanol production, and that the NZ methanol production would "most likely be replaced by gas and coal based overseas methanol production, likely leading to an increase in global carbon emissions". Based on (paid subscription) reports we have access to, it appears to us that coal-based methanol is the marginal overseas production rather than gas-based, and we believe this important issue of carbon leakage should be more fully elaborated in the report.

Methanex as a source of flexibility: There are references to methanol production providing a "source of energy flexibility able to address extreme situations of scarcity". We are aware that Transpower has long held the view that gas contracted by Methanex would be re-deployed to power generation in such situations, but we question whether there is any evidence for this assumption, and if not, then suggest the modeling framework should be based on mitigation within the electricity market itself.

Yours sincerely

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