GREYMOUTH GAS

22 August 2019

Andrew Knight
Chief Executive Officer
Gas Industry Company Limited
By email

Dear Andrew,

Re: Long term gas supply and demand Scenarios – 2019 update DRAFT

Greymouth Gas considers that the report is inaccurate in parts. We refer to our previous letter dated 19 July 2019 (attached as an appendix).

It would also be helpful if GIC / Concept were to workshop the report with industry after submissions are received. This would allow open and transparent debate of the conclusions.

Yours sincerely

Chris Boxall
Commercial Manager

GREYMOUTH GAS

19 July 2019

Andrew Knight
Chief Executive Officer
Gas Industry Company Limited
By email

Dear Andrew,

Re: Early stakeholder engagement: Long-Term Gas Supply and Demand Scenarios 2019

Greymouth Gas (**Greymouth**) is pleased to provide feedback on the draft version received on 1 July 2019 of the Gas Industry Company (**GIC**) commissioned Long-Term Gas Supply and Demand Scenarios Report from Concept Consulting (**Report**).

Greymouth's main concern is that the Report does not properly articulate the risks to security of gas supply in the immediate term, as either gas supply is expected to meet existing levels of gas demand, or future levels of reduced gas demand will be supported by the development of Contingent Resource.

Greymouth considers the matters detailed below require further consideration by GIC before finalisation of the Report. Commentary focuses on the Reference Case scenario unless otherwise stated.

1. Gas Demand

Greymouth commends the analysis performed to underpin the breakdown of gas demand across different major industries for the forecast periods. Greymouth is aligned with the rationale underpinning the forecast reduction in demand of each of the major demand buckets:

(a) petrochemical sector – reflects step-wise reduction in gas supply availability from major fields plus an inability to tolerate scarcity pricing,

(b) electricity sector - reflects a transition away from gas for baseload to gas for intermittent supply to complement a greater penetration of renewable electricity, and

(c) industrial, commercial and residential sector – price elasticity of demand, especially as the carbon price increases and the sector seeks alternative energy sources - moderated by traditional GDP growth.

Gas demand projections are predicated on the willingness of sector segments to pay for gas, albeit in a rising carbon price world, but solely based on an existing demand pool. No account has been taken for new growth when contrasted against a 2018 baseline. This appears inconsistent with the supply analysis which does consider Contingent Resource becoming available. The inclusion of new demand, such as (1) the substitution of gas for coal at the Huntly power station – as gas has materially less greenhouse gas emissions, and (2) the "in pre-feasibility stage" 8 Rivers clean energy project to produce electricity, urea and electricity from natural gas, together have the potential to add circa 60PJ of annual incremental demand from CY25.

In addition, the credibility of projections would have been aided by better linking the Government's wider energy sector decarbonisation objectives. Greymouth understands that the Interim Climate Change Committee has recommended, amongst other matters, that the Government focuses on electrification of

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transportation rather than achieving the goal of 100% renewable electricity by 2035. This would require additional electricity generation from renewable sources. Forecasts by Transpower of electricity demand increasing by circa 50% by 2050, to partly support this structural change in electricity demand, will require the consideration of all forms of electricity generation – not just renewable sources.

2. Gas Supply

Greymouth cautions reliance on the PEPANZ conclusion detailed in the Report – "*investment in the development of contingent resources from existing fields should deliver sufficient gas supply to meet demand at current levels until the latter part of the next decade*". The Report implies that such investment, and associated volumes, **will** happen. At least 100PJ/pa of Contingent Resources will be required from as early as 2025 to meet existing demand when contrasted against the 2P gas supply profile in the Report – this is before consideration that the 2P profile has a 50% chance of being less than assumed.

Contingent Resources by definition are discovered but usually uncertain; may need new technologies as yet undefined to unlock them; have been evaluated and are sub-economic under forecast development expenditure and commodity pricing or have not passed various other maturation hurdles. Yet the application in the Report of a 75% realisation of such volumes to provide assured gas supply suggests otherwise.

Greymouth considers threshold attainment for technical maturity and commercial maturity is questionable for the suite of Contingent Resources included in the Report. Commercial maturity under current market conditions is also less assured given the backdrop of a shrinking market, political pressures plus the reducing outlook for capital availability and upstream players.

Separately, the inclusion of incremental gas supply from new offshore and new onshore discoveries seems unrealistic when set against the revised policy settings of the Government – the prohibition on oil and gas exploration offshore and onshore (excl. Taranaki region) as recorded in the Crown Minerals Amendment Act 2019.

3. Projections of Supply and Demand

Greymouth considers the Report would benefit from inclusion of near term analysis (up to 5 years) that contrasts uncontracted gas supply versus uncontracted gas demand.

4. Other

Greymouth notes that the Report highlights that the continued imposition of costs on the gas value chain, whether in the form of carbon charges or via increasing gas transmission costs, raises the prospect of demand destruction.

Greymouth proposes GIC commission these reports annually given the criticality of gas in the energy sector. As evidenced by Pohokura in 2018, supply (or demand) changes can materially impact the market in cycles of less than two years.

Yours sincerely

PP

Andrew McGavin
Business Development Manager