TOTAL UTILITIES

Gas Industry Company

Total Utilities - Submission 23/6/2021

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Quality Control

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1. Overview

- We all know and understand the importance of decarbonizing given the ominous challenge posed by climate change globally.
- But, NZ is a small/remote country which only accounts for 1/15th of 1% of the world's total population of 7.5 billion.
- The NZ electricity and natural gas markets are inextricably inter-linked. Electricity and gas compete as alternative energy sources. Electricity generation is the second biggest user of natural gas after methanol production by Methanex. Gas is the second biggest source of electricity generation after hydroelectricity. All businesses need electricity!
- Given the above considerations, the effective management of our national energy strategy (including electricity and gas etc) is critically important to our continuing economic health and hence to all 5 million of us.
- The outright prohibition of all new offshore oil and gas exploration, has had a profound negative impact on the natural gas sector and hence on the electricity (energy) sector. This prohibition was introduced early on in the first term of the Labour lead Coalition Government. This major policy change 'came out of the blue' as it was not included in Labour's Election Manifesto. The serious negative knock-on effects were not thought through properly and thorough 'what if' scenario planning clearly did not take place.
- It is unfortunate to say the very least but hardly surprising that coal-based electricity generation last year was the highest for a decade. This coincided with the lowest gas-based electricity generation for 10 years. Given that coal emits +/- 1.9 times more CO2, on a GJ for GJ basis, than natural gas this is a step backwards by any standard. Coal imports of +/- 1 million tonnes in 2020 are on course to triple in 2021.
- The negative impacts of the above prohibition have unfortunately been compounded by various other negative electricity supply and demand factors since then. These factors have included 1) rebounding electricity demand following the GFC in 2008, 2) back-to-back very dry summers in 2019/20 and 2020/21, 3) the retirement of thermal powers stations like Otahuhu B and Southdown and 4) failure of new renewable stations to meet the combined challenge of growing electricity demand and reduced thermal generation.
- Pohokura has been our biggest natural gas field for some years. During the past two years however, production has fallen sharply for unspecified technical reasons. This decline in gas production has reduced gas supplies available both for gas users and for electricity generation. The prohibition of all new offshore oil and gas exploration, has also meant that there will be no offshore oil rigs available in NZ waters until 2022, at the earliest, to identify let alone resolve the ongoing production problems at Pohokura.
- Other gas supply options have been constrained in the longer term by the non-renewal by the Government of existing offshore field permits once their initial term had expired. Previously, successive Government's lead by both major parties renewed these permits unless there was a compelling specific reason not to.
- Seriously damaged gas industry morale has also resulted in a combination of reduced/delayed/cancelled capex in existing gas fields.
- The profound uncertainty surrounding the shorter term, let alone longer term, future of the natural gas industry has already resulted in Contact Energy vacating the TOU part of the gas market across the board, as TOU agreements expire. Another gas retailer has declined to quote for supply to various existing TOU customers. We are well aware of other very large TOU gas users (not our clients) who have to use natural gas and have been forced onto punitive spot market-related gas pricing. Major electricity-users like Whakatane Board Mills have also had a huge question-mark over their future due to huge gas-related electricity price hikes.

- There is still some limited competition in the non-TOU part of the market, albeit at much higher prices. But competition has essentially collapsed in the TOU part of the gas market.
- Aside from exhorting gas users to decarbonize (utilizing the EECA GIDI fund to make this a bit more financially palatable), the Government's main response to our growing 'energy' crisis has been to incentivize both RTZ and Methanex to use less electricity and natural gas respectively! Both these initiatives are 'reactive' and questionable in terms of macroeconomic variables like employment, exports and jobs etc.

2. Case Studies

NZ Hothouse

- A very large user of gas.
- In addition to the above specific points raised, Simon Watson, Managing Director, emphasized the negative impact on the horticulture industry in general and on his company in particular of the massive TOU gas price hikes and the related collapse of competition.
- He also stressed the risk of companies in his industry having significant stranded assets.
- He emphasized too the overall risk to NZ's food security posed by the above issues.

Van Lier Nurseries

- Like NZ Hothouse, a long-established family-owned business, providing cut flowers for the NZ market – in competition with imported flowers.
- Used to use coal in their boilers and then switched to the use of natural gas.
- Gas usage has grown steadily over the years and was due to increase by 40% in 2022 due to a large additional new greenhouse which is currently en route from the Netherlands to NZ.
- Existing Gas Supply Agreement expires 31/10/2021. Current longstanding TOU supplier told them recently that they would not be supplying them after 31 October. The problem is that no other gas retailer is ready/willing/able to assume supply to them on a longer-term basis.
- Fortunately, one supplier has confirmed that it will supply gas during a transition period of up to one year, while they migrate from gas to electric heat pumps.
- This migration does however come at a large and unbudgeted cost increase, impacting both capex and opex. This large new capex is in addition to the large capex associated with the above referenced new greenhouse.
- Whether Van Lier Nurseries does transition to electricity or not, will depend to a very large degree on whether it receives the requested EECA GIDI Fund (round 2) project funding. To put this in perspective, there were 41 round 1 GIDI applications of which 14 (34%) were approved by EECA!
- If it doesn't change to electric heat pumps, the only viable option open to it is to change from being a 'hothouse' to a 'coldhouse' based nursery. If this occurs, job losses of up to 75% are likely.

Client 3

- Owned by overseas venture capitalists
- Natural gas is used in a crucial industry specific application
- Existing supplier confirmed that it would not continue supplying them after expiry of their current Gas Supply Agreement.
- Electricity is not a viable option due to technical/cost considerations.
- Only option is LPG (similar calorific value etc). Will necessitate a bulk LPG tank installation. Resultant cost, programme implications etc.
- Significant threat to jobs if LPG option not seen as commercially viable.

Client 4

- Packaging industry
- Very similar considerations to client 3 above but much larger TOU gas usage

Client 5

- Farming-related
- Again, similar considerations to client 3 above.

3. Recommendations

In large measure the damage has already been done. We cannot change the past but as a nation, we can design and implement a much better integrated supply/demand energy strategy moving ahead. Much like the cross-party Superannuation Accord back in the 1990's, we need a similar cross-party accord now in this vitally important area.

We appreciate that the GIC investigation relates to the natural gas sector only and not to the electricity market as well. But these two areas need to be viewed together both by the Government and by the wider 'energy' sector (including the GIC) as a whole.

Specific recommendations are to:

- Reverse the previous Government decision not to extend existing gas field permits – longer term supply benefit.
- Greatly extend the existing EECA GIDI Fund/ETA initiatives
- Extend the separate Genesis Energy decarbonisation initiative to include Mercury, Meridian and Nova as well

To conclude, the appetite for future investment in the gas infrastructure is key to improving certainty in the market. Not only does it send signals to the sellers of gas but also to major users who are often multinational organisations. If it becomes more apparent that investment will be very limited, these organisations could very well leave NZ prematurely, obviously impacting employment not to mention business activity and tax revenue.