

25 June 2021

Carolyn van Leuven  
Gas Industry Company Ltd  
WELLINGTON 6140 (via email to [consultations@gasindustry.co.nz](mailto:consultations@gasindustry.co.nz) )

Emailed to [consultations@gasindustry.co.nz](mailto:consultations@gasindustry.co.nz)

Subject: Gas Market Settings Investigation

Ballance Agri-Nutrients Limited thanks the Gas Industry Company for the opportunity to make this submission on its consultation document.

A well-functioning energy market is critical to the opportunities, individual and social wellness and prosperity of every New Zealander. Natural gas is an important part of the New Zealand energy sector and an enabler of our transition to a low emissions economy, it is our desire to see New Zealand industry thrive during this transition. Our detailed submission is attached.

We welcome any clarification questions the GIC may have on this submission.

A handwritten signature in black ink, appearing to read 'G. Johnson', with a long horizontal flourish extending to the right.

Glenn Johnson  
National Operations Manager

## Our Vision

1. For New Zealand to maintain and further build a resilient economy in a decarbonising world, the support of agriculture and home-grown manufacturing is vital to avoid reliance on imports. Ballance was originally formed in 1958 by a group of farmers who wanted a secure supply of fertiliser which reduced their reliance on imported product. It steadily grew into a very successful national business which provides vital support to the agricultural industry and our food exports. Emissions leakage would erode our competitive ability and weaken New Zealand's support of agriculture.
2. Our vision is to develop future nutrient solutions for the agri-business sector using green hydrogen produced from renewable energy sources supported and accelerated by complementary use of the natural gas and existing infrastructure and capabilities.

## Submission Summary

3. Ballance encourages the GIC to consider the role of natural gas in the New Zealand energy system to 2050. Used as part of the energy mix natural gas can accelerate decarbonisation of difficult to abate industries as demonstrated by the hydrogen project championed Ballance and Hiringa.
4. The Petrochemical sector (and historically the electricity sector) plays a key role in supporting supply side investment through long term offtake agreements. Without petrochemical and electricity sector investment underwriting field development, responsibility would fall on government to guarantee offtakes to provide for electricity security, household and commercial natural gas needs while an orderly energy transition takes place.
5. Long term offtake commitments require high levels of business confidence. New Zealand has become a significantly less predictable country to operate in, resulting in delayed investment and short-term contracting approaches. A lack of predictability and industry-Government partnership in decision making has added to energy market volatility and is compromising our climate, economic and social objectives.
6. To grow business confidence Government must provide stable industrial policy settings and make sector specific evidence-based changes in consultation with industry.

## Company Overview

7. Ballance is a farmer-owned co-operative with over 18,000 shareholders and approximately 800 staff throughout New Zealand. Ballance owns and operates super-phosphate manufacturing plants located in Tauranga and Invercargill, as well as New Zealand's only ammonia-urea manufacturing plant located at Kapuni, South Taranaki. The Company owns and operates 'SuperAir', an agricultural aviation company with high precision technology SpreadSmart; and 'SealesWinslow', a

high-performance compound feed manufacturer. Ballance has a network of fertiliser storage and dispatch facilities across the country.

8. As well as supporting New Zealand farmers, Ballance also supplies products to a range of domestic applications:
  - Urea is used in the production of formaldehyde-based resins, a key ingredient in the wood processing sector for the manufacture of particleboard and MDF.
  - An extremely high purity urea solution is used to produce GoClear at the Kapuni plant. GoClear is an exhaust system additive and scrubbing agent that reduces harmful nitrogen oxide (NOx) emissions from diesel engines, breaking the NOx down into harmless water vapour and nitrogen gas. GoClear has been supplied to the largest vehicle fleets in New Zealand for many years.
  - Other products important to non-farming industries including ammonia; sulphuric acid used in the dairy, pulp and paper, and power generation industries; and liquid alum and hydrofluorosilicic acid, both used in drinking water treatment processes.
9. Ballance places a strong emphasis on delivering value to its farmer shareholders and on the use of the best science to inform and deliver sustainable nutrient management, including supporting improvements in on-farm environmental performance.

### ***Ballance's Exposure to Natural Gas***

10. Urea manufacture currently requires natural gas for high temperature process heat and feedstock for hydrogen production through steam methane reforming, an intermediate step to producing ammonia and subsequently urea.
11. Ballance is committed to reducing our natural gas consumption and carbon emissions. In partnership with Hiringa Energy we are investing in green hydrogen production at our Kapuni facility. This project highlights the “absorptive capacity” foundation of existing assets and skills that can be leveraged to transform the economy to a low emissions future.

### **Kapuni Green Hydrogen**

On 20 June 2019, Ballance Agri-Nutrients and Hiringa Energy confirmed a Joint Development Agreement for a major clean-tech project in Taranaki to produce ‘green’ hydrogen using renewable energy.

Under the Joint Development Agreement, the two companies are planning the construction of up to four large wind turbines (with a total capacity of 24 MW) to supply 100% renewable electricity directly to the Kapuni site, and also power electrolyzers (electrolysis plant) to produce high-purity hydrogen – for feedstock into the ammonia-urea plant or for supply as ‘zero-emission’ transport fuel. The facility will be operational by Q1 2023.

The \$60 million showcase project of Taranaki's new energy future will be based at Ballance's Kapuni ammonia-urea plant and is seen as a catalyst for the development of a sustainable green hydrogen market in New Zealand to fuel heavy transport – as fleet operators push to reduce carbon emissions (CO<sub>2-e</sub>) in response to Zero Carbon legislative change.

## Response to GIC Questions

In our submission we have provided comment and answers to those questions of most relevance to its operations

### Question 1

Do you agree with our characterisation of the role of gas in New Zealand?

12. Ballance encourages the GIC to expand its view of natural gas as part of the energy strategy to 2050. The role of gas in the New Zealand economy is broader than electricity and includes feedstock for the production of agri nutrients and low emission fuels, process energy for specialist applications and energy supply to safety critical and high integrity applications which electricity cannot support. As part of their low emissions road map the Climate Change Commission has twice recommended the government revise its 100% renewable electricity by 2030 target and has urged the government to take a more holistic view of emissions and the energy sector.

### Question 2

Do you have any comments in relation to the gas supply and demand outlook?

13. Ballance expects continued use of natural gas at the Kapuni site for the foreseeable future. Domestic urea supply displaces imported product and enhances supply security of a key input for horticulture, agriculture, value added forestry sector, and transport.
14. The Hiringa Project demonstrates the capability of renewable energy and natural gas to complement and accelerate emissions reduction in an industry which is recognised by the Climate Change Commission as being hard to abate. Without a hybrid 'dual fuel' approach decarbonisation of urea production would be slower.
15. Ballance agrees the Petrochemical sector will continue to play a key role in supporting supply side investment. Historically the offtaker role was shared with the electricity sector however the '100% renewable electricity' target has changed this. Without petrochemical and electricity sector investment underwriting field development responsibility would fall on Government to guarantee offtakes to provide for electricity security, household and commercial natural gas needs while an orderly transition takes place.

### Question 3

Do you agree with our characterisation of the commercial outlook for gas?

16. We urge caution around 'demand diversion'. Pricing incentives to reduce energy demand must be based on the value of incremental production, meaning both electricity and gas markets will be exposed to significant stress before demand diversion is considered.
17. Enerlytica proposed the incremental value of Methanex gas in their May 2021 NZ Gas updated between \$20-30/GJ. This is significantly higher than the ability to pay for many industrial and commercial consumers and electricity generators. For this reason, Ballance does not support the characterisation of Petrochemical demand as 'Swing (supply flexibility)'.

### Question 4

Current arrangement and Potential Issues, Have we captured the issues fairly and accurately? Have we missed anything?

18. Ballance believes in Bi-Lateral supply arrangements as the best way to secure long term supply reliability and equitable energy cost.
19. During periods of change and uncertainty, short term markets (both electricity and natural gas) are slow to invest in new capacity to meet demand changes and manage dry year risk – price is exaggerated when supply response like construction of new electricity generation or development of new gas resources are long duration activities.
20. For short term markets to operate well, policy direction must be stable. The development of policy amendments should be predictable, consultative and in partnership with industry.

### Question 8

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?

### Business Confidence

21. The paper describes the importance of long term offtakers (via bi lateral agreements) in supporting supply side investment. This is a trend becoming more prevalent in the electricity sector where

offtakes via long term power purchase agreements can be secured at a significant discount to the market price.

22. Long term offtake commitments will only be made where business has confidence in demand, it's ongoing competitiveness and ability to operate in the country (social licence). New Zealand has become a significantly less politically predictable country to operate in, resulting in delayed investment (by both supply side and demand side participants) and a focus on short-term contracting approaches.
23. Both electricity and natural gas markets are experiencing similar delays in supply side investment resulting in elevated energy pricing.
24. If elevated energy prices are sustained, New Zealand will continue to lose its manufacturing base with the loss of jobs, knowledge and future capabilities. Large employers are our trainers, our standard setters for environmental and safe work practices, and our employers of highly skilled and knowledgeable energy workers.

#### Factors effecting Business Confidence

***The ETS can only be an effective tool for reducing carbon emissions when coupled with a predictable approach to Industrial Allocations.***

25. The importance of Industrial Allocations supporting an efficient and functioning ETS must continue to be recognised.
26. Emissions intensive trade exposed (EITE) businesses need policy predictability when we are formulating long term capital investment plans. The existing uncertainty delays investment decisions and promotes investment in maintaining assets rather than adoption of new technologies.
27. The critical policy measure for EITE activities to mitigate against emissions leakage is industrial allocation. The Cabinet Environment Energy and Climate Change Committee Paper "*New Zealand Emissions Trading Scheme tranche two: a phase-down of industrial allocation*" provides a very useful description of industrial allocation:<sup>1</sup>

#### *About industrial allocation*

11. *Industrial allocation is the provision of free New Zealand Units (NZUs) to entities that carry out 'eligible activities' whose competitiveness is considered at risk due to costs placed on the activity by the NZ ETS.*

---

<sup>1</sup> <https://www.mfe.govt.nz/more/briefings-cabinet-papers-and-related-material-search/nz-ets-tranche-two-phase-down-of>

*These costs create a risk of emission leakage if these entities were exposed to the full cost of NZ ETS surrender obligations. The purpose of industrial allocation is to mitigate this risk.*

- 12. Emission leakage would occur if New Zealand companies lost market share or shifted production overseas to avoid a domestic price on emissions. This is a significant concern due to the potential economic and employment impacts, particularly for regions where a single emission-intensive facility may be an important part of the local economy.*
- 13. Emission leakage is also an issue of environmental integrity. If leakage occurred, this would mean that New Zealand's climate policy is driving the export of emissions rather than reducing them. As a result, New Zealand's policies could potentially increase global emissions.*

28. Ballance's views are entirely consistent with this description, the industrial allocation supports;

- New Zealand emissions reductions which are globally effective and credible,
- The retention of NZ jobs in energy intensive businesses,
- Investment in low emission technologies and prevents the ETS from being a barrier to achieving our low emissions targets.
- Confidence to our exporting and importing manufacturers that they can invest and remain competitive internationally (and domestically) against producers in countries not exposed to carbon costs.

29. Government must provide stable industrial policy settings through Industrial Allocations and any changes should be sector specific, evidence based, and made in consultation with industry.

***MfE promoted changes to the RMA are in conflict with the need to commit to long term contacts***

30. The MfE *Phasing out fossil fuels in process heat* consultation document creates uncertainty in the conditions which will be applied to both current and new consents.
31. The proposed 5 yearly reviews of resource consents would be a barrier to industry committing to the long-term energy offtake agreements needed to support a robust energy system.
32. Ballance supports the concept of 'best practicable options' to reducing any adverse effects on the environment; our Green Ammonia project with Hiringa is a demonstration of our desire to lead the adoption of new practices. However, we also recognise energy assets have long life investments with expected economic life often exceeding 15yrs which require confidence in future settings

before investment are made and equitable treatment of domestically produced items and there imported equivalents.

33. Our submission to the MfE consultation noted

*In our view the revision of long-term consents undermines New Zealand's objective to accelerate adoption of low emission technology. Without a high degree of policy certainty throughout the asset life cycle (typically >15yrs), new investment decisions will be delayed in favour of repairs and maintenance. In addition to voiding the benefit from lower emissions, delayed investment further decreases the competitiveness of the NZ manufacturing sector.*

### ***An absence of coherent Energy Policy***

34. Ballance strongly supports the views of the Climate Change Commission (CCC) on the need for coherent Energy Policy to support achieving our emissions goals while maintaining affordable reliable energy supply. Ballance supports the CCC recommendation for a National Energy Strategy to be developed. This should have detail on a time horizon at least as long as the emissions budget periods of 3 \* 5 years and policy direction out to 2050.

Energy policy is a foundation policy for Government as it has direct impact on our social, environmental and economic objectives and overall wellbeing.

### **Market Concentration**

35. The small, isolated nature of our energy market means New Zealand has increased exposure to supply disruption. In 2021 we have experienced restricted gas availability from the Pohokura Gas field, low water flow into our hydro system and low wind availability. Increased supply side robustness can be achieved by enlarging potential supply to spread risk. Should development of New Zealand's domestic natural gas resources not be a preferred pathway then development of international connections in the form of LNG infrastructure is required to mitigate dry year risk and hard to abate industry high temperature process heat and feedstock requirements.

36. The consequences of connection to international LNG markets must be carefully considered. For large petrochemical businesses (and other consumers) able to commit to long term bi lateral domestic offtake agreements pricing is unlikely to be affected, however consumers purchasing short term contracts are likely to experience import parity pricing even when gas supply restrictions are not in place.