

3 February 2017

Energy Markets
Ministry of Business, Innovation and Employment
PO Box 1473
WELLINGTON

Sent via email: energymarkets@mbie.govt.nz

Dear Sir/Madam

Draft replacement New Zealand Energy Efficiency and Conservation Strategy

First Gas is pleased to make a submission to the Ministry of Business, Innovation and Employment (MBIE) on its draft replacement New Zealand Energy Efficiency and Conservation Strategy dated December 2016.

We support the government's work on promoting energy efficiency, and endorse the drafting of a replacement strategy that is concise, focused and incorporates clear targets to measure progress. However, we consider that the draft strategy misses the opportunity to incorporate natural gas into the plan to transition to a low carbon economy. We recommend that the government should not discount the role of gas, even though it is a fossil fuel. The draft strategy should focus on supporting the lowest cost sources of energy efficiency and carbon abatement, regardless of source.

Benefits from coal to gas conversions

First Gas considers that the draft strategy understates the efficiency benefits that can be achieved from converting industrial heat processes from coal to gas (LPG or natural gas).

While gas is an important fuel in the processes of many energy-intensive businesses, other higher carbon fuels (predominantly coal) remain significant. Gas is a cleaner burning fuel than coal, and is an ideal choice in locations where renewable fuels are either unavailable or impractical.

As outlined in figures one and two¹ below, there is still a reasonable level of coal used for both intermediate and high level process heat in the North Island of New Zealand (approximately 10 PJ per annum). Depending on the distance to the closest transmission or distribution pipeline, gas could be a viable and more efficient option for many of these business. For example, First Gas estimates that using gas rather than coal for process heat in a Waikato dairy factory could reduce carbon emissions by around 41 percent.²

The benefits from reducing coal use within the food processing sector³ is also outlined in the Green Party's plan for reducing greenhouse gas emissions.⁴ Information sourced from the German

¹ *Approach to developing distribution network demand projections*, Concept Consulting Group Limited, 4 July 2016, <http://www.comcom.govt.nz/regulated-industries/gas-pipelines/gas-default-price-quality-path/2017-2022-gas-dpp/>.

² Calculated from the CO₂ arising from complete combustion of a typical Waikato coal compared with that of natural gas.

³ Where the majority of thermal coal used is to provide heat for drying milk.

⁴ Page 17, *Yes we can! A plan for significantly reducing greenhouse gases*, Green Party discussion paper, September 2015, <https://www.greens.org.nz/sites/default/files/policy-pdfs/Yes%20We%20Can.pdf>

Figure 1: North Island delivered fuel energy for intermediate temperature process heat

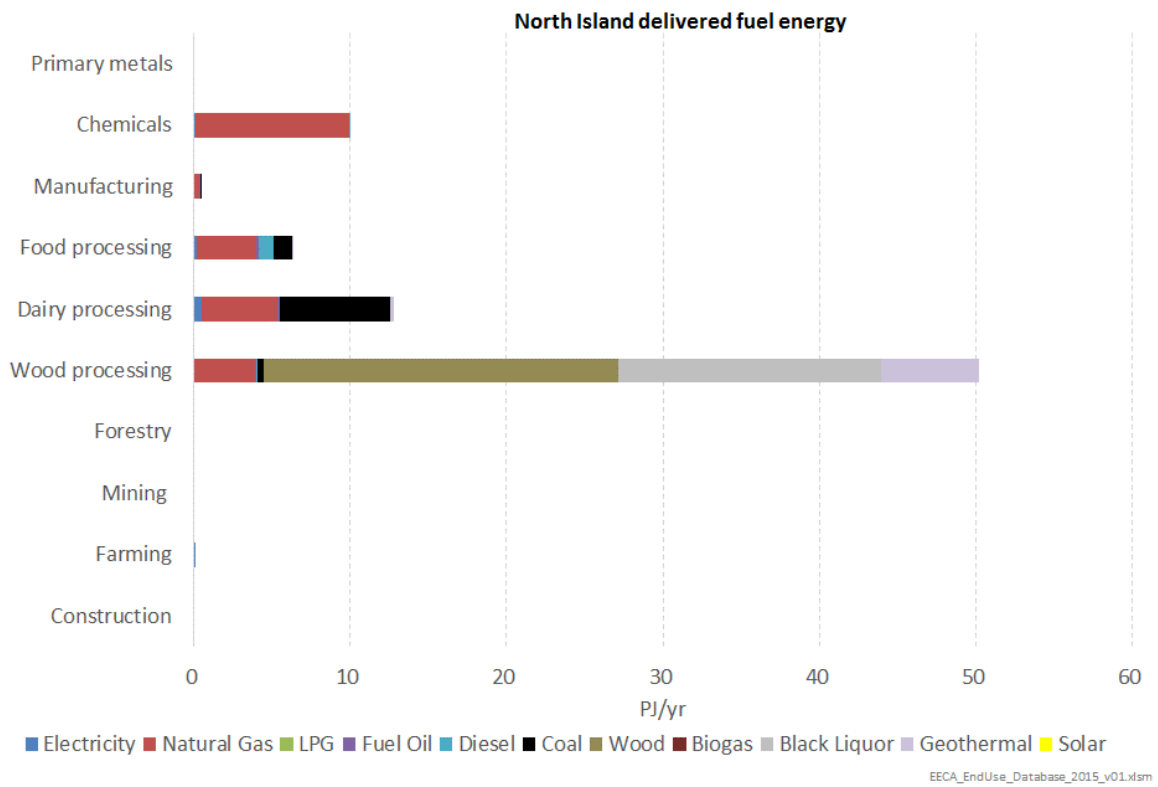
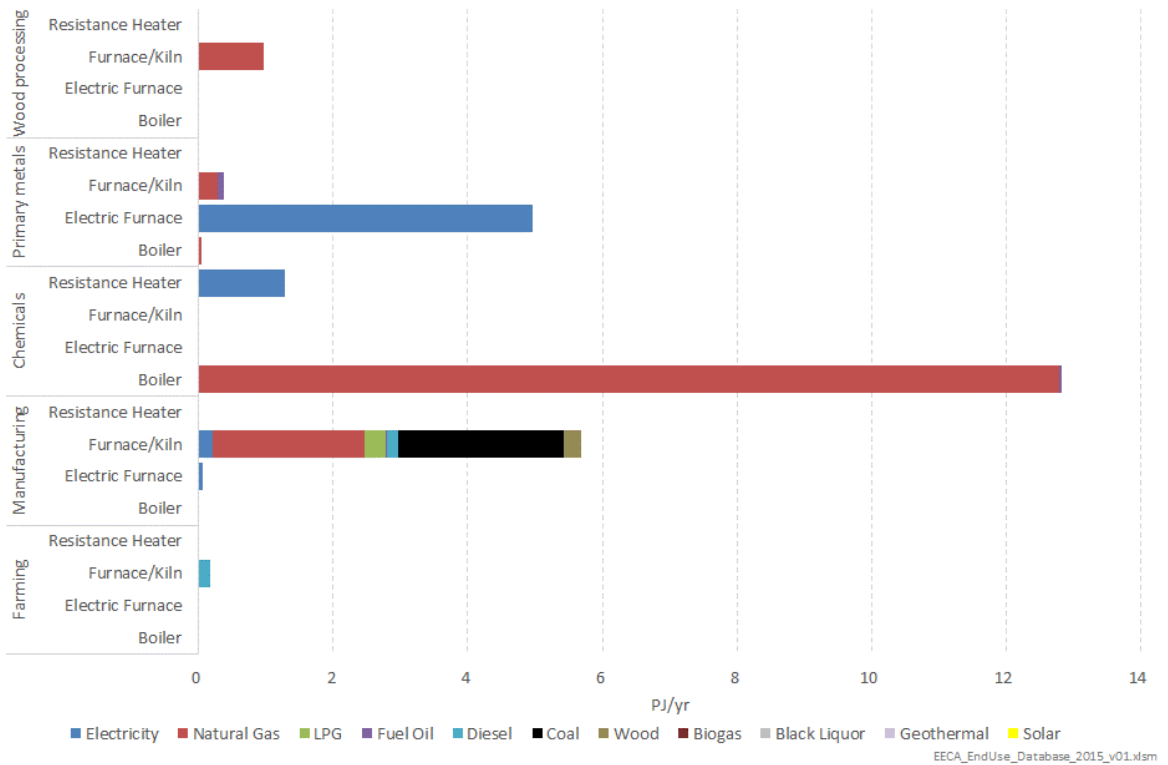


Figure 2: North Island delivered fuel energy for High-temperature process heat



Aerospace Centre outlines the opportunity to “save 3.7Mt of emissions if we reduce the use of thermal coal by 90 percentand keep gas consumption steady to 2030”.⁴

First Gas considers that gas-fired process heat (where gas supply is available) has the potential to meet many of the objectives of the government’s work on energy efficiency. We are keen to play our part to ensure that these efficiencies can be realised.

We recommend that the role of gas and gas conversions should be more clearly articulated within the draft strategy, with a focus on ensuring that natural gas is used for applications where it is most valued. This addition would also ensure that the draft strategy aligns with the *New Zealand Energy Strategy 2011 -2021* that notes that gas “is an important direct source of energy in industry and homes”.

Support for developing a process heat action plan

The draft strategy notes that the government intends to introduce a new Process Heat Action Plan to target improvements in the efficiency of existing process heat plant and to encourage investment in efficient and renewable plant.

First Gas is actively working with coal users to investigate the option of gas conversions, including the economic and environmental benefits. We would be happy to engage with MBIE on how this work can fit within the new Process Heat Action Plan and how we can coordinate efforts on future coal to gas conversions.

Gas complements New Zealand’s predominantly renewable-sourced electricity system

First Gas is concerned the draft strategy does not acknowledge the role that gas-fired generation plays within our predominately renewable electricity system, over both the short and longer term. Natural gas is a relatively low greenhouse gas emitting fossil fuel and gas-fired electricity generation augments renewable generation during seasonal and peak periods, providing security of supply benefits.

This point is recognised in the government’s overarching *Energy Strategy 2011 – 2012* where it states that “for the foreseeable future some fossil fuel generation will be required to support supply security”.⁵ The Royal Society of New Zealand⁶ also notes that even within an electricity system with very high penetrations of renewables, gas could still have a role through:

- the inclusion of gas-fired power plants linked with carbon dioxide capture and storage (CCS); or
- retention or installation as back-up capacity to meet seasonal peak demand, especially in dry years.

First Gas recommend that section three of the draft strategy⁷ be amended to acknowledge the role of efficient gas-fired generation within the electricity system.

⁵ Page 6, *New Zealand Energy Strategy 2011–2021*, Ministry of Economic Development, <http://www.mbie.govt.nz/info-services/sectors-industries/energy/energy-strategies/documents-image-library/nz-energy-strategy-lr.pdf>

⁶ *Transition to a low-carbon economy for New Zealand*, April 2016, Royal Society of New Zealand, <http://royalsociety.org.nz/media/2016/06/Report-Transition-to-Low-Carbon-Economy-for-NZ.pdf#page=77>

⁷ Section three – innovative and efficient use of electricity, page 11, Draft New Zealand Energy Efficiency and Conversation Strategy 2017 – 2022.

If you have any questions regarding this submission, please contact me on 04 460 2548 or via email at karen.collins@firstgas.co.nz.

Yours sincerely

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

Karen Collins
Regulatory Manager