Firstgas Group

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Andrew Caseley
Chief Executive
Energy Efficiency and Conservation Authority
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Emailed to: levyconsultation@eeca.govt.nz

Dear Andrew

EECA's 2021/22 levy funding and work programme

Firstgas Group (Firstgas) welcomes the opportunity to comment on the Energy Efficiency and Conservation Authority's (EECA) consultation paper on "*EECA's 2021/22 levy funding proposal and related work programme*" released in November 2020.

As an energy infrastructure business, we have a strong interest in the role that gas plays in New Zealand and how EECA intends to use the Gas, Safety, Monitoring and Energy Efficiency (GSMEE) levy to improve energy efficiency and encourage our transition to a lower carbon economy. Nothing in this submission is commercially sensitive and we are happy for this submission to be posted on EECA's website.

Firstgas' interest in EECA's work programme

Firstgas owns and operates three businesses that have a direct interest in EECA's work programme:

- Our **regulated gas pipeline businesses**. Firstgas owns and operates 2,500 kilometres of gas transmission pipelines and more than 4,800 kilometres of gas distribution pipelines. These pipelines transport around 20 percent of New Zealand's primary energy supply from Taranaki to industrial gas users, electricity generators, businesses and homes across the North Island. Our distribution network services approximately 63,000 consumers across Northland, Waikato, Central Plateau, Bay of Plenty, Gisborne and Kapiti.
- **Rockgas** is New Zealand's largest LPG retail business and supplies more than 100,000 customers throughout New Zealand. Rockgas has over 80 years' experience and distributes LPG using a range of channel partners (such as service stations and franchisees).
- **Ahuroa gas storage facility** (trading as Flexgas Limited) is New Zealand's only open access gas storage facility. Ahuroa is a depleted gas field that has been re-purposed to store large amounts of energy for release when New Zealand energy users need it most (e.g., due to low hydro inflows, gas production outages or during periods of high demand). To provide a sense of scale, the Ahuroa facility has a similar storage capacity to all New Zealand's hydro lakes when they are all full.

These businesses provide important sources of energy diversity and flexibility for New Zealand's energy system. In particular, gas storage coupled with fast starting gas electricity generators will be critical for New Zealand's energy security as we increase our reliance on intermittent renewable generation (wind and solar), as part of the transition to a low emissions economy.

This infrastructure will continue to play a critical role in the broader energy system for many decades to come by offering solutions that reduce emissions. There is growing international and local interest in hydrogen and biogas, and we are actively exploring the role that Firstgas assets and capabilities can play in quickly and effectively transporting these renewable gases. With co-funding from the Provincial Growth Fund, we are finalising a study into the viability of hydrogen transport using Firstgas

pipeline infrastructure.[1] Firstgas is also collaborating with EECA, Fonterra and Beca on a joint biogas study to assess its potential as a substitute for natural gas.[2]

Firstgas would like to see EECA encourage large emitters to evaluate the best-fit technology options for their future operational needs, whether this is electricity, natural gas, LPG or renewable gases such as biogas or green hydrogen.

We encourage EECA to consider the role of gas and gas infrastructure

As a member of the Climate Leaders Coalition, Firstgas is committed to supporting New Zealand's transition to a lower emissions economy and we support EECA's goal of mobilising clean and clever energy use. We strongly believe that gas and gas infrastructure will have an important ongoing role in reducing New Zealand's emissions.

We are comfortable with the work programmes EECA has proposed to fund with the GSMEE levy – the E3 programme, Large Energy User Programme, Energy Transition Accelerator Programme, and Technology Demonstration Programme. However, in terms of previous work in these areas, we note that there is little visibility over what has been delivered in terms of improved gas efficiency. We recommend more detail be provided on the outcomes of gas efficiency programmes in future years.

There are many examples in other jurisdictions where significant gas efficiency gains are being made and promoted. One example from the United Kingdom is the use of condensing boilers to capture waste heat. Modern condensing boilers can reduce gas consumption rates by 15 to 20 percent and are 92 percent efficient compared to old boilers with 55 percent efficiency.[3]

We welcome the recognition of the benefits achievable through improved performance of gas consuming facilities to reduce associated emissions through:

- Continued support for Minimum Energy Performance Standards (MEPS) for gas boilers.
- Continued facilitation of access to tailored advice and services for large energy users to help manage long term energy and carbon challenges.
- Continuing to demonstrate commercially available, but under-utilised, technologies with energy and emissions reduction potential.

We are particularly interested in the proposed Technology Demonstration Programme. We encourage EECA to grant funding to a wide range of emissions reducing technologies, not just technologies to enable greater electrification. Biogas and hydrogen are obvious examples with commercial scale projects currently under way in Reporoa[4] and South Taranaki[5] respectively.

Timely emissions reduction requires multiple energy options

To ensure emissions reductions are made in a timely and sustainable manner, we believe multiple options will need to be investigated and tested simultaneously. We note that the programmes do not cover conversion of processes currently fueled by coal to natural gas, or the potential role of other types of gas such as biogas, hydrogen, LNG, or gas blends.

While there is a consensus that failure to decarbonise our economy is not an option, there is also a growing global view, that complete electrification of heat, industry, transport and wider power demand will not be possible[6] without significant cost. We think renewable gases or gas blends will make an important contribution where electrification or the direct use of biomass is not feasible. Further to this, we believe the future role of gas has been underexplored. In a New Zealand context, it is possible that the natural decline in indigenous gas

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[1] Hydrogen pipeline project gets Government funding – First Gas

[2] Industry leaders collaborate to solve global energy challenges – First Gas

[3] https://www.greenmatch.co.uk/blog/2015/09/how-efficient-is-a-condensing-boiler

[4] https://bioenergyinternational.com/biogas/construction-start-for-new-zealands-first-large-scale-food-waste-to-bioenergy-plant

[5] https://www.greenhydrogennz.com

[6] https://www.worldenergy.org/experiences-events/events/entry/hydrogen-innovation-forum

reserves could be offset with a combination of domestically produced biogas and hydrogen and/or imported LNG. The global LNG trade is growing[7] and imported gas is becoming increasingly viable. On this basis, we support the Government's focus on eliminating coal boilers and recommend EECA work programmes consider gas as a sensible and achievable tool for reducing coal consumption.

Areas where gas can help support emission reductions

Firstgas believes that there are opportunities for gas to help reduce total carbon emissions and support the Government's objectives by:

- Reducing the carbon content of fuels transported via existing gas pipeline infrastructure, for example through the blending of biogas or hydrogen into the natural gas stream.
- Displacing coal with natural gas in the Huntly Rankine units.
- Using gas-fired electricity generation to provide the flexibility to support high levels of renewables (wind and solar).
- Using hydrogen, CNG or LNG for New Zealand's heavy vehicle fleet (road and rail).
- Supporting new and existing industrial processes that can economically capture, store and utilise carbon.
- Investing in understanding opportunities for Carbon Capture and Underground Storage (CCUS). Some of New Zealand's existing gas fields are already used for gas injection and storage and are likely to be suitable for CCUS.
- Working with the Gas Industry Company on renewable gas certificates, which could be supported under EECA's Emissions Transition Accelerator programme.

For further information on Firstgas' position on the future role of gas and gas infrastructure, we refer you to our response to the Interim Climate Change Committee's call for evidence.[8] We encourage EECA to consider these opportunities and how they can be incorporated into future work programmes.

Contact details

If you have any questions regarding this submission or would like to meet with Firstgas to discuss opportunities for optimising the use of natural gas on our networks, please contact me on (04) 9795368 or via email at karen.collins@firstgasgroup.co.nz.

Yours sincerely

Karen Collins
Regulatory and Policy Manager

[7] https://www.mckinsey.com/industries/oil-and-gas/our-insights/global-gas-and-lng-outlook-to-2035
[8] https://firstgas.co.nz/wp-content/uploads/Firstgas-submission-ICCC-call-for-evidence.pdf