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Sent via email: definingenergyhardship@mbie.govt.nz

Dear Carolyn

Defining Energy Hardship: A discussion document on defining and measuring energy wellbeing and hardship in Aotearoa

Firstgas Group welcomes the opportunity to comment on the Ministry of Business, Innovation and Employment's (MBIE) discussion document "*Defining Energy Hardship: A discussion document on defining and measuring energy wellbeing and hardship in Aotearoa*" released in November 2021.

Our comments and recommendations reflect our experience as the owner of natural gas pipelines throughout the North Island (Firstgas Limited) and a nationwide retailer of LPG (Rockgas Limited). We have provided an overview of Firstgas Group in **Attachment 1**.

We support MBIE's proposal for a flexible definition of energy wellbeing supported by a suite of measures that are expected to improve. We are especially pleased that the discussion document recognises the pivotal importance of housing quality and that one of the four primary measures proposed covers housing quality.

Proposed definition adequately captures natural gas, LPG and future low- or zero-carbon alternatives

We support the inclusion of liquid petroleum gas (LPG) and natural gas in the scope of the proposed definition of energy wellbeing. Both are important fuels for many New Zealanders:

- Households with natural gas have it piped into their homes and use it for space heating, hot water heating and cooking.
- Households relying on LPG typically use large (45 kg) LPG bottles for space heating, hot water heating and cooking. Small (9 kg) LPG bottles can be used for space heating (with a portable gas heater), but more often are used for outdoor gas appliances such as barbecues and patio heaters.

Firstgas considers that the proposed definition of energy hardship is flexible enough to incorporate future fuel alternatives, as they become more commonly available for household energy needs. Future fuels are needed to replace fossil fuels (such as natural gas and LPG) with fewer or no greenhouse gas emissions. Examples of such future fuels are:

- Hydrogen made with no carbon emissions ('green hydrogen')
- Bio-gas replacements for natural gas
- Bio-LPG replacement for LPG.

Information on the future fuels that Firstgas is exploring is provided on our website www.gasischanging.co.nz.

Opportunities to improve proposed energy wellbeing indicator – “Access to a reliable energy supply when needed”

Section 6.1 of the discussion document includes an energy wellbeing indicator of “Access to a reliable energy supply when needed.” We propose that the word “reliable” should be removed and be considered out of scope for the definition of energy wellbeing, due to the following factors:

- 1) The reliability of energy delivery systems is either competitive (such as delivery of LPG) or, more commonly, regulated (such as the Commerce Commission’s quality targets for regulated electricity distribution and gas pipeline businesses, or the Electricity Authority’s requirements for power system quality).
 - a. Providing reliable delivery of LPG is important in a competitive environment because customers can change supplier if their needs are not being met. Furthermore, while the reliability of LPG energy services is currently unregulated, the Gas Industry Company (the industry co-regulator) can propose regulation if reliability outcomes were found to be unsatisfactory.
 - b. The Commerce Commission and Electricity Authority have monitoring arrangements in place to ensure reliability outcomes are acceptable. Both agencies have enforcement powers to act if reliability requirements are not met. They also have the power to change the reliability standards and information disclosure requirements to be met by regulated businesses.
- 2) Energy system reliability is broadly similar for all household consumers. There is little scope for energy suppliers to vary their reliability outcomes at a household level. Therefore, highly granular monitoring is not valuable for understanding energy reliability.

For these reasons, we consider that including reliability in scope duplicates the existing monitoring arrangements of the relevant regulators and would add undue cost and complexity to the energy hardship monitoring regime. We therefore recommend that the word “reliable” is removed from the indicator. If it is retained, measures of reliability should be proposed and guidance provided on what will be included.

We observe that for the energy wellbeing indicator “Access to a reliable energy supply when needed”, just one measure is proposed¹. The proposed measure (“No access to electricity supply”) is for electricity only. We are not aware of an equivalent official dataset for natural gas or LPG (delivered or pickup). However, it would help to incorporate an equivalent natural gas / LPG measure to better describe the range of energy options that New Zealanders can access. Potential data sources are the [Gas Industry Company’s](#) gas registry, and the [LPG Association’s](#) aggregated customer numbers for 45kg LPG bottles. Anecdotally, there is good reason to think that mainland New Zealanders have first-rate access to natural gas and LPG, as:

- Access to LPG is effectively 100% in both the North and South Islands. The majority of LPG is bottled, however in a few areas, the LPG is piped (“reticulated”). For delivery of bottled LPG (typically 45 kg bottles), suppliers need safe vehicle access. This may exclude some extremely remote households. For pickup of bottled LPG (typically 9 kg), the distance a customer needs to travel varies. Some customers may be unable to access natural gas or LPG due to unsafe conditions on the customer’s property. Some landlords may deny the tenant the ability to connect gas services.
- The Gas Industry Company reports there are approximately 275,000 residential natural gas consumers. In addition to this, there are households who have piped gas available on their

¹ P5 on page 35, and C2 of the discussion document.

street and some who have piped gas to their house (but are not currently using that connection). We consider that all these households can be said to have access (or some access) to natural gas as an energy service.

- For some consumers, they may have access to piped natural gas, but still choose to have bottled LPG delivered to them.

We recommend the establishment of a new measure to indicate New Zealanders' access to natural gas and LPG energy services.

Some measures will have significant limitations of data availability or quantifiability

We recognise that many of the proposed measures will inevitably provide an incomplete picture of what they purport to measure, due to limitations around data availability or inability to quantify some aspect of what matters. This need not prevent the use of such measures but does require caution when interpreting the results and progress against these measures.

In order to improve understanding of such measures, we note the following limitations:

- Customers sometimes make major investments in energy efficiency (such as insulation), energy storage (batteries), or generation (solar panels). Such investments can be financed in a variety of ways: from paying cash in advance, buying the asset but paying the debt off over a few years, or leasing the asset under a 20-year contract.
 - Paying cash in advance will not be visible in the proposed measures.
 - Repaying debt may or may not be visible depending on how the measures are implemented.
 - Long term-leasing of assets will likely be visible in the proposed measures as an energy-related invoice.
- The quantity of self-generated electricity that is used in a house is unmetered, so will not be directly quantified within the proposed measures.
- Time invested collecting free firewood will not be visible to the proposed measures.
- We understand that a small number of customers use small LPG bottles as their primary energy source for cooking. Anecdotally, these customers are more likely to be from a low-income household. However, the ease and anonymity with which customers can get small LPG bottles means little data is available from suppliers on individual customer usage in these cases.
- Some owners of small- and medium-sized businesses may, by choice, have very little personal income. This would likely inappropriately increase the appearance of energy hardship.
- Some homeowners may, by choice, be repaying their mortgages at an accelerated rate. This will tend to reduce their after-housing-costs income and thereby, increase the costs of energy services as a proportion of that income. However, this would not necessarily represent a situation of energy hardship.

Detailed comments on additional areas

We have minor comments on the following areas:

- Since the 2018/19 Household Economic Survey, new requirements have been imposed on landlords to improve housing conditions. Some landlords, rather than invest in meeting the new requirements, may have instead sold their properties. As such, the adverse outcomes being experienced by renters may have markedly improved and the outcomes for homeowners (especially first-home buyers) deteriorated.
- Page D-7 of the discussion document notes a caveat that income is not equivalised and an intention to investigate doing so in future. Accounting for the varied energy needs of

households will be important and must be achieved by some means. There appears to be merit in achieving this when transitioning the primary measures P1 and P2 to 'required energy services' rather than 'actual energy services'.

- Paragraph 4.3.3.1 of the discussion document notes that smart electricity meters enable more regular consumption monitoring. We note that the rollout of smart gas meters, while just commencing, will provide similar benefits.

Contact details

Firstgas Group would welcome the opportunity to meet with MBIE staff to discuss the points we have raised in our submission. To arrange this meeting or if you have any questions, please contact me on

Privacy of natural persons or via email at Privacy of natural persons.

Yours sincerely



Karen Collins
Regulatory and Policy Manager

Attachment 1 About Firstgas Group

Our vision is to lead the delivery of New Zealand's energy in a changing world. Our mission is to safely and reliably deliver energy that's affordable and accessible to Kiwi families and businesses. We're really proud of this and of the important role we play in Kiwis' lives.

Based in New Plymouth, Firstgas Group is an umbrella brand consisting of Rockgas, Firstgas, Flexgas and Gas Services NZ. Firstgas and Rockgas are consumer brands that supply LPG and natural gas to over 165,000 customers through their gas network of over 2,500 kilometres of high-pressure transmission pipeline and 4,800 kilometres of distribution pipeline in the North Island, 36 local LPG suppliers, and over 180 Refill and Save locations across New Zealand.

Flexgas and Gas Services NZ are energy storage, operations and maintenance brands who make sure gas can be delivered safely and continuously. Flexgas operates the Ahuroa gas storage facility in central Taranaki. Gas Services NZ provides operational and maintenance support to all gas infrastructure owners, including the brands within Firstgas Group.²

New Zealand's homes have benefited from the choice of energy sources to meet their household needs. Currently there are over 400,000 homes in New Zealand who enjoy natural gas and LPG in their homes. These homes predominantly use gas for cooking, instant hot water, and heating. There are many benefits of having gas in the home. Natural gas is currently the lowest cost way to heat a home's water.³ Gas boilers heat water so that it is instantly available. It requires no onsite storage in the home.

Firstgas is investigating opportunities for using our assets in ways that help to reduce New Zealand's carbon emissions. Our gas transmission and distribution networks cover much of the North Island and are ideally placed to support the development, transfer, and use of emerging fuels such as hydrogen and/or biogas.



² For more information about Firstgas Group, visit www.firstgas.co.nz , www.rockgas.co.nz , www.flexgas.co.nz

³ [Home heating costs in 2021 - Consumer NZ](#)