

12 June 2019

Carolyn Tremain
Ministry of Business, Innovation & Employment
PO Box 1473
WELLINGTON 6140

Sent via email: Resource.Markets.Policy@mbie.govt.nz

Dear Carolyn

Options for amending the Gas Act 1992

First Gas welcomes the opportunity to make a submission to the Ministry of Business, Innovation and Employment (MBIE) on its discussion document "*Options for amending the Gas Act 1992.*"

Executive summary

First Gas supports the Government's commitment to transition to a low carbon economy, and we believe that gas can help make that happen. We see this review of the Gas Act 1992 (the Act) as an important opportunity to ensure that gas legislation and regulation remains fit for purpose and supports the development of emerging fuels and technologies.

We consider that the Act, in its current form, is suitable for the known emerging fuels and blended fuels we expect to see develop in New Zealand. However, we encourage MBIE to carry out periodic reviews over the coming years to ensure we can adapt and respond to changes in New Zealand's energy sector, and the arrival of new technologies and fuels that may not yet be anticipated.

Our submission focusses on:

- The need for the Act and supporting regulations and standards to support the development of emerging fuels, while ensuring that gas remains of a specification that it can be transported safely within New Zealand's gas infrastructure and safely used by consumers. We are concerned the discussion document may give the impression that meeting the definition of gas may be all that is required to allow emerging fuels to flow into our networks. In fact, further work on standards and secondary regulations needs to be prioritised to ensure all aspects of the gas sector and supply chain can successfully transition to new lower carbon fuels;
- Our support for introducing enabling provisions into the Act that would enable the Gas Industry Company (GIC) to introduce regulated information disclosure requirements for the gas sector. We believe that the main information gaps relate to planned and unplanned outages at major gas production and user facilities and a regulated option will be the most effective; and
- Penalties should reflect the seriousness of any divergence from the governance rules. We strongly recommend that the Act be extended to address unauthorised interference with critical infrastructure. We believe stronger mechanisms are required to adequately deter individuals and organisations from engaging in conduct that has the potential to damage pipeline infrastructure and disrupt fuel supply.

We expand on these points below. We have also responded to selected questions posed in the discussion document in **Attachment 1**.

About the First Gas Group and our work on alternative fuels

First Gas operates 2,500 kilometres of gas transmission pipelines and more than 4,700 kilometres of gas distribution pipelines across the North Island. These gas infrastructure assets transport natural gas from Taranaki to major industrial gas users, electricity generators, businesses and homes, and transport around 20 percent of New Zealand's primary energy supply. Our distribution network services approximately 63,000 consumers across the regions of Northland, Waikato, Central Plateau, Bay of Plenty, Gisborne and Kapiti.

The First Gas Group also owns energy infrastructure assets across New Zealand through our affiliate Gas Services NZ Limited (GSNZ), a separate business with common shareholders that owns the Ahuroa gas storage facility and Rockgas. The Ahuroa gas storage facility (trading as Flex Gas) can store up to 18PJ of gas, with expansion planned over the next two years to increase the injection and withdrawal rates of the facility. Rockgas has over 80 years' experience providing LNG to over 90,000 customers throughout New Zealand.

First Gas is committed to investigating the opportunities for alternative fuels that will 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. We have announced that we will begin feasibility studies and a hydrogen trial this year.¹ We intend to base staff at the new National Energy Centre to design and run an initial trial of hydrogen in gas pipelines to demonstrate that the existing gas network can be repurposed and is suitable for conversion to transport hydrogen.

Fit for purpose regulation to support New Zealand's changing needs

We support MBIE's review of the Act and welcome the indication that this is the beginning of a longer-term programme of work. New Zealand is transitioning to a net-zero carbon economy and as time progresses, new fuels and technologies will emerge to enable that goal to be reached. The key for regulation is to be sufficiently flexible to enable consideration of the options and remove barriers if they exist.

The discussion document states that the Act already adequately covers the emerging fuels of hydrogen, biogas and blends of these fuels. While we agree with this finding, to avoid doubt we recommend that hydrogen should be explicitly added to section (a) of the definition for "gas" in the Act

What will be important is to periodically review the Gas Act to consider its "fit for purpose" for new technologies, fuels and energy demands that have not been anticipated and are becoming viable. For example, New Zealand currently does not have regasification facilities for the importation of gas such as LNG, nor do we have export infrastructure and associated storage if we were to consider exporting hydrogen. We believe on-going engagement with MBIE and the wider industry would facilitate the removal of barriers when appropriate.

Amendments to the Act must consider the wider regulatory framework

First Gas recommends that any amendments to the Act to enable the introduction of new fuels or fuel blends should consider the necessary amendments that will be required to the underlying regulations and standards. While the Act may enable the production, transport and use of gas in New Zealand, it is the underlying regulations and Standards that provide the backstop and assurance that the industry is operating in a safe, efficient and effective manner.

The discussion paper recognises the "*Act interacts with other pieces of legislation for the management and use of gas in New Zealand*"²; however, the Act's link to regulations, Standards and pipeline access agreements is less clear. The possibility to include new types of fuel within the definition of Gas under the Act enables potential future development, which may lead to an expectation that networks will be able to transport and use emerging fuels immediately.

Act should support pipeline access agreements

First Gas is the system owner and operator of the gas transmission network., Parties that connect to our network do so under an interconnection agreement with First Gas. The interconnection

¹ Announced by First Gas as part of the Just Transitions Summit held in New Plymouth in May 2019, <https://firstgas.co.nz/news/hydrogen-project-first-to-join-nnedc/>

² Page 10, discussion document.

agreements specify that those injecting gas into the network must ensure it is compliant with New Zealand Standards for gas.

The standards ensure that the industry is operating in a safe, efficient and effective manner. For example, the quality of gas entering the transmission networks and being dispersed to residential, commercial and industrial consumers is determined under New Zealand Standard 5442 (NZS5442). This Standard determines a range of acceptable quality components and considers contaminants that must be excluded. Following this standard means that our personnel, network and our end users' equipment and appliances should not be harmed in transporting or using the gas.

Changes will be needed to Standards as new fuels are introduced

It is possible that any new gas, even if already covered by the definition in the Act, will not meet the specification for gas under NZS5442. Hydrogen, for example, may meet the definition of gas under the Act but would be prevented from entering the networks as it does not meet the gas specification standard - which has a very low maximum hydrogen limit. In addition, as new fuels or fuel blends are developed, the risk of previously unknown contaminants being included in the fuel increases.

We encourage MBIE to ensure there is a robust process around revising standards as new forms of gas are investigated and trialled in New Zealand's gas network. We anticipate any proposed change to the gas specification, including contaminants would be preceded by evidence of effect on networks and equipment. We note, by example, that the Northeast Gas Association in New York State, New England is working on an interconnection guide for renewable natural gas (RNG).³ The guide is in response to the growing interest and number of initiatives implementing RNG to reduce emissions from conventional natural gas. The guide is intended to enhance understanding of both the technical and policy issues to ensure RNG projects successfully interconnect.

We would welcome the opportunity to work with MBIE and the industry as new forms of gas are investigated and trialled in New Zealand and help develop the supporting standards and guides to enable successful and safe deployment.

Support enabling provisions in Act to enable information disclosure

First Gas supports the addition of a provision to the Act that would enable broader information disclosure gas governance arrangements.

As outlined in our submission to the GIC, the provision of sufficient information is necessary to enable good decisions in the gas market.⁴ We consider that the main information gaps in the gas market relate to planned and unplanned outages at major gas production and user facilities. These facilities have significant physical and financial impacts on the gas industry. Having consistent, timely information on the ability to produce or consume gas at major facilities would help to build confidence in a well-functioning and transparent gas market.

The current reliance on bilateral contract notifications supplemented by voluntary disclosures has been shown to be inadequate, and First Gas would prefer to see a greater level of disclosure embedded in regulation.

Penalties should reflect the potential for harm and include penalties for unauthorised access to critical infrastructure

Whilst we don't have concerns about the current penalty regime, we agree in principle with having a penalty regime that reflects the extent of harm when a breach occurs. If the concern is around the incentive to comply with the critical contingency rules, we suggest the Act be amended to increase a penalty for this area of governance only.

Extend governance rules to address unauthorised interference with critical infrastructure

First Gas recommends that the Act be extended to address unauthorised interference with critical infrastructure and propose that New Zealand could adopt a similar approach to that adopted in New South Wales. This includes potential criminal liability for individuals who damage assets or do not report damage.

³ https://www.northeastgas.org/renewable_natural_gas.php

⁴ First Gas has commented more extensively on this issue in its submission to the Gas Industry Company consultation on information disclosure. Refer https://firstgas.co.nz/wp-content/uploads/First-Gas-submission_Options-paper-for-ID_April-2019.pdf

We believe that there is a gap in current regulation that has the potential to cause harm to people, the industry and the economy. Unauthorised access to critical infrastructure is not considered under the governance rules of this Act or other legislation. The recent incident on the Auckland refinery pipeline provides an example of harm that can happen when unauthorised access to critical infrastructure occurs.

From our experience operating and maintaining gas networks, these networks can be dangerous if accessed by unauthorised personal. We have easements in place and signage to warn parties to contact us before doing any works in the area. However, we still have instances of unauthorised access and damage to our assets. Although serious risks to pipelines from human activity are rare, it is important to be able to stop them quickly when they do occur. Our experience is that it is very difficult to respond urgently to unauthorised activity within the easement while it is still occurring.

First Gas considers that the existing legal remedies, sanctions and enforcement mechanisms are insufficient to adequately deter individuals and organisations from engaging in conduct that has the potential to damage pipeline infrastructure and disrupt the supply of fuel to thousands of people and businesses, and which involves potentially serious risks to life and the environment. Unauthorised activities are not only carried out by laypeople. Our field technicians have previously identified, and responded to, unauthorised activity by contractors engaged by large commercial organisations which are aware of the applicable restrictions around pipelines (e.g., the trenching works carried out before our field technicians arrive). This reinforces our view that a lack of knowledge is not the issue, but rather a willingness to run the risks because of the limited repercussions.

We believe these concerns can be addressed through policy changes designed to alter the behaviour of third parties and to permit enforcement action if they do not respond. We would support inclusion in the Act measures similar to the legal regime in New South Wales, Australia. In particular, the legal regime in New South Wales: ⁵

- Includes “dial before you dig” obligations for networks and any person, intending to carry out excavation works, or authorising such works;⁶
- Provides immediate rights of entry for network owners;⁷
- Provides network owners the power to instruct parties to alter or cease operations that put infrastructure at risk;⁸
- Provides for network owners to recover costs from parties that damage their assets;⁹ and
- Includes potential criminal liability for individuals who damage assets or do not report damage.¹⁰

We would welcome discussions on this matter, as MBIE review the submissions received on this discussion document.

Contact for this submission

We would welcome the opportunity to remain involved with this work, as MBIE develops a longer-term programme of regulatory work around alternative fuels and emerging technologies. If you have any questions regarding this submission, please contact me on 027 4055 634 or via email at lynette.taylor@firstgas.co.nz.

Yours faithfully



Lyn Taylor
Regulatory Advisor

⁵ See, in particular, the amendments made by the Energy Legislation Amendment (Infrastructure Protection) Act 2009 (NSW).

⁶ See, e.g., Part 5E of the Energy Legislation Amendment (Infrastructure Protection) Act 2009 (NSW)

⁷ See, e.g., sections 55 – 64 of the Gas Supply Act 1996 (NSW).

⁸ See, e.g., section 50 of the Gas Supply Act 1996 (NSW).

⁹ See, e.g., section 64E of the Gas Supply Act 1996 (NSW).

¹⁰ See, e.g., section 66 of the Gas Supply Act 1996 (NSW).

Attachment 1: Response to specific consultation questions

Questions relating to Emerging challenges for the Gas Act 1992

Question	First Gas Response
<p>1 What emerging technologies or alternative fuel sources are likely to be covered by the Act's definition of "Gas"?</p>	<p>We welcome the opportunity to consider if the Act covers emerging fuel sources and technologies.</p> <p>It is difficult to predict the technologies and fuel sources that may be available in New Zealand in the future. Rather than try to predict the future, it is more important that the industry continue to work together, and consultation occurs as new options come to light.</p> <p>While the Act forms the basis for the industry currently, it is possible that emerging technologies relating to the gas industry will be better suited to their own regulatory framework and legislation. For example, we believe if carbon capture and storage (CCS) were to be developed, it should be subject to its own legislation covering all facets of the technology, possibly within the Crown Minerals Act. First Gas is aware that the University of Waikato¹¹ is exploring the viability for CCS in New Zealand, including looking at the regulatory settings.</p> <p>As discussed in our cover letter, where amendments to the Gas Act are proposed, we strongly recommend the effect on second and third tier regulation such as safety regulations and New Zealand Standards are also considered. For example, amendments to the definition of "gas" must consider the flow-on effects to the current gas specification standard, and what amendments may be required, or additional documentation (i.e. interconnection guides for biogas).</p> <p>We welcome the opportunity to work with MBIE and the industry as alternative fuel sources are developed to ensure any changes to gas specification can be accommodated in our networks.</p>
<p>2 What aspect(s) of the Act could be a barrier to the uptake of emerging technologies or alternative fuels?</p>	<p>The extent of future technologies and alternative fuels are unknown. The Act should be sufficiently flexible to accommodate minor changes to the industry.</p> <p>The industry working with MBIE as new technologies and fuels develop should ensure that regulation is amended as required. The process for any change must include consultation to avoid unintended consequences.</p>
<p>3 What aspects should be amended or changed to facilitate the emergence of new technologies and alternative fuels?</p>	<p>As noted above, we recommend that hydrogen is explicitly included within the definition of "gas" within the Act.</p> <p>We also recommend that any changes to the Act are not considered in isolation. The downstream costs of any change to the Act must be assessed to avoid unintended consequences. For example, a change in the gas definition and specification may require a change in meters or appliances so they can operate safely and efficiently. We note that currently section 54.1(a) of the Act puts the cost of any removal or replacement of such assets on the owners. The implications of this on consumers' needs to be explored, alongside the technical aspects of transporting emerging fuels.</p>

¹¹ Current research builds on and extends earlier work completed by Waikato University on CCS.
https://www.waikato.ac.nz/_data/assets/pdf_file/0011/179570/University-of-Waikato-CCS-Report-2013-web.pdf

Question	First Gas Response
4 How will your business be impacted if changes to the Act are not made in the short term (e.g. two to three years)?	While we don't anticipate any significant impacts on our businesses if the Act were not to change in the short term, we encourage MBIE to continue their work with industry so the Act will be amended if required in a timely manner.
6 Are you or your organisation involved in the development or deployment of emerging technologies or alternative fuels?	<p>First Gas is committed to supporting the development and/or deployment of emerging technologies and alternative fuels. Our gas networks cover much of the North Island and are ideally placed to support the development, transfer and use of alternative fuels.</p> <p>As discussed in our covering letter, First Gas is planning to undertake hydrogen feasibility studies and trials beginning this year.</p>
7 Are you interested in being contacted as MBIE develops a longer-term programme of regulatory work around the development of emerging technologies and alternative fuels relating to the Act?	First Gas is interested in being involved with any programme of work around the development of emerging technologies and alternative fuels.

Questions relating to Information Disclosure

Question	Response
8 What concerns do you have about the flow and availability of information available to you or your organisation regarding situations that may affect the price and/or availability of gas supply?	First Gas considers that the main information gaps in the gas market relate to planned and unplanned outages at major gas production and user facilities.
9 Do you support the inclusion of an additional regulation/rule making power in the Act to require broader disclosure of information from the gas industry?	<p>First Gas supports the introduction of a prescriptive regulatory solution for information disclosure in the gas market. This is our preferred approach because it:</p> <ul style="list-style-type: none"> • Makes all participants subject to the same requirements, removing the risk of parties withholding information that would apply under a voluntary approach; and • Can be supported by enforcement action where a party does not provide information in an accurate or timely way. <p>Including additional regulation or rule making power in the Act enables the Gas Industry Company (GIC) to work with industry to develop information disclosure to meet industry requirements</p>

Questions relating to Penalties under the Gas Act

Question	Response
<p>10 What concerns do you have about the current penalty regime for gas governance arrangements provided for by the Act?</p>	<p>Whilst we don't have concerns about the current penalty regime, we agree in principle with having a penalty regime that reflects the extent of harm when a breach occurs.</p> <p>We suggest that if the concern is in relation to the critical contingency provisions, then penalties be increased for a breach of this section of the governance rules only.</p>
<p>15 Are there circumstances where the Act should impose a criminal offence on either industry participants or on non-industry participants? What are these?</p>	<p>As discussed in our cover letter, we strongly recommend the Act be extended to recognise the risk of harm due to unauthorised access to, or damage caused to critical infrastructure.</p>