

27 January 2020

Sarah Stevenson
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Ministry of Business, Innovation and Employment
15 Stout Street
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Emailed to: Resource.Markets.Policy@mbie.govt.nz

Dear Sarah

Review of the Crown Minerals Act 1991

First Gas Limited (Firstgas) welcomes the opportunity to comment on the Ministry of Business, Innovation and Employment's (MBIE) discussion document "Review of the Crown Minerals Act 1991".

As a permit holder under the Crown Minerals Act 1991 (CMA) and a provider of significant linked energy infrastructure, we have a strong interest in the CMA review and any changes to the existing framework that may impact our business. We support the review in principle and believe it is in everyone's interests to have an effective and up to date regulatory regime.

Nothing in this submission is commercially sensitive and we are happy for this submission to be posted on MBIE's website.

Structure of our submission

The first part of our submission provides comments on Firstgas' general areas of interest as an energy infrastructure owner. The second part of our submission responds to the specific change proposals that relate to Firstgas as the owner and operator of an underground gas storage facility and the holder of a Petroleum Mining Permit under the CMA.

About Firstgas

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.

The Firstgas 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 Rockgas and the Ahuroa gas storage facility (AGS). Rockgas has over 80 years' experience and provides LPG to 100,000 customers throughout New Zealand. It is New Zealand's largest LPG retail business and supplies its customers with both domestic and imported sources of LPG.

Firstgas' interest in the review

AGS (trading as Flexgas Limited) is New Zealand's only open access gas storage facility. It 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 or during periods of high demand). To provide a sense of scale, AGS has a similar energy storage capacity to all New Zealand's hydro lakes when they are all full (approximately 14 petajoules).

Firstgas' pipeline and gas storage businesses are an important source of energy diversity and flexibility for the New Zealand energy system. Gas storage coupled with modern gas electricity generators will be critical for New Zealand energy security as we transition to a low emissions economy. Our infrastructure will continue to play a critical role in the broader energy system for many

years to come. At the end of our gas storage facilities life, there may even be an opportunity to use it for long term CO₂ storage.

Transition – not revolution

Gas has the potential for a long future in New Zealand. Not just Crown-owned gas but imported gas, biogas, hydrogen and other forms of gas. Firstgas, as part of its commitment under the World Energy Council Hydrogen Global Initiative¹ is aiming for 20 percent hydrogen blending by 2030. We also believe biogas could be blended at a similar level.

Firstgas has a strong interest in ensuring that the regulatory regimes applying across all “gases” support gas as an affordable, available and acceptable form of energy. While we transition to forms of energy with lower emissions, we want to ensure enough gas is available to support New Zealand’s growing energy demands. The declining role of the Maui gas field, depletion of other producing fields, and a desire to end New Zealand’s reliance on coal use at Huntly Power Station means underground gas storage will become more important as the proportion of intermittent renewable energy generation increase.

CMA objectives, principles and scope are generally sensible, but some key themes are missing

We think the current objectives and principles are generally sensible. We believe the emphasis on having a clear, coherent and fair regulatory regime is important to continue providing a constructive foundation for regulator and permit holder to continue to work together effectively.

Reference to Living Standards Framework Wellbeing has merit

Firstgas believes wellbeing is already implicit in the CMA. This is because natural resources directly and indirectly allow New Zealanders to enjoy a high quality of life by global standards. Energy security has been a primary driver for the legislation of rights to explore and produce petroleum in New Zealand throughout the last 150 years.² Gas explorers and producers continue to contribute to energy security, which helps keep the cost of energy down. On this basis, we see some merit in referring to the Living Standards Framework because it emphasises the important role of gas in New Zealand.

Role of the CMA in reducing carbon emissions not fully reflected

During the gas supply disruptions, low hydro lake levels and windless days in the 2018 spring and early 2019 summer, coal consumption increased to levels not seen since 2013. Given this recent experience we thought the discussion document may have placed more emphasis on the role of gas as an alternative to coal in periods where other forms of energy are unavailable.

The International Energy Agency (IEA) continues to stress the importance of gas in reducing global carbon emissions³. The evidence of the gains in emissions reduction through switching from coal to gas is compelling (Figure 1 below), and conversion from coal to gas is expected to be a critical step in meeting global emissions reduction targets by 2050.

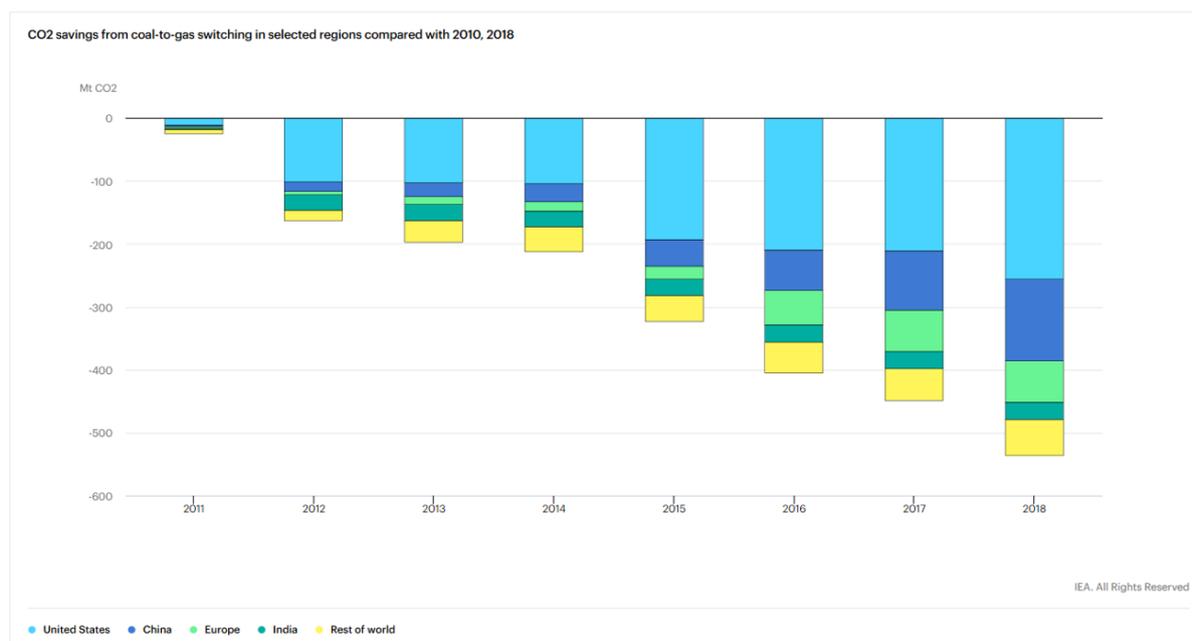
Growth in global gas trade via LNG is a critical enabler to allow countries to switch from coal to gas. New Zealand is fortunate that it has an existing gas resource that can be used to displace domestic coal consumption, and the potential to help displace coal use in other countries if an LNG scale discovery is made in New Zealand. Gas exports from New Zealand to countries with high current coal demand could make a significant contribution towards meeting the global 2050 emissions reduction targets.

¹ <https://www.worldenergy.org/impact-communities/innovation/hydrogen-charter>

² See Grinlinton (1995): <http://www.nzlii.org/nz/journals/OtaLawRw/1995/4.html>

³ <https://www.iea.org/reports/the-role-of-gas-in-todays-energy-transitions>

Figure 1: CO₂ savings from switching from coal to gas in selected global regions compared with 2010, 2018⁴



Energy security should be emphasised in the review

Dry hydro conditions have been relatively common in New Zealand over the last twenty years with public conservation campaigns occurring in 2001, 2002 and 2008⁵ (~15 percent of the time) and close calls in other years such as 2018/19. If burning coal is not an option, then gas will remain important until other effective solutions become available. At this stage effective substitutes for hydro-firming fuel are not ready to fully displace gas in New Zealand. On this basis, we think the CMA should continue to promote gas exploration until effective low carbon substitutes are built and brought to market.

To ensure energy security, we think it's better to have a range of real options available while we work on renewable sources of hydro-firming. Retaining gas as one of those energy options will require continued investment in exploration and some promotion to ensure investment is sustained.

Carbon capture and storage is a missed opportunity

We note that Carbon Capture and Underground Storage (CCUS) has not been considered in the review. Firstgas agree with the New Zealand Productivity Commission recommendations and the IEA, that many emissions mitigation options need to be developed and executed simultaneously to meet 2050 reductions levels. Those organisations have been clear that CCUS is critical to meeting the 2050 targets.

New Zealand is well positioned to explore CCUS because it has existing gas fields and opportunities for injection into deep saline aquifers⁶. The CMA provides an existing framework that could be adapted to integrate CCUS. A key question that could have been addressed in this review is what role the CMA could play (if any) in the facilitation of CCUS in New Zealand.

Comments on specific change proposals

General record keeping (paragraphs 248 to 253)

Firstgas support a reasonable level of reporting detail to the extent this doesn't lead to unnecessary administrative burden. The scope of the CMA regulates a wide range of permit holders – from relatively simple quarrying and mining operations through to large joint venture operated oil and gas

⁴ Source: IEA, The Role of Gas in Today's Energy Transitions

⁵ https://www.iccc.mfe.govt.nz/assets/PDF_Library/daed426432/FINAL-ICCC-Electricity-report.pdf

⁶ <https://link.springer.com/article/10.1007%2Fs11242-004-0670-9>

ventures. With this variation in complexity, we think it is appropriate to look for opportunities for alignment with other regulatory reporting requirements where those opportunities are easy for permit holders to implement.

As a gas storage operator, Firstgas doesn't pay a royalty on gas injected and withdrawn from our AGS facility, and yet we are required to meet the same record keeping requirements as a producing field. We encourage MBIE to consider any opportunities to remove or reduce unnecessary reporting obligations for gas storage.

Definition of decommissioning – Proposal A2

Firstgas agrees with the proposals to reference decommissioning to good industry practice.

Definition of Petroleum Infrastructure – Proposal A2

We support inclusion of a definition for "petroleum infrastructure" in the CMA. However, to be more explicit we think the definition should clarify that this is not intended to include transmission and distribution pipelines covered by other legislation.

Cessation of production – Proposal A3

Gas storage not considered

This proposal doesn't appear to have considered gas storage. We encourage MBIE to consider a storage operation in the context of cessation of production. Unlike an existing declining field, storage fields have utility long after the original gas reserves have been depleted. Any future decisions to cease storage operations altogether ahead of decommissioning are likely to depend on New Zealand's gas market rather than normal field depletion. A definition for cessation of production could be a way to distinguish between the normal end of field life process and that of a storage field.

Potential for regulator to issue operational directives is concerning

The way this proposal has been drafted suggests the regulator may require a permit holder to continue producing until they are told they can stop. This potentially has many operational and legal implications for the regulator and the permit holder, especially if those directives require the permit holder to continue operating at a loss or to make significant operational changes e.g. additional compression costing millions. Permit holders are best placed to understand the commerciality of their fields. For the regulator to make informed decisions on cessation of petroleum activities additional resourcing would be required by MBIE.

If the intention of this proposal is simply to ensure the regulator has clarity on when production will cease prior to a definitive decommissioning decision and permit surrender, then we support that intention and think a formal agreement has some merit. However, we don't think it's appropriate for the regulator to issue operational directives. If that is the intention, then for CMA consultation purposes, we think MBIE needs to provide more detail about the circumstance under which it might issue operational directives to a permit holder. Further, we don't think the costs and benefits described in the review document accurately reflect the financial and technical risks to the regulator or the permit holder.

Maintaining sense of perspective and materiality

There are currently around 26 existing petroleum mining permits and licences in New Zealand and only a small probability that that new material discoveries will be made without significant investment in exploration. That's a tiny number compared to the UK portion of the North Sea that has several hundred fields, or Australia that also has hundreds of fields. Given the small number of fields in New Zealand, the regulator should already have a good understanding of likely field cessation timeframes. Based on this we think there are likely to be more effective options to discuss and agree cessation of production.

The CMA Annual Review Meetings were introduced following the last CMA review, and these were intended as a forum for all regulators and the permit holder to formally discuss and agree permit work programmes, especially key decision points such as cessation of production.

Cessation of production decision should consider opportunities to repurpose old fields

Large capital expenditure goes into the development of oil and gas fields. New onshore wells can cost anywhere between \$2 million and \$20 million each. If the Crown ever wished to promote CCUS

to help achieve its 2050 emissions targets, then it may need to promote the conversion of old fields to CCUS. We recommend that future decisions on cessation of production consider the value of repurposing fields due to be decommissioned for CCUS or other purposes⁷.

Financial capability reporting – Proposal C1

Regulatory monitoring is a normal function for all regulators, and we accept MBIE's desire to have more visibility over financial capability of permit holders across the permit lifecycle. We don't mind providing additional information if the costs are minimised and any new powers used judiciously.

We note there are many ways a permit holder can become insolvent during the permit lifecycle. When the regulator grant's a new permit or a transfer following an asset sale, it is also accepting the risks of the permit holding entities, and there are many risks. Even with more regular financial capability reporting, by the time a permit holder runs in to financial difficulty it may be too late for the regulator use that information to avoid a transfer of liabilities i.e. it may not be possible to impose last minute financial security requirements.

Field Development Plans – Proposal C2

Field development plans (FDPs) are an essential part of the permit holder asset management planning process. Every field should have a relevant up-to-date FDP and Firstgas supports the provision of these to the Crown.

The complexity of FDP's varies depending on the operation. For example, the FDP for a storage facility is different from a producing field because new wells and other techniques to maximise gas extraction are not required.

Developing and updating FDP's can involve a lot of additional work and cost and we think the comments in paragraph 369 are incorrect. If the Crown requires an out-of-cycle FDP update, then the cost to do that could be relatively large. The resourcing required to do the update would almost certainly impact on a permit holders' day to day business. Further to this, we don't believe MBIE is sufficiently resourced to review complex FDP's⁸ and we don't think the additional resourcing requirement has been reflected in the costs and benefits described in the discussion paper. As part of the review process we encourage MBIE to look carefully at the additional resourcing requirements needed to implement regular FDP reviews on top of the regulator's additional workload.

Financial Security – Proposal D1

Firstgas believes this is an important issue and supports a regime that prevents transfer of industry liabilities to the taxpayer. However, we think this needs to be thought through carefully because imposing the wrong form of financial security could also result in poor outcomes for permit holders, regulator, and taxpayer.

For a financial security regime to be fully effective, ideally the regulator would agree the form and amount of financial security before a new field development, or prior to a significant field redevelopment and these should be reflected in the permit conditions – not towards the end of the asset lifecycle.

In the New Zealand context, the time to establish a new financial security regime was in the early to mid-2000's before permit holders made final investment decisions on several offshore fields, and again in the early 2010's when several small onshore fields were developed. Most of those fields are now more than halfway through their field lives and some will be facing decommissioning decisions within the next two years. In this regard, because the regulator set and agreed the conditions in the permits and licenses when they were granted, it needs to take some responsibility for the current situation. We encourage MBIE to work with permit holders towards a regime that minimises the impact on the existing rights and obligations agreed in those permits and licenses.

If MBIE intends to impose financial assurance regulations, then our preference would be the option that has the least inefficient use of capital. For example, for an asset like our AGS facility that has

⁷ For example, geothermal energy generation from deep hot aquifers.

⁸ For example, FDP's include input from Reservoir Engineers, Petrophysicists, Petroleum Engineers, Petroleum Geologists, and Geophysicists – these professions are uncommon in New Zealand.

decades of life remaining, it would be inefficient use of capital to have all funds for decommissioning sitting in a bank account for the duration of the AGS asset life. For other permit holders, a sudden demand for say 90 percent of the future decommissioning and well abandonment, could in fact bring forward decommissioning and the Crown could potentially create a situation where the value from a permit has not been maximised⁹. Every operation will have a different set of economic sensitivities, and a one-boot-fits-all approach to financial security at this stage in the lifecycle of those operations is unlikely to be workable.

Given the timing for responses to the discussion paper (Christmas and New Year) and the significance of this proposal, we recommend MBIE establish a separate consultation process with permit holders to assess the most practicable financial security options available.

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) 830 5306 or via email at josh.adams@firstgas.co.nz.

Yours sincerely

**Josh Adams**

Transmission Commercial and Ahuroa Business Case Support

⁹ This includes availability of gas – not just royalties.