

5 July 2021

Gas Industry Company

Submitted by email to consultations@gasindustry.co.nz

Submission on the Gas Market Settings Investigation Consultation Paper

Introduction

1. Energy Resources Aotearoa (“Energy Resources”) represents energy-intensive firms in the energy resources sector, from explorers and producers to distributors and users of resources like oil, LPG, natural gas and hydrogen.
2. This document constitutes Energy Resources’ submission to the Gas Industry Company (“GIC”) on its *Gas Market Settings Investigation Consultation Paper*.

Submission

We commend the GIC’s work

3. We commend the GIC for preparing a comprehensive consultation paper which covers a wide range of issues in a fair manner. We appreciate the GIC’s consultative processes that it undertakes and we especially thank the GIC for accepting this late submission.
4. We welcome the investigation, as its occurrence signifies and acknowledges that both sides of the market (not just the supply side) are under extreme stress. Regardless of how ‘clear’ and ‘certain’ the Government has attempted to make the upstream operational environment through its legislation, policy and statements, the operation of markets involve a complex and interwoven web of incentives and signals. This inherent complexity cannot be made ‘simple’ by virtue of a government statement (setting end dates for example) even if intended to clarify. Having had the Government fundamentally change the framework, the behaviour of all market participants inevitably needs to adapt to a ‘new normal’.



5. To a certain extent therefore, the Consultation Paper has been an exercise in stating the obvious. Given existing and signalled policy settings and field decline, no one at all should be surprised that New Zealand faces the prospect of a massive and growing energy gap and that policy needs to change if this is to be avoided.

Our interest is in promoting an efficient energy market

6. We largely agree with the GIC's characterisation of both the importance of natural gas in New Zealand and the issues facing the gas sector. Our core interest is ultimately in an efficient energy market, and this submission primarily considers the necessary public policy settings to achieve that.
7. We conceive of an efficient energy market as one where supply of various fuels is allowed to meet demand now and over time. We suggest that standard economics be used as the governing framework for assessing this, with allocative, productive and dynamic efficiency as overarching goals.¹ We note that the issues in the consultation paper have not yet been tested against this and it is important to do so.
8. In terms of a framework for assessing the need for either regulatory interventions or policy change, there should be analysis that demonstrates the presence of either:
 - a. **'market failure' (externalities, monopoly, imperfect information, or public goods) that warrants government intervention:** when considering the status quo and pathway to a better functioning energy market it is important to maintain a disciplined focus on genuine and material market failures (as opposed to normatively disliked outcomes).² In considering regulatory interventions, a full analysis of costs and benefits is necessary; and
 - b. **'government failure' that needs correcting through policy change:** government intervention can, when improperly designed or implemented, lead to inefficiencies and the misallocation of resources. Government failure is an important public administration concept to consider as it helps to

¹ If the GIC or Government has non-market objectives then these should be made explicit, and ex ante analysis should assess the likely outcomes arising from such a focus. This should be compared to the outcomes expected under a standard economics approach (as we prefer) so the trade-offs can be well understood.

² In terms of identifying residual problems remaining after the ETS has dealt with externalities of carbon emissions, we note that capital barriers are sometimes loosely alleged to represent a market failure. This is usually incorrect however as competing capital decisions is an inherent part of the commercial sector, as all decisions involve an opportunity cost, meaning that if a particular project does not happen this is just revealed preference in action.

account for the costs beyond the direct costs, transaction costs and opportunity costs of resources spent on complying with government regulation.³ Government failure can occur due to:

- i. political failure: legislation responds to interest groups at the expense of the general public;
- ii. bureaucratic failure: government agencies may seek to advance their own interests (e.g. expanding budgets and influence) rather than addressing the original problem that warranted intervention in the first place;
- iii. judicial failure: slow, costly and uncertain legal processes can arise from new regulations;
- iv. regulatory capture: regulatory agencies can end up captured by stakeholders in the regulated industry; and
- v. regulatory creep: where additional costly regulations are needed to manage unintended consequences of the original policy).

Problem assessment

The market is broadly working

9. The GIC states that:

“The vast majority of those we heard from concluded that the market, commercial and regulatory settings for gas for the most part work well and are manageable.”⁴

10. We generally agree that market settings for gas are working well, but this is largely due to the efforts of the market participants themselves. If settings are broadly working, then it is especially incumbent on the GIC to develop a clear problem definition (through a market failure and government failure lens) before recommending interventions or corrections.

11. We agree with the point conveyed in the following finding:

“Virtually all were concerned that intervention in commercial arrangements would reduce predictability and lead to poorer outcomes both for the gas and electricity industries and for New Zealand industry and business more generally.”⁵

³ Note that our use of the term government failure is not intended to convey a political judgement nor is it necessarily pejorative. We use the term in its traditional public economics and public administration sense whereby government policy can lead to a misallocation of resources.

⁴ Page 1. Gas Market Settings Investigation Consultation Paper.

⁵ Ibid.

12. We are not aware of any recent serious analysis claiming that we are experiencing market failure, except in relation to imperfect information which is being dealt with through voluntary disclosure arrangements and potential regulation.⁶ The view we most frequently encounter is that government failure is the key issue facing the energy sector.

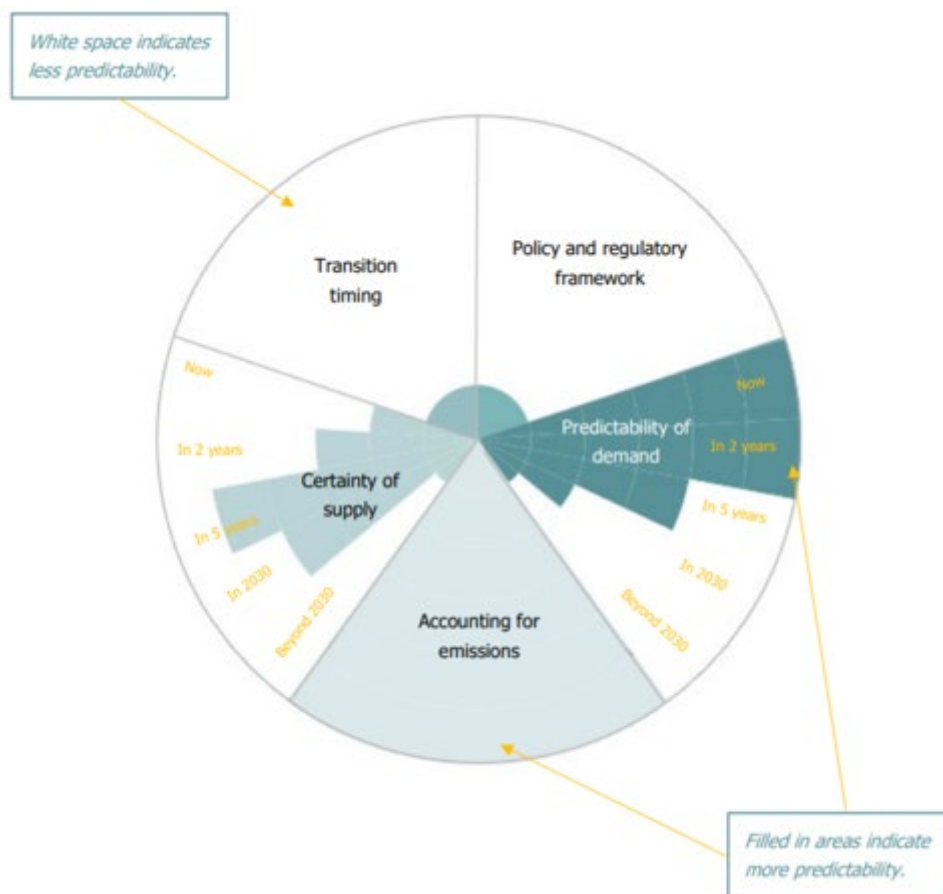
But government failure is present

13. One aspect of the regime not working is, in our view, due to government policy and regulation. In a well-functioning market, high energy prices work as a scarcity signal and incentive:
 - a. for producers to invest in bringing to market new supply; and
 - b. for consumers to either reduce use or use affordable substitutes.
14. Normally, the price incentive and consequent responses would resolve the issue. At the current time, however, there is significant uncertainty about the future (of both gas and its renewable substitutes) which makes it hard for firms to be able to rationally respond, especially for the next phase of projects with durations beyond 2030. For industrials and many process heat users, substitutes to gas are simply not available (for either economic or technical reasons) leaving them 'caught out' through no fault of their own.
15. It is within this context of government failure that the economic problem we are facing and trying to address is the allocation of an increasingly scarce gas resource. The current investment climate is challenging for parties right across the energy sector due to:
 - a. an imbalanced emphasis on sustainability while not giving due regard to affordability or security of supply;
 - b. an emerging policy focus on *gross* emissions (as opposed to the traditional fuel neutral focus on net emissions);
 - c. a limited regard for what we consider to be classically sound public policy fundamentals;
 - d. heightened sovereign risk and a lack of stability and predictability in policy settings; and
 - e. the velocity of change, (noting that no one believes the status quo is sustainable and that no one objects to the net zero emissions objective).

⁶ We support reasonable disclosure of information to correct any situations of imperfect information, hence leading development of the Upstream Gas Outage Information Disclosure Code 2020. We are also looking at how to promote more timely disclosure of other data including gas production and forecasts. However, as important as information is, ultimately it cannot replace molecules of gas and it is this shortage of gas that is the core issue and one that, going forward especially, is being exacerbated by government settings.

16. The Predictability Themes graph from the discussion document, copied below, correctly identifies the almost complete absence of predictability in the policy and regulatory framework. It is from this problem that nearly all others flow, and of course it is the Government that ultimately decides on the policy framework and that sets the tone for how predictable and stable it will be. Addressing the lack of policy predictability will be crucial in restoring confidence and investment into the New Zealand natural gas sector.

Image one: Predictability Themes graph from page 34 of the consultation paper



Investment is required to keep gas flowing, but this needs the right policy and commercial settings

17. The consultation paper makes clear that the gas market is tight and will remain so into the medium term and even the long term unless upstream capital is invested. Investment of capital is contingent upon at least two important factors:
- predictable and stable settings; and
 - reasonable confidence that downstream counterparties will be around in New Zealand long enough to justify the investment.

18. Key issues in the current political and policy environment which compound uncertainty and risk are:
- a. the 100% renewable electricity target;
 - b. a possible ban on new gas connections;
 - c. phasing out fuel fossils in process heat;
 - d. the NZ Battery Project and Lake Onslow pumped hydro concept;
 - e. the end to new petroleum exploration permits outside Taranaki; and
 - f. retrospectively implementing perpetual liability on Crown Mineral permits in the context of decommissioning.
19. We cover each of these in turn:
- a. **the 100% renewable electricity target:** the government policy of 100% renewables has been 'doubled down' upon through removal of the 'normal hydrological year' qualification and brought forward from 2035 to 2030.⁷ This policy appears to be becoming an absolute goal which sends strong negative signals to thermal generators and their gas producers that they will shortly have no role or place. This leads to a significant risk that such firms either exit or limit investment due to a lack of confidence in the future;
 - b. **the NZ Battery Project and Lake Onslow pumped hydro concept:** having this government project on the horizon as a possibility will have a major chilling effect on investment into new generation (both thermal and renewable) because it threatens to impair private assets by filling the market with nominally cheap electricity (we say nominally as in reality the multitude of economic costs are real and socialised);
 - c. **a possible ban on new gas connections:** the Climate Change Commission's recommendation to ban new natural gas and LPG connections is demand-destruction by regulatory fiat and represents both another ban and more focus on particular fuels;⁸
 - d. **phasing out fuel fossils in process heat:** this new 'hard phase-out' language and policy direction reinforces the myopic focus on fuels and technology rather than net emissions;
 - e. **the end to new petroleum exploration permits:** the ban on new petroleum exploration permits outside onshore Taranaki and the manner in

⁷ The absence of this qualification from the Minister's letter commissioning the GIC's report is noteworthy.

⁸ This language is seen in the recent consultation entitled *Phasing Out Fossil Fuels in Process Heat*. Our submission on this can be found at <https://www.energyresources.org.nz/dmsdocument/174>.

which it was made significantly added to sovereign risk. It has put parameters around the existing sector meaning it is now operating with a closed and contracting system. Some may consider that the exploration ban is not relevant to the current energy shortage as today's gas deliverability issues are not caused by it directly. That is possibly true in a narrowest sense, but the ban certainly becomes relevant in terms of how firms (across the wider energy system) *respond* to the current situation;⁹ and

- f. **retrospectively implementing perpetual liability on Crown Mineral permits:** Crown Minerals legislation, recently introduced, will implement retrospective legislation to institute a perpetual liability regime on permit holders and will also require financial assurance in the event of environmental issues post-decommissioning.¹⁰ The poor policy process (i.e. being implemented without prior public consultation) and retrospective nature is chilling for business and shows that the rules of the game can be changed at any time.

Implications

20. This cacophony of negative signals adds significant risk (especially for the next cycle of investments which may see production beyond 2030) for those considering investing in natural gas projects including the development of contingent resources. The upstream petroleum sector operates with significant technical and commercial risks as it is, so adding political and policy risk compromises a key factor that has traditionally made New Zealand's sector attractive to invest in.
21. If we assume that:
- a. the goal of 100% renewable electricity by 2030 is maintained and firms act as if it will remain a goal (by either not investing in long-lived assets or raising prices to recover costs over a shorter timeframe);
 - b. the Government either directly intervenes in the market to achieve 100% renewable electricity by 2030 or firms act in anticipation of such a possibility;
 - c. the ban on new petroleum exploration permits remains in place; and
 - d. if the Lake Onslow pumped hydro scheme is committed to being built

then we expect that gas producers will identify that they do not have a role beyond 2030 and they will act accordingly. This would mean gas exits the

⁹ It is difficult to know what might have happened in a different world. For example, might there have been a rig in the country last year that could have been redirected to infill drilling without the exploration ban?

¹⁰ The Crown Minerals (Decommissioning and Other Matters) Amendment Bill can be found at: <https://www.legislation.govt.nz/bill/government/2021/0047/latest/whole.html#LMS508620>.

electricity sector, which (aside from the collateral damage) means the *actual* challenge becomes ensuring enough electricity is generated in a reliable and affordable manner. That is to say, the challenge shifts to the electricity sector due to a supply gap arising from the premature exit of gas from electricity generation.¹¹

22. If companies believe that the current settings and the direction of travel are firmly set, then their ability to respond in way conducive with the longer-term interests of New Zealand (in terms of keeping open options and meeting demand) are extremely limited.
23. The Minister of Energy and Resources in her letter commissioning the GIC's report and current consultation process states that she is particularly interested in:

"How current market, commercial, and regulatory settings in the gas market support security of supply in the electricity market (particularly during periods of heightened demand), and whether these are fit-for-purpose for ensuring that thermal generation is provided during the transition"

and

"How current market, commercial, and regulatory settings provide major gas users with sufficient certainty/transparency about gas supply for their operations, and whether these are fit-for-purpose during the transition"¹²

24. It is difficult to conceive how the GIC can undertake this task given certain parameters, in particular the firm commitment to 100% renewable electricity by 2030.
25. If the GIC were to come up with an assessment and recommendations that are constrained by such parameters, then it will be automatically working on second and third best options. Policy designed within the current parameters will inevitably have their own set of separate issues and unintended consequences, which will lead to the need for *further* corrections which will continue to compound the lack of policy predictability.

Asking explorative questions to help think about the consequences of these settings

26. We would sincerely hope that policy makers will not allow foreseeable unintended consequences to eventuate, as it would likely see the current energy *gap* evolve into a full-blown energy *crisis*.

¹¹ We note the longstanding swaption between Meridian Energy and Genesis Energy for dry year reserves underpinned by coal. We wonder if a similar arrangement could be arranged with a gas supplier or gas-fired generator (at lower emissions than coal).

¹² The full letter can be found on page 6 of the Consultation Paper.

27. A tool to allow the GIC to offer sound advice is to ask explorative questions to help think through the consequences of firms acting on the above policy settings and direction of travel. Such an exercise would flush out the implications of the current policy mix and will help to inform policy changes that can be made to improve the situation to avoid the most adverse consequences.
28. It is worth the GIC exploring the consequences of the following kinds of “*what would happen if*” scenario-based questions:
 - a. what if the Lake Onslow pumped hydro project is committed to but not built by 2030 or, for whatever reason, not built at all despite an intention for it be completed?;
 - b. what if the Climate Change Commission is right in saying natural gas will still be needed for electricity peaking in 2050?;
 - c. what if the Government accepts the Climate Change Commission’s recommendation concerning the 100% renewable electricity target?;
 - d. what if the Government decides the Lake Onslow project is unnecessary or amends its terms of reference to allow hydrocarbons a role in firming electricity?; and
 - e. what if the ban on new petroleum exploration permits is amended or repealed?
29. Asking the ‘what if’ questions to explore foreseeable outcomes should shine a light on the severity of the situation that we may find ourselves in. It would likely highlight the necessity of widening policy parameters to increase optionality, so as to avoid path dependence and the foreclosure of options leading to regrets later on.¹³
30. This is crucial to establish resilient policy settings that are durable in the long-term. This will allow sufficient flexibility to adapt to both changing circumstances to the scenario where things do not ‘go to plan’.

The policy settings needed

31. We now turn to policy and regulatory options that could improve the situation. This would better promote an efficiently functioning energy market and avoid the worst outcomes that could eventuate under the status quo direction of travel. In the situation (highly likely in our view and supported by other experts) that gas is needed beyond 2030 we must immediately think about how to enable the necessary investment to achieve this.
32. We would like to see the GIC recommend that the Government commit to:

¹³ Path dependence exists when a feature of the economy (institution, technical standard, pattern of economic development etc) is not based on current conditions, but rather has been formed by a sequence of past actions each leading to a distinct outcome.

- a. **a stable policy and regulatory environment with long-term and bipartisan predictability to give firms the confidence to invest:** the Government should commit to uphold a “no surprises” forward-looking decision-making process, based on meaningful dialogue with stakeholders. A core aspect of this is respect for property rights and not implementing retrospective policy changes. Without political stability behind climate policy, economic actors will likely delay making important actions to reduce emissions, or they will raise prices as risk is factored in;
- b. **withdraw support for the NZ Battery Project as currently scoped:** as covered earlier, this project will stifle investment. It should not be proceeded with, but if it is, then the terms of reference should be amended so as to not definitively preclude any fossil fuel or gas storage having a role in electricity generation;¹⁴
- c. **abandon the arbitrary target of 100% renewable electricity and accept a role for gas-fired peaking:** the Climate Change Commission, in its Final Advice, stated that “The Government should consider replacing the 100% target with a goal of aiming to achieve 95-98% renewable electricity by 2030.” This is on the basis that pursuing 100% renewable electricity will result in high electricity prices making decarbonisation through electrification relatively less attractive. This view echoes that of the Interim Climate Change Committee and practically all other serious analysts who have looked at and commented on the matter;
- d. **adopt a fuel and technology neutral approach and focus on net emissions:** ultimately it is net emissions that matter and fuel-focussed policies and an emphasis on gross emissions have risks of unintended consequences and typically high emission abatement costs;¹⁵
- e. **set up an enabling regime for carbon capture and storage and make all CCS activities eligible for carbon credits:** the lack of a regulatory framework for CCS is a key barrier to the activity happening in New Zealand. Some details relating to this are covered in **Appendix One**. Gas combined with CCS means very low emissions and it would be positive if the Government was open to its application. We note that CCS is a workstream for the Ara Ake energy institute, and that the Australian Government has chosen to invest in CCS to reduce emissions.¹⁶ Choosing not to embrace CCS

¹⁴ Options for storage could include other reservoirs similar to Ahuroa.

¹⁵ In other words, these policies reduce emissions at a very high cost per tonne of carbon, compared to other approaches such as using the ETS.

¹⁶ “The government picked CCS as one of five technologies that it intends to invest in over the next two decades to drive emissions cuts, and instructed the Clean Energy Regulator to develop a method for

means missing out on opportunities that would present themselves (such as blue hydrogen) if gas had a clearer pathway to a zero emissions future;¹⁷

- f. **an energy accord between industry and government:** there has been recent discussion about an energy strategy. Rather than adopting such a top-down approach, we propose that the Government work with the energy resources sector to develop an accord representing a joint commitment to work together to enable and promote a vibrant and well-functioning energy resources sector. A joint accord would be practical and more durable than one single Government's strategy.

More than most, the energy sector is a complex, integrated living ecosystem, which has implications for policy and regulation. The level of co-ordination, responsiveness and adaptability that is (and increasingly will be) required, means all players in the sector need to be more collaborative and open to achieving consensus on broad outcomes.

An accord, properly developed, would create a framework and platform for government and industry to collaboratively work together to consider and address key challenges in the sector. These could include security of supply, affordability, environmental sustainability including emissions, regulatory environment, and skills and training. If an accord is reached, a subsequent work plan could be developed to deliver the outcomes agreed upon;

- g. **use the energy trilemma and invite stakeholders to hold it accountable against this;** the trilemma is a recognised framework employed by the World Energy Council which focusses thinking on the three key components of a successful energy system - affordability, reliability and sustainability. Each component is important, but trade-offs within and across them are inevitable. The focus should be on achieving sound and balanced energy policy and not overemphasising sustainability, especially to the extent that general energy policy gets used to achieve specific climate change objectives;
- h. **investigate barriers to LNG imports:** it would be desirable for gas supply to be able to meet demand (as determined to be efficient under the ETS regime of course) so the full suite of options should be considered. This includes LNG imports, so it would be reasonable to consider whether any

CCS schemes to earn Australian Carbon Credit Units (ACCUs)s". *Australia releases draft carbon offset method for CCS*, Carbon Pulse. 29 June 2021.

¹⁷ Adopting a positive view on CCS would require the Government to change its focus away from fuels towards a simple focus on emissions, as covered in the previous paragraph.

regulatory barriers should be addressed that would otherwise prevent LNG importation; and¹⁸

- i. **use the ETS as the mechanism for reducing emissions:** the ETS with its newly implemented cap is an excellent policy tool for reducing emissions to socially efficient levels by pricing the externality;¹⁹

Emission reductions must ultimately happen at the level of the national economy, and not just in particular sectors as promoted by certain sectoral interventions. In considering this point, it is important to bear in mind that New Zealand has just recently (and rightly) instituted a genuine cap and trade scheme.²⁰

Some people claim the ETS is insufficient or inadequate, but we are becoming concerned that it is not being given the room to actually do its job, free from other 'complementary measures' or adjustments to the ETS regime itself. Ongoing support for the ETS cannot be expected to endure if the actions of policy makers continue to undermine its efficacy and then point to undermined effectiveness as a reason to support even more changes to undermine it further.

If the government undermines the ETS with direct measures without providing any robust evidence, it sends a strong signal that the ETS can be diluted again in future. This would severely undermine confidence in the ETS by the public and investors who we need to make the capital investments in the technology we require for the transition.

¹⁸ We consider LNG imports to be suboptimal if domestically produced resources can be economically developed, but if policy settings that limit domestic activity remain in place then imports may be required.

¹⁹ Economist William Nordhaus was awarded the Nobel Memorial Prize in Economic Sciences in 2018 for his work demonstrating that carbon pricing is the most efficient tool for reducing emissions. Nordhaus found that carbon pricing:

- sends signals to consumers about which goods and services are more carbon-intensive;
- sends signals to producers about which activities are most carbon intensive (such as coal burning) and which are less carbon-intensive (like solar or wind);
- sends signals to propel innovation to find new, affordable alternatives; and
- is the best means to convey these signals within well-functioning markets.

²⁰ This emissions cap means a new and important dynamic in climate economics must be carefully considered – the 'waterbed effect' The waterbed effect is a metaphor showing that under a capped system, regulations further to the ETS cannot reduce overall emissions, because 'pushing down' on one part of the 'waterbed' (through a sector-specific ban for example) means that the displaced set of emissions simply 'pops up' somewhere else in the economy as the overall volume of emission units does not change.

Summary

33. In summary, we agree with the GIC's view that the market is working well. The challenge going forward is to ensure that New Zealand sees the right investment at the right time so that fuel supply can meet demand in a balanced way, providing affordable, reliable and sustainable energy. Unfortunately, under current policy settings and direction we believe that this is almost impossible.
34. We have identified risks associated with government policy and suggested explorative questions to ask to help identify foreseeable outcomes. To address those risks, we have offered a number of policy actions which are intended to be pragmatic and achievable. Our policy prescription should better allow for the investment required to ensure a relatively smooth transitions to a low emissions future in a way that provides security of supply for fuel users.
35. We look forward to working with the GIC as it works to consider and resolve these issues for the benefit of New Zealand's well-being.

Appendix One: Regulation of carbon capture and storage

Although carbon capture and storage is not specifically prohibited in New Zealand, there is no legislation that sets out a CCS regime or specific consenting process. This uncertain and ill-defined framework means that CCS operators could theoretically apply for consents, but detailed reports advise that the Resource Management Act is not equipped to deal with the nuances of CCS (even if “called-in” by the Minister for the Environment). The two key reports are listed below and reach the stated conclusions.

- In *Carbon Capture and Storage: Designing the Legal and Regulatory Framework for New Zealand*²¹ Barry Barton of Waikato University states CCS “is probably not actually possible at all under the existing law”.
- The Productivity Commission's *Low Emissions Economy*²² report considers that the current law “is not set up to deal with the complexities of CCS, and acts as a barrier to the uptake of these technologies” (page 449).

The Productivity Commission's *Low Emissions Economy* report and the Waikato University paper both recommend a bespoke CCS Act.

The Waikato University paper states “A close analysis of the RMA, the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act), and the Crown Minerals Act 1991 produces the conclusion that **none of those Acts is capable, either in its detail or its general architecture, of delivering the legal framework that is required for CCS**”.

The main comments of the Commission and University include the following.

- a. CCS is a ‘removal activity’ under the Climate Change Response Act (“ETS Act”). That means the removing entity (i.e., an operator of a suitable geological formation) could receive 1 ETS credit for every tonne of CO₂ removed and stored (s64(1), CCRA).
- b. However, that only applies where the capture and storage is related to a given operator's activities. So, if an operator were to store carbon on behalf of a third party, then that operator could not currently claim ETS credits.
- c. One of the Commission's recommendations (R14.7) is to change the ETS Act so that an entity performing CCS (including capture) can receive ETS credits, regardless of whether or not that entity was the source of the CO₂.
- d. Like the Commission's R14.7 recommendation, the University paper recommends that the definition of ‘removal activity’ be wider than currently

²¹ https://www.waikato.ac.nz/_data/assets/pdf_file/0011/179570/University-of-Waikato-CCS-Report-2013-web.pdf

²² https://www.productivity.govt.nz/sites/default/files/Productivity%20Commission_Low-emissions%20economy_Final%20Report_FINAL_2.pdf

stated for CCS, i.e., that CCS be a removal activity "*whether or not the CO₂ is from an activity that is required to surrender units*".

- e. The Commission considers that the combined effect of the RMA, EEZ Act and Crown Minerals Act is not capable of delivering the legal framework required for CCS. In particular, the RMA was singled out for not being fit-for-purpose for CCS. For example, the RMA is not equipped to deal with the long-term liability required for CCS operations.
- f. The University paper aligns with the Commission's findings on the RMA, stating "*The overall consequence appears to be that the positive effect of CCS on climate change cannot be taken into account (it is not a renewable energy project), but its possible negative effects on the environment more broadly can be. This could make it practically impossible to get consent for a CCS project...*"
- g. To deal with this issue, the Commission recommends (R14.6) that a whole new piece of legislation, a CCS Act, be drafted to regulate CCS.
- h. The University paper also considers that a new CCS Act is the preferred option. To clarify the interplay between any new CCS Act and current regimes like the RMA and EEZ Acts, the paper states (emphasis added) "*We conclude that new legislation should be enacted that specifically regulates the injection of CO₂ for permanent sequestration, any subsequent leakage or migration, and exploration for storage formations. **We propose that those matters will be removed from control under the RMA and EEZ Act, and will not require permits under them***" (Executive summary, page vii)
- i. The University paper (page 57) recommends any new CCS Act apply only to the injection and storage aspects of CCS operations, but other CCS activities will likely still be covered by the RMA.
- j. The University paper (page 49) concludes that permits for CCS cannot be issued under the Crown Minerals Act, as CCS is outside the definition of 'mining'. The University notes that the CMA does not prohibit CCS.