



NGĀ IWI O TARANAKI

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Consultation Response - Regulatory Regime for Carbon Capture, Utilisation and Storage

Tēnā koe,

Ngā Iwi o Taranaki (Ngā Iwi) appreciates the opportunity to provide a response to the proposals document for a regulatory regime for carbon capture, utilisation and storage published July 9, 2024. We are dismayed that once again the resources of Taranaki are being focused upon to provide for the greater good of the nation. This is occurring in both the new sector of renewable energy and in the declining sector of oil and gas. The amount of energy and wealth that has previously been extracted from the stolen lands and resources of Iwi and Hapū in Taranaki is astounding. What is even more astounding is that they were excluded from the decision-making that enabled these destructive and exploitative actions to take place. Unfortunately, this exclusion looks set to continue with policy proposals such as this one.

We are concerned at the governments current preoccupation with emissions offsetting rather than emissions reductions. MBIE's assessment of existing policy predicts that while targets under the first emissions budget will be met, targets for the 2nd and 3rd budgets are unlikely to be achieved.

Climate change policy should be about decoupling economic growth from GHG emissions to meet net zero targets. This removes the perceived conflict between business growth and emissions reduction. This consultation proposals are short term in focus with little concern for potentially adverse environmental effects or the long-term well-being of communities.

We are of the opinion that the potential costs of implementing a CCUS permitting, consenting, monitoring and enforcement regime would far outweigh the potential benefits. This considerable expenditure would be best utilised incentivising an increase in the amount of new renewables in the New Zealand electricity sector. We do acknowledge that gas supply is a significant issue which requires bespoke policy or legislation for the short-term security of domestic energy needs.

Introduction

1. Ngā Iwi o Taranaki (hereafter Ngā Iwi) advocates for the interests of the eight Iwi of the Taranaki region, supporting the social, cultural, economic, and environmental interests of those eight entities both as individual Iwi and as a collaborative and co-operative whole.
2. Each of these eight Iwi have now completed Treaty of Waitangi settlement claims and established governance and operations bodies as post-settlement governance entities (PSGE's). Those eight Iwi are:
 - a. Ngāti Tama ki Taranaki;
 - b. Ngāti Ruanui;
 - c. Ngaa Rauru;
 - d. Ngāti Mutunga;
 - e. Taranaki Iwi;
 - f. Ngāruahine;
 - g. Te Ātiawa;
 - h. Ngāti Maru Wharanui.
3. This response does not usurp or reduce the mana motuhake of each Iwi as Treaty partners and as such each Iwi shall also provide their own response to the consultation in question.
4. The content and recommendations of this response should not be taken as an expression of consent to anything contained in the proposal document.
5. It is highly likely that CCS will be promoted to extract further gas resources in the Taranaki region. We refer specifically to the Kapuni and Maui East fields.

Proposal Analysis Constraints and Limitations

6. The MBIE Regulatory Impact Statement (RIS) identifies that it is an initial assessment to facilitate public consultation, rather than a full RIS for final policy decisions. Limitations on this assessment include:
 - the environmental risks of CO² leakage from storage sites have not been quantified nor has the potential costs of remediating these sites;
 - not being able to quantify the potential impacts of CCUS policy options on businesses at the firm level and the flow-on mitigating effects on fluctuations in natural gas electricity prices;

- amending regulatory settings that directly regulate petroleum exploration and mining activities has not been considered.
7. A set of assumptions has however been used to estimate the amount of CO² that could be stored out to 2035 based on a series of assumptions. These assumptions are:
- An additional twenty percent of geothermal generation emissions are captured from 2027 based on a future monitoring and liability regime being in place to incentivise investment in CCUS technology for geothermal electricity generation.
 - CCUS is commercially and technically viable from 2027 for gas production and 2030 for the petrochemical industry based on a suitable regulatory regime being put in place. Commercial viability will be driven by the cost of CCUS compared to ETS prices.
 - CCUS will be used to capture 100 percent of emissions from gas production from the high CO² Kapuni and Maui East fields. This will lead to a net zero emissions profile for Maui East production.
 - CCUS will be used to capture 5 percent of emissions from other industries such as steel and cement.

Ngā Iwi o Taranaki - Problem Identification

8. Ngā Iwi notes the framing of the consultation document around the central themes of:
- The importance of natural gas supply to domestic industry and as a transitional facilitator to move to low emissions future.
 - Regulatory and consenting uncertainty creating economic barriers to businesses utilising CCUS.
 - The ETS not providing economic incentives for CCUS activities.
 - A lack of clarity about who bears the long-term liabilities for CO² storage sites.
9. We note the large amount of input from the natural gas industry in determining problems including their reluctance to invest in CO² sequestration due to 'uncertainty' over abandonment obligations.
10. Our review of the consultation document has identified a number of issues which warrant reference in light of the coalition governments agreements. These are:
- a. The policy changes made by the coalition government which include;
 - i. the reversal of the ban on offshore oil and gas exploration without any consultation with Iwi, Hapū or communities;
 - ii. removal of the Clean Car Discount programme;
 - iii. the disestablishment of the Government Decarbonising Industry Fund (GIDI);
 - iv. the disestablishment of the Climate Emergency Response Fund (CERF);

- v. removing the agricultural emissions pricing advisory function of the Climate Change Commission.
- b. The conflation of carbon capture utilisation with carbon capture storage as equally valid activities that will both benefit Aotearoa New Zealand's net zero 2050 target.
 - c. Assumptions that CCUS is both a viable activity and positive contributor to the reduction of CO² emissions.
 - d. The framing of CCUS as a potential activity under proposed Fast Track Approvals legislation.
 - e. The use of international regulatory examples which bear no resemblance to Aotearoa New Zealand's unique economic, environmental, and emissions landscape.
 - f. Objectives to utilise or modify the ETS to reward and indemnify the oil and gas industry. We note in particular the New Zealand First Party's commitment to - *Future proof the natural gas industry by restarting offshore exploration and supporting development of hydrogen technology to produce hydrogen from natural gas without co-production of CO².*
 - g. The total lack of reference to the principles of Te Tiriti o Waitangi and the protection of Māori rights and interests.
11. Ngā Iwi acknowledges that MBIE is responsible for developing and supporting both the renewable energy and the fossil fuels sectors through the establishment of regulations and incentives.
 12. Policy to address agricultural emissions, including a carbon pricing regime by 2026, have been pushed further out – possibly under a separate system bespoke to this sector¹.
 13. The proposals are seeking to address both energy security and a regulatory regime for as yet unproven CO² capture technology.
 14. Many New Zealand industries and domestic consumers are dependant on natural gas for their energy needs. A transition to full electric dependency will be costly, take time and require behavioural change. This requires strategic leadership which is unambiguous, long-term, and equitable.
 15. Consultation proposals are based on a commercially and technically viable CCUS regime for gas production from 2027 and the petrochemical industry from 2030 *if* a suitable regulatory regime is put in place.

¹ <https://icapcarbonaction.com/en/ets/new-zealand-emissions-trading-scheme#:~:text=In%202024%2C%20the%20cap%20is,year%20period%20with%20annual%20updates.>

16. We note the Climate Change Commission's 2021 recommendations that the Government develop a New Zealand Energy Strategy after the first Emissions Reduction Plan was completed². Such a strategy would:

- set targets for the energy system;
- ensure access to affordable and secure low-emissions electricity for all consumers;
- manage the phase out of fossil fuels (including planning for the diminishing use of fossil gas in the energy system and phasing out coal for electricity generation).

An energy strategy has not yet been developed or is in the process of being developed³.

17. We note the National Party's pre-election commitment to rely on carbon pricing to reduce GHG emissions rather than subsidising industry efforts⁴. The issues this raises will be addressed in this response.

18. Unfortunately, we appear to be faced with the same policy-based evidence making that this government has become infamous for.

19. The framing of the consultation document combined with the publicly available coalition government agreements leads us to the conclusion that this government has been captured by a number of vested interests – in terms of this proposal, by the oil and gas industry.

20. We acknowledge important legislation and/or policy on increasing new renewable electricity capacity has yet to be confirmed by this government.

Consultation Questions

21. *Do you agree that the government should establish an enabling regime for CCUS?*

The proposals are attempting to do two vastly different things:

- a. enhance the country's natural gas energy security; and
- b. establish a regulatory regime for CO² removals from industry.

The proposals claim that enabling regulatory frameworks globally streamline the approval and operation of CCUS projects. What enables those projects is that the countries referred to are large energy and minerals exporters who are able to mobilise vast resources to conduct research, provide credible supporting information and develop projects via public/private collaboration.

We note the use of CCUS as a broad term which includes two quite different processes. It is important to separate CCU and CCS and identify the differences between them.

CCU uses captured CO² to create valuable products and materials. The proposal document indicates that this could include dry ice for meat and seafood exports, welding gas for heavy steel construction and novel initiatives for production of synthetic fuels,

² <https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa.pdf>

³ <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-strategies-for-new-zealand/new-zealand-energy-strategy>

⁴ [Has cutting 'corporate welfare' left a hole in government climate plans? | RNZ News](#)

chemicals and building aggregates. The captured CO² provides a commercial product which would otherwise need to be imported in the case of Aotearoa New Zealand.

CCS is a process which includes enhanced oil recovery (EOR) and enhanced hydrocarbon recovery (HER)⁵. Captured CO² is sequestered in underground geological reservoirs.

These terms are used interchangeably throughout the consultation document with little attempt to clearly define or explain the difference or potential risks of each.

The International Energy Agency (IEA) has summarised four strategic areas in which CCUS should be used to address emissions⁶:

- existing infrastructure;
- low-carbon hydrogen production;
- the most challenging emissions from sectors such as heavy industry and aviation;
- removing carbon from the air.

The IEA also states that CCS technology is a key tool for direct and rapid emission reductions from fossil fuel based, large scale sources such as the steelmaking, cement, and chemical industries. It predicts CCS will become a major industry comparable to the scale of the oil and gas industry.

CCS projects are generally classified by the Global CCS Institute (GCCSI) which lists 65 commercial projects in the world – with 26 operational projects and the remaining in various stages of development. CCS projects are classified based on the source of CO² such as:

- CO² from natural gas separation;
- carbon capture in coal/chemical plants;
- coal power plants;
- carbon capture in steelworks;
- biomass energy capture; and
- direct air capture (DAC).

We agree that the government should establish an enabling regulatory regime for CCU which facilitates a move to a circular economy around CO² capture and utilisation which benefits the economy of Aotearoa New Zealand.

The IPCC has stated that scaling up carbon capture will be essential to keep the planet inside 1.5C or 2C heating, avoiding potential crisis and disasters which would occur with warming above 2C. However, this IPCC pathway assumes CCS occurs alongside immediate and deep emissions reductions across all sectors⁷.

We do not support CCS regulation which enables and rewards the oil and gas sector to extract further emissions producing resources from end-of-life assets.

22. Do you agree with our objectives for the enabling regime for CCUS?

Efficiency is a term used throughout the consultation document but in particular for the first objective of the proposals.

⁵ <https://australiainstitute.org.au/wp-content/uploads/2021/12/P1092-Santos-CCS-Scam-WEB.pdf>

⁶ [Carbon Capture and Storage: History and the Road Ahead - ScienceDirect](#)

⁷ [The evidence is clear: the time for action is now. We can halve emissions by 2030. — IPCC](#)

Efficient emissions abatement - creating a level playing field for emissions reduction/removal technologies to enable businesses to reduce/remove emissions at least cost.

The problem with efficiency is that it is assumed to be measurable. If it is measurable then it favours what can best be measured. We note that cost is used to define what is efficient in this objective. Economic costs are easily measure but benefits are not so easily measured. What are the social costs and how are these measured? Efficient emissions abatement may result in an increase in social costs. A simplistic focus on economic efficiency favours an approach which ignores social costs.

Emissions reduction and removal are two hugely different processes. Emissions reduction involves reducing the amount of emissions produced by industry in order to meet agreed reduction targets set under the first Emissions Reduction Plan 2022 – 2025. Reductions should be supported by the development of renewable energy to enable the transition away from fossil fuel consumption.

Emissions removals contribute very little to changing behaviours. The World Economic Forum warns that attempting to balance CO₂ emissions and CO₂ removals could lead to a different outcome than simply avoiding CO₂ emissions in the first place.

Both CCS and CCU are removals processes contributing to net emissions reductions. The proposal document does not deal with gross emissions reductions. Current local emissions removal processes are carbon forestry and the trialling of CO₂ reinjection at the CCS at Top Energy's geothermal Ngāwha power station. Forestry is eligible for the ETS, and geothermal fluid users may apply for approval to use a unique emission factor under the Climate Change (Unique Emissions Factors) Regulations 2009. Forestry is a proven method of CO₂ removal.

The recent Monitoring Report from the Climate Change Commission reveals the government is yet to set a clear, quantified pathway for meeting the emissions budgets or 2050 target⁸. Gross emissions reductions from petroleum refining and hydrogen production during the 2021-2022 period were solely due to the closure of the Marsden Point Oil Refinery in 2022. While the commission states that the outlook for meeting the first emissions budget is encouraging, other gross emissions reductions for this period were strongly influenced by external factors such as high urea prices, higher inflows into hydro lakes and the uptake of the now discontinued Clean Car Discount. Continued progress on gross reductions is highly uncertain due to risks such as dry years, rising transport emissions and deforestation. The Government can reduce this risk by aiming to overachieve the emissions budgets and provide a buffer for unexpected increases in emissions.

Environmental integrity – ensuring that the CO₂ storage sites, and the emissions sequestered in those sites are monitored and accurately reported, the risk of CO₂ leakage from those sites is mitigated, and the liability for the storage sites is appropriately assigned.

The proposal document states that MBIE will complete analysis with the Ministry for the Environment and the Environmental Protection Agency to complete the design of the regulatory regime. The proposal document also presumes that CCS is a viable and environmentally sustainable activity. We expect that CCS and CCU are appropriately analysed and treated as separate activities.

⁸ [monitoring-report---emissions-reduction---july-2024--final-web-ready.pdf \(climatecommission.govt.nz\)](#)

Energy security – supporting security of energy supplies as we transition to a low-emissions economy.

We agree that there is a need to secure natural gas supply for domestic purposes. The natural gas industry is already providing domestic CO² to other industries via CCU. We acknowledge the Wood Beca report of 2023 which suggests the development of a CO² economy would benefit current emitters and CO² consumers seeking sustainable business operations.

The transition to a low emissions economy includes accelerating development of new renewable electricity generation across the country.

Ngā Iwi identifies that the companies supported through the disestablished GIDI fund proposed to reduce their primary fuel needs from coal, LPG, natural gas, and diesel. The fund would have continued to reduce industry reliance on these fossil fuels by switching to electric alternatives⁹.

23. *Should the ETS be modified to account for the emissions reductions achieved using CCUS?*

There will be no emissions reductions achieved by using CCUS. CCUS is an emissions removals process. The ETS should incentivise emissions reductions and the existing removals methods such as forestry and geothermal reinjection. The 2024 Climate Change Commission monitoring report identifies that the NZ ETS cannot be relied upon to drive the emissions reductions needed to meet the second and third emissions budget period.

We note that CCS is already included in Subpart 2 of Schedule 4 of the Climate Change Response Act 2002. This could be activated by Order in Council to allow those undertaking CCS to participate in the ETS if they can show CO² reductions towards international climate change obligations.

It is appropriate to point out the influence of the ‘waterbed effect’ as identified by Energy Resources Aotearoa in 2021¹⁰. A ‘sinking lid’ on the ETS provides the most important and effective solution of any government climate policy. This fully neutralises most other policies to **reduce** emissions. For instance, subsidies for commercial electric vehicles might lower transport emissions but cannot lower total net emissions because transport is already covered by the ETS. Fewer petrol-powered vehicles would simply mean the freeing up of NZ units which would be taken up by other emitters. In this regard, climate policies which ‘push down’ in one area results in emission ‘pop ups’ in other areas.

The ‘waterbed effect’ identifies that most policies meant to reduce emissions will just end up moving NZ units to different emissions sources without reducing overall emissions.

The sinking lid guarantees emissions will fall under the existing ETS framework. The idea is that goods and services which generate emissions are more expensive than lower emitting alternatives such as renewable energy. Energy Resources Aotearoa suggests that policy makers should answer one simple question when considering climate policy – *will this policy reduce overall net emissions, given the ETS is now capped?*

This means that the expected costs and benefits of any policies need to be recalibrated to allow for the fact that they will not lower New Zealand’s total emissions.

⁹ <https://www.eeca.govt.nz/assets/EECA-Resources/Co-funding/GIDI-Projects-source-data.xlsx>

¹⁰ <https://www.energyresources.org.nz/dmsdocument/202>

It also means that policies which are used and seem successful overseas, where there is no capped ETS, would simply not make sense or work. We identify the following important details of various government ETS systems:

Australia – The Safeguard Mechanism: covers CO², CH⁴, N²O and other gases. Assigns mandatory emissions baselines to 200 large facilities in Australia. Facility level baselines are set on emissions intensity. Facilities emitting above their baseline must surrender Australian Carbon Credit Units (ACCU's). Total emissions from all Safeguard facilities must reduce emissions over time measured over a five-year rolling average. The agricultural sector emits 16% of Australia's total gross emissions. ACCU's are part of the Emissions Reduction Fund. No falling cap on ACCU's¹¹.

UK – UK ETS: covers CO², N²O and PFC's. Seeks a 68% reduction in net GHG emissions from 1990 levels by 2030. Has an industry cap on free allocation of units – auctioning is the primary means of allocation. Revenue from ETS auctions accrue to the general budget¹². Agricultural emissions account for 10.2% of UK's GHG emissions.

Canada – has several provincial carbon pricing mechanisms in effect. A national cap-and-trade system is being developed which would apply specifically to emissions from its oil and gas sector which is its largest emitter. This would focus on CO², CH⁴, N²O and other GHG's. Trading of emissions allowances would only be allowed among the covered entities. The sinking cap would decline at a pace and scale consistent with meeting net zero by 2050¹³. CH⁴ emissions account for around 13% of Canada's GHG emissions.

Norway – operates an ETS and GHG emissions tax system covering 85% of GHG emissions. The ETS is connected to Norway's electricity price as they trade electricity with the rest of Europe¹⁴. Phase 1 and 2 caps on units indicate that Norway intends to achieve two-thirds of its emissions reductions under the Kyoto pledge via its ETS system. CH⁴ emissions contribute to 9.6% of Norway's GHG emissions.

Ireland - has a similar population and emissions profile to Aotearoa New Zealand with agriculture contributing to a large proportion of its GHG emissions¹⁵. Denmark is also very similar to Aotearoa New Zealand with energy, agriculture and transportation being the three main sectors which contribute to GHG emissions¹⁶.

We do not support the modification of the ETS to account for unproven or unlikely technologies such as CCUS.

24. *Do you agree that all CCUS activities should not be eligible to receive recognition for the emissions captured and stored?*

Yes. But we believe that CCU should be recognised for its contribution towards a circular economy. What is needed is a competitive CO² industry. CCS is unlikely to be adopted by industries other than the natural gas and fertiliser industries who are large emitters.

¹¹ <https://cer.gov.au/markets/reports-and-data/quarterly-carbon-market-reports/quarterly-carbon-market-report-june-quarter-2023/australian-carbon-credit-units-accus>

¹² <https://icapcarbonaction.com/en/compare/99>

¹³ <https://icapcarbonaction.com/en/compare/112>

¹⁴ [https://energifaktanorge.no/en/et-baerekraftig-og-sikkert-energisystem/avgifter-og-kvoteplikt/#:~:text=About%2085%20%25%20of%20greenhouse%20gas,emissions%20trading%20system%20\(ETS\).](https://energifaktanorge.no/en/et-baerekraftig-og-sikkert-energisystem/avgifter-og-kvoteplikt/#:~:text=About%2085%20%25%20of%20greenhouse%20gas,emissions%20trading%20system%20(ETS).)

¹⁵ <https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/latest-emissions-data/>

¹⁶ <https://ens.dk/en/our-responsibilities/energy-climate-politics/greenhouse-gasses>

MBIE's CIPA document identifies assumptions based on low, medium, and high uptake scenarios in the event a CCUS regime is adopted in the following sectors¹⁷.

- Geothermal.
- Gas Production.
- Petrochemical Industry.
- Other industries.

The assumptions also identify additional gas availability. We note that 100% of emissions would be captured from Maui East and Kapuni from 2027 in all scenarios. Conversely, Maui East would not be counted as emission reductions because this gas production would not occur without CCUS.

Similarly, from 2027 additional capture from geothermal would range from 15 percent (low scenario) to 25 percent in the high uptake scenario. Emissions capture for the petrochemical industry and other industries would amount to 50 percent and 10 percent respectively from 2030 in the high uptake scenario. In the low uptake scenario, the petrochemical industry would only capture 20 percent of emissions while other industries would not capture any emissions.

CCUS favours the oil and gas industry in all scenarios. Only high uptake of CCUS would have any impact on the petrochemical or other industries. However, this would require substantial investment in capture and transport for what is essentially minimum impact on CO² removals.

We note the Production Gap Report released by the UN Environment Programme in 2023 which identifies the key issues with climate policy for all countries¹⁸. There are two key factors which lead to misalignment between governments planned and actual fossil fuel production levels and the Paris Agreements temperature goal.

- a. The extent of a country's socioeconomic dependence on fossil fuel production, and
- b. The country's financial and institutional capacity to transition away from it.

The report further notes that - *“while fossil fuel production can result in some anticipated development benefits, these are by no means assured, nor is it guaranteed that adverse local impacts will be modest and manageable. The extraction and processing of coal, oil, and gas can deepen existing inequities and indebtedness, is often associated with local pollution, ecological damage, and human rights violations, and comes with long-term liabilities for the public to fund labour and environmental rehabilitation and remediation costs for abandoned coal mines and oil and gas wells.”*

25. Do you think there should be a separate non-ETS mechanism for providing economic incentives for CCS?

The Climate Emergency Response Fund (CERF) was established in 2021 as an enduring, multi-year fund designed to address the long-term nature of many of the challenges presented by climate change¹⁹. It was set up with an initial \$4.5 billion 'down payment' proportional to the proceeds of the ETS. The eligibility criteria for initiatives was if they:

¹⁷ <https://www.mbie.govt.nz/dmsdocument/28609-interim-climate-implications-of-policy-assessment>

¹⁸ [Production Gap Report 2023 | UNEP - UN Environment Programme](https://www.unep.org/production-gap-report-2023)

¹⁹ <https://www.treasury.govt.nz/information-and-services/nz-economy/climate-change/climate-emergency-response-fund>

- were included is included in an Emissions Reduction Plan, or directly supports emissions reductions (domestically or internationally),
- were included in a National Adaptation Plan, or directly reduces vulnerability or exposure to the impacts of climate change,
- support a te ao Māori approach to the climate response,
- address the distributional impacts of climate change or the climate policy response, or
- support the development of any initiatives meeting these criteria in the future.

Unfortunately, in a stunning display of short-sightedness, the government disestablished CERF in order to pay for tax cuts in its 2024 Budget²⁰. Some previously funded initiatives will however remain such as the development of an on-farm emissions measurement scheme.

The 2024 Budget also saw funding for the Climate Change Commission reduced by 25% removing its agricultural emissions pricing advisory function²¹.

The government also decided to disestablish the GIDI (Government Investment in Decarbonising Industry) Fund returning \$640 million in unspent funding to the governments coffers²².

Due to CCS being a process which favours EOR and HER, we do not believe an ETS or a separate ETS mechanism would send the right signals to the oil and gas industry and would undermine existing incentives for other industries to decarbonise.

We note the NZ ETS unique treatment of forestry which require surrender of units and the opportunity to earn units for emissions removals²³.

26. *In your opinion, which overseas standards for monitoring, verification and reporting of CCUS-related information should New Zealand adopt?*

It is worth noting that all international examples used in the consultation document are major oil, gas and/or mining economies. Canada, Australia, and Norway have many years of development and refining their industrial practices to meet environmental standards. Norway for example has been capturing and reinjecting CO² from gas production since 1996. CCS projects in that country focus on establishing a large-scale network which will have the capacity to not only capture CO² from Norway's domestic waste and cement industries but also taking in profitable CO² from other European nations.

The Norwegian government has invested heavily in research and providing knowledge that CCS is safe and feasible. Norway's Longship Project is a Full Chain CCS meaning it is a complete value chain for capture, compression, transport to injection, and permanent

²⁰ <https://www.rnz.co.nz/news/national/518301/budget-2024-what-survived-and-what-was-cut-from-climate-emergency-response-fund>

²¹ <https://budget.govt.nz/budget/pdfs/summary-initiatives/b24-sum-initiatives.pdf>

²² [Has cutting 'corporate welfare' left a hole in government climate plans? | RNZ News](https://www.rnz.co.nz/news/national/518301/budget-2024-what-survived-and-what-was-cut-from-climate-emergency-response-fund)

²³ <https://icapcarbonaction.com/en/ets/new-zealand-emissions-trading-scheme#:~:text=In%202024%2C%20the%20cap%20is,year%20period%20with%20annual%20updates.>

storage. Domestically, Longship focuses purely on capturing and storing CO² from cement factories and waste-to-energy facilities.

The Australian National Greenhouse and Energy Reporting Scheme requires industry to provide information on captured emissions, emissions stored underground, leaked emissions, and emissions sent to, or imported from another country. It is however only applicable to offshore CCS projects. As stated previously, we will not support CCS projects in the coastal marine area or the territorial sea. Onshore CCS consenting is managed under the jurisdiction of states and territories. Only Victoria and Queensland have passed comprehensive legislation to regulate CCS²⁴.

In Queensland, CCS development and exploration requires:

- A greenhouse gas exploration permit to search for geologic formations that are suitable for storing greenhouse gases. These permits are granted through a competitive tender process.
- A greenhouse gas injection and storage license allows holders to inject greenhouse gases into identified geologic formations.

We favour the EU standards of measurement, monitoring and verification plans contained in the EU CCS Directive, Article 13. It is our expectation that any monitoring and reporting is undertaken by the Climate Change Commission.

27. Is there any other information that CCS project operators should be required to verify and report?

On shore CCS should include a site remediation plan to restore the surface level of storage sites with indigenous biodiversity.

28. Are additional mechanisms required to ensure compliance with monitoring requirements?

Yes. Annual reporting to Te Tiriti partners as per existing Oil and Gas reporting under the Crown Minerals Act.

29. What level of transparency and information sharing is required?

Credible and robust information is required on the baseline environmental impacts should be shared to impacted communities, iwi and hapū .

30. Do you consider there should be a minimum threshold for monitoring requirements so that small-scale pilot CCS operators would not have to comply with them?

Yes but only for non-health and safety monitoring requirements.

31. Should a monitoring regime extend to CCU activity?

There should be objectives around captured CO² utilisation. These should be monitored and reported annually.

²⁴ <https://www.whitecase.com/insight-our-thinking/how-australian-laws-and-regulations-affect-carbon-capture-and-storage>

32. *Do you agree the proposed approach on liability for CO2 storage sites aligns with other comparable countries (like Australia)? If not, why not and how should it be changed?*

Almost all of the worlds 41 operational CCS projects are connected to the production or use of oil and gas²⁵. This favours the gas industry in Aotearoa New Zealand which in some cases is already undertaking CCS. As stated previously, we will strongly oppose CCS in coastal marine areas or the territorial sea.

33. *Is the proposed allocation of liability consistent with risks and potential benefits? Are there other participants that should share liability for CCS operations?*

If the risks are too high then CCS should not proceed. We reiterate the need for a precautionary approach in an earthquake prone country such as Aotearoa New Zealand.

34. *Should liability be the same for all storage sites if projects are approved or should liability differ, depending on the geological features and characteristics of an individual storage formation?*

Yes, geological formation and stability is potentially a temporary condition for the reasons referred to in the previous question.

35. *Do you consider there should be a minimum threshold for CCUS operators being held responsible for liability for CO2 storage sites so that small scale pilot CCS operators would be exempt?*

No.

36. *Should the government indemnify the operator of a storage site once it has closed? If so, what should be the minimum time before the government chooses to indemnify the operator against liabilities for the CO2 storage sites?*

No. We suggest perpetual liability for Ministers who approve the operation of storage sites under the Fast Track Approvals Act – even after closure.

37. *Are additional insurance mechanisms or financial instruments required to cover potential liabilities from CO2 leakage in CCS projects?*

Yes. Storage site operators should provide securities to the value of the costs to clean up a worst-case scenario in the event of CO² leakage. These securities should be held by the Climate Change Commission.

38. *What measures should be implemented to monitor CCS projects for potential leakage and ensure early detection?*

Monitoring of CCS should be included in the Climate Change Response Act 2002. The reasons for this are that this Act already has a treaty clause and would allow for the Climate Change Commission to undertake monitoring and enforcement of any permits.

²⁵ <https://zerocarbon-analytics.org/archives/energy/a-closer-look-at-ccs-problems-and-potential>

39. *Do you agree that trailing liability provisions are needed? How do you think they should be managed?*

Any company undertaking extractive activities should be subject to perpetual liability by providing financial sureties prior to undertaking the activity and unlimited ongoing environmental monitoring of CCS sites. As mentioned previously, any CCS activity approved under the Fast Track Approvals Act should provide for perpetual liability for the Minister that has approved the activity.

40. *Are inconsistencies in existing legislation for consenting and permitting impacting investment?*

What is impacting investment is the lack of cross-party support for a consistent approach to reducing GHG emissions. The current government has attempted to revitalise the oil and gas industry by reversing the previous governments ban on offshore exploration. It is unlikely that overseas investment will occur given a potential change in government at the next election. Aotearoa New Zealand is a long way behind the rest of the world in terms of CCUS. We also have a very different emissions profile from those countries who are developing CCUS technologies and regulatory frameworks with over half of our GHG equivalent emissions profile coming from the agricultural sector. The international examples used in the consultation document all have large oil and gas sectors and governments in those countries have the ability to either impose obligations on private operators or to work in partnership with them. The gas sector in Aotearoa New Zealand is small has a high degree of uncertainty and is soon to be defunct.

41. *Should the permit regime for CCUS operations be set out in bespoke legislation or be part of an existing regulatory regime (such as the RMA, EEZ Act, the CMA, or the Climate Change Response Act 2002)?*

We are not opposed to a permitting regime for terrestrial CCUS. We will vehemently oppose the development of CCS in the coastal marine area or territorial sea. The reason for our opposition is that CO² readily dissolves into seawater. The ocean is already a natural carbon sink with the oceans/atmosphere interface a unique balancing act occurring over long timeframes. The oceans are already under intense pressure due to rising temperatures and increased levels of CO² in the atmosphere. The risk of acidification is already high. One leakage of stored CO² in a territorial sea reservoir would introduce a localised acidification event which would cause surface water to become increasingly acidic with potentially disastrous consequences for marine organisms such as corals and shellfish.

The permitting regime should be included in the Crown Minerals Act 1991.

If CCS is to proceed in the territorial sea, it should be regulated under the EEZ Act as the EPA already enforces its requirements and the regulations and consents granted under the Act. To be clear, we do not see CCUS in the oil and gas industry as a climate change mitigation action – it is enabling the extraction of fossil fuels that would otherwise be unavailable.

42. *Should CCS project proponents be required to submit evidence that proposed reinjection sites are geologically suitable for permanent storage, in order for projects to be approved? What evidence should be provided to establish their suitability?*

Yes. However, as an earthquake prone country, there are serious concerns with approving a CCS project based on 'geologically suitable' sites.

43. *Are there regulatory or policy barriers to investment and adoption of CCU technologies?*

The 2023 Beca Wood report noted that a CO² market is needed in Aotearoa New Zealand²⁶. Both captured CO² and natural gas are critical to the domestic economy. CCU is unlikely to occur in any other industries apart from the gas and fertiliser industries due to high amount of energy and resources needed for what would be a comparatively small removal of CO². In depth cost-benefit analysis is needed on this as the natural gas industry is not a viable long-term source of captured CO².

44. *What potential markets for CO₂ derived products to you see as most critical in New Zealand?*

We note that the largest consumer of CO² globally is the fertiliser industry where 130 million tonnes of CO² is used in urea manufacturing²⁷. The second biggest global user of CO² is the oil and gas industry, using 70 – 80 million tonnes for enhanced oil recovery.

We see the most critical markets for CO² products as:

- healthcare
- industrial and steel production (includes cement and chemical manufacturing);
- food and beverage; and
- water treatment.

It would therefore make sense for the oil & gas and fertiliser manufacturing industries to utilise CCU creating a CO² 'economy.' The partnership between Ballance Agri-nutrients and Hiringa Energy to produce hydrogen is a clear approach to decarbonisation for fertilisers and fuel in the Taranaki region.

Nitrogen also provides a potential alternative to the use of CO² in many but not all industries reliant on CO².

45. *Are there any specific barriers to transportation of CO₂?*

The international success stories of CCS have well established transport networks which facilitate storage. We are mindful that in the handful of successful CCS projects, a large amount of government investment was made along with a lead in time of 10 – 20 years.

Conclusion

46. This consultation is attempting to address two issues in a selectively interconnected way. Lumping them together is not necessarily a wise approach.

47. It is clear that natural gas supply and domestic CO² supply are matters of national importance.

48. CO² removals in Aotearoa New Zealand are currently based on forestry and geothermal sequestration to a smaller extent. These are proven methods which utilise the ETS.

²⁶ <https://www.gasindustry.co.nz/assets/CoverDocument/Review-of-CCUS-CCS-Potential-in-New-Zealand-March-2023.pdf>

²⁷ <https://www.industrialair.co.nz/blog/how-co2-shortages-impact-nz-business>

Additional climate policy will not lead to an improved ETS but may in fact reduce its usefulness in achieving emissions reduction targets such as Zero 2050.

49. There will be significant cost and time involved in establishing a CCUS regime and system. The environmental risks and potential consequences have not yet been evaluated.
50. Gas field operators already reinject excess CO² into the ground rather than venting it to the air. This should be a standard operating procedure for this industry.
51. CCS and CCU are different methods of CO² removals. CCS will not be a positive contributor to emissions reductions. CCS poses a significant risk to it will however normalise and embed the perception that offsetting emissions is equal to reducing emissions. There is a case for CCU to provide a much-needed CO² commodity for our domestic economy which would otherwise be treated as a pollutant or waste. Captured CO² utilisation could include biogenic CO² or other sources in the future.
52. We disagree that establishing an enabling regulatory and permitting regime is all that is required for CCUS to succeed. This consultation document has used international examples which bear no correlation to Aotearoa New Zealand's emissions profile or geographic location in the world. It takes significant investment and a great deal of time.
53. Aotearoa New Zealand is a long way behind the rest of the world, both financially and technically, in terms of developing CCUS. Adopting a policy to enable CCUS looks increasingly like the government is simply incentivising the natural gas industry to continue with business as usual without any consequences.
54. Both Ireland and Denmark are also investigating the potential benefits of CCUS. Both these countries are in the EU and geographically suited to establishing CCUS within an environment where large CO² transportation and storage networks are being developed. Denmark favours CCS for its biogenic CO² derived from biomass while Ireland is focusing on 16 industrial sites suitable for CCUS adoption including energy from waste facilities and power stations fuelled by peat, coal, and natural gas²⁸.
55. Energy security is also a matter of electrifying the economy. Continued household and industrial dependency on natural gas must be decreased in a way that is equitable for all New Zealanders.
56. The lack of a NZ Energy Strategy means there is no strategic central government direction on managing the phase out of fossil fuels, energy security, and affordability. We note that a Gas Transition Plan is also being developed with a key focus on supporting an equitable transition to new renewable electricity out to 2035²⁹.
57. The ideological swings involved in the change of government are impacting ability to meet decarbonisation targets. This can be summarised as either:
 - Full market-based approach to identifying emissions reductions solutions; or
 - Government intervention/incentivisation where industry is exposed to trade impediments.

²⁸ <https://www.seai.ie/publications/Carbon-Capture-Utilisation-and-Storage.pdf>

²⁹ <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-strategies-for-new-zealand/gas-transition-plan>

58. We believe urgency is potentially being prioritised over sensible and informed decision making. Any legislation or policy regarding CCUS requires the guidance of both a National Energy Strategy and a Gas Transition Plan.

Interconnections with other policy

59. Opposition to the FTA legislation has been clear, loud, and organised. This opposition has been voiced through the only engagement process available to iwi, hapū and the general public – the select committee.

60. We acknowledge matters of gas security and CO² supply are issues which require urgent attention.

61. In an electrified economy, issues of natural gas supply would not impact on households or businesses. We need to hasten the addition of new renewable energy capacity to the current electricity supply network. Dependency needs to be reduced to ensure the sustained well-being of all New Zealanders by transitioning current users of natural gas to a fully electric supply of their energy needs.

a. Short-term, timebound security of natural gas supply.

b. A CO² economy needs to be developed and regulated based on CCU.

62. We note the current consultation on amendments to the Crown Minerals Act which would reverse access and consenting approvals for mining and extraction activities, particularly on Taranaki Conservation lands.

63. There is also a Minerals Strategy in the works which the government is seeking feedback on.

Recommendations

Our recommendations are as follows:

64. We support the recommendations of the 2021 Climate Change Commission that the government:

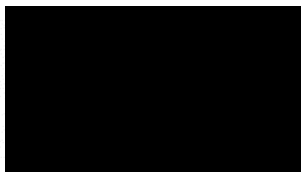
- seek cross party support on the emissions budgets;
- debate emissions budgets in Parliament before they are notified, so that the positions of each political party are on the parliamentary record.

65. There is a high degree of uncertainty and a poor understanding of the potential impacts of CCS. We recommend that a precautionary approach is taken by establishing sound, comprehensive policy and recommendations based on evidence. A 'look at what they are doing over there' approach is not wise given the actions of successive governments in ignoring agricultural emissions.

66. We suggest that Ireland and Denmark provide better international examples of a CCUS system than the large extractive nations which have been used in this consultation document.
67. We support the pursuit of incentives to secure CO² for Aotearoa New Zealand's domestic industry.
68. We suggest the Energy Strategy and Gas Transition Plan are completed before progressing any further on any CCUS regime.
69. We also suggest that domestic energy and minerals security is defined and differentiated from the extraction of these resources for the sake of extraction and export.
70. Extensive research on the potential adverse environmental affects of CCUS is required to ensure that a precautionary approach is taken.

Nāku noa,

Emere Wano



Regional Recovery Manager | Ngā Iwi o Taranaki