MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

COVERSHEET

Minister	Hon Simon Watts	**Portfolio**	Energy
Titles of Cabinet Papers	Enabling Carbon Capture, Utilisation and Storage Policy Approach for Carbon Capture, Utilisation and Storage	**Date to be published**	27 March 2025

List of documents that have been proactively released		
Date	**Title**	**Author**
October 2024	Enabling Carbon Capture, Utilisation and Storage	Office of the Minister for Energy
16 October 2024	Enabling Carbon Capture, Utilisation and Storage ECO-24-MIN-0223 Minute	Cabinet Office
9 October 2024	Regulatory Impact Statement: Enabling Carbon Capture and Storage	MBIE
9 October 2024	Climate Implications of Policy Assessment: Enabling Carbon Capture and Storage	MBIE
December 2024	Policy Approach for Carbon Capture, Utilisation and Storage	Office of the Minister for Energy
11 December 2024	Policy Approach for Carbon Capture, Utilisation and Storage ECO-24-MIN-0305 Minute	Cabinet Office
26 November 2024	Regulatory Impact Statement: Further decisions on an enabling framework for Carbon Capture and Storage	MBIE

Information redacted **YES**

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Some information has been withheld for the reasons of Confidential advice to Government, Negotiations, and National Economy.

In Confidence

Office of the Minister for Energy

Office of the Minister of Climate Change

Office of the Minister for RMA Reform

Cabinet Economic Policy Committee

Policy Approach for Carbon Capture Utilisation and Storage

Proposal

1 This paper seeks agreement to key elements of the proposed regime for Carbon Capture Utilisation and Storage (CCUS).

Relation to government priorities

2 The proposals in this paper contribute to goals around rebuilding the economy. They play a key role in ensuring that climate change policies are aligned and do not undermine national energy security as per the National/NZ First coalition agreement.

3 This paper also links to the Government's climate strategy, in particular the commitment to credible markets, as well as supporting achievement of our targets, budgets, and international obligations.

Executive Summary

4 Cabinet has agreed to create an enabling framework for CCUS [ECO-24-MIN-0223 refers] and to make changes to the *Climate Change Response Act* (CCRA) to enable CCUS operators to benefit through the New Zealand emissions trading scheme (the ETS). This paper seeks Cabinet's agreement to further design elements of the enabling regime.

5 The following are included in overseas jurisdictions' CCUS regimes. In return for being able to access some form of credit for carbon that is sequestered:

- A judgement is made on the suitability of the storage site, and on the suitability of the planned operation
- A robust system is in place for monitoring and verification, along with an audit and penalty regime
- An assessment is made of closure and post-closure plans, and
- In the majority of international regimes, the removal of surrender obligations under the ETS (or equivalent) for leakage of carbon dioxide (CO_2), after a period of time if certain conditions are met.

6 The CCUS regime outlined in this paper seeks to deliver the elements above by adding where necessary to existing regulatory settings. We wish to avoid duplicating existing regulatory requirements in any way.

7 As agreed in October, a CCUS operator will receive one New Zealand unit per tonne of CO_2 sequestered and will repay any CO_2 that leaks (unless Ministers have decided to remove their ETS surrender obligations).[1] The key elements of the regime that this paper proposes are:

- The regulator must consider the suitability of a storage site and associated operations for CCUS activities.
- Consistent with normal ETS arrangements, reporting of results from CCUS should be on a self-reported basis, augmented by a strong monitoring, verification, audit and penalty regime. Monitoring of the site will continue post-closure.
- A system to ensure that closure of the site is performed adequately.
- Decommissioning costs will be met by the operator.
- Following the closure of the CCUS site, liabilities will remain with the CCUS operator. Ministers may agree to remove the ETS surrender obligations for the leakage of stored carbon if certain conditions are met, and after a period no shorter than 15 years post-closure.

Goals

8 The goals of the CCUS regime are to incentivise emission reductions where it is sensible and feasible to do so. This will assist with meeting our emission reduction targets. It is important to create a level playing-field so that CCUS can be assessed by interested parties against other approaches to reduce emissions.

9 CCUS is becoming widely used internationally and is increasingly being recognised as a valuable part of countries' toolboxes for reducing emissions. In addition to assisting to meet emission reducing goals, CCUS can support economic and energy security goals, and it can reduce the cost of producing and using energy.

10 It is important to create the right financial incentives to support CCUS activities. Not every risk can be managed 100% upfront; to attempt to do so would kill off interest in CCUS. The level of risk needs to be balanced with maintaining interest in uptaking CCUS. Unless the right financial incentives are created, New Zealand will continue to miss out on possible opportunities to reduce emissions in a sensible way and will continue to miss out on ancillary benefits such as assisting with meeting energy security goals.

About CCUS

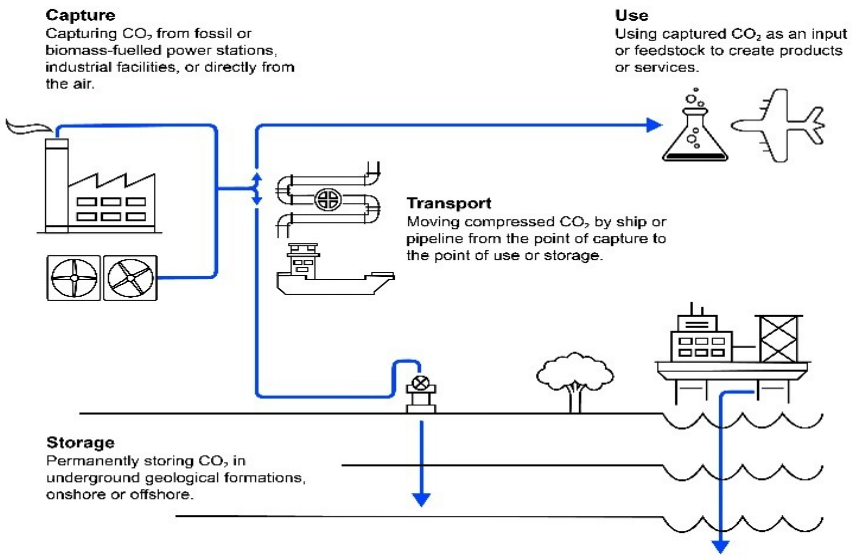
11 CCUS involves capturing CO_2 and then either using it (eg in food and beverage manufacturing) or storing it (eg by injecting it into deep geological formations). This paper is not relevant for the use of carbon (eg manufacture of commercial grade CO_2). The use of carbon in this way is not countable against New Zealand's international climate change obligations. This paper is relevant where the storage of carbon is countable against our international climate change obligations (other than geothermal

[1] If the CCUS operator has existing ETS obligations they may see a reduction in their surrender obligation as a result of CCUS as opposed to receiving New Zealand units.

reinjection).[2] This will be where carbon is captured and stored in underground geological formations.

12 Figure 1 below shows the capture, use and storage of carbon in a schematic form.

Figure 1: Schematic of potential CCUS activities (Source: IEA)



Proposed regime

Approach of proposed regime

13 Our overall approach aims to:

- Ensure the integrity of the regime through ensuring that the site and operations are suitable for CCUS, and by ensuring robust monitoring and verification systems. This is important for social licence for CCUS as an emissions mitigation technology, to minimise any environmental harms, and to protect the Crown from fiscal risk.
- Minimise duplication of processes and compliance burden wherever possible. Officials heard that a weakness of overseas regimes is that potential proponents often have to gain approval from multiple regulators and are discouraged as a result.
- Provide clear decision-making criteria and processes. An applicant should be clear on what is required of them at each stage of the process. And those charged with making decisions should be clear on the criteria to apply.

14 Existing processes, such as consenting processes in the *Resource Management Act* (RMA) and approaches to reporting, monitoring and auditing of carbon flows as per the CCRA provide many of the building blocks for a successful CCUS regime. We

[2] Operators of geothermal plants that re-inject greenhouse gases into geothermal fluids already receive an ETS benefit from this activity. This is already enabled through our regulatory settings so no policy or regulatory changes are required in this regard.

wish to avoid duplicating any existing regulatory requirements. A CCUS operator must comply with Health and Safety requirements.

Upfront approvals

15 Investigations into the detail are ongoing but existing legislation may not fully support:

- A test of the suitability of the site to store CO_2 and the suitability of associated operations for CCUS activities
- An assessment of monitoring, closure and post-closure plans.

16 In overseas CCUS regimes, tests along these lines are undertaken before permission is granted for an operator to claim a reward for the sequestration of carbon from CCUS. To ensure integrity of the system, we must ensure that the site and operation is capable of storing carbon and the monitoring regime is sufficiently robust so that flows of carbon are accounted for.[3]

17 In practice, this means that an application to carry out CCUS (and claim ETS credits) would need to provide information on factors such as:

- Site Geology and Characterisation
- Site Operations Plan
- Monitoring, Reporting and Verification Plan, and
- Closure and Post-Closure Plans.

18 The key to making CCUS work is to ensure that the relevant test a decision-maker employs against the information listed above is sensible and fit for purpose. This paper proposes that the relevant legislative test is the *suitability of a storage site and associated operations for CCUS activities.* This is about determining the credibility of the operator and planned operations (not about attempting to manage every possible risk upfront).

Monitoring over the life of the project

19 A key to the credibility of the regime is the approach to monitoring. If carbon leaks, it must be measured. The operator will be liable for that carbon. Further, some flexibility must be retained for the regulator to adjust the monitoring and accounting regime if new information comes to light part way through a CCUS operation.

20 The ETS operates as a self-reporting system. The penalty and audit regime in the CCRA is based on that in the *Tax Act*. This has proved to be a robust approach over time. Like other activities in the CCRA, the CCUS would operate on a self-reporting basis.

Decommissioning

[3] The most likely site for CCUS in the immediate term is Todd Energy's Kapuni site. In their submission on CCUS, Todd argued that the ISO standard on geological storage of carbon is an "*operationally practical standard for carbon capture and storage"*. Every item listed above in paragraph 17 is covered in the relevant ISO standard.

21 The Crown should not be exposed to the costs of decommissioning. [redacted]
Confidential Advice to Government [redacted]

Management of long-term ETS liabilities

22 It is common in international CCUS regimes for there to be the **potential** for the removal of ETS (or equivalent) surrender obligations associated with the leakage of CO_2 into the atmosphere, if the CCUS project has been properly decommissioned and certain conditions have been met, and after a specified period of time has elapsed. We have referred to this as the removal of the ETS surrender obligation.

23 We have considered several options in this regard, including not having any potential for ETS surrender obligations to be removed. But we are concerned that such an approach may be seen as overly cautious from a CCUS proponent's viewpoint and may chill investment and activity in CCUS.

24 The time-period for removal of emissions surrender obligations varies across jurisdictions, ranging from 15 to 100 years (in the regimes officials have identified). The Australian Commonwealth CCUS regime allows for the removal of emissions liability to occur after 15 years if, in the opinion of the relevant Minister, certain conditions are met. Critically, the Minister must consider whether injected CO_2 is behaving as predicted, and that there is no significant risk that CO_2 will have a significant adverse impact on the integrity of the storage formation, the environment, or on human health or safety. Our view is that the Australians have the balance right in this regard.

25 Note that any other liabilities under other legislation (eg the RMA, CMA or *Exclusive Economic Zone and Continental Shelf Act* (EEZ Act) should be unchanged. These include possible liabilities associated with environmental harms and remediation of problems occurring at decommissioned wells. Moreover, any removal of ETS surrender obligations would not cover losses caused through negligence of the CCUS operator. The operator would remain liable in this case. Further, we propose that the costs of monitoring of the site continue to be covered by the operator for a further 30 years past any removal of ETS surrender obligations.[4]

26 It is proposed that the Minister with responsibility for decisions regarding the removal of ETS surrender obligations is the Minister of Climate Change. Given the nature of a decision to remove the ETS surrender obligations, it is proposed that the Minister of Climate Change must gain the approval of the Minister of Finance before a decision is made to remove the ETS surrender obligations. (In practice, this may involve consulting with the Cabinet of the day). It is proposed that the Minister of Climate Change be required to commission an independent report on the risk of CO_2 leakage from the site. This will provide further assurance to decision-makers of the day that the Crown is not taking on an inappropriate level of risk.

[4] This is the approach taken in the European Union.

Ancillary issues

27 We intend to ensure that the regime is sufficiently future-proofed to allow CCUS-only participants to access ETS rewards should this become more viable in time, such as through direct air capture. Therefore, CCUS needs to be provided for in the CCRA and supporting regulations as not only a reduction in existing ETS surrender obligations but also able to receive New Zealand Units as a separate removal activity.

28 CCUS activities overseas are often larger than is likely in New Zealand, meaning that those overseas activities can absorb regulatory costs in a way that a New Zealand operation may not. It is important that the regulatory requirements for New Zealand's CCUS scheme are not overly prescriptive and are fit for purpose. We intend to pay particular attention to this matter in the detailed design of the regime.

29 Confidential Advice to Government

Cost-of-living and population implications / Use of external resources

30 No cost-of-living implications. There are no associated population / human rights implications. External contractors were not used in preparing this paper.

Financial implications

31 This paper has no direct financial implications. Any financial implications on the Environmental Protection Authority (EPA) or other government agencies that cannot reasonably be cost recovered from applicants should be covered within baselines. However, we note that resourcing continues to be an issue for the EPA in its role as regulator across its various functions, and may be affected by this additional function. Proponents of CCUS proposals will be expected to cover the costs of the assessment of their proposals. We intend that cost recovery provisions are built into the relevant changes to legislation.

32 The decision for the Crown (if taken) to remove the ETS surrender obligations for a CCS operator, if certain conditions are met, may have fiscal implications if the CO_2 were to subsequently leak. Confidential Advice to Government This matter will be the subject of future advice to the Ministers for Climate Change and Finance.

Treaty implications

33 Iwi and Māori are likely to have a range of interests in CCUS activities, that may vary depending on where these activities take place. Taranaki iwi submitted to the earlier public consultation on a CCUS regime and expressed concern about the climate impacts of CCUS through prolonging gas production. They strongly opposed CCUS taking place in the coastal marine area due to concerns of environmental risks and impacts on customary interests.

34 The regulatory framework for CCUS will uphold Treaty settlement commitments and other obligations. Work on which legislative vehicle to utilise to promulgate the CCUS regime is ongoing. One approach is to utilise existing legislative frameworks, such as the RMA, EEZ Act and CCRA. These frameworks already have specific requirements to uphold the principles of the Treaty of Waitangi.

35 As part of the policy development that informed this paper, officials contacted 18 iwi authorities to offer discussions on the proposals. Uptake was limited. We will continue to provide opportunities for engagement with iwi as part the of detailed design work to come.

Legislative implications

36 Work is ongoing to assess the fit of the policy proposals set out in this paper with existing legislation (in particular the RMA and EEZ Act). This work will inform the final formulation of the legislative changes needed to facilitate CCUS.

Regulatory Impact Statement (RIS)

37 MBIE's Regulatory Impact Analysis Review Panel reviewed the RIS and considered that the information and analysis summarised in the RIS meets the criteria necessary for Ministers to make informed decisions on the proposals in this paper.

Climate Implications of Policy Assessment (CIPA)

38 A CIPA was prepared for the October Cabinet paper. No update is required.

Consultation

39 The Treasury and the PCO were consulted in the preparation of this paper. DPMC (Policy Advisory Group) was informed.

Proactive release

40 This paper will be proactively released subject to suitable withholdings.

Recommendations

41 The Ministers for Energy, Climate Change and RMA Reform recommend that the Cabinet Economic Policy Committee:

1 **note** that on 16 October 2024 [ECO-24-MIN-0223 refers], the Cabinet Economic Policy (ECO) noted the lack of a high-level framework for carbon capture utilisation and storage (CCUS) is a gap in New Zealand's regulatory landscape, and agreed significant parameters of how the CCUS regime will interact with the emissions trading scheme (ETS)

2 **note** that, at the same meeting, the Ministers for Energy, Climate Change and RMA Reform (the responsible Ministers) were invited to report back to ECO by December 2024 to seek agreement to other high-levels parameters necessary to promulgate a CCUS regime for New Zealand

3 **note** that this paper only relates to CCUS activities that (firstly) are countable against New Zealand's international climate change targets, Confidential Advice to Government and (thirdly) are not covered elsewhere in our regulatory settings (such as geothermal re-injection)

4 Confidential Advice to Government

5 **agree** that the design of the CCUS regime is driven by the following principles:

a. that the CCUS regime is one of high integrity

b. that processes for applicants and CCUS proponents will be streamlined as much as possible

c. that decision-making processes and criteria are clear and are workable from the viewpoint of both scheme proponents and decision-makers

d. the regulatory requirements for CCUS scheme design should not be overly prescriptive, and are fit for purpose in a New Zealand context

Approvals and injection period

6 **agree** that the primary criterion to be set out in legislation is that decision-makers must be satisfied of the *suitability of a storage site and associated operations for CCUS activities*

7 **agree** that it must be determined that both the site and the planned operations (including approach to monitoring and the closure plan) are credible for an operator to claim ETS credits from CCUS activities

8 **note** that the tests set out in recommendations 6 and 7 will seek to appropriately manage risk without being too onerous on potential CCUS operators

9 **note** that the information required from the operator to enable the regulator to assess the tests set out in recommendations 6 and 7 will likely include:

a. Site Geology and Characterisation

b. Site Operations Plan

c. Monitoring, Reporting and Verification Plan, and

d. Closure and Post-Closure Plans

10 **agree** that all costs associated with an application be met by the applicant, including the costs of assessing the application

11 **agree** that there is the ability to change obligations such as monitoring requirements on a CCUS operator (an adaptive approach) to effectively manage risks while enabling activities to occur

Closure, Post-Closure and Decommissioning

12 **agree** that the costs of decommissioning of CCUS operations be met by the operator

13 Confidential Advice to Government

14 **agree** that any financial security an applicant or scheme proponent is required to post to cover decommissioning costs cannot include provision for the ETS cost of any leakage of CO_2 from a site

15 **agree** that when a CCUS operator wishes to stop injecting into a storage site, it may update the closure and post-closure plan set out in the approvals process

16 **agree** that a site be regarded as closed (decommissioned) once the regulator has signed off that the closure plan has been implemented appropriately, and that the risk of leakage of carbon from the site is independently assessed as being very low

17 **agree** that obligations on a CCUS operator extend beyond the cessation of a CCUS activity, in order to provide for ongoing monitoring and management of a CCUS storage site following closure

Possible removal of ETS surrender obligation

18 **note** that in most overseas CCUS schemes, the possibility exists for an operator to cease to be liable through the ETS (or equivalent) for surrender obligations associated with the leakage of CO_2 if certain conditions are met to the satisfaction of Ministers

19 **agree** that the regime should provide for the possible removal of ETS surrender obligations for the stored carbon associated with a CCUS activity, no sooner than 15 years after the start of the post-closure period

20 **agree** that the Minister with responsibility for decisions regarding the removal of ETS surrender obligations is the Minister of Climate Change

21 **agree** that the Minister of Climate Change must gain the approval of the Minister of Finance before a decision is made to remove the ETS surrender obligations

22 **agree** that when deciding whether to remove the ETS surrender obligations associated with any CO_2 leakage, the Minister of Climate Change must consider whether injected CO_2 is behaving as predicted, and that there is no significant risk that CO_2 will have a significant adverse impact on the integrity of the storage formation, the environment, or on human health or safety

23 **agree** that the Minister of Climate Change must commission and consider an independent study from an expert body of the risk of CO_2 leakage from a site prior to making a decision to remove ETS surrender obligations from an operator

24 **agree** that the operator covers the cost of the independent study referred to in recommendation 23 above

Ancillary and Enabling

25 **agree** that the CCRA include provision for CCUS to receive New Zealand Units as a separate removal activity

26 **agree** to delegate to the responsible Ministers, along with the Minister for the Environment, further decisions (including rights to issue drafting instructions) needed to give effect to the proposals in this paper

27 **note** that the responsible Ministers and the Minister for the Environment will consult with other Ministers as appropriate in exercising the delegation referred to above, including the Minister for Resources in relation to CMA-related issues, the Minister for Workplace Relations and Safety for health and safety matters, and the Minister of Finance for matters pertaining to the eligibility for removing surrender obligations under the ETS.

Hon Simeon Brown Minister for Energy	Hon Simon Watts Minister of Climate Change	Hon Chris Bishop Minister for RMA Reform