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Research that matters.

Regulatory carbon capture

Submission on the proposed methodology determination for Carbon Capture and Storage

Australia's Emissions Reduction Fund will soon incorporate carbon capture and storage projects. The design and development of the CCS ERF method lacks integrity and independence.

The proposed method will allow industry to sidestep regulation, enable new gas and oil projects to exist where they otherwise would not have, and result in more emissions being emitted than will be stored.

Submission

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Contents

Summary

The Draft CCS Method as proposed would allow much of the small amount of funding available for emissions reduction through Australia's only dedicated carbon abatement program, the Emissions Reduction Fund, to be diverted to the oil and gas industry for projects that will result in more emissions not less.

Key concerns around both the technical veracity of method and the integrity of its development include:

- **Regulatory capture by the oil and gas industry**
  The Clean Energy Regulator is an independent statutory authority. Yet the appointment of David Byers, the Chief Executive of the CCS lobby group CO2CRC as chair of the Emissions Reduction Assurance Committee (ERAC), overseeing the method development, appears to be a blatant conflict of interest. CO2CRC's 'industry partners' include Santos, Chevron, ExxonMobil, Shell and Woodside — industry proponents who stand to gain financially if their projects are eligible under the method. It is not clear what steps if any have been taken to mitigate this conflict of interest.

- **Net increase in emissions by CCS for oil and gas projects**
  CCS is used by the oil and gas industry to justify large-scale projects that would inevitably result in far greater emissions than they sequester (CCS can only capture some direct emissions, usually "reservoir CO2," but will not reduce the vast bulk of emissions which are from burning the gas and methane emissions associated with gas processing). A net increase in emissions generated by developments attached to CCS projects contravenes the principle of the Carbon Credits (Carbon Farming Initiative) Act 2011 which is to remove or avoid emissions.

- **Inadequate risk of reversal buffer**
  The Emissions Reduction Fund's 'Offsets Integrity Standards' includes the standard of 'Conservatism'. The ERAC has interpreted this to mean: *all estimates, projections and assumptions that have an influence on the calculation of the net abatement amount of eligible projects to be conservative. Conservative in this context means estimates, projects and assumptions that are cautious and likely to avoid the over-estimation of the abatement from projects taken under the method* ; and

  Consistent with this, in applying the conservative standard, the Committee generally considers: the potential for direct and indirect leakage to arise as a consequence of project activities

A 3 per cent risk reversal buffer on unproven technology that is refunded at site closure cannot be considered to be 'conservative'. There is no empirical evidence demonstrating that CCS safely stores CO_2 over long time periods (because no projects have existed over long time periods). Conversely, there is a high rate of failure of CCS projects in the short term.

- **Lack of long-term monitoring requirements for CCS sites.** California requires CCS operators to monitor and maintain storage sites for a minimum of 100 years. In contrast, despite the ERF being a national scheme, the draft method does not include any requirement for long-term monitoring, deferring to inconsistent standards in state and territory legislation which do not necessarily require the operators to undertake any ongoing monitoring or responsibly for the storage sites after closure.

- **Undermining of regulation and socialising the public cost of CCS**
  Including CCS projects under the ERF will potentially allow industry to bypass state regulation or legislation requiring emissions reduction as part of a project's initial approval process (whereby industry also bears the cost). If industry is permitted to lobby against regulation on the basis that their projects be allowed to be an ERF CCS project instead, this is a transfer of the costs of emissions reductions from the oil and gas industry to Australian taxpayers.

Recommendations:

- To address the conflicts of interest underpinning the development of the method, and to maintain CER's independence, the entire method development and consultation should be started anew with an independent chair, full transparency and genuine stakeholder engagement.
- Oil and gas extraction projects should be ineligible as CCS ERF projects from the outset, as they are being used to enable expansion of the gas industry that will result in far greater emissions being emitted than are sequestered.
- The method should include a 50 per cent reduction in ACCUs during the crediting period to account for the risk of reversal following the site closure.
- Long-term liability insurance as a prerequisite for receiving ERF funding.
- The method should explicitly require rigorous storage sites for a minimum of 100 years in line with Californian standards.
- ACCUs should be deducted during the crediting period to cover these long-term monitoring costs in case the companies no longer exist over this period.
- CCS projects should not proceed or be eligible for ERF funding until rigorous Australian or state regulations comparable to the Californian Protocol are in place.
- The issue of potential leakage through abandoned wells should be thoroughly addressed.

Introduction

The Clean Energy Regulator (CER) has been directed by the Minister for Energy and Emissions Reduction to develop a carbon capture and storage (CCS) method under the Emissions Reduction Fund. The method will determine the eligibility of CCS projects for Australian Carbon Credit Units (ACCUs) and how those projects would be credited with ACCUs.

The Emissions Reduction Assurance Committee (ERAC) that oversees the method development is seeking feedback on the draft method proposed by the CER. Accreditation of Australian Carbon Credit Units (ACCUs) for CCS will enable oil and gas companies to access the limited available funding provided by taxpayers for Australia's only carbon abatement program.

The Australia Institute welcomes the opportunity to comment on the draft CCS method.

Carbon capture and storage has been touted as a means of capturing emissions from large stationary sources since the 1980s. Despite over thirty years of trial and error, and billions of dollars of funding in Australia and globally, CCS has consistently failed to meet targets set by the IEA, the IPCC, The G8, European Union and the industry itself.[1]

Most of these targets were set for sequestering emissions for coal power stations, an idea which has now been all but abandoned. In Australia in 2017, $1.3 billion of taxpayers' money had been committed to CCS since 2003. Despite this, there are no large-scale CCS projects for coal power stations operating in Australia and no planned coal CCS projects at any stage of development.[2]

More recently the oil and gas industry has recognised the public relations potential of CCS and rebranded a highly polluting tertiary oil extraction process called Enhanced Oil Recovery (EOR) as CCUS, where carbon dioxide is pumped into an oil-bearing rock formation to increase the amount of oil that can be extracted.

According to the Global CCS Institute there are currently twenty-eight commercial CCS facilities in operation, twenty-three of which are EOR.[3]

[1] Browne (2018) *Sunk costs: Carbon capture and storage will miss every target set for it,* https://australiainstitute.org.au/wp-content/uploads/2020/12/P546-Sunk-costs-WEB.pdf

[2] Browne and Swann (2017) *Money for nothing,* https://australiainstitute.org.au/wp-content/uploads/2020/12/P357-Money-for-nothing_0.pdf

[3] Global CCS Institute (2020) Global Status of CCS 2020, Appendices p.20, https://www.globalccsinstitute.com/wp-content/uploads/2020/12/Global-Status-of-CCS-Report-2020_FINAL_December11.pdf

The only CCS project operating in Australia is the Gorgon LNG CCS project. Based in Western Australia, this project is one of just five dedicated geological storage projects globally, and by far the largest. It has a disastrous record to date. Multiple technical failures, including corrosion in pipes, meant it failed to sequester any CO_2 for the first three years of its reporting period. It then operated for an extended period without its pressure management system before being curtailed by the regulator.[4] It sequestered just 30 per cent of the emissions it was required to sequester as a condition of its approval over the first five-year reporting period. This should require the company to purchase ACCUs for a liability of 4.8 million tonnes at a cost of $100 million.[5]

Despite CCS' clear failure as an abatement technology, the report *Examining additional sources of low cost abatement*, headed by Grant King (the former head of Origin Energy who initiated the giant polluting Australia Pacific LNG (APLNG) coal seam gas project in Queensland) recommended that industry, rather than government, should be able to "propose and prepare" the *methods*, or criteria for allowing oil and gas companies to receive accreditation for carbon credits for CCS.[6]

The Australian Government, in turn, indicated that it had:

> "…already given industry early-stage involvement in the initial scoping of a Carbon Capture and Storage/Carbon Capture, Use and Storage (CCS/CCUS) method"[7]

In December 2020, the Government announced that it appointed several new members to the Emissions Reduction Assurance Committee (ERAC), the committee "responsible for overseeing the design and implementation of the methods that determine the eligibility of offsets projects and issuance of ACCUs,"[8] including the method for carbon capture and storage. These appointments included the new chair, David Byers, former head of the gas industry lobby group APPEA, and former head of the Minerals Council, and at the time of writing this submission and while the draft method was being developed, CEO of the CCS

[4] Milne (January 2021) *Chevron's Gorgon emissions to rise after sand clogs $3.1B C02 injection system*, https://www.boilingcold.com.au/chevrons-gorgon-co2-emissions-to-rise-sand-clogs/

[5] Milne (July 2021) Time's up on Gorgon's five years of carbon storage failure, https://www.boilingcold.com.au/times-up-on-gorgons-five-years-of-carbon-storage-failure/

[6] Australian Government Department of Industry, Science Energy and resources (February 2020), Report of the Expert Panel examining additional sources of low cost abatement, (King Review) https://www.industry.gov.au/sites/default/files/2020-05/expert-panel-report-examining-additional-sources-of-low-cost-abatement.pdf

[7] Australian Government (2020) Australian Government response to the Final Report of the Expert Panel examining additional sources of low-cost abatement ('the King Review'), https://www.industry.gov.au/sites/default/files/2020-05/government-response-to-the-expert-panel-report-examining-additional-sources-of-low-cost-abatement.pdf

[8] Emissions Reduction Assurance Committee (March 2021) Information Paper: Committee considerations for interpreting the Emissions Reduction Fund's offsets integrity standards, p.3, http://www.cleanenergyregulator.gov.au/DocumentAssets/Documents/Information%20Paper%20on%20the%20Offsets%20Integrity%20Standards.pdf

lobby group CO2CRC. CO2CRC represents the interests of the major fossil proponents standing to benefit from inclusion in the ERF, including Santos, Shell, Woodside, ExxonMobil and Chevron.

Also appointed was Dr Brian Fisher. Dr Fisher and his consultancy BAEconomics have been involved in promoting the interests of the fossil fuel industry and delaying climate action in Australia for many decades.

Given this context, it quickly becomes apparent that there are major integrity and conflict of interest issues affecting the independence of the ERAC and the development of the CCS method.

The method as proposed reflects this underlying conflict of interest with the main beneficiaries being the oil and gas industry. The method provides a way for scarce climate funds to be diverted to the oil and gas industry to enable projects that will ultimately result in far greater emissions than are sequestered under the scheme.

Integrity concerns

CONFLICTS OF INTEREST

> In deciding to make a methodology determination the Minister must have regard to the advice of the Emissions Reduction Assurance Committee, an independent expert panel established to advise the Minister on proposals for methodology determinations[9].

The Emissions Reduction Assurance Committee (ERAC) oversees the design and development of ERF methods.

> The Committee's responsibilities relate exclusively to the ERF's crediting mechanism. It is responsible for overseeing the design and implementation of the methods that determine the eligibility of offsets projects and issuance of ACCUs. It performs these functions in collaboration with the Minister for Energy and Emissions Reductions, Department and CER.[10]

As the *Carbon Credits (Carbon Farming Initiative) Act 2011* (the Act) clearly states the ERAC should be an independent panel. However, when the ties to industry by committee members are examined it quickly becomes apparent that the ERAC is far from independent and significant conflicts of interest exist. Thus, any advice the committee provides to the Minister is also not independent.

In December 2020, the Government announced that it was appointing a new chair and several new members to the ERAC: David Byers (chair), Brian Fisher, Allison Hortle and Margie Thomson.

David Byers is a former CEO of the oil and gas industry lobby group the Australian Petroleum Production and Exploration Association (APPEA), and former CEO of the mining lobby group the Minerals Council of Australia. Through the duration of the CCS method design he was also the CEO of the CCS lobby group CO2CRC, an industry and government-funded CCS

[9] Carbon Credits (Carbon Farming Initiative) Act 2011 Explanatory Statement https://www.legislation.gov.au/Details/F2015L00164/Explanatory%200ment/Text

[10] Emissions Reduction Assurance Committee (March 2021) Information Paper: Committee considerations for interpreting the Emissions Reduction Fund's offsets integrity standards, p.3, http://www.cleanenergyregulator.gov.au/DocumentAssets/Documents/Information%20Paper%20on%20the%20Offsets%20Integrity%20Standards.pdf

'research body' whose 'industry partners' include Santos, Shell, Woodside, ExxonMobil and Chevron.[11]

Mr Byers' appointment appears to contradict the 'conflict of interest' provision of the Act, which states unequivocally:

> An Emissions Reduction Assurance Committee member must not engage in any paid employment that conflicts or may conflict with the proper performance of his or her duties [12]

Dr Brian Fischer's appointment also raises significant concerns. Dr Fisher was the head of the Australian Bureau of Agriculture and Resource Economics (ABARE) from 1988 to 2006, aside from a brief stint in the Department of Primary Industries and Energy. While ABARE is a government agency, under Dr Fisher's leadership, much its modelling work was funded by organisations such as the Australian Coal Association, the Australian Aluminium Council, BHP, Exxon and other fossil fuel-intensive interests.[13]

Dr Fisher and BAEconomics have worked for the proponents of some of the most controversial fossil fuel projects in the country and have been heavily criticised in court judgements and government assessments. In the Rocky Hill Coal Project, ultimately rejected by the NSW Land and Environment Court, the judgement described Dr Fisher's evidence as "speculative and hypothetical". [14]

METHOD DEVELOPMENT

In December 2020, the Australia Institute contacted the Clean Energy Regulator (CER) requesting to be allowed to participate in the stakeholder consultation and workshops informing the draft CCS method development and workshops. These requests were rejected.

The Australia Institute first wrote to the ERAC on December 1, 2020 asking to be included in the technical working group and participate in any workshops in regard to the development of this methodology. This was followed up on January 6, 2021. No response was received.

On January 11, 2021 the Institute wrote to the CER with the same request. The CER offered an online meeting to discuss the Australia Institute's potential participation in the method which took place on January 21, 2021. Following the meeting, on January 22, the Australia Institute sent further information at the request of the CER detailing our long involvement in

[11] CO2CRC (2021) Partners, https://co2crc.com.au/who-we-are/our-partners/

[12] Carbon Credits (Carbon Farming Initiative) Act 2011, S.263, https://www.legislation.gov.au/Details/C2017C00076

[13] Hamilton (2007) Scorcher

[14] Gloucester Resources Limited v Minister for Planning [2019] NSWLEC 7, https://www.caselaw.nsw.gov.au/decision/5c59012ce4b02a5a800be47f

similar processes. A CER officer then phoned to inform us that we would not be invited to join the method development process or workshops, but no justification for this decision was given. The Institute submitted a written response on 29 January 2021 requesting a justification for the organisation's exclusion from the process.

An inadequate response to this was received three months later on April 27, when the process was all but over, suggesting that the Institute look at the CER website tracker to "to show stakeholders how the method is progressing" and put in a submission.

The Australia Institute understands that it is unprecedented for anyone to be refused a request to be involved in workshops for the development of an ERF method.

Unfortunately, which stakeholders participated in the method development workshops has never been disclosed, however it appears potential proponents like Santos were closely involved, as indicated by the following media release.

> We want to be ready to take a final investment decision on our 1.7 million tonne per annum Moomba Carbon Capture and Storage Project by the end of this year, so the announcement that the Clean Energy Regulator will take over methodology development to enable CCS to generate carbon credits and halve methodology development times is very welcome."
>
> Santos has been consulting with the Department on this methodology since March [2020].[15]

The combination of a clear conflict of interest of the ERAC Chair as CEO of a lobby group representing potential proponents, the general lack of transparency, and a consultation process skewed towards proponents has undermined the integrity of the method development process.

This bias has resulted in a method that would potentially allow serious adverse social, environmental, or economic impacts to arise from the CCS activities it would enable.

Recommendation: To address the conflicts of interest underpinning the development of the method, and to maintain CER's independence, the entire method development and consultation should be started anew with an independent chair, full transparency and genuine stakeholder engagement.

[15] Santos (17 September 2020) Santos welcomes $1.9 billion technology-neutral investment to reduce carbon emissions, https://www.santos.com/wp-content/uploads/2020/09/200917-Release-Santos-welcomes-1.9-billion-technology-neutral-investment-to-reduce-carbon-emissions.pdf

Oil and gas projects will increase, not reduce, emissions

A fundamental requirement of the Act is that associated projects remove greenhouse gases from the atmosphere, and avoid emissions of greenhouse gases, as described in the Objects of the Act:

> (2) The first object of this Act is to **remove greenhouse gases from the atmosphere, and avoid emissions of greenhouse gases**, in order to meet Australia's obligations under any or all of the following:
>
> (a) the Climate Change Convention;
>
> (b) the Kyoto Protocol;
>
> (c) an international agreement (if any) that is the successor (whether immediate or otherwise) to the Kyoto Protocol.[16]

In addition, the Minister is required to "consider any adverse environmental, economic or social impacts likely to arise as a result of projects"[17].

Carbon capture and storage (CCS) is being used by the oil and gas industry to justify its continued expansion in the face of dangerous climate change and the steady erosion of their social license to operate. To illustrate this, the CEO of Santos Kevin Gallagher, whose company is proposing a CCS project at Moomba in South Australia's Cooper Basin, has stated that:

> Australia needs large-scale CCS projects to make development of our oil and gas resources viable for investors, financiers and customers so that the wealth of these resources can be unlocked for the nation[18]

Santos has also used its proposed Moomba CCS project to progress its highly polluting Barossa Gas Project that will supply gas to the Darwin LNG export terminal. The announcement of the memorandum of understanding (MoU) signed with Korean firm SK E&S to collaborate on Moomba CCS in relation to "carbon neutral LNG" from the Barossa

[16] Australian Government, Federal Register of Legislation (2011) *Carbon Credits (Carbon Farming Initiative) Act 2011*, https://www.legislation.gov.au/Details/C2020C00281

[17] Carbon Credits (Carbon Farming Initiative) Act 2011 Explanatory Statement https://www.legislation.gov.au/Details/F2015L00164/Explanatory%20Statement/Text

[18] McDonald-Smith (June 2015) *Australia can be 'carbon storage superpower': Santos,* https://www.afr.com/companies/energy/australia-can-be-carbon-storage-superpower-santos-20210614-p580zv

field was made in the media release announcing Final Investment Decision (FID) for the Barossa Gas Project, and was clearly a significant part reaching FID on the project.

> Santos and SK E&S have also signed a Memorandum of Understanding to jointly investigate opportunities for carbon-neutral LNG from Barossa, including collaboration relating to Santos' Moomba CCS project, bilateral arrangements for carbon credits and potential future development of zero-emissions hydrogen[19]

The Barossa field has by far the highest reservoir CO_2 emissions of any gas field in Australia and has been described as "carbon-dioxide emissions factory, with an LNG by-product."[20] The CO_2 extracted along with the gas will be vented to the atmosphere. Mining magnate Andrew Forest describes the project as "atrocious" and "the most polluting project in the world."[21]

CCS projects for oil and gas production only ever propose sequestering a fraction of the emissions that result from the project as a whole —usually just the reservoir CO_2 emissions. This is the case with Chevrons Gorgon CCS project and Santos's proposed Moomba CCS project.

Methane is often combined with CO_2 in oil and gas reservoirs. When the methane is extracted the CO_2 needs to be stripped during processing. The CO_2 is generally then vented to the atmosphere. Oil and gas fields have varying levels of CO_2. Any gas extraction project, (especially LNG) has significant emissions, but when high levels of CO_2 are present in reservoirs, the overall emissions of the project are higher than fields with lower CO_2 reservoir emissions.

Therefore, even if a gas or oil project has a CCS component attached, the CO_2 reservoir emissions captured still only represent a small fraction of the total emissions that result from oil and gas production, the vast bulk of which result from burning the oil and gas produced.

If CCS allows existing oil and gas projects to continue longer than they otherwise would have or enables new projects to proceed when they would not have otherwise, *and* the emissions resulting from the project as a whole are greater than the emissions being sequestered, then CCS simply cannot be said to "remove greenhouse gases from the atmosphere and

[19] Santos (April 20, 2021) *Santos completes Bayu-Undan and Darwin LNG sell-down to SK,* https://www.santos.com/wp-content/uploads/2021/04/210430_Santos-completes-Bayu-Undan-and-Darwin-LNG-sell-down-to-SK.pdf

[20] Fitzgerald (June 2021) *Santos' $4.7 billion Barossa gas field could produce more CO2 than LNG, report says,* https://www.abc.net.au/news/rural/2021-06-24/santos-barossa-gas-carbon-emssions-twiggy-forrest/100224254

[21] Keane (2021) Twiggy hits the mark: Santos' new Barossa gas field is a 'carbon emissions factory with an LNG by-product', https://www.crikey.com.au/2021/06/16/andrew-forrest-santos-barossa-lng/

avoid emissions of greenhouse gases" as required by the object of the Act. In fact, it will increase emissions which is the opposite of the object of the Act.

An example of the approval of a CCS project increasing emissions is Chevron's Gorgon LNG CCS project. Chevron's Gorgon CCS sequesters CO_2 reservoir emissions from the offshore Gorgon oil and gas field that feeds the Gorgon LNG export facility on Western Australia's Burrup Peninsula. The Environment Protection Agency (EPA) of Western Australia advised against approving the Gorgon LNG project due to the unacceptable harms of the project including its greenhouse gas emissions.[22] However Gorgon LNG was approved on condition that Chevron undertake CCS,[23] which, to date, has only served to demonstrate that CCS is an ineffective way of capturing CO_2.[24]

If it can be made to operate successfully, the Gorgon CCS facility will capture, at the most, 4 Mt per year, which is around half the Scope 1 emissions from the Gorgon LNG export facility, giving it an emissions intensity similar to other LNG facilities that do not have high reservoir CO_2 emissions. Given Gorgon LNG would not have been approved without CCS, CCS has enabled a project to proceed that has emitted millions of tonnes of CO_2, dramatically more than it will ever sequester.

While the Gorgon project would not be eligible under the current draft method because it is not a new project, there is the risk that similar projects will be allowed to be proceed and also be eligible to receive ACCUs.

It is important to note that the emissions from projects like Gorgon LNG are far greater than just the emissions from the processing and export facilities. When the emissions from burning the gas are added (often referred to as downstream or Scope 3 emissions), Gorgon LNG emits an additional 48 million tonnes annually.[25]

The days of ignoring emissions from Australian exports burnt overseas are over. It is now well established that these downstream or Scope 3 emissions should be included in the assessment of fossil fuel projects. It is required in NSW planning law, [26] and supported by a

[22] Government of Western Australia, Environmental Protection Authority (June 2006) *Gorgon Gas Development Barrow Island Nature Reserve, Chevron Australia Report and recommendations of the Environmental Protection Authority*, https://www.epa.wa.gov.au/sites/default/files/EPA_Report/B1221.pdf

[23] Government of Western Australia, Minister for Environment and Water (August 2009) *Ministerial Statement 800*, P.33, https://www.epa.wa.gov.au/sites/default/files/1MINSTAT/Ministerial%20Statement%20800.pdf

[24] Milne (July 2021) *Time's up on Gorgon's five years of carbon storage failure*, https://www.boilingcold.com.au/times-up-on-gorgons-five-years-of-carbon-storage-failure/

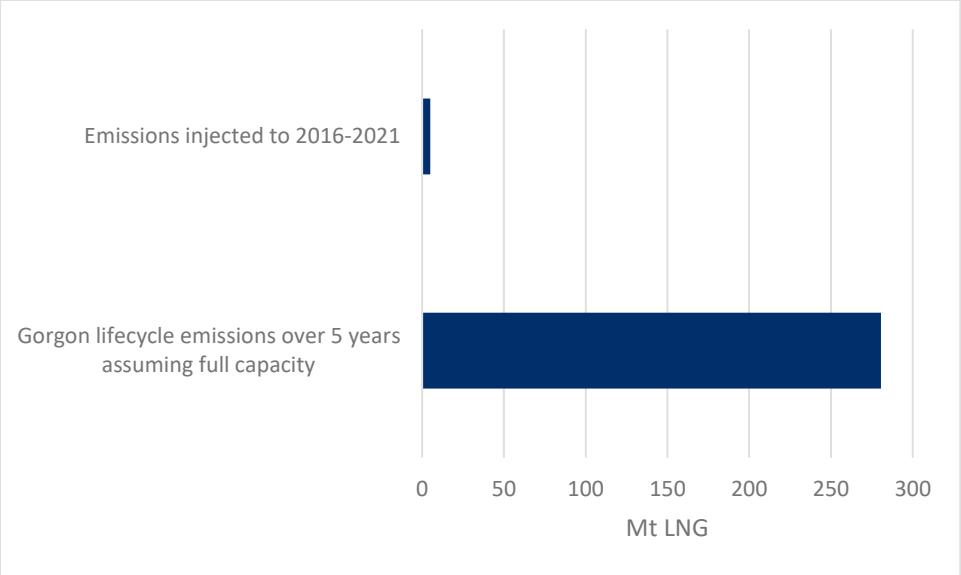
[25] Assuming production 15.6 Mt LNG/year, Chevron (2021) *Gorgon Project, and Australian Icon*, https://australia.chevron.com/our-businesses/gorgon-project, IPCC (2006) *2006 IPCC Guidelines for National Greenhouse Gas Inventories - Volume 2 Energy* Table 1.4

[26] NSW Government (2007*) State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*, S.14(2), https://legislation.nsw.gov.au/view/whole/html/inforce/current/epi-2007-0065

landmark decision in the NSW Land and Environment Court.[27] There are also similar requirements in other Australian states. For instance the Western Australian EPA has due regard to Scope 3 emissions in assessing projects under its Environmental Impact Assessment (EIA) process.[28]

Figure 1 below shows the Gorgon CCS project captured just 1.7 per cent of Gorgon's total emissions over 5 years if it is running at full capacity.[29]

Figure 1: Gorgon CCS v total emissions



Source: Assumes full capacity of 15.6 Mt LNG/year (actual production figures are not publicly available) Chevron (2021) *Gorgon, an Australian Icon*, https://australia.chevron.com/our-businesses/gorgon-project, includes author's calculations of Scope 1, 2 and 3 emissions.

The emissions that would result from CCS enabling an expansion of oil and gas extraction in Australia are a serious environmental economic and social impact.

Recommendation: Oil and gas extraction projects should be ineligible as CCS ERF projects from the outset, as they are being used to enable expansion of the gas industry that will result in far greater emissions being emitted than are sequestered.

[27] Land and Environment Court of NSW (2019) *Gloucester Resources Limited v Minister for Planning [2019]* NSWLEC 7, https://www.caselaw.nsw.gov.au/decision/5c59012ce4b02a5a800be47f#_Toc431202

[28] Environment Protection Authority of Western Australia (March 2019) *Environmental Factor Guideline, Greenhouse Gas Emissions*, p.4, https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/20190306%20EPA%20Greenhouse%20Gas%20Emissions%20-%203.pdf

[29] Assumes full capacity of 15.6 Mt LNG/year (actual production figures are not publicly available) Chevron (2021) *Gorgon, an Australian Icon*, https://australia.chevron.com/our-businesses/gorgon-project, includes author's calculations of Scope 1, 2 and 3 emissions.

Risk of long-term leakage ignored

One of the major concerns about CCS is that the abatement could be reversed, and the injected emissions released to the atmosphere.

The 'Draft Simple Method Guide' for the CCS method recognises that this is a risk, but argues that the risk is low, reduces over time, and the proposed method provides for three per cent of ACCUs being withheld until site closure.

This means there is no reduction in ACCUs to account for the risk of reversal after site closure, and implicitly assumes that long-term leakage will be zero.

Although CCS is sequestration (often called Carbon Capture and *Sequestration*), under the Act it is technically classified as "emissions avoidance" because the emissions are captured before they are released to the atmosphere.

Emissions avoidance projects are not subject to a risk of reversal buffer under the Act, probably because parliament did not envisage CCS as an ERF activity, and assumed emissions avoidance activities would be activities like energy efficiency and agriculture practices where emissions were not created in the first place, hence reversal is impossible.

However, in reality emissions are created when CO_2 that would have remained underground for millennia is extracted with methane from oil and gas reservoirs. This is fundamentally different from an emissions avoidance activity like energy efficiency. When CCS emissions are sequestered there is a risk that injected emissions will be released to the atmosphere, as the CER acknowledges in the 'Draft Simple Method Guide'.

For *sequestration* activities the ERF methods apply a five per cent risk of reversal reduction in ACCUs during the reporting period for projects with 100 year duration, and a further 20 per cent reduction in ACCUs for projects with a 25-year permanence period.

> The risk of reversal buffer applies to all sequestration projects and reduces the carbon abatement issued during a reporting period by 5 per cent. This means that for every 100 tonnes of carbon stored by a sequestration project only 95 Australian carbon credit units will be issued, instead of 100 if the project is a 100-year permanence period project. A further 20 per cent deduction of Australian carbon credit units will be made for 25-year permanence period projects.[30]

CCS projects have a 25-year crediting period, which is effectively a 25-year permanence period. The 20 per cent permanence discount accounts for the risk of loss after the

[30] Clean Energy Regulator (2018) *Risk of Reversal Buffer*, http://www.cleanenergyregulator.gov.au/ERF/Choosing-a-project-type/Opportunities-for-the-land-sector/Risk-of-reversal-buffer

permanence period. There is clearly a risk of reversal in CCS following the reversal period, so a permanence discount should equally apply to CCS.

In contrast, the draft method has no permanence discount and the three percent of ACCUs held back to cover risk of reversal is not only significantly lower than that applied to activities that are classified as sequestration, but are refunded after the site closure, meaning that there is no reduction in ACCUs to cover the risk of reversal.

One of the two studies cited by the CER for the risk of reversal being low for CCS is a 2005 IPCC report[31] written when CCS was virtually non-existent, let alone any long-term monitoring of storage site that could establish permanence.

The second, a 2018 study that uses a model to estimate global storage security and leakage that acknowledges "key uncertainties remaining in the program" that include:

> a lack of empirical data, and thus understanding, of CO_2 behaviour in the subsurface over the thousands of years timescale, long-term behaviour of abandoned wells as fluid migration pathways, and long-term evolution of leakage rates.[32]

Using a 16-year-old report (that pre-dates CCS at any meaningful scale, and any CCS at all in Australia) to justify such a generous risk of reversal buffer is particularly striking given the current Australian example of the Gorgon CCS project.

The Gorgon CCS project has been beset by delays and faults. It failed to sequester any emissions for the first three years of its reporting period due to corroded pipework[33] and was injecting CO_2 without its pressure management system operating at least until June 30 2020. After regular extensions to allow it to keep operating without its pressure management system,[34] the regulator finally capped injection rates leading to additional venting of CO_2.

It is alarming that Gorgon operated for an extended period of time without its pressure management operating. Pressure management is essential to preventing leakage of CO2:

[31] IPCC (2005) *Carbon Dioxide Capture and Storage*, p.215, https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_wholereport-1.pdf

[32] Alcalde et al (2018) Estimating geological CO2 storage security to deliver on climate mitigation, https://www.nature.com/articles/s41467-018-04423-1

[33] Milne (January 2021) *Chevron's Gorgon emissions to rise after sand clogs $3.1B C02 injection system*, https://www.boilingcold.com.au/chevrons-gorgon-co2-emissions-to-rise-sand-clogs/

[34] Chevron (September 2020) Gorgon Project Carbon Dioxide Injection Project Low Emissions technology Demonstration Fund Annual Report 1 July 2019-30 June 2020,p.11, https://www.documentcloud.org/documents/20440488-foi-2-gorgon-project-2020-letdf-annual-report-rev-1-ar?responsive=1&title=1#document/p15/a2011350

> CO2 injection implies displacement of water, and thus aquifer pressure build-up or displacement of water to other rocks. Both may be problematic. Pressure build-up may result in seal failure and / or restrict injection rates, whereas displacement of brine to other rocks may have undesired effects on the environment, such as contamination of potable drinking water. CO2 storage capacity also depends on pressure management, especially in closed systems where displaced water cannot be adequately displaced in the subsurface or vented to the surface.[35]

The types of failures that have occurred at Gorgon highlight the gulf between the optimistic abstract theoretical studies like those cited in the 'Draft Simple Method Guide' and the complexity and risk of CCS in the real world.

Although CCS is a mature public relations campaign, it is in its infancy as a technology. Its efficacy for long-term storage of CO_2 has not been tested because it has not existed long-term.

As shown in Table 1 below, there are only five commercial CCS facilities in operation globally that are not enhanced oil recovery (EOR) projects. Of these, three have begun operation in the last five years, and the largest by far is Chevron's Australian Gorgon project which as noted above has performed disastrously. The maximum collective sequestration of these projects is 10 million tonnes annually. The actual sequestration would be much lower, with Gorgon for instance only sequestering 30 per cent of its capacity to date. Overall, these projects make up a miniscule proportion of the billions of tonnes of annual oil and gas emissions and have operated for a very short period of time.

Table 1: Commercial CCS facilities (excludes enhanced oil recovery)

Facility name	Country	Operation date	Industry	Capture Capacity (Mtpa) (Max)
Sleipner CO_2 Storage	Norway	1996	Natural gas processing	1.0
Snøhvit	Norway	2008	Natural gas processing	0.7
Quest	Canada	2015	Hydrogen production and oils sand upgrading	1.2
Illinois Industrial Carbon Capture and Storage	United States	2017	Ethanol production-ethanol plant	1.0
Gorgon Carbon Dioxide Injection	Australia	2019	Natural gas processing	4.0
Qatar LNG	Qatar	2020	Natural gas processing	2.1

[35] Hermanrud et al (2013) Importance of pressure management in CO2 storage, file:///C:/Users/Mark/Downloads/ImportanceofpressuremanagementinCO2storageOTC2013.pdf

Source: Global CCS Institute (2020) Global Status of CCS 2020, Appendix 6.1 p.70, https://www.globalccsinstitute.com/wp-content/uploads/2020/12/Global-Status-of-CCS-Report-2020_FINAL_December11.pdf

As such, there is no empirical data from real world experience as a basis for the lack of a permanence discount as proposed in the draft method.

The Offset Integrity Standards of the CFI Act also requires an assumption of conservatism

> (g) to the extent to which a method specified in, or ascertained in accordance with, a methodology determination in accordance with paragraph 106(1)(c) involves an estimate, projection or assumption—the estimate, projection or assumption should be conservative;[36]

The 3 per cent deferral of ACCUs and the lack of a permanence discount proposed in the draft method is far from conservative.

Oil and gas companies are by far the dominant proponents for CCS projects and the lack of a permanence discount represents special treatment for the oil and gas industry, which is unsurprising given their intimate involvement in the method development.

Given the immaturity of the technology, the lack of real-world data for long-term leakage, the lack understanding of CO_2 behaviour in the subsurface including the long-term behaviour of abandoned wells as fluid migration pathways, as well as the requirement for conservatism in the Offsets Integrity Standards, the Australia Institute believes 50 per cent of ACCUs should be deducted during the crediting period to account for the risk of reversal.

The inadequate risk of reversal deferral proposed in the draft method will increase the risk of long-term leakage and is a serious environmental economic and social impact.

Recommendation: The method should include a 50 per cent reduction in ACCUs during the crediting period to account for the risk of reversal following the site closure.

[36] Parliament of Australia (2021) Carbon Credits (Carbon Farming Initiative) Act 2011, S.133(1)(g), https://www.legislation.gov.au/Details/C2020C00281

Socialising the costs and avoiding regulation

The Emissions Reduction Fund (ERF) legislation has a regulatory additionally requirement, which is intended to ensure that ERF projects (activities) to reduce emissions or sequester carbon do not receive Australian Carbon Credit Units (ACCUs) if those activities are already required by law.

The likelihood of more stringent regulation on oil and gas companies is increasing given recent events. In the last few months alone the International Energy Agency (IEA) found that no new oil and gas projects should be approved if the world is to remain under 1.5 degree warming,[37] Shell has been required to reduce its global emissions by 45 per cent by 2030,[38] Chevron shareholders have voted in favour of a proposal to cut Scope 3 emissions,[39] and climate change continues to increase extreme weather events worldwide.[40]

There are many Australian gas and oil projects in the approval and development pipeline that are subject to regulation and legislation requiring a project take responsibility for emissions before it can proceed. The risk exists that the CCS method will create an easy way for industry to lobby against these regulatory requirements. If industry was subject to regulatory requirements then the cost would be borne by industry. In the offsets scenario these costs are transferred to taxpayers.

Diluted regulation for ERF projects that should not have been eligible according to the regulatory additionality requirement has already been seen in landfill gas ERF projects:

> One of the largest Australian companies in this area is LMS Energy. Their Rochedale landfill gas project should, under the tests in the Act, be thrice barred from participation…the capture and disposal of methane from landfill sites is required by Queensland's air pollution laws…Nevertheless, this project is funded by the ERF. It should be noted clearly that there is no suggestion that the project is engaged in any

[37] IEA (May 2021) Net Zero by 2050: A Roadmap for the Global Energy Sector, https://www.iea.org/reports/net-zero-by-2050

[38] Taylor May (2021) Dutch court rules oil giant Shell must cut carbon emissions by 45% by 2030 in landmark case, https://www.cnbc.com/2021/05/26/dutch-court-rules-oil-giant-shell-must-cut-carbon-emissions-by-45per cent-by-2030-in-landmark-case.html

[39] Reuters (May 2021) *Chevron investors back proposal for more emissions* cuts, https://www.reuters.com/business/energy/chevron-shareholders-approve-proposal-cut-customer-emissions-2021-05-26/

[40] Pearson (July 2021) Summer of disaster: Extreme weather wreaks havoc worldwide as climate change bears down, https://www.latimes.com/world-nation/story/2021-07-21/extreme-weather-worldwide-climate-change-disasters

> deception. Its operators are absolutely complying with regulations. The issue is that the regulations themselves have been watered down to a ludicrous degree. [41]

Paying companies to sequester their emissions is socialising the costs of their activities. This is doubly inequitable for taxpayers given the companies are making billions of dollars annually from these activities and pay little, if any, tax.[42]

Transferring the cost of emissions reduction from the polluting companies to Australian taxpayers is a serious adverse economic and social impact.

[41] Baxter (2017) The government is miscounting greenhouse emissions reductions https://theconversation.com/the-government-is-miscounting-greenhouse-emissions-reductions-88950

[42] McIlroy (2019) Oil, gas 'systemic non-payers' of tax, https://www.afr.com/politics/federal/oil-gas-systemic-non-payers-of-tax-20191211-p53iys

Long-term liability

The risk of long-term leakage from Gorgon CCS has required the Western Australian Government to assume long-term common law liability post closure, with an agreement in place for the Commonwealth Government to assume 80 percent of this liability.[43]

It is entirely inequitable that Australian taxpayers should have to cover the long-term liabilities of CCS projects, particularly when the projects will be receiving taxpayer funding in the form of ACCU's.

Recommendation: Long-term liability insurance as a prerequisite for receiving ERF funding.

[43] Government of Western Australia, Department of Mines, Industry, Regulation and Safety, *Gorgon CO2 Injection Project Regulatory Compliance,* p.5, https://www.dmp.wa.gov.au/Documents/Petroleum/REC-OA-110D.pdf

Inadequate long-term monitoring requirements for CCS sites

While Australia has significant expertise in emissions accounting, it has failed to develop a robust accounting methodology for CCS at the federal and state level. This is not adequately addressed by the CER in the draft method.

The standard is set in California where the protocols covering CCS outline monitoring and reporting requirements in exhaustive detail. The Californian Government requires CCS sites to be monitored for 100 years after injection is finished.

> After injection is complete, the CCS Project Operator must continue to conduct monitoring as specified in this section and Post-Injection Site Care and Site Closure Plan for a minimum of 100 years.[44]

By contrast the draft method provides no protocols or standards and requires projects to comply with disparate state and federal legislation that may not require operators to undertake any long-term monitoring or have any ongoing responsibility for CCS sites.

METHOD MONITORING REQUIREMENTS

The draft simple method guide states that the project proponents are responsible for reporting fugitive emissions from the project site for the crediting period (25 years) and the project specific extended accounting period, but not beyond this.

Division 3 of the draft method covers monitoring requirements as follows:

> 36 Requirement to monitor certain parameters
>
> (1) The project proponent must, during a reporting period, monitor and determine any parameter that is required to calculate the net abatement number for the purpose of working out the carbon dioxide equivalent net abatement amount for the reporting period or a future reporting period:
>
> (a) in a manner that is consistent with the NGER (Measurement) Determination; or

[44] California Air Resources Board (August 2018) Carbon Capture and Sequestration Protocol under the Low Carbon Fuel Standard, p.103, https://ww2.arb.ca.gov/sites/default/files/2020-03/CCS_Protocol_Under_LCFS_8-13-18_ada.pdf

> (b) if the NGER (Measurement) Determination does not include any relevant requirements, in a manner that is consistent with relevant standards and other requirements under the National Measurement Act 1960.

Under the National Greenhouse and Energy Reporting (NGER) scheme Measurement Determination, companies are required to use data obtained from monitoring and verification under various state and federal legislating that the project has been approved.

> (3) For the factor E_{CO2}, fugitive emissions to the atmosphere from geological formations used for the permanent storage of a greenhouse gas are to be estimated from data obtained for monitoring and verification obligations under a licence, lease or approval mentioned in section 1.19A (meaning of ***captured for permanent storage***). [45]

Section 1.19A specifies the various state and federal legislation that cover CCS projects. This means that rather than setting national standards or protocols for monitoring CCS, various state and federal legislation applies.

In contrast to the minimum 100 years of specified monitoring activities required in California, Santos's Moomba CCS project's Environmental Impact Report (EIR) approved under the Petroleum and Geothermal Act (2000), which was not designed with CCS in mind, requires that at some point the CO_2 will be considers safely stored after which the company will have no further responsibility.

> Reservoir modelling, informed by monitoring data, will be used to identify the point at which stored carbon is considered to be in storage with minimal risk of causing harm to identified sensitive receptors or becoming unacceptable fugitive greenhouse gas emissions (for the foreseeable geological future). At this point, monitoring can cease, relevant tenements handed back to the regulator, and regulation of the carbon storage activity can cease. This will be the point where effective geological sequestration of carbon has occurred.[46]

With regard to monitoring, the approved Statement of Environmental Objectives[47], Santos proposes developing a Monitoring Reporting and Verification Plan (MPV) to be approved by the Department of Energy and Mining (DEM), noting that MRV plans "typically address" a number of requirements, and that the MRV should ensure:

[45] National Greenhouse and Energy Reporting (Measurement) Determination 2008, Subdivision 3.4.4.2— Fugitive emissions from the storage of greenhouse gases, https://www.legislation.gov.au/Details/F2020C00600

[46] Santos (March 2021) South Australia – Moomba Environmental Impact Report, Carbon Storage, p.21, https://sarigbasis.pir.sa.gov.au/WebtopEw/ws/samref/sarig1/image/DDD/PGER003212021.pdf

[47] Santos (March 2021) South Australia-Moomba, Statement of Environmental Objectives: Carbon Storage, https://sarigbasis.pir.sa.gov.au/WebtopEw/ws/samref/sarig1/image/DDD/PGER003222021.pdf

Compliance with regulatory requirements and / or international reporting requirements (in the absence of Australian or South Australian systems) for carbon storage accounting. [48]

The vague undertaking to comply with "regulatory and/ or international standards," and noting the absence of "Australian or South Australian systems" is very concerning, and in stark contrast to the Californian standards that, as noted above, require specific monitoring for a minimum of 100 years after injection ceases.

This exhaustive protocol covers every aspect and every stage of monitoring and reporting to ensure the permanence of CCS, down to how often wellheads and valves need to be inspected, the types of monitoring equipment, where they are placed, regular and detailed reporting and verification.[49] The coverage of the protocol is shown in Figure 2 below.

Figure 2: Figure 2: Californian CCS protocol certification, operation and closure process.

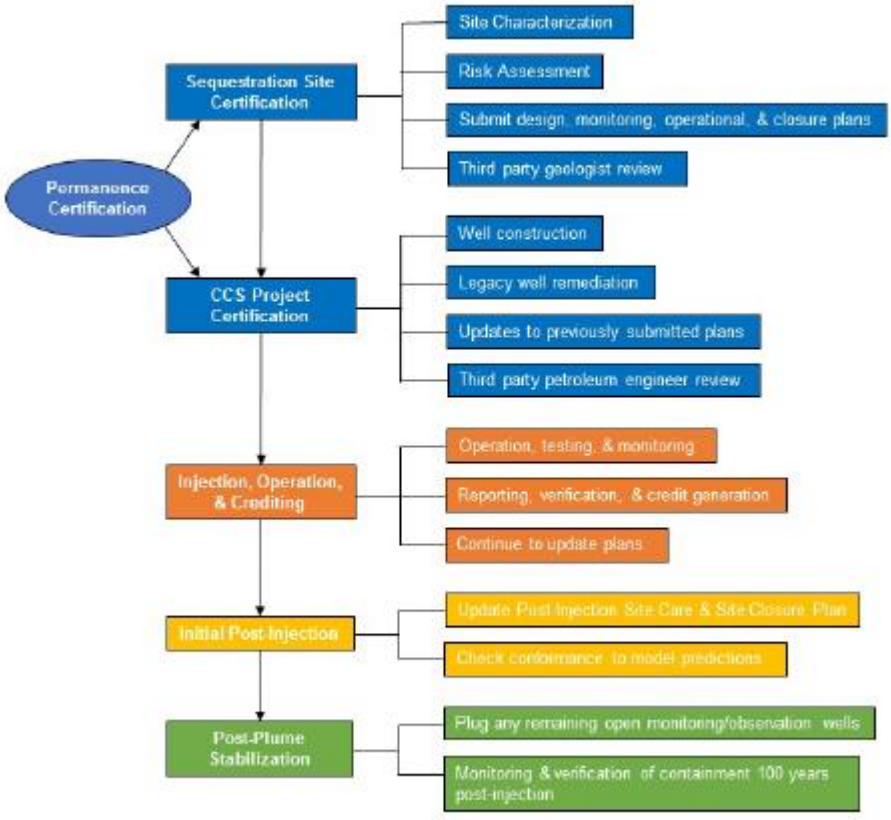


Figure 3. CCS Protocol certification, operation, and closure process.

[48] Santos (March 2021) South Australia-Moomba, Statement of Environmental Objectives: Carbon Storage, Table 1, p.6,https://sarigbasis.pir.sa.gov.au/WebtopEw/ws/samref/sarig1/image/DDD/PGER003222021.pdf

[49] California Air Resources Board (August 2018) Carbon Capture and Sequestration Protocol under the Low Carbon Fuel Standard, https://ww2.arb.ca.gov/sites/default/files/2020-03/CCS_Protocol_Under_LCFS_8-13-18_ada.pdf

Source: California Air Resources Board (August 2018) Carbon Capture and Sequestration Protocol under the Low Carbon Fuel Standard, P.31 https://ww2.arb.ca.gov/sites/default/files/2020-03/CCS_Protocol_Under_LCFS_8-13-18_ada.pdf

One specific area of concern is the risk of leakage from the thousands abandoned oil and gas wells in the depleted oil and gas fields such as the Cooper Basin that oil and gas companies are proposing as CCS storage sites. Abandoned wells provide pathways for CO_2 leakage, particularly as pressures increase with injection.

The Californian Government requires the CCS operator to identify and test all wells in the storage complex area and take corrective action with rigorous reporting.[50] Figure 3 below shows the process for evaluating wells for corrective action.

[50] California Air Resources Board (August 2018) Carbon Capture and Sequestration Protocol under the Low Carbon Fuel Standard, S.2.4.3 pp 59-64, https://ww2.arb.ca.gov/sites/default/files/2020-03/CCS_Protocol_Under_LCFS_8-13-18_ada.pdf

Figure 3: Well evaluation flow chart from Californian Air Resources Board CCS Protocol.

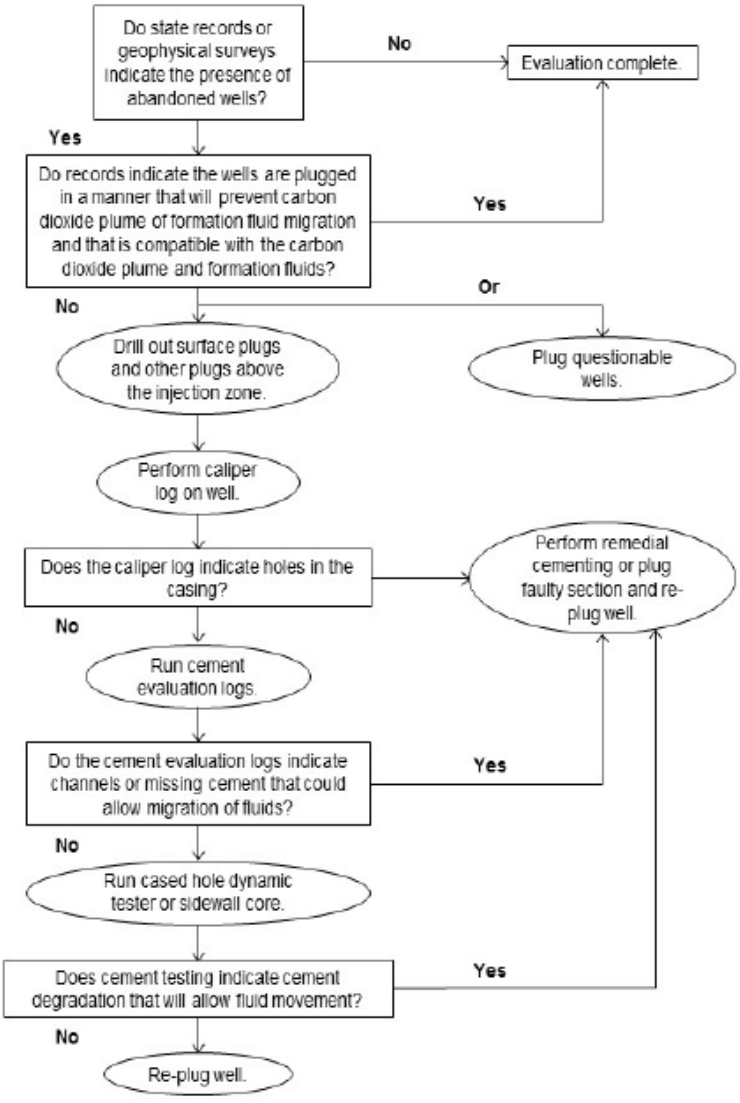


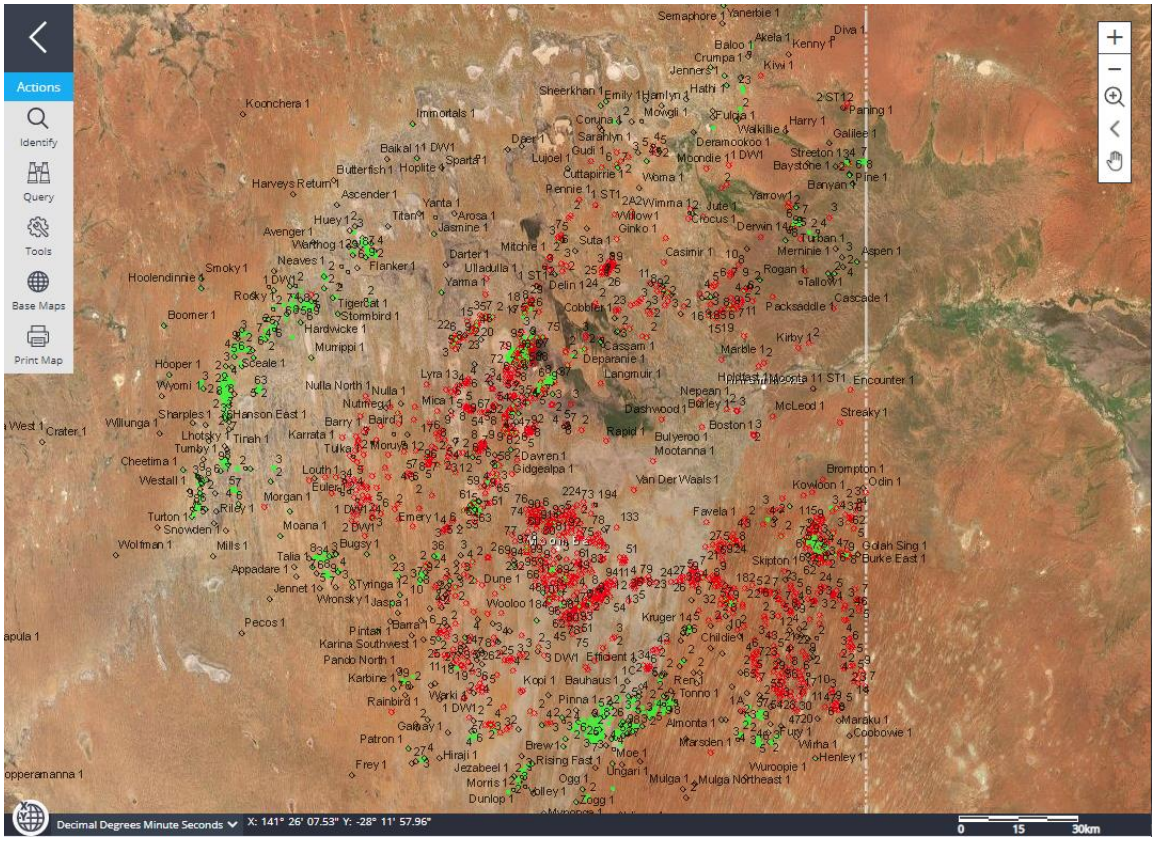
Figure 5. Well evaluation flow chart.

CCS Protocol – C: Permanence Requirements for Geologic Sequestration Page 61/139

Source: California Air Resources Board (August 2018) Carbon Capture and Sequestration Protocol under the Low Carbon Fuel Standard, p.61, https://ww2.arb.ca.gov/sites/default/files/2020-03/CCS_Protocol_Under_LCFS_8-13-18_ada.pdf

There are around 3,000 wells in the Cooper basin,[51] as visually represented in the geo-spatial map in Figure 3 below from the South Australian Government's Resources Information Gateway tool.[52]

Figure 4: Map of oil and gas wells in Copper Basin



Source: Government of South Australia (2021) South Australian Resources Information Gateway (SARIG), https://www.energymining.sa.gov.au/minerals/online_tools/free_data_delivery_and_publication_downloads/sarig

The concern around leakage from depleted wells is highlighted in the same IPCC CCS report cited in the 'Draft Simple Method Guide':

> … plugging of abandoned wells in many mature fields began many decades ago when wells were simply filled with a mud-laden fluid. Subsequently, cement plugs were required to be strategically placed within the wellbore, but not with any consideration that they may one day be relied upon to contain a reactive and potentially buoyant fluid such as CO_2. Therefore, the condition of wells penetrating the caprock must be assessed (Winter and Bergman, 1993). In many cases, even

[51] Government of South Australia (2021) PEPS SA, South Australia Data Exports, General Well Location and Details, https://peps.sa.gov.au/home

[52] Government of South Australia (2021) South Australian Resources Information Gateway (SARIG), https://www.energymining.sa.gov.au/minerals/online_tools/free_data_delivery_and_publication_downloads/sarig

> locating the wells may be difficult and caprock integrity may need to be confirmed by pressure and tracer monitoring[53]

Many of the Cooper Basin's abandoned wells are likely to be in states similar to those described by the IPCC, having been drilled and abandoned long before CO_2 storage was even considered, let alone leakage of greenhouse gas. Any of these wells could present a pathway for CO_2 leakage.

The resource industry's (including the oil and gas industry) record on remediation in Australia has been derelict to say the least. Examples include Woodside's recent announcement to dump a neglected and abandoned oil rig on the Ningaloo Reef in Western Australia, [54] and the Northern Endeavour scandal,[55] which forced the Government to levy the oil and gas industry to pay the clean-up costs of a floating oil and gas processing and storage ship in the Timor sea. Wood Mackenzie estimate the total cost of remediating the oil and gas wells and other infrastructure in Australia could be $76 billion to 2050, much of which will be borne by taxpayers.[56] There is no reason for confidence that the industry has or will in the future ensure proper decommissioning of wells over the oil and gas fields it proposes using for CCS.

Failure to assure proper monitoring of CCS will result in greater emissions which are a serious environmental impact.

Recommendations:

1. The method should explicitly require rigorous storage sites for a minimum of 100 years in line with Californian standards.

2. ACCUs should be deducted during the crediting period to cover these long-term monitoring costs in case the companies no longer exist over this period.

3. CCS projects should not proceed or be eligible for ERF funding until rigorous Australian or state regulations comparable to the Californian Protocol are in place.

4. The issue of potential leakage through abandoned wells should be thoroughly addressed.

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[53] IPCC (2005) *Carbon Dioxide Capture and Storage*, p.215, https://www.ipcc.ch/site/assets/uploads/2018/03/srccs_wholereport-1.pdf

[54] Slezak (July 2021) *Woodside's plans to convert old offshore oil facility into artificial reef could set precedent for industry*, https://www.abc.net.au/news/2021-07-23/woodside-plans-to-dump-part-of-oil-facility-near-ningaloo-reef/100314478

[55] Fitzgerald (April 2021) *Northern Endeavour oil platform clean-up could cost taxpayers $1 billion, senator says,* https://www.abc.net.au/news/2021-04-14/northern-endeavour-oil-vessel-could-cost-taxpayers-1-billion/100044914

[56] Milne (May 2020) *Australia's oil and gas industry will create a $76B clean-up bill*, https://www.boilingcold.com.au/australias-oil-and-gas-industry-will-create-a-76b-clean-up-bill/

Enhanced oil and gas recovery

The Australia Institute is pleased that projects that include enhanced oil recovery (EOR) and enhanced gas recovery (EGR) are excluded from this draft method.

One obstacle to including EOR/ EGR in the method was that there was no method for accounting for fugitive emissions under the NGER scheme. This obstacle is in the process of being removed by the recent proposed changes to NGERS[57] that could pave the way for changes to this method, or a new Carbon Capture Utilisation and Storage (CCUS) that allow EOR/ EGR, as suggested by the King Review.

The Australia Institute is also concerned that ACCU funding could cross-subsidise EOR/ EGR projects at the same site.

EOR is not a carbon abatement technology, it is a highly polluting and well established oil and gas industry method that has been utilised for more than 50 years for extracting oil and gas from depleted fields and has been rebranded as CCUS for greenwashing purposes. It can have retention rates of less than 30 per cent,[58] and can result in more emission, not less, when the emissions from burning the oil are taken into account.[59]

[57] Australian Government DISER (2021) *2021 National Greenhouse and Energy Reporting (NGER) Scheme Amendments,* https://consult.industry.gov.au/climate-change/2021-nger/

[58] Longden et al (March 2021) *'Clean' hydrogen? An analysis of the emissions and costs of fossil fuel based versus renewable electricity based*, https://iceds.anu.edu.au/files/2020%2003%2025%20-%20ZCEAP%20-%20CCEP%20Working%20Paper%20-%20Clean%20hydrogen%20emissions%20and%20costs_0_0.pdf

[59] Banks and Bigland-Pritchard (2015) *Saskpowers Carbon capture project, What risk? What reward?*, P.16 https://www.policyalternatives.ca/sites/default/files/uploads/publications/Saskatchewan%20Office/2015/02/Saskpowers_Carbon_Capture_Project.pdf

Conclusion

There are serious issues with the integrity of the development process of the CCS draft method which are reflected in the draft method itself. As such, this entire process and method is compromising the integrity of the Clean Energy Regulator as a statutory authority and will only seek to harm the reputation of ACCUs as high-quality offset units.

The ERAC has significant conflicts of interest, with the chair representing oil and gas proponents through CO2CRC, and the stakeholder engagement and workshops also appeared to be skewed towards oil and gas industry proponents.

The method cannot be said to be meeting a 'conservative' standard (as required by the Offsets Integrity Standards) when the risk of reversal buffer and monitoring requirements are scrutinised.

CCS for oil and gas projects only ever covers a small fraction of the overall emissions that result from the projects. Because CCS is used to justify the continuation and expansion of the oil and gas extraction, the net result will be increased emissions. This result is the contrary to the purpose or object of the fund, and will result in serious adverse environmental, social and economic impacts.

If ERF funding is made available for CCS projects, it will be a transfer of the costs of reducing emissions from the polluting companies to taxpayers. This is doubly inequitable for Australian taxpayers because these companies pay little if any tax in the first place.

This method should exclude oil and gas projects from eligibility for ACCUs, directing the resources to industries such as steel and cement that have a much stronger case for necessity and additionally.

The method development should be started from scratch, independent from oil and gas industry influence.