



August 16, 2021

California Air Resources Board
1001 I Street
Sacramento, CA 95814
Submitted via Online Comment Submittal Form¹

Re: Comments on the 2022 Scoping Plan Update – Engineered Carbon Removal Technical Workshop

The Center for Biological Diversity (the “Center”) appreciates the opportunity to comment on the California Air Resources Board’s (“CARB”) August 2, 2021 Engineered Carbon Removal Technical Workshop (hereinafter, “the workshop”). The Center was disappointed that the workshop primarily featured speakers who assumed carbon capture and storage (“CCS”) by the State of California is necessary to achieve carbon neutrality, and who asserted that CCS is safe and minimally disruptive to frontline communities. The Center vehemently disagrees with these assumptions.

As CARB “consider[s]” engineered carbon removal, it is essential that the agency take into account that according to the Intergovernmental Panel on Climate Change (“IPCC”), CCS is not necessary to achieve emissions reductions, nor is its effectiveness or safety proven. Moreover, the types of dirty energy CCS may prolong, and the infrastructure and energy required for CCS, will cause additional pollution in communities already suffering from unhealthy air and water quality.

We urge CARB to reevaluate its approach to CCS in its upcoming greenhouse gas emissions Scoping Plan update. CARB should focus on a rapid phase out of fossil fuels rather than seeking to entrench technologies that prolong the life of climate-damaging activities and harm frontline communities. In doing so, CARB must ensure meaningful community participation and input from the Environmental Justice Advisory Council (“EJAC”), who, as we understand, has been urging CARB throughout the Scoping Plan process to give greater weight to its recommendations.

I. Carbon Capture and Storage Is Not Necessary to Achieve Senate Bill 32 2030’s Target, and Instead Enables Dirty Energy

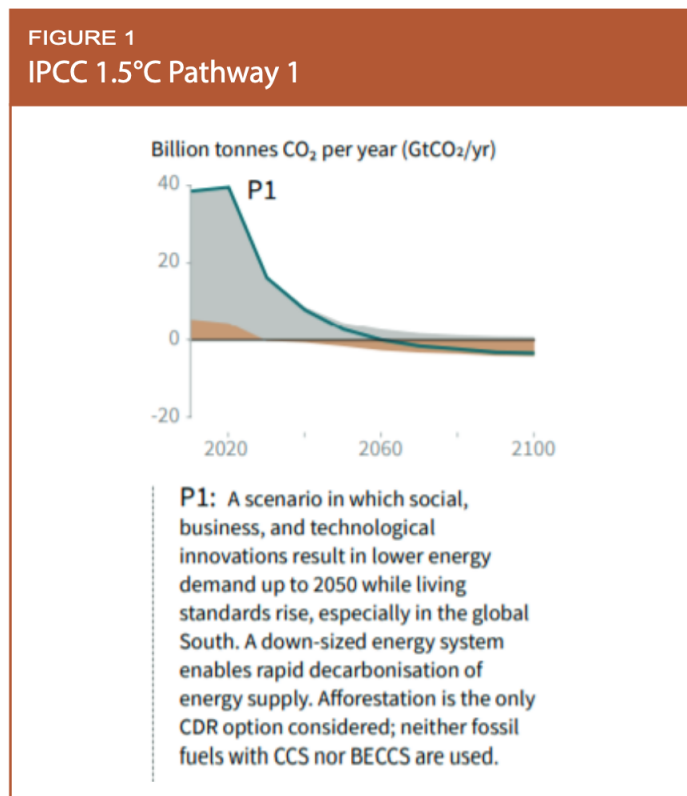
In order to meet Senate Bill 32’s (“SB32”) carbon neutrality target and avoid exacerbating the climate crisis, California must immediately eliminate fossil fuel extraction and use, as well as deforestation and biomass energy. CCS is a distraction from these necessary steps and instead helps prop up the dirty fossil fuel and biomass industries, leaving the State—and the climate crisis at large—in a dire state.

¹ CARB, [https://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=sp22-co2-removal-
ws&comm_period=1](https://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=sp22-co2-removal-ws&comm_period=1).

a) The Intergovernmental Panel on Climate Change (“IPCC”) sets forth a pathway to avoid climate catastrophe that does not involve CCS

Numerous times during the workshop, panelists asserted that CCS is necessary to avert climate catastrophe, or that there is “scientific consensus” that CCS is required as part of efforts to limit global warming. This is simply not true.

The IPCC-recommended pathway with the best chance of keeping warming at or below 1.5°C makes limited to no use of engineered carbon removal technologies.² Instead, this pathway requires a rapid phaseout of fossil fuels along with limited carbon dioxide removal (“CDR”) by natural sources such as reforestation and enhanced soil remediation. *See* Figure 1.³



Graphic Source: IPCC

² IPCC, Summary for Policymakers in IPCC, Global Warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (2018) [hereinafter IPCC SR1.5] at 14, Section C.1.1., Figure SPM 3b (Pathway 1); *see also* IPCC SR1.5, at Ch. 2.3.3 and Table 2.SM.12.

³ *Id.*; *see also* Center for International Environmental Law, “Confronting the Myth of Carbon Free Fossil Fuels” at 2 <https://www.ciel.org/wp-content/uploads/2021/07/Confronting-the-Myth-of-Carbon-Free-Fossil-Fuels.pdf> (“CIEL CCS Report”).

CARB must recognize that there are options to achieve SB32 that do not depend on CCS. The 2022 Scoping Plan must take the IPCC’s recommendation into account and focus on phasing out fossil fuels and natural carbon sinks rather than CCS.

- b) Reliance on CCS is likely to prolong the use of fossil fuels and dirty energy sources such as biomass*

California needs to rapidly end its permitting, incentivizing, and use of fossil fuels and other dirty energy sources such as woody biomass. Contrary to these goals, CCS is likely to extend the life of fossil fuels and biomass, both of which add large amounts of dangerous pollution to the environment and communities. Moreover, tacking CCS onto these dying industries is economically unsound, meaning that the public will pay for health-harming pollution.

The fossil fuel industry is enthusiastic about CCS as a strategy to maintain business as usual because by design, CCS enables an underlying emissions-generating activity to continue. Yet fossil fuel activities release large amounts of GHGs and harmful pollutants throughout their lifecycle, from extraction, refining, transport, use, and disposal.⁴ CCS does nothing to eliminate this pollution, much of which falls on overburdened communities.

One Stanford study confirmed that the lifecycle pollution and social harms from fossil fuels plus CCS result in more harm done than good. The study examined the net CO₂ reduction and total lifecycle cost of carbon capture from a coal plus CCS power plant, and a plant that removes carbon directly from the air.⁵ The study “account[ed] for the electricity needed to run the carbon capture equipment, the combustion and upstream emissions resulting from that electricity, and, in the case of the coal plant, its upstream emissions,” with the upstream component including leaks and combustion, mining, and fuel transportation. The study found that CCS “reduces only a small fraction of carbon emissions, and it usually increases air pollution.”⁶ Because of the lifecycle pollution and the harms arising from that, the study recommended replacing fossil fuels with renewables such as wind or solar, rather than encouraging and investing in CCS.⁷

Critically, more than 80% of all CCS capacity deployed is accompanied by enhanced oil recovery (“EOR”), meaning “CO₂ waste products from a fossil fuel-burning activity are used to generate more fossil fuels.”⁸ The promotion and enabling of CCS thus helps perpetuate the fossil fuel era, thereby negating any possible climate benefits from carbon capture. This is entirely the wrong direction for California.

⁴ CIEL CCS Report at 7 (citing, for example, a Harvard study finding that fine particulate matter emitted with fossil fuel burning is responsible for millions of deaths worldwide).

⁵ Taylor Kubota, “Stanford Study casts Doubt on Carbon Capture,” Stanford News (Oct. 25, 2019), <https://news.stanford.edu/2019/10/25/study-casts-doubt-carbon-capture/>, citing Mark Z. Jacobson, *The health and climate impacts of carbon capture and direct air capture*, 12 Energy Env’t. Sci. (Aug. 24, 2019), <https://pubs.rsc.org/en/content/articlelanding/2019/ee/c9ee02709b/unauth#!divAbstract> (“Stanford Report Summary”).

⁶ *Id.*

⁷ *Id.* (“There is a lot of reliance on carbon capture in theoretical modeling, and by focusing on that as even a possibility, that diverts resources away from real solutions. It gives people hope that you can keep fossil fuel power plants alive. It delays action. In fact, carbon capture and direct air capture are always opportunity costs.”).

⁸ CIEL CCS Report at 8.

Another dirty and GHG emissions-intensive industry that stands to benefit from growing acceptance and incentivization of CCS is woody biomass power. Electricity made from woody biomass is more climate polluting out of the smokestack than coal-fired power, and should be on the decline, much like fossil fuels.⁹ See Chart 1 below.¹⁰ Moreover, biomass power generation emits large amounts of harmful air pollutants, and in California, the majority of biomass plants are in communities suffering from harmful cumulative impacts of pollution.¹¹ In other words, biomass plants should be shutting down in order to protect public health and the environment, not encouraged to stay online through bioenergy with carbon capture and storage (or “BECCS”).

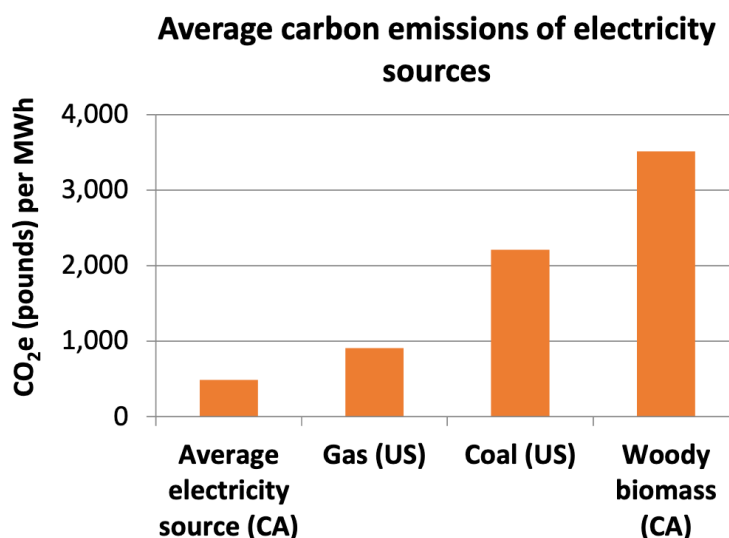


Chart 1: Woody biomass energy generation in California emits more than one-and-a-half times the carbon pollution of coal-fired power per unit of electricity—and almost four times the carbon pollution of gas-generated power.

Despite these harms, the lure of BECCS is leading to the reopening of idle biomass plants in environmental justice communities. In March 2021, the companies Clean Energy Systems, Chevron, and others announced that they would purchase the idle Covanta Mendota biomass powerplant and bring it back online to burn biomass and capture the carbon while likely using the captured carbon to extract fossil fuels through EOR.¹² This runs directly counter to what the

⁹ Searchinger, Timothy D. et al., *Europe’s renewable energy directive poised to harm global forests*, 9 Nature Comms. 3741 (2018); Sterman, John D. et al., *Does replacing coal with wood lower CO₂ emissions? Dynamic lifecycle analysis of wood bioenergy*, 13 Env’tl. Research Letters 015007 (2018).

¹⁰ Center for Biological Diversity, *Forest Bioenergy Briefing Book* at 4 (March 2021), https://www.biologicaldiversity.org/campaigns/debunking_the_biomass_myth/pdfs/Forest-Bioenergy-Briefing-Book-March-2021.pdf.

¹¹ *Id.* at 8-9.

¹² See “Schlumberger New Energy, Chevron, and Microsoft Collaborate on Carbon Negative Bioenergy” (March 4, 2021), <https://www.cleaneenergysystems.com/schlumberger-new-energy-chevron-and-microsoft-collaborate-on-carbon-negative-bioenergy>.

State is seeking to achieve through SB32 and other climate initiatives, and further promotion of BECCS and other forms of CCS could attract similar kinds of climate- and health-damaging projects.

Instead of wasting taxpayer dollars on risky and dangerous CCS, in order to decarbonize electricity and heavy industry, CARB should instead do everything to help shift the State to renewable sources like wind and solar, which one report agrees is “the surest, most direct, and likely most cost-effective pathway to significant emission reductions.”¹³

c) CCS has failed to live up to its promises

Reality has shown that powerplants with carbon capture have had drastically failed to meet their CO₂ capture targets. CARB and the public should not be endorsing and supporting a strategy that is unproven and could entrench the State in a false solution, rather than making real progress through investments in genuinely clean and renewable technologies, such as wind and solar.

A Stanford study calculated the lifecycle emissions associated with CCS projects used with energy production from fossil fuels and found that “the equipment captured the equivalent of only 10-11 percent of the emissions they produced, averaged over 20 years.”¹⁴ This research also considered the social cost of carbon capture—in other words, the resulting air pollution, potential health problems, economic costs and overall contributions to climate change—and concluded that these costs are similar to or higher than a fossil fuel plant *without* carbon capture, meaning “it is always better to use the renewable electricity instead to replace coal or natural gas electricity or to do nothing.”¹⁵

Even when the lifecycle of a project is not taken into account, real-world CCS projects are repeatedly failing their carbon capture promises. July 2021, Chevron, operator of Australia’s only commercial-scale CCS project, admitted that its self-described “world’s biggest CCS project” failed to meet its five-year capture target of 80% CO₂, and is now seeking a deal with regulators on how to make up for millions of tons of CO₂ it failed to store.¹⁶ Estimates are that the Liquefied Natural Gas facility captured only 30% of its CO₂ emissions.¹⁷ In the US, the Petra Nova coal-fired powerplant in Texas achieved only a 50% CO₂ capture rate, when the fossil fuels needed to capture and store the carbon were taken into account.¹⁸

¹³ See Int’l Aluminium Inst., Aluminum Sector Greenhouse Gas Pathways to 2050 at 10 & Figure 10 (Mar. 2021), https://www.world-aluminium.org/media/filer_public/2021/03/16/iai_ghg_pathways_position_paper.pdf.

¹⁴ Stanford Report Summary.

¹⁵ *Id.* (noting that the social cost of coal with carbon capture powered by natural gas was about 24 percent higher, over 20 years, than the coal without carbon capture, and only when wind replaced the fossil fuel did the social cost decrease).

¹⁶ IEEFA, “Chevron admits failure of \$3 billion CCS facility in Western Australia” (July 19, 2021), <https://ieefa.org/chevron-admits-failure-of-3-billion-ccs-facility-in-western-australia/>.

¹⁷ Adam Morton, “‘A shocking failure’: Chevron criticised for missing carbon capture target at WA gas project,” *The Guardian* (July 19, 2021), <https://www.theguardian.com/environment/2021/jul/20/a-shocking-failure-chevron-criticised-for-missing-carbon-capture-target-at-wa-gas-project>.

¹⁸ IEEFA, “Reality of carbon capture not even close to proponents’ wishful thinking” (Aug. 8, 2019), <https://ieefa.org/reality-of-carbon-capture-not-even-close-to-proponents-wishful-thinking/>.

d) CCS requires large amounts of energy, leading to further climate and energy demand impacts

As the Institute for Energy Economics and Financial Analysis (“IEEFA”) notes, the energy required to capture, transport, and inject carbon underground “materially reduces its net benefit.”¹⁹ For example, coal-fired power plants with carbon capture have an energy penalty of 25% or more, with the efficiency penalty as high as 15%.²⁰ These “penalties” mean more fuel has to be burned to produce the same amount of power, which means higher energy costs, greater emissions of non-CO₂ air pollutants, and increased demand on the grid.²¹

CARB must take these additional energy demands into account when considering CCS, especially given the grid demands in recent years that have led to blackouts.²² For example, CARB should require a full lifecycle analysis of GHG emission output—taking into account the energy used to capture, store, and transport the carbon, as well as the emissions of the project itself—and refuse to green-light any project that produces a net GHG output.

Moreover, CCS with energy production is likely to increase the cost of energy to Californians. A recent study concluded that for a new-build gas-fired plant, CCS could increase the cost of energy produced by up to 61 percent.²³ Instead of encouraging and incentivizing CCS and, by extension, more expensive energy, CARB should instead do everything it can to accelerate the transition to truly renewable and clean energy sources such as solar and wind.

II. CCS Creates Environmental, Public Health, and Safety Risks

CARB’s workshop failed to adequately inform decisionmakers and the public about the wide array and serious nature of environmental, public health, and safety risks CCS poses. This failure was especially egregious because in California as is the case elsewhere, it is those communities that have already suffered the worst impacts of fossil fuel and heavy industry pollution and environmental racism that will likely face the biggest risks from CCS. We urge CARB to consider these risks, along with the regulatory shortfalls, when preparing its Scoping Plan, and to reject CCS proposals that endanger communities and the environment.

¹⁹ IEEFA, Carbon Capture and Storage Is About Reputation, Not Economics at 4 (2020), https://ieefa.org/wp-content/uploads/2020/07/CCS-Is-About-Reputation-Not-Economics_July-2020.pdf.

²⁰ CAN Position: Carbon Capture, Storage, and Utilization, Climate Action Network Int’l at 9 (2021), <https://climatenetwork.org/resource/can-position-carbon-capture-storage-and-utilisation/>.

²¹ *Id.*

²² Alicia Victoria Lozano, “California warned to brace for another summer of energy blackouts,” NBC News (May 27, 2021), <https://www.nbcnews.com/news/us-news/california-warned-brace-another-summer-energy-blackouts-n1268879>.

²³ P. Psarras et al., *Cost analysis of carbon capture and sequestration from U.S. natural gas fired power plants*, 54 *Envtl. Sci. Tech.* 6272, 6274 (2020), https://users.wpi.edu/~jilwilcox/documents/Part%201_NG.pdf.

a) The risks and harms of transporting and storing CO₂ will be borne by already overburdened communities, which is unacceptable

The Central Valley has long been touted as an area ripe for storage of captured CO₂.²⁴ Having already suffered the harms of environmental racism resulting from the fossil fuel industry and large-scale agriculture, it would be unconscionable to then relegate the safety hazards and environmental risks of CO₂ storage to these Central Valley communities.

One such health and safety risk arises from transporting CO₂ via pipelines. CO₂ leaks from pipelines pose a potential hazard for people and other animals, as “CO₂ is denser than air and can therefore accumulate to potentially dangerous concentrations in low lying areas,” and “any leak transfers CO₂ to the atmosphere.”²⁵ These risks became reality in February 2020, when a CO₂ pipeline ruptured in Yazoo County, Mississippi, requiring the evacuation of hundreds and hospitalization of dozens,²⁶ with harms including extreme disorientation, unconsciousness, and seizures.²⁷ CARB’s workshop featured a speaker who proposed CO₂ pipelines near communities in the Central Valley and Bay Area without acknowledging the hazards CO₂.²⁸

CARB must also *genuinely* consult with and consider the concerns, perspectives, and preferences of environmental justice communities. For example, while the workshop provided time for members of the State’s Environmental Justice Advisory Council (“EJAC”) to speak before public comment, one speaker aptly observed that the workshop treated CCS deployment as a foregone conclusion, thereby calling into question CARB’s consultation process with environmental justice groups. CARB must do better in developing its Scoping Plan than it did with the workshop. CARB must also consider that the White House Environmental Justice Advisory Council (“WHEJAC”) called CCS projects a “type[] of project that will not benefit a community,” noting in the report that “it would be unreasonable to have any climate investment working against historically harmed communities.”²⁹

²⁴ See, e.g., California Energy Commission, “California Energy Commission’s R&D Activities in CCS for California” at 6 (Feb. 12, 2016), https://www.arb.ca.gov/cc/ccs/meetings/cec_presentation_2-12-16.pdf.

²⁵ IPCC, Special Report on Carbon Dioxide Capture and Storage, Chapter 4: Transport of CO₂ (2005), at 188 (noting that CCS “‘will require a large network of pipelines.’”).

²⁶ “Pipeline Ruptures in Yazoo County, Dozens Rushed to the Hospital,” Miss. Emergency Mgmt. Agency (Feb. 23, 2020), <https://www.msema.org/news/pipe-ruptures-in-yazoo-county-dozens-hospitalized/>.

²⁷ “‘Foaming at the mouth’: First responders describe scene after pipeline rupture, gas leak,” Clarion Ledger (Feb. 27, 2020), <https://www.clarionledger.com/story/news/local/2020/02/27/yazoo-county-pipe-rupture-co-2-gas-leak-first-responders-rescues/4871726002/>.

²⁸ See Stanford Center for Carbon Storage, “An Action Plan for Carbon Capture and Storage in California: Opportunities, Challenges, and Solutions” at 18 (Oct. 22, 2020) (featuring slides used during the workshop to suggest CO₂ pipelines and geologic storage in the Bay Area and Central Valley), <https://static1.squarespace.com/static/58ec123cb3db2bd94e057628/t/5f9739146a54d17debd6808f/1603746076400/EFI-Stanford-CA-CCS-Slides-ForWeb-10.26.20vF.pdf>.

²⁹ WHEJAC, Interim Final Recommendations at 55, 58 (May 13, 2021), https://www.epa.gov/sites/default/files/2021-05/documents/whejac_interim_final_recommendations_0.pdf (emphasis original).

b) State and federal law do not require, or hold industry accountable for, permanent storage of CO₂

The “permanence” requirements under California and federal law are inadequate to ensure that CCS projects aren’t just kicking the climate problem down the road and onto future generations. Under EPA’s regulations for Class VI injection wells for CO₂, for example, a permit applicant need only show that they can store CO₂ for 50 years in order to qualify for subsidies.³⁰ California’s Low Carbon Fuel Standards doesn’t fare much better, requiring only 100 years of storage.³¹ These decades-long time requirements are simply inadequate to be considered part of a real climate solution.

During the workshop, several presenters asserted that the regulations governing CCS are rigorous and protective. As the example above shows, clearly the existing regulations at the federal and state levels do not rise to the challenge of ensuring a long-term climate solution. CARB’s Scoping Plan must examine the permanence requirements and their implications for the State’s long-term climate goals in detail, and not accept CCS as part of the State’s climate strategy given regulatory deficiencies such as these permanence definitions.

c) Leakage of stored CO₂ is likely and could set back climate goals

Even though speakers in the workshop laid out criteria for selecting underground storage locations in California that would reduce the risk of CO₂ leakage, history has shown that GHG leaks can happen even with permitting and planning, and on devastating scales. The 2015-16 Aliso Canyon natural gas blowout released over 97,000 metric tons of methane, effectively doubling the Los Angeles basin’s methane emission rate.³² Such single-point failures can set back progress on emissions reductions, and simply aren’t worth the risk. Researchers estimate that a minor leakage of stored CO₂ could reduce the benefit of CCS by up to 35%.³³ The IPCC also called out the “non-negligible risk of carbon dioxide leakage from geological storage and the carbon dioxide transport infrastructure” when recommending an emissions-reduction pathway that doesn’t require CCS.³⁴

CARB must also note that industry has a terrible track record of capping and monitoring abandoned gas wells, which has led to mass amounts of underreported methane leakage.³⁵ CARB must consider and weigh the inevitable risk that stored CO₂ will escape to the atmosphere through abandoned oil and gas wells, especially given the woefully inadequate State and federal

³⁰ 40 CFR § 146.93.

³¹ CARB, Accounting and Permanence Protocol for Carbon Capture and Geologic Sequestration under Low Carbon Fuel Standard (Aug. 13, 2018), https://ww2.arb.ca.gov/sites/default/files/2020-03/CCS_Protocol_Under_LCFS_8-13-18_ada.pdf (“‘Permanent sequestration’ or ‘permanence’ means the state where sequestered CO₂ will remain within the sequestration zone for at least 100 years.”).

³² Conley, S. et al., *Methane emissions from the 2015 Aliso Canyon blowout in Los Angeles, CA*, Science (March 18, 2016), <https://science.sciencemag.org/content/351/6279/1317>.

³³ Frontiers in Energy Research, Bearing the Cost of Stored Carbon Leakage (May 15, 2018), <https://www.frontiersin.org/articles/10.3389/fenrg.2018.00040/full>.

³⁴ IPCC SR1.5, Ch. 5, Section 5.4.1.2.

³⁵ IEEFA, “Carbon Capture and Storage Is About Reputation, Not Economics” at 5 (2020), https://ieefa.org/wp-content/uploads/2020/07/CCS-Is-About-Reputation-Not-Economics_July-2020.pdf.

definitions of permanent CO₂ sequestration and storage. In addition, the injection of CO₂ carries the substantial risk of triggering earthquakes that can result in the leakage of the stored CO₂.³⁶

d) Building out CCS infrastructure will harm the environment

CARB's workshop did not give any airtime to the likely harms to air and water quality, biodiversity, and other environmental values due to the infrastructure build-out required by CCS. The likely negative impacts to the environment are not worth the spurious promises posed by CCS.

One fact that CARB must account for is the amount of infrastructure required for CCS will be massive. One study estimates that to scale, the CCS build-out—including the pipelines and infrastructure required to capture, compress, transport, and store CO₂—will need to be 2 to 4 times larger than the current global oil industry.³⁷ And while the workshop noted areas in California that are suitable for underground CO₂ storage, very little was made of the pipelines that would need to be built to achieve this storage,³⁸ and the environmental impacts of constructing and operating those pipelines.

III. There Is Widespread and Growing Recognition that CCS Is a False Solution

The widespread and growing recognition that CCS is a false solution—from community groups, analysts, environmental groups, and more—should alert CARB that it ought not to take CCS deployment as a necessary component of the State's emissions reduction goals.

As examples of the groundswell of opposition to CCS:

- In January 2021, the 1,500 member-organizations of Climate Action Network (CAN) International adopted a shared position statement stating that the members “do[] not consider currently envisioned CCS applications as proven sustainable climate solutions.”³⁹ The organizations warned that CCS “risks distracting from the need to take concerted action across multiple sectors in the near-term to dramatically reduce emissions.”⁴⁰ Accordingly, CAN urged that “[a]ll government subsidies, loans, grants, tax credit, incentives, and financial support for fossil fuels and technologies that use or otherwise support the continued use of fossil fuels, including CCS, should be phased out as soon as possible.”⁴¹

³⁶ Zoback, Mark D. and Steven M. Gorelick, *Earthquake triggering and large-scale geologic storage of carbon dioxide*, 109 PNAS 10164 (2012); Gan, Wei and Cliff Frohlich, *Gas injection may have triggered earthquakes in the Cogdell oil field, Texas*, 110 PNAS 18786 (2013).

³⁷ N. Mac Dowell et al., *The role of CO₂ capture and utilization in mitigating climate change*, 7 Nature Climate Change 243 (2017), <https://www.nature.com/articles/nclimate3231>.

³⁸ IPCC, Special Report on Carbon Dioxide Capture and Storage, Chapter 4: Transport of CO₂ (2005), at 181 (noting that CCS ““will require a large network of pipelines.”).

³⁹ CAN Position: Carbon Capture, Storage, and Utilization, Climate Action Network Int'l at 6 (2021), <https://climatenetwork.org/resource/can-position-carbon-capture-storage-and-utilisation/>.

⁴⁰ *Id.*

⁴¹ *Id.*

- In July 2021, over 500 international, U.S., and Canadian organizations sent an open letter to lawmakers calling on them to reject CCS.⁴² The letter referred to CCS as a “dangerous distraction” that “delays the needed transition away from fossil fuels and other combustible energy sources, and poses significant new environmental, health, and safety risks, particularly to Black, Brown, and Indigenous communities already overburdened by industrial pollution, dispossession, and the impacts of climate change.”⁴³

IV. Conclusion

This is a critical moment in history for the State of California and CARB to pave the way for genuine, lasting, and equitable emissions reductions in order to avert the worst impacts of the climate crisis. Accordingly, the State has no time to waste on unproven and dangerous false climate solutions such as CCS. In its Scoping Plan and in future activities, CARB must reject CCS as a way to achieve SB32 goals, and recognize that CCS stands to harm public health and the environment, especially in already overburdened communities.

Please reach out if you have any questions. Please also find a list of references at the end of this letter, along with the full text of references in a combined PDF attached to this comment for your consideration.

Respectfully,



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⁴² Center for International Environmental Law, “Carbon capture is not a climate solution” (July 19, 2021), https://www.ciel.org/wp-content/uploads/2021/07/CCS-Letter_FINAL_US-1.pdf.

⁴³ Center for International Environmental Law, “Carbon capture is not a climate solution” at 1 (July 19, 2021), https://www.ciel.org/wp-content/uploads/2021/07/CCS-Letter_FINAL_US-1.pdf.

LIST OF REFERENCES

Full text of references have been submitted in a combined PDF along with this comment

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