



Iowa Chapter  
Physicians for Social Responsibility

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May we please have your attention...

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## ACTION ALERT

Comments needed to the California Air Resources Board

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We interrupt our regularly scheduled report to bring you late-breaking news straight out of California. In our [previous report](#), we promised readers an upcoming report about the opportunity costs of carbon capture. That report is still forthcoming but paused due to **an urgent timeframe for this action alert**. Please carve out time in your busy schedules to post a comment on the California Air Resources Board (CARB) public comment page to urge CARB to eliminate the use of carbon capture in any of their climate policies.

The **deadline for comments is June 23, 2022**. Time is of the essence. See the end of this note for instructions on how to submit a comment. We offer this report on California's role in the broader carbon capture debate to help formulate your comments.

### Why should California matter to non-Californians?

California is the most populous state in the US, has the largest economy in the US and, if it were a country, it would be the **fifth-largest economy** in the world. California has the most **electoral votes** (55) and the largest number of **members** in the US House of Representatives (53). This contributes to California's role in **shaping** federal policy and California has historically been seen as a leader on environmental concerns. California is in the process of updating its climate policies, which have the potential to influence carbon capture policy at the Federal level and beyond.

### California's Influence on Carbon Capture Policy

In 2006, Governor Arnold Schwarzenegger signed the Global Warming Solutions Act, or AB 32, into California State Law. AB 32 was an ambitious bill for the time, intended to address global warming by establishing a program to reduce greenhouse

gas (GHG) emissions from all sources throughout the state to 1990 levels by 2020. With the passage of AB 32, California became one of the first states in the US to move forward with a regulatory plan to address climate change. This report explores AB 32's impact on evolving carbon capture policy and provides information on action steps in response.

### **CARB and the Scoping Plan**

The California Air Resources Board (CARB) falls under the umbrella of the California Environmental Protection Agency. CARB **came about** as a merger of the Bureau of Air Sanitation and the California Motor Vehicle Pollution Control Board in 1967, a result of efforts to address the critical problem of air pollution in the state under Governor Ronald Reagan. With AB 32, CARB became responsible for monitoring and reducing GHG emissions that cause climate change. AB 32 required CARB to develop a Scoping Plan that explained the methods California would use to accomplish the goal of reducing emissions to 1990 levels by 2020. CARB approved the first The Scoping Plan in 2008 with updates required for at least every five years. Since 2008, there have been two updates to the Scoping Plan, in 2014 and 2017. Each Scoping Plan has included a set of policies to help California reach its GHG targets. CARB designed a range of programs intended to monitor and reduce GHG emissions, including the Low Carbon Fuel Standard (LCFS).

### **LCFS**

The LCFS is a program intended to incentivize the use of low-carbon transportation fuels based on the fuel's lifecycle GHG emissions per unit of energy—or carbon intensity (CI) as rated by CARB. The regulation initially laid out annually declining CI benchmarks for the average transportation fuel mix from 2011 through 2020. In September 2018, CARB adopted regulatory amendments to extend the LCFS for an additional ten years with a 20% CI target reduction from 2010 levels by 2030. Included in the 2018 amendments was the **Carbon Capture and Sequestration Protocol under the Low Carbon Fuel Standard** formally recognizing carbon capture as an acceptable strategy to reduce emissions from transportation fuels. This created **further incentive** (in addition to the 45Q tax credit) for the ethanol industry to utilize CCS in ethanol production. Not only does the LCFS recognize CCS as a viable way to reduce emissions, but it also allows for the captured CO<sub>2</sub> to be used in Enhanced Oil Recovery (EOR), otherwise known as CCUS (Carbon Capture *Utilization* and Sequestration).

### **Ethanol**

Ethanol is the **largest** by volume of California's "renewable" fuels. In 2020, California's **ethanol consumption** in the transportation sector was 28,988 Thousand barrels, second only to Texas at 30,974 Thousand barrels. For contrast, Florida's ethanol consumption in 2020 was 19,164 thousand barrels. As we have discussed in a previous **report**, a recent peer-reviewed **study** found that as a result of the Renewable Fuel Standard (RFS) mandate (the federal policy that incentivizes ethanol production), corn cultivation increased by 8.7% and expanded to 6.9 million additional acres of land between 2008 and 2016. The RFS has contributed to changes in tilling and the increased application of nitrogen-based fertilizers. This enormous escalation in nitrogen fertilizer use has increased nitrous oxide (N<sub>2</sub>O) emissions and **sacrificed** water quality. Ultimately, the study concluded that ethanol is at least 24% more carbon-intensive than gasoline.

Other concerns about ethanol as a “renewable” fuel include that the ethanol in California is chiefly **imported** from Midwest states. Ethanol fuel cannot be transported via pipeline, so it is transported **by truck or rail** and cannot be blended with gasoline until the end-market locations. Moreover, certain percentages (10 and 15) of ethanol in gasoline can increase evaporative emissions and permeation, resulting in increased air quality concerns. When ethanol is exposed to warmer temperatures, it evaporates faster and releases organic compounds that contribute to the formation of ground-level ozone. This is the reason that the EPA, until **recently**, had banned the summer sale of E-15 gasoline (gas blended with 15% ethanol).

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Los Angeles Freeway Traffic.

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## The Scoping Plan Update

CARB is developing a Scoping Plan Update to be released in 2022. The update will assess the state’s progress toward its 2030 greenhouse gas reduction target of 40 percent and include strategies and policies to support its 2045 carbon neutrality goal. A copy of the Scoping Plan Update is available [here](#). The notice of the public meeting to consider the scoping plan is available [here](#).

Pages 66-73 and 172–178 of the Scoping Plan Update discuss carbon capture and its role in the plan. The 2022 Scoping Plan includes CCS/CCUS in more than the LCFS Protocol from 2018. CCS/CCUS and Direct Air Capture (DAC) are stated as being “necessary tools for climate change mitigation.” (p. 21). The plan states that Blue hydrogen (steam methane reformation paired with CCS) “could potentially be zero carbon.” (p. 69). As we discussed in a previous [report](#), this is simply not accurate. The plan also states that Blue hydrogen can be used to transition to Green hydrogen (p. 69), which was also discussed in our previous report on hydrogen.

The policy of allowing the captured CO<sub>2</sub> to be used in EOR is counter-intuitive to efforts to reduce emissions. We should be immediately transitioning away from the use of fossil fuels. EOR is simply another way of “drilling” for more oil. Even more so, by including CCS/CCUS and DAC

in the Scoping Plan, CARB legitimizes carbon capture. As discussed in earlier reports, CCS/CCUS is an expensive and unproven **false solution** with numerous **public health risks** that is aggressively marketed by the fossil fuel industry. Refineries, power plants, and other industrial processes have been **historically located** in and disproportionately imperil disenfranchised communities. Adding carbon capture to an existing fossil fuel or industrial site, functions to extend the lifespan of that facility, thereby compounding the public health threats to those communities.

In an **interview** with the Associated Press, Jared Blumenfeld, secretary of the California Environmental Protection Agency, was quoted as saying:

**“When final, this [Scoping] plan will serve as a model for other industrial economies around the world.”**

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## How to Submit a Public Comment

The public is allowed to make comments on the scoping plan until June 24, 2022, by 12:00 a.m. Midnight. Submit comments **here** and view comments **here**. The comment form is straightforward and easy to use and allows the uploading of an attachment. If you have more than one file to upload, they ask that you put all the attachments in a .ZIP file and send it that way.

Here are a few suggestions for points you might want to make. Put your message in your own words.

Urge the California Air Resources Board to:

- Re-evaluate their designation of ethanol as a renewable fuel; provide an attachment of a pdf file of this **peer-reviewed study**.
- Re-evaluate their determination that Blue hydrogen is a pathway to decarbonization; provide a pdf file of this **peer-reviewed study** or a pdf file of this **report**.
- Eliminate CCS and Direct Air Capture as strategies to reduce emissions; provide an attachment of a pdf file of the **press release** from **Deep South Center for Environmental Justice** announcing the City of New Orleans’ prohibition of CCS/CCUS projects in the City of New Orleans. A copy of the Resolution is available **here**. (The resolution is also linked in the press release.)
- Eliminate CCS and Direct Air Capture as strategies to reduce emission; provide an attachment of a pdf file of this **peer-reviewed study** demonstrating that the US can meet its energy needs by 2050 using only wind, water, and solar. The study’s models do not use fossil fuels, CCS/CCUS, DAC, or blue hydrogen.

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## Dear Reader

In our next installment, we discuss the opportunity costs of pursuing carbon capture and sequestration.

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