

Our Zero Waste Future Incorporated
HB [0155](#) / SB [0834](#)
Position: Against

My name is Dante Swinton and I am the executive director of our Our Zero Waste Future. We stand vehemently against SB 0834 / HB 0155. The state should spend absolutely no taxpayer dollars on the creation or facilitation of carbon capture projects. Carbon capture is merely a distraction from the actual policy needed to fight climate change, which should focus on the cancellation of any new fossil fuel projects, and the winding down of existing fossil fuel projects as we transition to a renewable energy economy.

Carbon capture technology requires additional power to run the carbon capture and storage (CCS) equipment, which could be achieved in a couple of ways, including

1. Producing more power from the plant in question to run the carbon capture equipment
2. Building a new power plant to power the carbon capture equipment

With the former, additional power from the power plant in question means additional co-pollutants emitted, such as sulfur dioxide, nitrogen oxides, and particulate matter - pollutants that are not the focus of the capture equipment. With the latter, the new power plant is typically a natural gas plant. The emissions from this plant are not captured, which means more carbon dioxide emissions and additional co-pollutants, fugitive methane emissions, and additional upstream methane emissions from natural gas production. More pollution means more long-term impacts on communities, especially low-income communities and communities of color. Carbon capture equipment could be run by renewables like solar and wind, but it would make more sense to use that solar and wind capacity as a replacement to the fossil fuel power plant itself¹.

If the plant with the capture equipment is the one supplying the power, anywhere from **13-44% additional power will be required**, known as an “energy penalty².”

Proponents of carbon capture claim that the CCS equipment can capture up to 95% of the carbon emitted from the target plant. However, projects across North America and beyond have fallen well short of this goal³.

¹ Stanford University. The health and climate impacts of carbon capture and direct air capture. <https://web.stanford.edu/group/efmh/jacobson/Articles/Others/19-CCS-DAC.pdf>

² IPCC AR6 Working Group III report. https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_Chapter06.pdf

³ IEEFA. Blue hydrogen: Technical challenges, weak commercial prospects, and not green. https://ieefa.org/wp-content/uploads/2022/02/Blue-Hydrogen-Presentation_February-2022.pdf

There are about 5,500 miles of carbon dioxide pipelines in the country right now⁴. For CCS to have any sort of serious impact on the climate, that number must increase by at least 12-fold⁵. But we cannot place Maryland communities at risk of any accidents related to carbon capture, especially communities of color and low-income communities. Carbon pipelines are an incredibly risky venture. The pipelines deal with extremely high pressures, and impurities in the steel pipes, such as water or other gasses, can weaken the pipe and lead to serious accidents⁶. Linked to this testimony is a video on what happens when a carbon pipeline ruptures⁷. The carbon dioxide immediately converts to dry ice around the rupture, but the rest will sublimate into a cloud that displaces oxygen and moves into low-lying areas.

Internal conditions are not the only threat to carbon pipelines. In February 2020, after weeks of heavy rains in Mississippi led to land subsidence, a carbon dioxide pipeline ruptured⁸ near the community of Sartatia. Dozens of residents were impacted, including some residents wandering around like zombies⁹ during the incident. Emergency responders were not prepared for this kind of emergency, with Denbury - the responsible company - failing to include Sartatia as a "high-consequence area" in the event of an accident, and failing to engage the Tri-Community Volunteer Fire Department¹⁰. At least some survivors of the incident have had long-term neurological impacts, with some who were exposed to carbon dioxide the longest still unable to work. Following this incident, PHMSA released an advisory for pipeline owners to review the potential risks for geohazards¹¹. And with climate change causing more and more 100-, 500-, and 1,000-year storms with greater frequency, any pipeline buildout in Maryland could be exposed to these geohazards.

⁴ Pipeline and Hazardous Materials Safety Administration (PHMSA).

https://portal.phmsa.dot.gov/analytics/saw.dll?Dashboard&PortalPath=%2Fshared%2FPDM%20Public%20Website%2F_portal%2FMiles%20by%20Decade&Page=Miles%20By%20Decade%20Gas%20Distribution

⁵ Princeton University. Net zero America: potential pathways, infrastructure, and impacts.

[https://netzeroamerica.princeton.edu/img/Princeton%20NZA%20FINAL%20REPORT%20SUMMARY%20\(29Oct2021\).pdf](https://netzeroamerica.princeton.edu/img/Princeton%20NZA%20FINAL%20REPORT%20SUMMARY%20(29Oct2021).pdf)

⁶ Pipeline Safety Trust and Accufacts Inc. Perspectives on the State of Federal Carbon Dioxide Transmission Pipeline Safety Regulations as it Relates to Carbon Capture, Utilization, and Sequestration within the U.S.

<https://pstrust.org/wp-content/uploads/2022/03/3-23-22-Final-Accufacts-CO2-Pipeline-Report2.pdf>

⁷ CO2 pipeline rupture test. <https://vimeo.com/668827261>

⁸ PHMSA. Failure investigation report: Denbury Gulf Coast Pipeline.

<https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2022-05/Failure%20Investigation%20Report%20-%20Denbury%20Gulf%20Coast%20Pipeline.pdf>

⁹ Huffington Post. The gassing of Sartatia.

https://www.huffpost.com/entry/gassing-sartatia-mississippi-co2-pipeline_n_60ddea9fe4b0ddef8b0ddc8f

¹⁰ PHMSA. Denbury consent order.

[https://primis.phmsa.dot.gov/comm/reports/enforce/documents/42022017NOPV/42022017NOPV_Consent%20Agreement%20and%20Order_03242023_\(20-176125\).pdf](https://primis.phmsa.dot.gov/comm/reports/enforce/documents/42022017NOPV/42022017NOPV_Consent%20Agreement%20and%20Order_03242023_(20-176125).pdf)

¹¹ PHMSA. Pipeline safety: Potential for damage pipeline facilities caused by earth movement and other geological hazards.

<https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2022-05/PHMSA%20Land%20Movement%20Advisory%20Bulletin.pdf>

Placing Marylanders in harm's way of possible CO2 pipeline buildout would neglect everyone's right to a safe environment to live, and spend taxpayer money on nothing more than perpetuation of our dependence on fossil fuels. I strongly urge this bill to be pulled from consideration.

Please reach out if you have any questions.

Kind regards,
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