

## **Final Report: EJAB Feedback on CCUS Task Force Recommendations**

### **Background:**

Carbon Capture, Utilization, and Storage (CCUS) is a process to capture carbon dioxide emissions from sources like cement manufacturing and ethanol plants and either reuse or store the carbon so that it will not enter the atmosphere. Carbon dioxide can be stored in geologic formations including oil and gas reservoirs and deep saline reservoirs.

As part of the near-term actions in its Greenhouse Gas Pollution Reduction Roadmap, Colorado identified the development and utilization of a Carbon Capture, Utilization, and Storage (CCUS) Task Force as an important step to better understand the role that CCUS may play in meeting the state's emissions targets. The CCUS Task Force broke into several subcommittees to evaluate various aspects of CCUS in Colorado, including a subcommittee identifying the environmental justice (EJ) impacts and opportunities of CCUS. The Task Force subcommittees identified a series of recommendations at the end of the process.

As stated in the [Task Force's final report of recommendations](#), the EJ principles were developed to guide community engagement processes and empower communities to shape CCUS policy. These principles were based on the state's "Climate Equity Principles" developed in the [Climate Equity Framework](#), with additional detail specific to CCUS. These principles were considered non-exhaustive and were expected to be adapted over time, in coordination with the Environmental Justice Advisory Board (EJAB) (and other relevant state resources under [HB 21-1266](#)), to meet community needs.

It is important to note that the EJ recommendations did not have complete consensus from the Task Force members. Three members of the Task Force (Environmental Defense Fund, Western Resource Advocates, and the Sierra Club) stated they would not support the CCUS recommendations unless and until the EJAB thoroughly reviewed and "shaped" the recommendations. As a result, the Governor's Office requested that the EJAB review and provide input on the CCUS Task Force recommendations and their impact on disproportionately impacted (DI) communities, to the extent that projects are anticipated to be constructed in DI communities.

The EJAB has thoroughly reviewed the CCUS Task Force EJ recommendations, as is reflected in the detailed feedback below. However, due to time limitations and the priority of the EJAB to submit its immediate thoughts on CCUS in advance of the upcoming legislative session, the remaining CCUS Task Force recommendations have not been thoroughly evaluated by the EJAB. This report and the recommendations herein do not constitute an endorsement of the use of CCUS by the EJAB due to the limitations in the current understanding of the risks inherent in the process.

Furthermore, the EJAB has concluded that because the Task Force completed its work before the matter was referred to the Board, it is not well positioned to adequately "shape" the Task Force's report insofar as "shaping" means changing the text of the Task Force's report itself. The EJAB recognizes that the CCUS Task Force completed its work only a month after the EJAB itself was first convened, and there was therefore no opportunity for the EJAB to be consulted during the Task Force process. Moving forward, the EJAB recommends that when possible its input on EJ matters be solicited while the process of developing similar reports is still in progress, so the EJAB's feedback can be meaningfully incorporated into the final product of the initial policy recommendations themselves.

**Official Environmental Justice Advisory Board Statement:**

While Carbon Capture, Utilization and Storage (CCUS) technologies continue to be researched and their exact risks and harms to communities already burdened by the impacts of pollution and climate change remain unknown, the EJAB recommends that agencies employ the precautionary principle and not prioritize CCUS projects, including pilot projects, in disproportionately impacted (DI) communities.

Siting Carbon Capture facilities must take into account cumulative impacts in DI communities. Given the existing environmental and public health implications of cumulative impacts in these communities, when developing routes and making siting decisions for CO<sub>2</sub> pipelines, routes that go through DI communities should be avoided. Furthermore, given the corrosive nature of CO<sub>2</sub> and the vulnerability of pipelines to exposure to water in the CO<sub>2</sub> stream, permits for pipelines in DI Communities should be limited in time duration with requirements to demonstrate pipeline integrity for the permit to be renewed.

In order to understand the effects of CCUS on surrounding environments and communities, an analysis of CCUS similar to an Environmental Impact Statement (EIS) that would be conducted under the National Environmental Policy Act (NEPA) should be produced, which should include a comprehensive Health Impact Assessment (HIA) detailing the full life cycle of all steps leading up to and as a result of existing and potential CCUS projects. This analysis should also include projections about how much farther into the future the use of CCUS technology would extend the contractual life of an existing carbon producing facility. The HIA component of the analysis should focus on the social determinants of health, health outcomes, health equity, and renewable greenhouse gas reduction technology alternatives. Finally, additional stakeholder engagement and outreach is necessary to ensure potentially impacted communities are aware of and have a voice in shaping policy decisions about future CCUS projects.

The EJAB asks the Governor and Legislature to take these EJ policy recommendations into consideration when creating any future legislation related to CCUS.

**EJAB's feedback on the CCUS Task Force EJ Recommendations:**

1. *[CCUS Task Force Recommendation]: Carbon reduction technologies like CCUS must not exacerbate existing harms in DI communities, and wherever possible, should reduce those harms*
  - The EJAB fully supports this recommendation that CCUS must not exacerbate existing harms in DI communities.
  - This recommendation should not only include language about not exacerbating existing harms, but also not causing new harms
  - To successfully and transparently achieve this recommendation, regulatory agencies and industry must fully assess the impacts, and mitigate any negative impacts of the projects.

- ‘Carbon reduction technologies’ like CCUS should more accurately be referred to as ‘carbon mitigation technologies’ as they offset the severity of the impact of carbon, however they do not reduce the quantity of carbon already produced.
  - Both qualitative and quantitative data must be considered in understanding impacts on a community.
2. *[CCUS Task Force Recommendation]: In order to mitigate harms and prioritize benefits, it is important to identify where locations of carbon capture, transport, and storage might affect Disproportionately Impacted (DI) communities, as defined in HB 21-1266, and to prioritize those community voices in decision-making.*
- A comprehensive description of each CCUS project is required in order to fully assess the harms and benefits of each CCUS project.
  - Harms and benefits should not only be assessed with regard to human health, but also to social factors and ecosystems.
  - There must be further detail provided on who, when and how this identification or analysis will occur (e.g. an environmental impact statement, health impact assessment, social impact assessment, population risk assessment, and/or community based participatory research).
  - While capture, transport and storage are mentioned in this recommendation, carbon utilization must also be included in the assessment of how this technology might affect DI communities.
3. *[CCUS Task Force Recommendation]: Governments and industries should pursue meaningful community involvement – early and often in all decision-making – to learn from and respond to community concerns*
- Meaningful community involvement must be defined and should not only be measured by participation, but rather by engagement that is observable such as a company integrating community feedback and recommendations into their processes.
  - Community must be involved in all steps of the CCUS process:
    - i. Conduct engagement when there is planning, deployment and subsequent evaluation of CCUS projects;
    - ii. Inform community of environmental and health risks associated with CCUS projects during planning stages and prior to permitting; and
    - iii. Incorporate community input into permitting decisions, including denial of permits, if necessary.
  - The industries pursuing meaningful community involvement in CCUS projects should be named and specified to ensure accountability in meeting their community engagement goals.
4. *[CCUS Task Force Recommendation]: CCUS deployment should prioritize environmental, health, and economic benefits in DI communities*

- Potential global climate benefits of CCUS deployment should be appropriately balanced with both positive and negative local impacts on the environment, public health, and the economy. Long term consideration of the gain or loss of environmental, public health, and economic benefits should be part of the balance.
  - The socio-cultural and spiritual connection to the land where CCUS compressor stations and pipelines run through must be respected and considered. These lands are not just resources, but are sacred to many people.
  - Where possible, communities should help prioritize whether and how to prioritize environmental, health, and economic benefits in their own communities.
5. *[CCUS Task Force Recommendation]: When CCUS is deployed at facilities, improvements should be made to the facilities to ensure that there is no increase, and where possible are decreases, in localized pollution in the communities where they are deployed, especially in DI communities*
- Aside from localized pollution, the loss of environmental assets or environmental deterioration must be considered. While a CCUS operation may not emit additional pollution, it may have the ability for example to destroy habitats, consume excess amounts of water, and increase seismic activity.
  - Improvements that extend the contractual life of a facility must take into account both short and long term increases to pollution including prolonging the amount of pollution produced by the facility due to the extension, as opposed to if the operation ceased to exist and/or was replaced by a more sustainable alternative.